Filed Pursuant to Rule 424(b)(3)
Registration No. 333-235780

PROSPECTUS SUPPLEMENT NO. 2
To Prospectus dated February 10, 2020

9,321,593 Shares of Common Stock

This prospectus supplement no. 2 supplements the prospectus dated February 10, 2020, or the Prospectus, relating to the proposed resale or other disposition from time to time of up to 9,321,593 shares of DermTech, Inc., or the Company, common stock, $0.0001 par value per share, or the Common Stock, as follows: (i) an aggregate of up to 8,565,893 shares of Common Stock held by parties to the Registration Rights Agreement (as defined in the Prospectus), of which 3,076,925 shares of Common Stock were issued in connection with a private placement, or the PIPE Financing, consummated in connection with the Company's Business Combination (as defined in the Prospectus); (ii) an aggregate of up to 615,385 shares of Common Stock that are issuable upon the conversion of outstanding shares of the Series A Convertible Preferred Stock of the Company that were issued to certain parties to the Registration Rights Agreement in connection with the PIPE Financing; and (iii) an aggregate of up to 140,315 shares of Common Stock underlying certain outstanding warrants, or the Warrants, that were issued in connection with the Warrant Agreement (as defined in the Prospectus) and are held by certain selling securityholders. The Company is not selling any securities under the Prospectus and will not receive any of the proceeds from the sale of securities by the selling securityholders, except that the Company may receive up to approximately $3,227,245 in aggregate gross proceeds from the exercise of the Warrants, if the Warrants are exercised for cash (and, as applicable, not on a cashless basis), based on the per share exercise price of the Warrants.

This prospectus supplement incorporates into the Prospectus the information contained in our attached annual report on Form 10-K for the year ended December 31, 2019, which was filed with the Securities and Exchange Commission on March 10, 2020.

You should read this prospectus supplement in conjunction with the Prospectus, including any supplements and amendments thereto. This prospectus supplement is qualified by reference to the Prospectus except to the extent that the information in the prospectus supplement supersedes the information contained in the Prospectus. This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any supplements and amendments thereto.

The selling securityholders or their assignees or successors-in-interest may offer and sell the shares of Common Stock described in the Prospectus in a number of different ways and at varying prices. We provide more information about how a selling securityholder may sell its shares of Common Stock in the section titled "Plan of Distribution" appearing in the Prospectus.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "DMTK." On March 9, 2020, the last reported sale price of our Common Stock was $14.72 per share.

AN INVESTMENT IN OUR COMMON STOCK INVOLVES RISKS. SEE THE SECTION ENTITLED "RISK FACTORS" BEGINNING ON PAGE 27 OF THIS PROSPECTUS SUPPLEMENT.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is March 10, 2020

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended: December 31, 2019

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 001-38118

DERMTECH, INC.
(Exact name of registrant as specified in its charter)

Delaware	**84-2870849**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
11099 N. Torrey Pines Road, Suite 100 La Jolla, CA	**92037**
	(Zip Code)

Registrant's telephone number, including area code: (858) 450-4222

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**DMTK**	**The Nasdaq Capital Market**

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such report(s), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Acts.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock, $0.0001 par value, held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter was approximately $5,623,654 (based on the closing price of the registrant's common stock on June 28, 2019 of $20.80 per share).

The number of shares outstanding of the registrant's common stock, $0.0001 par value as of March 5, 2020 was 14,844,054.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days after the end of the fiscal year ended December 31, 2019. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

DERMTECH, INC
ANNUAL REPORT ON FORM 10-K
YEAR ENDED DECEMBER 31, 2019
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Special Note Regarding Forward-Looking Statements

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Forward-looking statements are statements other than historical facts and relate to future events or circumstances or our future performance, and they are based on our current assumptions, expectations and beliefs concerning future developments and their potential effect on our business. Words such as, but not limited to "anticipate," "aim," "believe," "contemplate," "continue," "could," "design," "estimate," "expect," "intend," "may," "might," "plan," "possible," "potential," "predict," "pro forma," "project," "seek," "should," "suggest," "strategy," "target," "will," "would," and similar expressions or variations thereof are intended to identify forward-looking statements, but are not deemed to represent an all-inclusive means of identifying forward-looking statements as denoted in this report. These statements include, among other things, statements regarding:

- our ability to attain profitability;
- our estimates regarding our future performance, including without limitation estimates of potential future revenues;
- our ability to maintain commercial reimbursement for our tests;
- our ability to efficiently bill for and collect revenue resulting from our tests;
- our anticipated need to raise additional capital to fund our operations, commercialize our products, and expand our operations;
- our ability to market and sell our tests to physicians and other clinical practitioners;
- our ability to continue to develop our existing tests and develop and commercialize additional novel tests;
- our dependence on third parties for the manufacture of our products;
- our ability to meet market demand for our current and planned future tests;
- our reliance on our sole laboratory facility and the harm that may result if this facility became damaged or inoperable;
- our ability to compete with our competitors and their competing products;
- the importance of our executive management team;
- our ability to retain and recruit key personnel;
- our dependence on third parties for the supply of our laboratory substances, equipment and other materials;
- the potential for us to incur substantial costs resulting from product liability lawsuits against us and the potential for these lawsuits to cause us to suspend sales of our products;
- the possibility that a third party may claim we have infringed or misappropriated our intellectual property rights and that we may incur substantial costs and be required to devote substantial time defending against these claims;
- the potential consequences of our expanding our operations internationally;
- our ability to continue to comply with applicable privacy laws and protect confidential information from breaches;
- how changes in federal health care policy could increase our costs, decrease our revenues and impact sales of and reimbursement for our tests;
- our ability to continue to comply with federal and local laws concerning our business and operations and the consequences resulting from our failure to comply with such laws;
- the possibility that we may be required to conduct additional clinical studies or trials for our tests and the consequences resulting from the delay in obtaining necessary regulatory approvals;
- the harm resulting from the potential loss, suspension, or other restriction on one or more of our licenses, permits, certifications or accreditations, or the imposition of a fine or penalty on us under federal, state, or foreign laws;
- our ability to maintain and our intellectual property protections;
- how recent and potential future changes in tax policy could negatively impact our business and financial condition;
- how recent and potential future changes in healthcare policy could negatively impact our business and financial condition;

- our ability to maintain Nasdaq listing;
- our ability to manage the increased expenses and administrative burdens as a public company; and

Although forward-looking statements in this report reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include, without limitation, those specifically addressed under the heading “Risk Factors” below, as well as those discussed elsewhere in this report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. We file reports with the Securities and Exchange Commission, or the SEC, and our electronic filings with the SEC (including our quarterly reports on Form 10-Q and current reports on Form 8-K, and any amendments to these reports) are available free of charge on the SEC’s website at http://www.sec.gov.

We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this report, except as required by law. Readers are urged to carefully review and consider the various disclosures made throughout the entirety of this report, which are designed to advise interested parties of the risks and factors that may affect our business, financial condition and results of operations. We qualify all of our forward-looking statements by this special note.

PART I

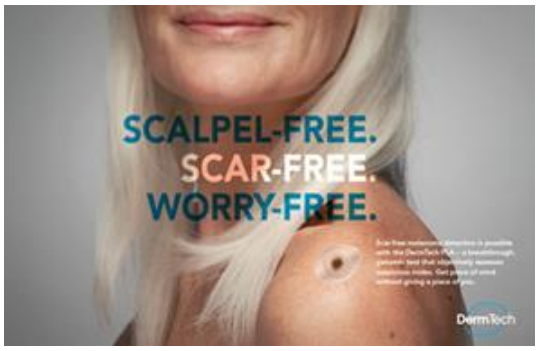
Item 1. Business

Unless specifically noted otherwise, as used throughout this Business section, "we," "our," or "us" refers to the business, operations and financial results of DermTech Operations prior to, and the Company and its subsidiaries subsequent to, the completion of the Business Combination as the context requires. "Constellation" refers to the Company prior to the completion of the Business Combination.

Business Overview

We are an emerging growth molecular diagnostic company developing and marketing novel non-invasive genomics tests to aid in the diagnosis of various skin conditions, including skin cancer, inflammatory diseases, and aging-related conditions. Our technology provides a highly accurate alternative to surgical biopsy, minimizing patient discomfort, scarring, and risk of infection, while maximizing convenience. Our scalable genomics assays have been designed to work with a proprietary "adhesive patch skin sampling kit" that provides a tissue sample for analysis non-invasively.

We are initially commercializing tests that will address unmet needs in the diagnostic pathway of pigmented skin lesions, such as moles or dark colored skin spots. Our current products facilitate the clinical assessment of pigmented skin lesions for melanoma. We have initially marketed this test directly to a concentrated group of dermatologists. The simple application of the adhesives patches to collect a sample may allow us to eventually market the test to primary care physicians and through telemedicine channels. We process our tests in a high complexity molecular laboratory that is Clinical Laboratory Improvement Amendments of 1988, or CLIA, certified. We also provide laboratory services to large pharmaceutical companies on a contract basis for their use in their clinical trials for new drugs. We have a history of net losses since our inception.



Business Combination, Reverse Split and Domestication

On August 29, 2019, the Company, formerly known as Constellation Alpha Capital Corp., or Constellation, and DermTech Operations, Inc., formerly known as DermTech, Inc., or DermTech Operations, consummated the transactions contemplated by the Agreement and Plan of Merger, dated as of May 29, 2019, by and among the Company, DT Merger Sub, Inc., or Merger Sub, and DermTech Operations. We refer to this agreement, as amended by that certain First Amendment to Agreement and Plan of Merger dated as of August 1, 2019, as the Merger Agreement. Pursuant to the Merger Agreement, Merger Sub merged with and into DermTech Operations, with DermTech Operations surviving as our wholly owned subsidiary. We refer to this transaction as the Business Combination. In connection with and two days prior to the completion of the Business Combination, Constellation re-domiciled out of the British Virgin Islands and continued as a company incorporated in the State of Delaware.

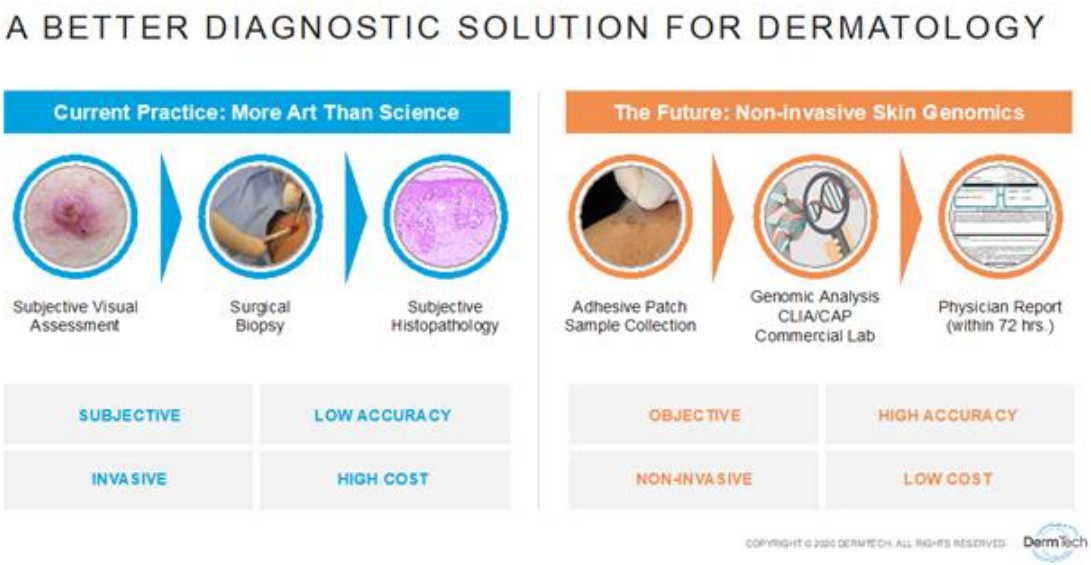
On August 29, 2019, immediately following the completion of the Business Combination, we amended and restated our certificate of incorporation, or the Amended and Restated Certificate of Incorporation, to change the name of the Company to DermTech, Inc. Prior to the completion of the Business Combination, the Company was a shell company. Following the Business Combination, the business of DermTech Operations is the business of the Company.

On August 29, 2019, in connection with and immediately following the completion of the Business Combination, we filed a certificate of amendment, or the Certificate of Amendment, to the Amended and Restated Certificate of Incorporation to effect a one-for-two reverse stock split of our common stock on August 29, 2019, or the Reverse Stock Split. As a result of the Reverse Stock Split, the number of issued and outstanding shares of our common stock immediately prior to the Reverse Stock Split was reduced into a smaller number of shares, such that every two shares of our common stock held by a stockholder immediately prior to the Reverse Stock Split were combined and reclassified into one share of our common stock.

Our Business

We are an emerging growth molecular diagnostic company developing and marketing novel non-invasive genomics tests that seek to transform the practice of dermatology and related fields. Our platform may change the diagnostic paradigm in dermatology from one that is subjective, invasive, less accurate and higher-cost, to one that is objective, non-invasive, more accurate and lower-cost. Our initial focus is skin cancer. We currently offer a test for the enhanced early detection of melanoma and are developing a product for non-melanoma skin cancer. We are also working on a product to assess skin cancer risk. Our scalable genomics platform has been designed to work with a proprietary adhesive patch sample collection kit that provides a skin sample collected easily and non-invasively, in contrast to the existing standard of care of using a scalpel to biopsy suspicious lesions. We also provide our services and technology platform on a contract basis to large pharmaceutical companies who use the technology in their clinical trials to test for the existence of genetic targets of various diseases and to measure the response of new drugs under development. We process our tests in a CLIA certified and College of American Pathologists accredited commercial laboratory located in La Jolla, California that is licensed by the State of California and all states requiring out-of-state licensure. As described below, our technology platform is easy to use and integrates seamlessly into the current clinical diagnostic pathway by providing (i) simple and rapid tissue collection and shipping via standard express mail, (ii) sample processing via quantitative polymerase chain reaction, or qPCR, or other technologies and (iii) physician reporting within 48 to 72 hours. In addition, physicians can bill for their services using existing Current Procedural Technology, or CPT codes.

Dermatology is one of the largest medical markets in the United States. The skin cancer segment alone has over 15 million surgical diagnostic procedures performed each year in the United States, with an average annual spend of $8.1 billion from 2007 to 2011, according to the American Academy of Dermatology, or AAD. Current dermatologic diagnosis is primarily based on subjective visual assessments and subsequent surgical diagnostic procedures. This legacy paradigm is prone to error and results in a substantial number of unnecessary and invasive surgical procedures. Our platform provides a non-invasive alternative that minimizes patient discomfort, scarring, and risk of infection. Further, because our testing results utilize genomic analysis, we provide more accurate, objective diagnostic information than the currently prevailing diagnosis procedures. As described below, our first product, the Pigmented Lesion Assay (PLA™) has been demonstrated in a recent publication in JAMA Dermatology to lower the cost to diagnose melanoma while providing a more accurate and less invasive alternative to current methods.



The general genomic testing market is highly saturated with other genomic diagnostic tests and are primarily marketed to pathology and oncology specialists. We are the first company to offer non-invasive genomic tests to the clinical dermatology market. We believe our technology platform will transform the practice of dermatology and will expand the base of clinicians that can practice high quality dermatology (e.g., primary care clinicians). As healthcare delivery diverges to more convenient delivery models, such as pharmacy-based/retail clinics and telemedicine, we believe our platform will facilitate the migration of dermatologic care to these alternative models. We believe our platform may allow for future consumer-based sample collection shipped directly to our laboratory, positively impacting the ease of use and convenience of providing dermatologic care.

Our PLA assesses pigmented skin lesions, moles or dark skin spots for melanoma and enhances early detection. Of the approximate 4.0 million surgical biopsies performed each year on pigmented skin lesions, over 90% are negative for melanoma and represent avoidable surgical procedures. The PLA improves the assessment of pigmented lesions by reducing the probability of missing melanoma to less than 1.0% (versus approximately 11-17% with the existing standard of care) and by reducing the number of surgical biopsies required to diagnose melanoma by tenfold (from about 25:1 to about 2.5:1). In March 2019, Medicare's MolDX program, administered by Palmetto GBA, or MolDX, which performs technology assessments for genomic tests, issued a favorable draft Local Coverage Determination (LCD), or Draft LCD, for our PLA. In October 2019, the AMA provided us with a CPT Proprietary Laboratory Analysis code for our PLA of 0089U, or the PLA Code. Pricing of $760 for the PLA Code was published on December 24, 2019 as part of the CMS Clinical Laboratory Fee Schedule, or CLFS, for 2020. The Medicare final LCD, or Final LCD, first made available on December 26, 2019 expanded the coverage proposal in the Draft LCD from one test per date of service to two tests per date of service, and to allow clinicians to order our PLA if they have sufficient skill and experience to decide whether a pigmented lesion should be biopsied. Our PLA became eligible for Medicare reimbursement effective on February 10, 2020. Our local Medicare Administrative Contractor, Noridian Healthcare Solutions, LLC, relies upon MolDX for technology assessments of genomic-based tests and has adopted the Final LCD issued by MolDX.

The performance of the PLA is supported by numerous investigational studies, which enrolled an aggregate of over 6,000 patients and yielded a total of 17 peer-reviewed publications in top-rated medical dermatology journals. A recent publication in JAMA Dermatology demonstrated that the PLA significantly lowers the cost to diagnose melanoma while providing a more accurate and less invasive alternative to current methods. The current AAD melanoma guidelines indicate that non-invasive gene expression testing can be used as a part of the initial clinical assessment for pigmented lesions. In addition, an independent panel of melanoma experts has produced consensus recommendations for use of our PLA product. In January 2018, the American Medical Association, or AMA, published the addition of our PLA target genes to the Category I CPT code 81401, and our application for this code was endorsed by nine major medical societies. The PLA was also issued a proprietary laboratory analysis code from the AMA for insurance payors that prefer to bill using these codes. We believe the PLA can be used as an alternative for the majority of these surgical biopsy procedures, which could create a total existing market opportunity for melanoma greater than $3.0 billion per year. We have also received Health Canada clearance for use of our platform and have established a non-exclusive licensing partnership with DermTech Canada. We are working with this partner to secure reimbursement coverage with various Canadian provinces.

We initiated the commercialization of our PLA product in the second quarter of 2016. We currently market these tests directly to dermatologists in the United States with a team of approximately 25 sales representatives throughout the United States and plan to expand our team into more regions throughout the United States during 2020. With our recent Medicare coverage and growth of testing volume and physician users, we believe our test is being reviewed for coverage by key United States commercial payors, including Aetna Inc., Cigna Corporation, Humana Inc., CareCore National, LLC eviCore Healthcare, LLC and others. We believe we will achieve successful coverage outcomes from these efforts over the next 24 to 36 months, although no assurances can be given that any reimbursement coverage approvals will be obtained.

In the second quarter of 2018, we introduced our Nevome product, an adjunctive reflex test for the PLA. The Nevome test can be used with histopathology to identify additional risk factors for melanoma and to confirm the diagnosis of melanoma in PLA positive tests, which are subjected to surgical biopsy. The Nevome test analyzes early-stage melanoma driver mutations in the v-Raf murine sarcoma viral oncogene homolog B (BRAF), neuroblastoma RAS viral oncogene homolog (NRAS) and telomerase reverse transcriptase (TERT) genes. The Nevome test utilizes the same genomic material collected from the initial adhesive patch sample used for the PLA and does not require additional sampling. We will replace our Nevome test with the introduction of our second-generation PLA test, PLA *plus*, which we expect to be available in the second quarter of 2020. The PLA *plus* test will add a TERT promoter mutation analysis to the current PLA gene expression test, and we will no longer test for BRAF or NRAF genes, which were previously tested in our Nevome product.

We plan to expand our sales efforts as we obtain reimbursement coverage to provide sales coverage to a majority of over 12,000 healthcare professionals specializing in dermatology in the United States.

We believe the total annual United States market opportunity for our PLA and PLA *plus* tests exceeds $3.0 billion, and that the select annual worldwide market consisting of Australia, Europe, and Canada exceeds an additional $750 million.

Additional skin cancer product offerings, including for non-melanoma skin cancers (basal cell and squamous cell cancers), are currently under development. In the United States, approximately 12 million surgical biopsies are performed each year to diagnose approximately 5.0 million non-melanoma skin cancers. Many of the initial surgical procedures for these skin cancers are performed on cosmetically sensitive areas of the body, such as the face, neck and chest, creating significant demand for a non-invasive alternative. We believe the total market opportunity for our non-melanoma skin cancer products exceeds $3.0 billion in the United States and $1.0 billion in select world-wide markets.

We are also working on tests to facilitate the assessment of inflammatory skin diseases, such as atopic dermatitis and psoriasis, which will facilitate the appropriate diagnosis and treatment of these inflammatory diseases. The prevalence of atopic dermatitis in the United States is approximately 7.0% with approximately 6.6 million patients having moderate-to-severe disease. The prevalence of psoriasis in the United States is approximately 2.2% with approximately 1.3 million patients having moderate to severe disease.

We also make our non-invasive molecular skin analysis platform available to pharmaceutical companies to facilitate the development of new targeted therapies in dermatology and cancer, including biologics. These partners use our platform and services to assess treatment response, monitor side effects and identify likely responders to the therapy under development. We have completed and have ongoing research collaborations with large pharmaceutical companies to facilitate their development of new targeted therapeutics in dermatology. We have initiated programs across the spectrum of pharmaceutical development stages from Phase 1 through Phase 3. We believe that some of these collaborations may lead to a complementary or companion diagnostic product for the pharmaceutical partner’s therapeutic candidate, if it reaches the commercial market. We have booked over $4.2 million of orders pursuant to research contracts in the last 24 months, and many of these contracts are multi-year in length.

We offer our gene expression tests through our CLIA certified and College of American Pathologists (CAP) accredited commercial laboratory located in La Jolla, California, which is licensed by the State of California and all states requiring out-of-state licensure. In the first quarter of 2018, we received our laboratory permit from the New York State Department of Health, the most rigorous licensing process for clinical diagnostic laboratories. We can scale our current facility to approximately 300,000 tests per year, with the ability to scale to over 1,000,000 tests per year with additional facility and capital investments.

Our sample collection technology maximizes collection of relevant tissue with minimal patient discomfort using adhesive patches. We have developed significant intellectual property and know-how around the use of adhesives for non-invasive biopsy and the transportation and handling of this type of sample. We have developed a proprietary process that allows us to extract genomic material from the patches with sufficient quality and quantity to perform gene expression, DNA mutation, DNA methylation and transcriptomic analyses. We believe our technology can be utilized to assess the microbiome of the skin with superior performance to existing methods that use swabs. The results of these efforts will allow us to introduce our sample collection technology to facilitate the diagnosis of a broad array of dermatologic conditions and other conditions where the skin serves as a surrogate target organ.

Our Competitive Advantages

Superior patient care at a lower cost. The PLA is used to assess pigmented lesions that may harbor melanoma at the earliest stages (melanoma in situ or stage 1a), the most difficult lesions to diagnose. In our clinical studies, our PLA test has demonstrated a sensitivity of 91-95% and a specificity of 69-91% in differentiating these early-stage melanomas from non-melanoma using histopathology as the reference standard. This leads to a very high negative predictive value, or NPV, of greater than 99%, which is the probability our PLA test correctly ruled out melanoma. In addition, the PLA has demonstrated a tenfold reduction in unnecessary surgical procedures, relative to the current visual assessment and histopathology standard of care. Such a reduction results in significant cost savings for the health care system and reduces patient morbidity as compared to other diagnostic approaches. Table 1 below compares our PLA with other techniques and the existing standard of care for assessing early-stage melanoma in pigmented skin lesions.

	Diagnostic Devices	Surgical Specimen Gene Expression	Our PLA	Visual Assessment & Pathology (Current Standard)
Mechanism	Pattern Recognition	Tumor Biology	**Tumor Biology**	Pattern Recognition
Surgical Procedure Required	No	Yes	**No**	Yes
Platform Technology	No	N/A	**Yes**	N/A
Multiple Dermatologic Indications	No	No	**Yes**	Yes
Physician Payment	No	No	**Yes**	Yes
Simple Practice Integration	No	N/A	**Yes**	N/A
Ease of Use	No	N/A	**Yes**	N/A
Number Needed to Biopsy(1)	>15	>25	**2.7**	>25
Number Needed to Excise(2)	Unknown	5.2	**1.6**	5.2
Better Performance				
NPV(3)	99%	>99%	**>99%**	>81-89%
Sensitivity(4)	96-98%	90-95%	**91-95%**	65-84%
Cost	Unknown	$2,000 - $8,000	**$760(5)**	$947
Capital Equipment	Yes	No	**No**	No

Table 1. The data summarized above compares our PLA with other techniques and the existing standard of care for assessing early stage melanoma in pigmented skin lesions.

Footnotes to Table 1:

(1) Number of surgical biopsies required to diagnose one melanoma.

(2) Number of wide excision surgical procedures per melanoma diagnosed.

(3) NPV measures the probability that a negative result is truly negative.

(4) Sensitivity measures the proportion of actual positives that are correctly identified as such.

(5) Figure represents a projected United States reimbursed price, though this price has not yet been negotiated with major United States payors. Pricing of $760 for the PLA Code was published on December 24, 2019 as part of the CMS Laboratory Fee Schedule for 2020. The Medicare Final Coverage Decision was made available on December 26, 2019 and the PLA became eligible for Medicare reimbursement on February 10, 2020.

Our technology platform has the potential to transform dermatologic practice. We are the first and only company to offer non-invasive genomic testing to clinicians that practice dermatology. Current dermatologic practice is based on subjective visual assessments that are prone to inaccuracy and lead to invasive surgical procedures that drive unnecessary costs. Our technology platform seeks to dramatically transform this paradigm by providing non-invasive, objective, and more accurate information, thereby broadening the base of clinicians that can practice dermatology while also improving the performance of specialists.

Superior ease of use. Our non-invasive biopsy sample collection procedure can be performed in less than five minutes. All the necessary items, including adhesive patches, instructions, a marking pen for outlining, and a preaddressed and prepaid return shipping label, are contained in our kit.

Simple integration into clinical practice. Our tests use an adhesive patch that replaces the scalpel traditionally used in the initial clinical assessment. Unlike other technologies, our platform does not require the installation and maintenance of capital equipment. The nursing support, documentation, specimen processing, and requisition post procedure are substantially similar to current practice. These issues are critical in a busy clinical practice where clinicians see patients every five to seven minutes.

Strong intellectual property protection. We have five issued United States patents, one of which is broadly directed to the use of an adhesive to collect samples containing RNA from the skin for analysis. In addition, we have been awarded patents on unique gene expression profiles and classifiers that differentiate melanoma from non-melanoma, and they will not expire until 2029. Additional efforts to further expand our patent portfolio are ongoing. We have also developed unique know-how and proprietary processes that allow us to extract sufficient quantities of low-quality genomic material from adhesive patch samples suitable for analysis.

Our Strategy

Our goal is to become the global leader in non-invasive genomics testing for dermatologic conditions. We believe our robust intellectual property portfolio, platform technology, first-to-market advantage, and groundbreaking research will facilitate the achievement of this goal. Specifically, we will focus on the following objectives:

Build a specialized sales force to introduce our products into the dermatology market. We intend to expand our existing direct specialty sales force up to three-fold as additional reimbursement coverage is achieved. Consistent with our current sales strategy, we will continue to recruit experienced sales representatives, primarily those from the dermatology sector who have existing physician relationships. We also plan to leverage this sales force by establishing distribution relationships with laboratory companies that do business with the clinical dermatologist or sell molecular tests.

Secure broad reimbursement coverage for our assays. We have targeted regional and national payors to secure favorable coverage decisions for the reimbursement of our tests. The PLA has completed the necessary analytical validity, clinical validity, and clinical utility studies that payors require molecular tests to undertake. We have also published a United States health economic impact study on the PLA in JAMA Dermatology, which shows that the PLA significantly reduces the relative cost to assess a pigmented lesion. The cost to fully adjudicate a pigmented lesion suspicious for melanoma is $947 in the United States. We believe the PLA could lead to cost savings of greater than $650 million per year in aggregate savings, based on approximately 4.0 million surgical biopsies performed per year to rule out melanoma, and assuming the PLA was to become the standard of care in the United States.

In March 2019, MolDX, which performs technology assessments for genomic tests, issued a favorable Draft LCD for the PLA. In late October 2019, the AMA provided us with the PLA Code. Pricing of $760 for the PLA Code was released on December 24, 2019 as part of the CLFS for 2020. The Final LCD, first made available on December 26, 2019, expanded the coverage proposal in the Draft LCD from one test per date of service to two tests per date of service, and allows clinicians to order our PLA if they have sufficient skill and experience to decide whether a pigmented lesion should be biopsied. Our PLA became eligible for Medicare reimbursement on February 10, 2020. Our local Medicare Administrative Contractor, Noridian Healthcare Solutions, LLC, relies upon MolDX for technology assessments of genomic-based tests and has adopted the Final LCD issued by MolDX.

In addition to our demonstrated clinical validity, clinical utility is the most important attribute of a test for establishing coverage policies with payors because it demonstrates how frequently physicians adhere to the recommendation of the test and the resulting improvement in clinical outcomes. In 2020, we completed and published our largest clinical utility study of the PLA based on real-world commercial usage. This most recent clinical utility study on 3,418 cases corroborates earlier utility studies and demonstrates that clinicians adhere to the recommendation of the PLA more than 98% of the time. Our test significantly reduces surgical procedures and improves the diagnostic pathway for pigmented lesion assessment. Lesions clinically suspicious for melanoma have negative PLA results in over 90% of cases, leading to an approximately 90% reduction in surgical biopsies in our 2020 study. We believe our body of clinical evidence and utility will lead to securing coverage policies from the major commercial payors over the next 24 to 36 months, although no assurances can be given that any reimbursement coverage approvals will be obtained.

We have currently secured six contracts with major preferred provider networks, including MultiPlan Inc., FedMed, Inc., America’s Choice Provider Network, Three Rivers Provider Network, Inc., First Health Group Corp., and Midlands Choice, Inc. In addition, we have established contracts with Carefirst BCBS of Maryland, Inc. and Tricare West. We have submitted clinical and technology assessment packages to eviCore healthcare, LLC, which provides consultative services for approximately 20 large payors, and a number of large commercial payors, including Aetna Inc., Cigna Corporation, UnitedHealthcare Inc., several independent Blue plans and Humana Inc., all of which are currently under review.

Integrate our products into the standard of care. We conduct rigorous clinical research and basic science research and publish the results of this research in peer-reviewed journals. Overall, our research has yielded over 17 publications in top peer-reviewed journals. The PLA's performance is supported by nine investigational studies, which enrolled an aggregate of over 6,000 patients. A recent publication in JAMA Dermatology demonstrated that the PLA significantly lowers the cost to diagnose melanoma while providing a more accurate and less invasive alternative to the current methods. Our research is frequently highlighted at clinical meetings and has several times been accepted for peer-reviewed late-breaking presentations at major medical society meetings, including recent annual meetings of the AAD.

The AAD melanoma guidelines have indicated that non-invasive gene expression testing can be used as a part of the initial clinical assessment for pigmented lesions. In addition, an independent panel of melanoma experts has produced consensus recommendations for use of our PLA product, which were published in 2019.

We have established an extensive board of over a dozen Key Opinion Leaders, or KOLs, in dermatology, including four former presidents of the AAD. These KOLs speak extensively about our technology platform and the PLA at various clinical and research meetings. In addition, these KOLs participate in our clinical studies and publish findings in peer-reviewed journals.

Establish distribution partnerships for primary care. A substantial portion of dermatology is practiced in primary care. We plan to access the primary care market by establishing distribution relationships with molecular testing companies that focus on this physician call point. These potential partners have several hundred sales professionals in the aggregate who access the primary care market. We plan to pursue opportunities for distribution partnerships in the future.

Implement reference testing for large integrated dermatology networks and dermatopathology laboratories. Large dermatology practices with multiple clinics and generally more than 50 clinical professionals often have integrated dermatopathology and laboratory testing services for their clinics. For these situations and depending on federal and state regulations, we plan to implement reference contracts, whereby the integrated laboratory will accession the PLA samples and bill for these samples, while paying us a contracted price. We estimate that 10-20% of our dermatology market opportunity may be accessed through this model.

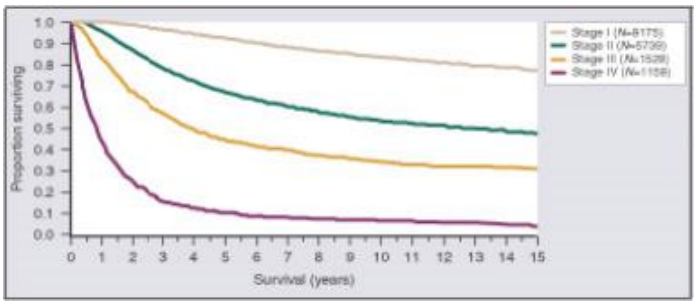
Expand our product offerings. We have developed a platform that provides genomic analysis of the skin using a non-invasive adhesive patch platform as the sample collection method. This platform can be used to develop multiple products based on the same sample collection method, and it only requires different genomic markers to be assayed in our CLIA licensed laboratory. We are currently working to complete development of additional products, which assesses non-pigmented lesions for basal cell and squamous cell cancers. In addition, we are working to develop tests for inflammatory diseases of the skin.

Expand our marketing of research services to pharmaceutical companies. Our platform is used by several large pharmaceutical companies to facilitate their development of new targeted therapeutics in dermatology. Our PLA product helps identify biomarker treatment responses, track side effects, and identify patients that respond to the therapy. We plan to hire additional business development professionals to sell these services to the pharmaceutical industry. These efforts will include the participation in additional industry conferences and the presentation of our platform and data at additional medical conferences. Additionally, our collaborations with pharmaceutical partners may result in the introduction of complementary or companion diagnostic products for the partners' therapeutic candidates that reach the commercial market.

Market Opportunity—Skin Cancer

Melanoma is currently one of the fastest growing cancers and the subject of significant attention in the medical community. The incidence of melanoma has doubled since 1973. While there has been a 20% decline in cancer deaths overall since 1991, melanoma is one of three cancers facing increasing death rates. According to a study from the Mayo Clinic, the incidence of melanoma increased eightfold among women under 40 and fourfold among men under 40 from 1970 to 2009.

Melanoma is one of the deadliest forms of skin cancer. On average, melanoma causes more than one death every hour of every day of the year in the United States. The American Cancer Society projected that more than 9,000 people would die from melanoma in 2018. If diagnosed and removed early in its evolution, when confined to the outermost skin layer and deemed to be “in situ” (Stage 0), patients are expected to have a survival rate of almost 100%. Invasive melanomas that are thin and extend into the uppermost regions of the second skin layer (Stage 1) still have cure rates greater than 90%. However, once the cancer advances into the deeper layers of skin, the risk of it spreading to other parts of the body, or metastasis, and death increases. The table below depicts the survival rate of melanoma based on the stage of the cancer at initial diagnosis.



From Balch CM, Buzaid AC, Soong S-j et al: Final Version of the American Joint Committee on Cancer Staging Sysem for Cutaneous Melanoma. Journal of Clinical Oncology, August 2001.

Approximately 178,560 cases of melanoma, 87,290 non-invasive (in situ) and 91,270 invasive, were diagnosed in the United States in 2018. Our PLA test is primarily used to assess pigmented lesions at risk for melanoma at the earliest stages, in situ and stage 1a, which we estimate numbered 132,925 cases in 2018. On average, 25 surgical biopsies are performed per early stage melanoma diagnosed, creating a total market opportunity of approximately 4.0 million surgical procedures per year. Outside the United States, the incidence of melanoma is highest in Western Europe, Australia, and Canada. We estimate that these select worldwide markets perform over 1.5 million surgical biopsies annually to diagnose approximately 75,000 melanomas, creating additional market opportunity that we believe exceeds $750 million per annum.

Approximately 5.0 million non-melanoma skin cancers (basal cell and squamous cell carcinomas) were diagnosed in the United States in 2018. The number of surgical biopsies needed to diagnose one non-melanoma skin cancer is approximately 2.5-3.0 among dermatologists and can be considerably higher when diagnosed by other clinicians such as nurse practitioners and primary care physicians. We estimate that approximately 12 million surgical biopsies are performed each year in the United States to diagnose non-melanoma skin cancer. While these cancers are not as deadly as melanoma, they commonly occur on the face, head, neck, and other cosmetically sensitive areas, creating an important unmet medical need for a non-invasive alternative, and a potential market opportunity of approximately $3.0 billion in the United States per annum based on the approximately 10-12 million surgical biopsies performed to diagnosis of basal and squamous cell skin cancers.

Limitations of Current Melanoma Diagnostic Pathway

The estimated prevalence of pigmented lesions (moles) ranges from 2% to 8% in fair-skinned persons.

Pigmented lesions may be classified as clinically atypical by meeting one or more of the American Cancer Society’s ABCDE criteria, which includes Asymmetric, irregular Border, variegated or dark Color, Diameter greater than 6 mm, or Evolving mole. Atypical pigmented lesions are at risk for harboring melanoma. A meta- analysis of case-control studies found that the relative risk of melanoma is 1.45 in patients with one atypical mole vs. those with none, and this risk increases to 6.36 in those patients with five atypical moles. Management of atypical pigmented lesions involves ruling out melanoma via a visual assessment followed by surgical biopsy and histopathology. Ideally, when melanomas are identified, they are found at the earliest stages (melanoma in situ or stage 1a) when a high cure rate is possible by wide excision. Since a biopsy only partially removes a lesion for histopathologic analysis, early stage melanomas diagnosed histopathologically from biopsy material are treated with follow-up wide excision procedures (generally with 0.5-1.0 cm margins).

While the purpose of the visual assessment or surgical biopsy is to rule out melanoma, the poor performance metrics of this diagnostic pathway leads to a low NPV for early stage disease (Table 2 below). This is related to the low specificity of the visual assessment (3-10%), which results in a high number of biopsies on benign atypical nevi. During histopathologic assessment, a *small* number of melanomas must be identified from this large pool of biopsied atypical nevi. However, there is significant overlap in the histopathologic diagnostic criteria between atypical nevi and early stage melanoma, invariably leading to false negative diagnoses and a relatively low sensitivity (65-84%). Elmore et al. BMJ (2017) 357:j2183, concluded that the diagnosis of early stage melanoma was not accurate after finding that 35% of slide interpretations for melanoma in situ or stage 1a melanomas by 187 pathologists received a false negative diagnosis as benign. With the prevalence of early stage melanoma in biopsied lesions at approximately 5%, the negative predictive value ranges from 75-89%.

According to several published papers, the real NPV of the visual assessment or surgical biopsy pathway is likely 80% to 85%. In a study by Malvehy et al., BJD (2014) 171:1099, 206 in situ and stage 1a (thickness less than 0.75 mm) melanomas were diagnosed with a sensitivity of 81% and a specificity of 10%. The prevalence of early melanoma in the study was about 10%, yielding an NPV of 83%.

	Current Pathway	PLA
Test Purpose	Rule-out melanoma	Rule-out melanoma
Type	Surgical biopsy/ histopathology	Non-invasive gene expression
NPV	83%	99%
Probability of Missed Mel	17%	1%
Number Needed to Biopsy	25	2.7
Number Needed to Excise	5.2	1.6
Cost per Lesion Tested	$947	$760

Table 2. Data summarized above compares the key performance metrics of the PLA versus the current pathway (visual assessment and surgical biopsy/histopathology) for managing pigmented skin lesions.

This low NPV for the current pathway is accompanied by a high number of unnecessary surgical procedures, again driven by the poor specificity of the visual assessment. The number of surgical biopsies needed to identify one melanoma averages 25 and ranges from eight to greater than 30 depending on the clinical setting. Further, the histopathologic review of biopsied lesions is extremely limited with 2% or less of the lesion sectioned and evaluated, leaving doubt as to what may be occurring in the rest of the lesion. Consequently, lesions that have cellular atypia and positive margins are often clinically managed conservatively and subjected to full excisions with margins. However, only 0.2% to less than 1.0% of lesions with atypia and positive margins that undergo excision are diagnostically upgraded, most commonly to a higher level of atypia and rarely to melanoma in situ, and such excisions can be considered unnecessary. Approximately 5.2 excisions with margins are performed per melanoma identified, emphasizing how the current pathway of surgical biopsy and limited histopathology assessment leads to more complex and invasive excisions.

Our Products

The PLA

The PLA is a gene expression test that helps rule out melanoma and the need for a surgical biopsy of atypical pigmented lesions. The performance of the PLA is supported by nine investigational studies, which enrolled over 6,000 patients and yielded 17 peer-reviewed publications in top rated medical dermatology journals. Key studies and manuscripts are summarized in Table 3 below. The PLA is based on a new platform technology for non-invasive genomic testing of the skin, which allows the molecular analysis of samples collected from adhesive patches. In contrast to the current pathway, the PLA has a very high NPV (greater than 99%) and high sensitivity (91-95%), ensuring a very low probability of missing melanoma. The PLA's high specificity (69-91%) effectively reduces the number of false positive samples undergoing histopathologic review. This improves the overall sensitivity of the pathway and greatly increases the NPV. The PLA's NPV is supported by a 12-month follow-up study of 734 patients, which demonstrated that no melanomas were missed in the 12-month period following initial testing. In the third quarter of 2019 we initiated the TRUST study, which will further examine long-term follow up of lesions previously tested negative by the PLA, and will incorporate repeat testing of the previously tested lesion. We expect this study to more definitively confirm the high NPV of the PLA test. In addition, the non-invasive sampling leads to a dramatic reduction in surgical biopsies and subsequent excisions. Consequently, our studies have shown that the number of surgical biopsies needed to find one melanoma using the PLA is markedly reduced by almost tenfold to approximately 2.7 and the number of excisions needed is reduced to 1.6. Our studies have shown that the PLA can reduce unnecessary surgical biopsies of lesions clinically suspicious for melanoma by 90%, which is consistent with a recent 2017 review of 18,715 biopsied pigmented lesions that found that approximately 90% of surgical biopsies to rule out melanoma are performed on pigmented lesions that are not melanoma. Non-invasive gene expression testing has been added to the most recent AAD melanoma guidelines as part of the initial clinical assessment for clinically concerning lesions. In addition, an independent expert committee has developed and published consensus use criteria for the PLA.

In the second quarter of 2020 we expect to introduce our second-generation PLA test (PLA *plus*). This second-generation test will add a TERT promoter mutation analysis to the current PLA gene expression test. TERT promoter mutations are associated with early stage melanoma and our validation testing against driver mutations showed in two publications that it can increase the sensitivity of the PLA to 97% with only a minor impact on specificity. Several other independent academic investigators have also shown that TERT promoter mutations have a high sensitivity and specificity for melanoma detection. With the addition of TERT to the PLA test we will phase out the Nevome product, which was a reflex confirmatory test offered for PLA positive tests.

Study	Status	Size (n)	Publication
Analytical Validation	Complete	125	Yao Z et al. Analytical characteristics of a noninvasive gene expression assay for pigmented skin lesions. *Assay Drug Dev Technol*. 2016;14(6):355-363.
Clinical Validation-Pathology	Complete	555	Gerami P et al. Development and validation of a noninvasive 2-gene molecular assay for cutaneous melanoma. *J Am Acad Dermatol*. 2017;76(1):114-120.e2.
Clinical Validation-Driver Mutations	Complete	626	Ferris L et al. Noninvasive analysis of high-risk driver mutations and gene expression profiles in primary cutaneous melanoma. *J Invest Dermatol*. 2019; 139(5):1127-1134.
Clinical Utility	Complete	45 Derms	*Ferris L et al. Utility of a noninvasive 2-gene molecular assay for cutaneous melanoma and effect on the decision to biopsy. JAMA Dermatol. 2017;153(7):675-680.*
Real-World Clinical Utility	Complete	381	Ferris L et al. Real-world performance and utility of a noninvasive gene expression assay to evaluate melanoma risk in pigmented lesions. *Melanoma Res*. 2018; 28(5):478-482.
1-Year Follow Up	Complete	734	Ferris L et al. Impact on clinical practice of a non-invasive gene expression melanoma rule-out test: 12-month follow-up of negative test results and utility data from a large US registry study. *Dermatology Online Journal*. 2019; 25(5).
Real-World Utility Registry	Complete	1575	Ferris L et al. Impact on clinical practice of a non-invasive gene expression melanoma rule-out test: 12-month follow-up of negative test results and utility data from a large US registry study. *Dermatology Online Journal*. 2019; 25(5).
Real-World Utility Registry (Extension)	Complete	3418	Brouha B et al. Real-world utility of a non-invasive gene expression test to rule out primary cutaneous melanoma: a large US registry study. *J Drugs Dermatol*. 2020; 19(3).
Adhesive Patch Validation	Complete	N/A	Yao Z et al. An adhesive patch-based skin biopsy device for molecular diagnostics and skin microbiome studies. *J Drugs Dermatol*. 2017; 16(10):611-618.
Association with Severe Atypia	Complete	103	Jackson Cullison S et al. Risk stratification of severely dysplastic nevi (SDN) by non-invasively obtained gene expression and mutation analyses. *American Academy of Dermatology, Annual Meeting* 2020; Abstract. Manuscript submitted.
Consensus Recommendations for PLA Use	Complete	N/A	Berman B et al. Appropriate use criteria for the integration of diagnostic and prognostic gene expression profile assays into the management of cutaneous malignant melanoma: an expert panel consensus-based modified Delphi process assessment. *SKIN The Journal of Cutaneous Medicine*. 2019; 3(5):291-306.
Health Economics	Complete	319	Hornberger J, Siegel D. Clinical and economic implications of a noninvasive molecular pathology assay for early detection of melanoma. *JAMA Dermatol*. 2018;154(9):1-8.
Genome Screen	Complete	202	Wachsman W et al., Noninvasive genomic detection of melanoma. *British Journal of Dermatology*. 2011; 164:797-806.

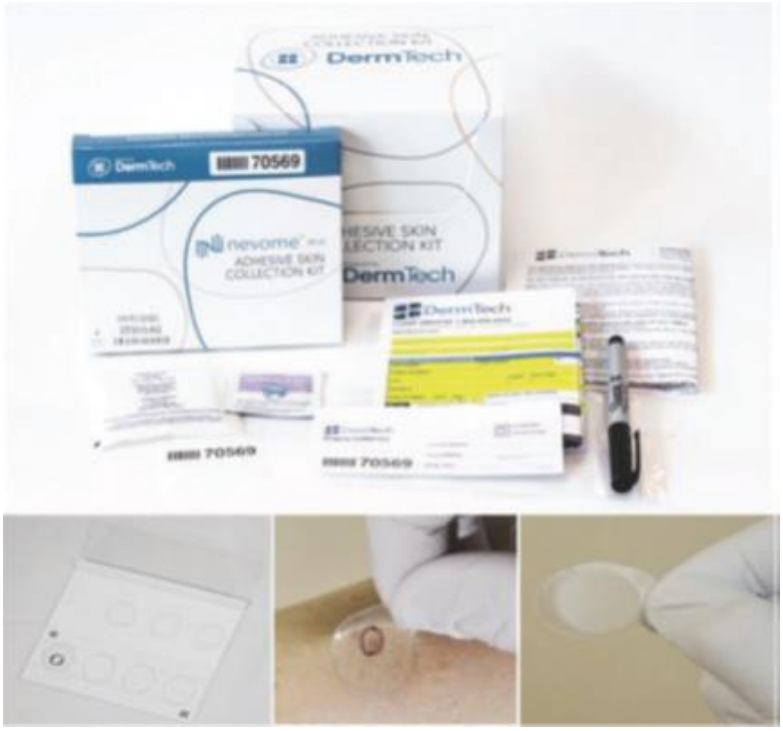
Table 3. Summarizes key clinical studies and publications supporting the PLA.

Nevome

Our Nevome test is an adjunctive reflex test for the PLA. It can be used with histopathology to identify additional risk factors for melanoma and confirm the diagnosis. Approximately 13% of our PLA tests are positive. Lesions that test positively for the PLA are subjected to surgical biopsy and histopathologic review. Due to significant challenges in diagnosing early stage melanoma by histopathology, additional information can be required to confirm the presence of melanoma and/or identify lesions with significant risk for melanoma that require wide excision. The Nevome test analyzes early stage melanoma driver mutations in the BRAF, NRAS, and TERT genes, providing additional information and risk factors in the lesion being assessed. The Nevome test utilizes the genomic material collected from the *initial* adhesive patch sample used for the PLA.

Adhesive Skin Sample Collection Kit

We are the inventor and owner of the intellectual property for the Adhesive Skin Sample Collection Kit (pictured below). We have contracted with a Food and Drug Administration, or FDA, registered supplier to produce our kit under applicable quality systems requirements, and we control the exclusive distribution rights for the kit. Our kit's adhesive patch allows for the collection of skin samples with minimal patient discomfort. A single kit contains all of the necessary components to complete the sample collection for our analysis, including the adhesive patches, instructions for use, a marking pen for lesion outlining, and a pre-addressed and prepaid return shipping pack. The unique properties of the adhesive maximizes the collection of informative cellular material for our PLA. The entire procedure for the kit's sample collection takes less than five minutes.



Clinical Research Products

Research on the genomic basis of diseases has increased significantly over the last decade. Genomic analysis can facilitate drug development by identifying drug targets and stratifying patients into groups that will maximize drug response. Genomic analysis is part of the effort to personalize medical therapy to patients' individual needs. Consequently, tools to facilitate this type of research are in high demand.

We offer a suite of products to facilitate clinical research using our technology platform. We have developed a proprietary process that allows us to extract genomic material from the patch with sufficient quality and quantity to perform gene expression, DNA mutation analysis, DNA methylation, and transcriptomic analyses. In addition, our platform can be utilized to assess the microbiome of the skin with superior performance to existing methods that use swabs. We have developed gene expression assays for the Th1, Th2, IFN-gamma, and Th17 inflammatory pathways. We market these assays to pharmaceutical companies developing drug products in dermatology. In addition, we develop custom gene assays to support development for these pharmaceutical partners. We have completed and have ongoing research collaborations with large pharmaceutical companies to facilitate their development of new targeted therapeutics in dermatology. Our technology platform has been deployed in Phase 1 through Phase 3 clinical programs. These efforts may also lead to the introduction of complementary and companion diagnostic products.

Leveraging Our Platform for Other Indications

We believe our adhesive patch gene expression platform is applicable to numerous other indications in dermatology. While we are focused initially on skin cancer products, we believe there are significant business development opportunities in other areas. We have undertaken a number of pilot development activities in inflammatory diseases, acne, and skin aging. This effort will also focus on potential licensing and partnering opportunities for the development of complementary and companion diagnostics for the pharmaceutical partners' drug product candidates, should they reach the commercial market. In addition, because the processing of samples is the same regardless of the disease indication, our development activities will leverage our laboratory operations.

Non-Melanoma Skin Cancer Diagnostic Products

To complement our melanoma rule-out product PLA, we are also utilizing our platform technology to develop products to rule-out non-melanoma skin cancer including squamous cell and basal cell carcinoma. We identified differentially expressed genes that allow the identification of these cancers, and we are currently conducting clinical validation trials. Nearly 4.5 million basal and squamous cell carcinoma skin cancers are diagnosed each year making skin cancer the most common of all types of cancer. The majority of these cancers occur in cosmetically sensitive areas such as the head, neck and face. The number of skin cancer cases is increasing due to better skin cancer detection, people living longer, and increased sun exposure.

More than 80% of skin cancers are basal cell carcinomas. These cancers usually develop in sun-exposed areas, especially the head and neck, and tend to grow slowly. It's very rare for a basal cell cancer to spread to other parts of the body. If left untreated, it can grow into nearby areas and invade other tissues beneath the skin. If not removed completely, basal cell carcinoma can recur in the same place on the skin. People who have had basal cell skin cancers are also more likely to get new ones in other places.

About 10% of skin cancers are squamous cell carcinomas. These cancers also commonly appear on sun-exposed areas of the body such as the face, ears, neck, lips, and backs of the hands. They can also develop in scars or chronic skin sores elsewhere. Squamous cell cancers are more likely to grow into deeper layers of skin and spread to other parts of the body than basal cell cancers, although this is still uncommon.

Non-Melanoma Skin Cancer Risk Assessment Product

We are developing a non-melanoma skin cancer risk assessment product. This product will assess non-melanoma skin cancer risk by genomic risk factors. Depending on the risk profile of a patient there are various treatment options to reduce the risk of future skin cancer including chemical peels, photodynamic therapy, laser therapy, topical pharmaceuticals, dietary supplements, and increased sunscreen use.

Inflammatory Indications

We have investigated gene expression profiles in atopic dermatitis and psoriasis. Responses to biologic therapy used in moderate to severe forms of these diseases can be variable and may wane over time. For example, only 30-40% of patients have a robust response to either anti-TNF alpha drugs used in psoriasis or the anti-IL-13 drugs used in atopic dermatitis. The low response rate of these drugs creates an unmet need for drug companion and complementary diagnostic products that identify responders to a specific therapy and that monitor responses over time.

Because atopic dermatitis and psoriasis are confined to the epidermis of the skin, blood-based biomarker tests are unreliable to test response to these drugs and biologics. Further, patients are unlikely to consent to repeated surgical biopsy procedures for the purposes of assessing therapy response. Our non-invasive genomics platform is therefore ideal for these types of conditions because it specifically samples tissue from the epidermis. Moreover, we have demonstrated in clinical studies that our platform is superior to surgical biopsy and blood testing for assessing biomarkers related to inflammatory diseases.

In our psoriasis research, for example, we have identified subsets of patients with different gene expression profiles. These different profiles may identify patients that respond more robustly to an expanding group of biologic therapies available for this condition. In addition, we have shown in a pilot clinical investigation that only subsets of patients with atopic dermatitis appear to have high gene expression levels of IL-13. The proportion of patients that are high expressers of IL-13 is approximately 40%, which is consistent with the response rate of approximately 30-40% to the anti-IL-13 drug dupilumab.

Microbiome Indications

The study of bacterial microbes that inhabit the skin and their relationship to health and disease has been the subject of intense investigation over the last several years. Numerous products are under development that seek to alter the composition and populations of these microbes for therapeutic purposes. We have demonstrated in development studies that our platform can be used to assess the genomics of skin microbes and that the quantity of microbial genomic material and the measurements of microbial variability are superior to the swab-based methods currently in use. In addition, our platform (which simultaneously and non-invasively collects skin host and microbiome samples) can separate and assess microbial populations at different depth levels in the epidermis.

Skin Health Indications

We have developed an expression profile that correlates with the age of the skin. Our profile could be used to stratify patients to a particular anti-aging treatment, to identify potential drug targets, and to assess the performance of different anti-aging treatments. Over $10 billion annually is spent in the United States on anti- aging topical treatments, creating a significant market opportunity for innovative treatments.

We have found over 300 genes that are differentially expressed between the skin of patients greater than 60 years old and those less than 30 years old. In a study of over 100 patients, a 16-gene expression profile could be used to stratify patients into 10-year increments. In addition, the profile demonstrated that some individuals show gene expression that is not consistent with their chronological age, and that is more typical of an older or younger person.

We have also conducted studies to assess skin damage due to ultraviolet radiation. We believe a future skin health expression profile product may allow patients to understand their degree of exposure to the sun, a risk factor for skin cancer. In addition, this product may help assess the effect of treatments aiming to reduce skin damage from sun exposure.

Acne

We have successfully isolated RNA from acne lesions on the face. In addition, we have successfully identified differences in gene expression between inflammatory and non-inflammatory acne. We believe our technology could be used to stratify patients for appropriate acne treatment and to assess therapeutic response.

Sales and Marketing

The vast majority of molecular diagnostic tests are sold to pathology and oncology practitioners. These markets are quickly becoming saturated with products, services, and sales calls. We believe that we have a unique opportunity as the first company to market a novel non-invasive molecular diagnostic test to dermatologists and other clinical practitioners of dermatology. We believe there are fewer barriers to adoption in this customer base than in other medical markets because our product fits within the current diagnostic and reimbursement pathway for various skin conditions.

We have established a highly experienced team of sales professionals possessing extensive backgrounds in selling dermatology products. Our Chief Commercial Officer spent 24 years at Allergan plc and rose to lead their dermatology and ophthalmology product sales for the entire United States. We expanded our specialty sales force in 2019 and plan to continue to expand our specialty sales force in 2020 as we secure reimbursement coverage from Medicare and commercial payors.

There are approximately 12,000 healthcare professionals specializing in dermatology in the United States. We segment these practices into three categories: primarily cosmetic practices (10-15%), mixed medical and cosmetic practices (50-75%), and medical only practices (15-25%). We focus much of our effort on practices that deliver some medical dermatology services. We have initially focused our selling activity on these accounts, which typically have a shorter adoption cycle. We recently completed a review of Medicare and commercial claims for melanoma skin biopsies. From this effort we have identified approximately 4,600 dermatology practitioners that perform the majority of biopsies for melanoma in the U.S. and that treat a majority of the Medicare population. We plan to target these practitioners and have designed our field sales territories around these practices.

We are also expanding our sales and marketing efforts with multi-site group practices and integrated dermatology networks. Multi-site group practices and large integrated dermatology networks make up approximately 25% and 15%, respectively, of the remaining dermatology market. We are actively working to integrate our PLA test in large dermatology networks in order to penetrate this market opportunity. As we continue to penetrate these group practices and large integrated networks, we have identified an opportunity to offer reference lab contracts for our PLA test as necessary depending on applicable federal and state regulations. In the reference lab model, the integrated dermatopathology laboratory will accession the PLA samples and bill for these samples, while paying us a contracted price. We believe this reference lab model will be most effective as our reimbursement coverage increases and payments for our tests become more routine.

A substantial portion of dermatology is practiced in primary care. We plan to access the primary care market by establishing distribution relationships with molecular testing companies that focus on this physician call point. These potential partners have 400-600 sales professionals in the aggregate who access the primary care market. We plan to pursue opportunities for distribution partnerships in the future.

Our marketing is focused on a mix of professional targeted campaigns including in person physician education, dermatology symposia, publication distribution, peer to peer education, consumer engagement and education campaigns including a mix of digital platforms. We participate as an exhibitor and sponsor at key dermatology conferences and will expand this effort to primary care conferences. We often submit scientific abstracts for presentation at the conferences we attend. Our KOLs speak on our behalf at various medical conferences, present data from our clinical studies, and chair continuing medical education courses on genomics in dermatology, which include our products.

Our sales and marketing strategy will leverage our extensive network of KOLs in the fields of dermatology, pathology, biostatistics, healthcare economics, and reimbursement. We use our experts to perform peer-to-peer education, to publish papers utilizing our tests, and to chair continuing medical education courses on genomics in dermatology and our products. These efforts extend to supporting our policy coverage review process with payors. Our KOL group includes four former AAD presidents and numerous melanoma experts.

We continuously expand and improve on the validation of our tests by conducting additional clinical trials, and we publish the results of our scientific and clinical work in peer-reviewed medical journals. Through these efforts, we elevated our positioning in the AAD guidelines and recent consensus group recommendations. We also utilize advertising in medical journals and social media campaigns to rally the extensive patient advocacy support that exists today for a variety of skin conditions and melanoma sufferers. Because dermatology practitioners often sell cosmetic procedures to their patients, they are very service oriented and responsive to their patient’s requests. We believe direct-to-consumer advertising will engage the patient to request our skin cancer assessment tests and allow us to capitalize on the unique non-invasive benefits our platform provides patients.

We have received Health Canada clearance for our platform and have established a non-exclusive licensing partner, DermTech Canada, for Canada. We are working with this partner to secure reimbursement coverage with various Canadian provinces. We plan to engage in the marketing of our product in other countries outside the United States only after we have established the United States and Canadian markets. We will focus our efforts in regions that have a high incidence of melanoma and skin cancers such as Australia and Western Europe. We will likely seek distribution partners in these select countries for the sales and marketing of our tests. While we have demonstrated that the stability of the skin samples collected with our adhesive patch-based sampling device is suitable for shipping from countries outside the United States, we will likely establish clinical laboratories or laboratory partnerships in some of these countries.

Reimbursement Strategy

In October 2019, the AMA issued the PLA Code. The PLA Code uniquely identifies our PLA for certain commercial payors to provide payment at a contracted rate. Contracted rates are negotiated and established based on multiple variables including the average allowed amounts under our current billing for CPT code 81401 claims, and the list price and the economic impact of the test. This PLA code was published online with an effective date of January 1, 2020 and is included in the CPT 2020 AMA publication. The genes that comprise our PLA test, LINC00518 and PRAME, were subject to review by the CPT coding editorial panel, including the molecular pathology subcommittee and the pathology coding caucus and the following medical societies and groups supporting the CPT code application:

1. American Academy of Dermatology
2. Society for Investigative Dermatology
3. American Society for Clinical Pathology

4. College of American Pathologists
5. American Society of Cytopathology
6. Pathology Coding Caucus
7. Molecular Pathology Advisory Group
8. United States and Canadian Academy of Pathology

We have developed in-house reimbursement capabilities, including claims submittal, appeals, collection, and contracting. Because we are currently out of network, our initial claims are commonly denied. In situations where payment is denied, we work through the claims appeals process to secure payment for services performed. The appeals process can require several cycles and can culminate in an independent committee review for blocks of claims. Currently, we are not routinely successful in winning appeal claims.

To improve our allowed claim rate and payment, we are seeking contractual relationships and reimbursement coverage policy decisions from third-party payors. Reimbursement coverage decisions for clinical tests are primarily supported by clinical utility studies. Clinical utility of a genomics test is established by demonstrating that the test result changes the behavior of the physician and improves the clinical outcome for the patient. In 2017, we completed a clinical utility study that demonstrated the PLA changes physician behavior, which leads to fewer unnecessary surgical biopsies and the identification of more early stage melanomas. In mid-2018, we completed a clinical utility study on real-world usage of the PLA. This study demonstrated that clinicians adhere to the recommendation of the PLA more than 98% of the time, and that the PLA significantly reduces surgical procedures and improves the diagnostic pathway for melanoma. In 2020, we also completed and published our largest clinical utility study of the PLA based on real-world commercial usage, which has collected data on over 3,418 commercial cases. This study has also demonstrated that clinicians follow the recommendation of the test more than 98% of the time, leading to the avoidance of unnecessary surgical diagnostic procedures. We believe our body of clinical evidence and utility will lead to securing coverage policies from the major commercial payors over the next 24 to 36 months. Our PLA test is being reviewed by key United States payors, including eviCore healthcare, LLC on behalf of their approximately 20 payor partners, and large payors such as Aetna Inc., Cigna Corporation, Humana Inc. and others.

For genomic-based tests, Medicare coverage is typically obtained through MolDX, which performs technology assessments for genomic tests. MolDX provides coverage policy decisions to Noridian Healthcare Solutions, LLC, our Medicare Administrative Contractor, and a successful coverage policy by MolDX effectively provides coverage for the genomic-based test across the United States. In March 2019, MolDX issued the PLA a favorable Draft LCD. In late October 2019, the AMA provided us with the PLA Code. Pricing of $760 for the PLA Code was published on December 24, 2019 as part of the CLFS for 2020. The Final LCD first made available on December 26, 2019 expanded the coverage proposal in the Draft LCD from one to two tests per date of service and to allow clinicians with sufficient skill and experience to decide whether a pigmented lesion should be biopsied to order PLA. PLA became eligible for Medicare reimbursement on February 10, 2020.

Competition

The molecular diagnostics market is highly competitive. We compete with a number of manufacturers and distributors of molecular diagnostic tests as well as new and traditional medical devices and other technologies that are used to assist physicians with the assessment of pigmented lesions and the diagnosis of skin cancer. We are currently the only company to offer a non-invasive genomics test to clinical dermatology professionals. However, LEO Pharma A/S, a large Danish pharmaceutical company, and Mindera Corporation, a small early stage start-up, are also working on minimally invasive genomic tests. In the area of pigmented lesions, Myriad Genetics, Inc. recently launched a gene expression assay as a CLIA laboratory test for surgical biopsy tissue specimens. Castle Biosciences, Inc. markets a product to determine metastatic potential in later stage melanoma by utilizing surgical tissue samples.

There are several companies that market or are developing medical devices and imaging tools to detect melanoma as skin cancer. In general, medical devices have capital equipment costs and maintenance requirements, do not integrate well into clinical practice, and do not have clear mechanisms to provide physician payment. Strata Sciences, Inc. owns the rights to Melafind, an FDA-approved device that utilizes varying wavelengths of light to capture lesion images at different depths and conducts an algorithmic image analysis to determine the degree of lesion disorganization and the need for biopsy. The clinical trials of this device demonstrated marginal improvement in the assessment of pigmented lesions, and the device has not been adopted in the United States largely due to its specificity of less than 10%, which hampered clinical use. SciBase AB is marketing an epidermal electrical impedance spectrometer to assess pigmented lesions. In 2018, this product received FDA approval. Verisante Technology, Inc. has received regulatory approval in Europe and Australia to market a device that uses real-time Raman spectroscopy to assess changes in the chemical composition of skin tissue. Welch-Allen, Inc. and various others manufacture dermatoscopes, which provide magnified views of a pigmented lesion during diagnosis. Caliber I.D. and others offer confocal microscopy solutions for enhanced imaging of pigmented skin lesions.

Research and Development

We have expertise in the development of gene expression profiles and other genomic analyses for the diagnosis of dermatologic disease. In addition, we have developed know-how related to the collection of skin samples using adhesives. We have also developed expertise in statistical programs and algorithms that are used to process gene expression data.

Our product development process involves several stages. The first stage involves a genome-wide screen for differential gene expression or screens for differences in mutations, methylation patterns, micro-RNAs and other factors. In case of gene expression, differentially expressed genes are then narrowed down to specific gene sets that categorize disease states. These genes sets are then validated by comparison to clinical reference standards to produce a clinical product. We have developed substantial expertise in designing and conducting clinical validation and utility studies.

We have identified additional gene targets that may further improve the performance of our PLA. The qPCR assays for these genes are under development and may be added to our platform in the future if their performance is validated in additional clinical studies. We plan to expand the use of our platform to include products to diagnose or support the diagnosis of non-melanoma skin cancers as well as a variety of inflammatory skin conditions. We have identified gene expression profiles for other conditions, such as psoriasis, atopic dermatitis, acne, and aging of the skin. Should we determine that there are viable market opportunities for products treating these conditions, we plan to consider developing gene expression tests for these conditions. Alternatively, we may seek development partners or licensing opportunities for these potential products.

Intellectual Property

We have developed a comprehensive portfolio of intellectual property, which includes five issued U.S. patents and six pending U.S. patent applications (three provisional and three non-provisional), several corresponding pending foreign patents and patent applications, and two pending PCT applications. Our intellectual property portfolio also includes trademark rights, trade secrets, and industry know-how. We believe our intellectual property adequately protects our technology and products, and that we may prevent others from developing products similar to ours.

U.S. Pat. No. 7,183,057 and its corresponding foreign counterpart patents in Australia, Canada, and Japan are directed to methods of using an adhesive to collect skin samples to quantitate RNA and determine disease or pathological state. U.S. Pat. No. 7,183,057 is not limited by specific species of RNA or by the use of specific types of adhesives. Subject to payment of all maintenance fees, U.S. Pat. No. 7,183,057 is expected to expire in 2024, unless the patent is disclaimed or rendered invalid by a court of competent jurisdiction or by the USPTO prior to the patent's expiration time. The patent is not encumbered by a licensing agreement or subject to any royalty payments.

Two of our issued U.S. patents, three of our pending U.S. patent applications, and the two PCT applications are directed to expression profiles and nucleic acid classifiers associated with various melanoma disease states. The issued patents in this area provide protection for our proprietary two-gene classifier for melanoma and also describe additional gene targets that we may add to the expression profile in the future. These issued patents are expected to expire in 2029 and 2030.

Counterpart foreign patent applications have been issued in what we believe to be the major foreign countries for melanoma. In addition to our core patent filings around our melanoma assay and our PLA, we have also filed patent applications in other areas including acne, inflammatory conditions of the skin, and age ranges of the skin. These applications are directed to methods for differentiating these conditions and include specific gene profiles and classifiers used in such assays.

The remaining two issued patents that we own are directed to methods that differ from, but are related to, our current and planned products. U.S. Pat. No. 7,297,480 is directed to non-invasive methods for detecting early stage melanoma in a skin sample of a human subject by detecting the level of Interleukin-1 RI RNA in the skin sample and is expected to expire in 2023. U.S. Pat. No. 7,989,165 is directed to non-invasive methods for isolating or detecting a protein from an epidermal sample of a human subject and is expected to expire in 2024.

Laboratory Operations

Our CLIA laboratory occupies approximately 6,000 square feet and is divided into an accession area, pre-qPCR-laboratory and post-qPCR-laboratory area as per CLIA standards. Access to all areas is controlled and requires gowning. The laboratories employ commercial state-of-the-art equipment including high-throughput qPCR machines. We use a laboratory information system to track all of our samples. We employ clinical laboratory scientists holding appropriate state licenses to perform the assay.

Our PLA assay utilizes qPCR techniques that requires the extraction and purification of genomic material from the skin adhered to adhesive patches. This extraction process is extremely challenging, and we have developed customized reagents and tools to provide suitable material yields reliably. Other steps of our process have been customized and have proprietary processes and procedures, but in general involve the three main steps set forth below:

- RNA extraction using our proprietary process to maximize the yields and quantity of RNA from the cells on the patch;
- reverse transcription, which converts the RNA into complementary DNA; and
- expression level quantification, using qPCR to determine the expression levels of the target genes in our expression profile.

After testing is complete, a written laboratory report is prepared and reviewed by our California-licensed and American Board of Medical Genetics and Genomics certified Laboratory Director. This report is made available to the ordering physician by Health Insurance Portability and Accountability Act, or HIPAA, compliant methods such as fax or via an internet portal. The reports are generated in industry-standard PDF format that allows for high definition figures to be reproduced clearly.

We continuously work to automate various steps in our test process. Much of this automation will come from purchasing and qualifying off-the-shelf and customized laboratory equipment such as liquid handlers and pipetting robots. We have developed a laser-cutting robot to automate the cutting of the lesion area circumscribed on the adhesive patch by the clinician. We expect these automation efforts to improve assay throughput by reducing processing time compared to manual processing, reducing the need for direct labor, and improving quality by reducing the potential for human error.

Third-Party Suppliers and Manufacturers

We are the owner of intellectual property for the Adhesive Skin Sample Collection Kit with our logo and have contracted with an FDA-registered supplier to produce our kits. This kit is considered a Class I FDA device and is exempt from FDA premarket notification requirements. This product is manufactured according to the FDA's applicable quality system manufacturing requirements. Our FDA registered supplier conducts the assembly and labeling of this kit. All of our suppliers are high-quality medical component and finished-product suppliers accustomed to working on high volume disposable FDA-regulated products. Our product has a shelf life tested to three years that allows us to build inventory to mitigate against disruptions.

Governmental Regulation

The services that we provide are regulated by federal, state and foreign governmental authorities. Failure to comply with the applicable laws and regulations can subject us to repayment of amounts previously paid to us, significant civil and criminal penalties, loss of licensure, certification, or accreditation, or exclusion from government health care programs.

Our Adhesive Skin Sample Collection Kit is a Class I FDA device and is manufactured by an FDA-registered supplier according to applicable regulations and is exempt from obtaining premarket approval or clearance by the FDA. The FDA could declare our Sample Collection Kit a Class II device. This would require us to submit an application for premarket clearance or approval, which may require us to develop additional clinical data to support premarket clearance or approval, which could come at substantial expense and could delay our commercialization effort.

We believe our qPCR gene expression assay is a laboratory developed test, or LDT, that is currently regulated under CLIA. While the FDA has asserted that it has authority to regulate LDTs it has generally exercised enforcement discretion and is not otherwise regulating most tests developed and performed within a single high complexity CLIA-certified laboratory. We have commercialized our test as an LDT and will process all tests in our single CLIA-certified central laboratory. We may at some time in the future seek FDA clearance or approval for our qPCR gene expression assay. We believe the data we have collected in the development of our LDT will support any FDA medical device clearance or approval process, but cannot guarantee that the FDA will find these data sufficient to support clearance or approval as a medical device under the applicable FDA regulations. This may require us to collect additional clinical data, which could come at substantial expense and could delay our commercialization effort.

CLIA and State Regulation of Laboratories

Clinical laboratories must hold certain federal, state, and local licenses, certifications, and permits to conduct business. Laboratories that perform testing on human specimens for the purpose of providing information for the diagnosis, prevention, or treatment of disease are subject to CLIA. CLIA requires such laboratories to be certified by the federal government and mandates compliance with various operational, personnel, facilities administration, quality, and proficiency testing requirements intended to ensure that testing services are accurate, reliable and timely. CLIA certification is also a prerequisite to be eligible to bill state and federal health care programs, as well as many private insurers, for laboratory testing services.

Standards for testing under CLIA vary based on the test and level of test complexity. Laboratories performing high complexity testing must comply with more stringent requirements than laboratories performing waived or moderate complexity testing. In addition, CLIA requires each certified laboratory to enroll in an approved proficiency-testing program if it performs testing in any category for which proficiency testing is required. Such laboratories must periodically test specimens received from an outside proficiency testing organization and then must submit the results back to that organization for evaluation. A laboratory that fails to achieve a passing score on a proficiency test may lose its right to perform testing in the category at issue. Further, failure to comply with other proficiency testing regulations, such as the prohibition on referral of a proficiency- testing specimen to another laboratory for analysis, can result in revocation of the referring laboratory's CLIA certification.

As a condition of CLIA certification, our laboratory is subject to survey and inspection every other year, in addition to being subject to additional unannounced inspections. The biennial survey is conducted by the Centers for Medicare and Medicaid Services, or CMS, a CMS agent (typically a state agency), or, if the laboratory holds a CLIA Certificate of Accreditation, a CMS-approved accreditation organization. We also obtained accreditation by the College of American Pathologists, or CAP, which is a CMS-approved accreditation organization.

Consequently, our laboratory must comply with all CLIA requirements as well as with any additional requirements imposed by CAP. In the first quarter of 2018, we also received our laboratory permit from New York State Department of Health, which has the most rigorous state licensing process for clinical diagnostic laboratories.

CLIA provides that a state may adopt laboratory regulations that are more stringent than those under federal law, and two states, New York and Washington, have met that standard and therefore substitute for the federal CLIA program. In addition, some, but not all, states require a separate state license or permit, which must be obtained in addition to a CLIA certificate, and some states require a laboratory doing business in its state to be licensed even if the laboratory is located in another state. Our laboratory is licensed by the appropriate state agencies in the states in which we do business, if such licensure is required. If a laboratory is out of compliance with state laws or regulations governing licensed laboratories, penalties for violation vary from state to state but may include suspension, limitation, revocation or annulment of the license, assessment of financial penalties or fines, or imprisonment. We believe that we are in material compliance with all applicable licensing laws and regulations.

We may become aware from time to time of other states that require out-of-state laboratories to obtain licensure to accept specimens from patients within the state, and other states may impose such requirements in the future. If we identify any other state with such requirements, or if we are contacted by any other state advising us of such requirements, we intend to follow all instructions from the state regulators regarding compliance with such requirements.

The FDA

Although the FDA has asserted that it has the authority to regulate LDTs that are validated by the developing laboratory and performed only by that laboratory, it has generally exercised enforcement discretion by not otherwise regulating most tests developed and performed within a single high complexity CLIA-certified laboratory. Nevertheless, the FDA has, for the past decade, been introducing proposals to end enforcement discretion and to bring LDTs clearly under existing FDA regulatory frameworks. In July 2010, the FDA held a two-day public meeting to obtain input from stakeholders on how it should apply its authority to implement a reasonable, risk-based, and effective regulatory framework for LDTs, including genetic tests. Subsequently, FDA issued draft guidance and a 2017 Discussion Paper to allow for further public discussion about an appropriate LDT oversight approach and to give congressional committees the opportunity to develop a legislative solution. Since 2017, Congress has been working on legislation to create an LDT and in vitro diagnostic regulatory framework that would be separate and distinct from the existing medical device regulatory framework. In August 2018, the FDA recommended changes to draft legislation that had been released by Congress in 2017. The agency's comments addressed the need for a requirement that new tests undergo FDA review to demonstrate analytical and clinical validity and suggested other changes to the draft language. FDA's recommendations, if included in enacted law, would give the FDA authority to revoke approval, request raw data, and take corrective action against test developers.

In December 2018, legislators released a discussion draft of a bill that incorporated many of FDA's suggestions and provided opportunities for additional stakeholders to also provide input on the proposed reform legislation. On March 5, 2020, U.S. Representatives Diana DeGette (D-CO) and Dr. Larry Bucshon (R-IN) formally introduced the long-awaited legislation, called the Verifying Accurate, Leading-edge IVCT Development (VALID) Act. An identical version of the bill was also introduced in the Senate and is sponsored by U.S. Senators Michael Bennet (D-CO) and Richard Burr (R-NC), demonstrating both bicameral and bipartisan support for the effort to overhaul how the FDA reviews and approves diagnostic tests going forward. The VALID Act would codify into law the term "in vitro clinical test" (IVCT), to create new medical product category separate from medical devices that includes products currently regulated as IVDs as well as LDTs. The VALID Act would also create a new system for labs and hospitals to use to submit their tests electronically to the FDA for approval, which is aimed at reducing the amount of time it takes for the agency to approve such tests, and establish a new program to expedite the development of diagnostic tests that can be used to address a current unmet need for patients. It is unclear whether the VALID Act would be passed by Congress in its current form or signed into law by the President. Until the FDA finalizes its regulatory position regarding LDTs, or the VALID Act or other legislation is passed reforming the federal government's regulation of LDTs, it is unknown how the FDA may regulate our tests in the future and what testing and data may be required to support any required clearance or approval.

If the FDA decides to regulate LDTs, such as our PLA or the Nevome test, as medical devices or under another regulatory framework such as the one proposed in the VALID Act, we will be subject to increased regulatory burdens. Any regulatory framework is likely to have premarket application requirements prohibiting commercialization without FDA authorization and controls regarding modification to the tests that may require further FDA submissions. The process would likely be costly and time-consuming. We cannot assure that our PLA, Nevome test, or any new tests that we may develop or new uses for our products that we develop will be cleared or approved by the FDA in a timely or cost-effective manner, if cleared or approved at all. Even if such tests are cleared or approved, the products may not be cleared or approved for all indications. This could significantly limit the market for that product and may adversely affect our results of operations.

The Adhesive Skin Sample Collection Kit we provide for collection and transport of skin samples from a healthcare provider to our clinical laboratory is a Class I medical device subject to FDA regulations, but is currently exempt from premarket review by the FDA and manufactured by a third party on our behalf. Class 1 products like our specimen collection kit are required to meet FDA's general controls for device products, including that they be manufactured in compliance with applicable Quality System Regulations for medical devices, adhere to device labeling requirements, and are listed with FDA upon commercial distribution, among other regulatory controls.

HIPAA and Other Privacy and Data Security Laws

HIPAA established for the first time comprehensive federal protection for the privacy and security of health information. The HIPAA standards apply to three types of organizations, or Covered Entities: health plans, healthcare clearing houses, and healthcare providers that conduct certain healthcare transactions electronically. Title II of HIPAA, the Administrative Simplification Act, contains provisions that address the privacy of health data, the security of health data, the standardization of identifying numbers used in the healthcare system and the standardization of certain healthcare transactions. The privacy regulations protect medical records and other protected health information by limiting their use and release, giving patients a variety of rights, including the right to access their medical records and limiting most disclosures of health information to the minimum amount necessary to accomplish an intended purpose. The HIPAA security standards require the implementation of administrative, physical, and technical safeguards and the adoption of written security policies and procedures. HIPAA requires Covered Entities to enter into business associate agreements with individuals or organizations who provide services to Covered Entities involving the use or disclosure of protected health information, also known as Business Associates.

On February 17, 2009, Congress enacted Subtitle D of the Health Information Technology for Economic and Clinical Health Act, or HITECH, provisions of the American Recovery and Reinvestment Act of 2009. HITECH amended HIPAA and, among other things, expanded and strengthened HIPAA, created new targets for enforcement, imposed new penalties for noncompliance and established new breach notification requirements for Covered Entities and Business Associates. Regulations implementing major provisions of HITECH were finalized on January 25, 2013 through publication of the HIPAA Omnibus Rule, or the Omnibus Rule. The Omnibus Rule contained significant changes for Covered Entities and Business Associates with respect to permitted uses and disclosures of Protected Health Information.

Under HITECH's breach notification requirements, Covered Entities must report breaches of protected health information that has not been encrypted or otherwise secured in accordance with guidance from the Secretary of the United States Department of Health and Human Services, or the Secretary. Required breach notices must be made as soon as is reasonably practicable, but no later than sixty days following discovery of the breach. Reports must be made to affected individuals and to the Secretary and in some cases, they must be reported through local and national media, depending on the size of the breach. We are currently subject to the HIPAA regulations as a Covered Entity and maintain an active compliance program. We are subject to audit under the United States Department of Health and Human Services' HITECH-mandated audit program. We may also be investigated in connection with a privacy or data security complaint. We are subject to prosecution and/or administrative enforcement and increased civil and criminal penalties for non-compliance, including a new, four- tiered system of monetary penalties adopted under HITECH. We are also subject to enforcement by state attorneys general who were given authority to enforce HIPAA under HITECH. To avoid penalties under the HITECH breach notification provisions, we must ensure that breaches of unsecured protected health information are promptly detected and reported within the company, so that we can make all required notifications to the government on a timely basis. However, even if we make required reports on a timely basis, we may still be subject to penalties for the underlying breach and at risk of significant reputational harm if we experience a large- scale data breach.

In addition to the federal privacy regulations, there are a number of state laws regarding the privacy and security of health information and personal data that are applicable to clinical laboratories. The compliance requirements of these laws, including additional breach reporting requirements, and the penalties for violation vary widely and new privacy and security laws in this area are evolving. For example, several states, such as California, have implemented comprehensive privacy laws and regulations. The California Confidentiality of Medical Information Act imposes restrictive requirements regulating the use and disclosure of health information and other personally identifiable information. In addition to fines and penalties imposed upon violators, some of these state laws also afford private rights of action to individuals who believe their personal information has been misused. California's patient privacy laws, for example, provide for penalties of up to $250,000 and permit injured parties to sue for damages. In addition to the California Confidentiality of Medical Information Act, California also recently enacted the California Consumer Privacy Act of 2018, or CCPA, which became effective January 1, 2020. The CCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the E.U. General Data Protection Regulation (described further below). The CCPA establishes a new privacy framework for covered businesses in the State of California, by creating an expanded definition of personal information, establishing new data privacy rights for consumers imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches.

Many states, such as Massachusetts, have also implemented genetic testing and privacy laws imposing specific patient consent requirements and requirements for protecting test results. The interplay of federal and state laws may be subject to varying interpretations by courts and government agencies, creating complex compliance issues for us and potentially exposing us to additional expense, adverse publicity and liability. Further, as regulatory focus on privacy issues continues to increase and laws and regulations concerning the protection of personal information expand and become more complex, these potential risks to our business could intensify.

The applicability and requirements of these laws and penalties for violations vary widely. We believe that we have taken the steps required of us to comply with health information privacy and security statutes and regulations in all jurisdictions, both state and federal. However, we may not be able to maintain compliance in all jurisdictions where we do business. Failure to maintain compliance, or changes in state or federal laws regarding privacy or security, could result in civil and/or criminal penalties and could have a material adverse effect on our business, financial condition, results of operation and cash flows.

We anticipate expanding our business internationally, which would implicate international laws governing the privacy of health information and personal data as well as restrictions on the cross-border transfer of these data. We currently receive samples from Canada and must comply with applicable Canadian federal and provincial laws. Compliance with these laws and with other international regulatory requirements is a complex, time and expense consuming endeavor. Our failure to comply could have a material adverse effect on our business, financial condition, results of operation and cash flows.

Federal and State Self-Referral Prohibitions

We are subject to the federal self-referral prohibitions, commonly known as the Stark Law or the Physician Self-Referral Law, and to similar state restrictions such as California's Physician Ownership and Referral Act, commonly known as PORA. Together these restrictions generally prohibit us from billing the Medicare or Medicaid program or any patient or commercial payor for a test when the physician ordering the test, or any member of such physician's immediate family, has an investment interest in or compensation arrangement with us, unless the arrangement meets an exception to the prohibition.

Both the Stark Law and PORA contain an exception for compensation paid to a physician for personal services rendered by the physician, provided that certain conditions are satisfied. We have compensation arrangements with a number of physicians for personal services, such as speaking engagements and specimen tissue preparation. We have structured these arrangements with terms intended to comply with the requirements of the personal services exception to the Stark Law and PORA. However, we cannot be certain that regulators would find these arrangements to be in compliance with the Stark Law, PORA or similar state laws.

Sanctions for a violation of the Stark Law include the following:

- denial of payment for the services provided in violation of the prohibition;
- refunds of amounts collected by an entity in violation of the Stark Law;
- a civil penalty of up to $25,372 (which reflects the annual inflation adjustment effective as of November 5, 2019) for each service arising out of the prohibited referral;
- exclusion from federal healthcare programs, including the Medicare and Medicaid programs; and
- a civil penalty of up to $169,153 (which reflects the annual inflation adjustment effective as of November 5, 2019) against parties that enter into a scheme to circumvent the Stark Law's prohibition.

These prohibitions apply regardless of the reasons for the financial relationship and the referral. No finding of intent to violate the Stark Law is required to commit a violation. In addition, knowing violations of the Stark Law may also serve as the basis for liability under the Federal False Claims Act.

Further, a violation of PORA is a misdemeanor and could result in civil penalties and criminal fines. Finally, other states have self-referral restrictions with which we have to comply that differ from those imposed by federal and California law. While we have attempted to comply with the Stark Law, PORA and similar laws of other states, it is possible that some of our financial arrangements with physicians could be subject to regulatory scrutiny at some point in the future, and we cannot provide an assurance that we will be found to be in compliance with these laws following any such regulatory review.

Federal and State Fraud and Abuse Laws

Because of the significant federal funding involved in Medicare and Medicaid, Congress and the states have enacted, and actively enforce, a number of laws to eliminate fraud and abuse in federal health care programs. Our business is subject to compliance with these laws. In March 2010, the Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Affordability Reconciliation Act, which we refer to collectively as the ACA, was enacted in the United States. The provisions of the ACA are effective on various dates. The ACA expanded the government's investigative and enforcement authority and increased the penalties for fraud and abuse, including amendments to both the federal anti-kickback law, or the Anti-Kickback Statute, and the False Claims Act, to make it easier to bring suit under these statutes. The ACA also allocated additional resources and tools for the government to police healthcare fraud, with expanded subpoena power for the United States Department of Health and Human Services, additional funding to investigate fraud and abuse across the healthcare system, and expanded use of recovery audit contractors for enforcement.

Anti-Kickback Statutes

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving, or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing, recommending or arranging for a good or service, for which payment may be made under a federal healthcare program such as Medicare or Medicaid.

The definition of "remuneration" has been broadly interpreted to include anything of value, including, for example, gifts, certain discounts, the furnishing of free supplies, equipment or services, credit arrangements, payment of cash, and waivers of payments. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of services covered by the federal health care programs, the statute has been violated. Penalties for violations include criminal penalties and civil sanctions such as fines, imprisonment, and possible exclusion from Medicare, Medicaid and other federal healthcare programs. In addition, some kickback allegations have been claimed to violate the federal False Claims Act, discussed in more detail below.

The Anti-Kickback Statute is broad and prohibits many arrangements and practices that are otherwise lawful in businesses outside of the healthcare industry. Recognizing that the Anti- Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements, Congress authorized the Office of Inspector General, or OIG, of the United States Department of Health and Human Services to issue a series of regulations known as "safe harbors." These safe harbors set forth provisions that, if all their applicable requirements are met, immunize the parties to the transaction or arrangement from prosecution under the Anti-Kickback Statute. The failure of a transaction or arrangement to fit precisely within one or more safe harbors does not necessarily mean that it is illegal or that prosecution will be pursued. However, transactions and business arrangements that do not fully satisfy an applicable safe harbor may result in increased scrutiny by government enforcement authorities such as OIG.

Many states have adopted laws similar to the Anti-Kickback Statute. Some of these state prohibitions apply to referral of recipients for healthcare items or services reimbursed by any source, not only the Medicare and Medicaid programs. In addition, in October 2018, the Eliminating Kickbacks in Recovery Act of 2018, or EKRA, was enacted as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act, or SUPPORT Act. EKRA is an all-payor anti-kickback law that makes it a criminal offense to pay any remuneration to induce referrals to, or in exchange for, patients using the services of a recovery home, a substance use clinical treatment facility, or laboratory. Although it appears that EKRA was intended to reach patient brokering and similar arrangements to induce patronage of substance use recovery and treatment, the language in EKRA is broadly written. Further, certain of EKRA's exceptions, such as the exception applicable to relationships with employees that effectively prohibits incentive compensation, are inconsistent with the Anti-Kickback Statute regulations, which permit payment of employee incentive compensation, a practice that is common in the industry. Significantly, EKRA permits the U.S. Department of Justice to issue regulations clarifying EKRA's exceptions or adding additional exceptions, but such regulations have not yet been issued. Laboratory industry stakeholders are reportedly seeking clarification regarding EKRA's scope and/or amendments to its language. Because EKRA is a new law, there is no agency guidance or court precedent to indicate how and to what extent it will be applied and enforced. We cannot assure you that our relationships with physicians, sales representatives, hospitals, customers, or any other party will not be subject to scrutiny or will survive regulatory challenge under such laws. If imposed for any reason, sanctions under the EKRA could have a negative effect on our business.

Government officials have focused their enforcement efforts on the marketing of healthcare services and products, among other activities, and recently have brought cases against companies, and certain individual sales, marketing, and executive personnel, for allegedly offering unlawful inducements to potential or existing customers in an attempt to procure their business.

Federal False Claims Act

Another development affecting the healthcare industry is the increased use of the federal False Claims Act, and in particular, action brought pursuant to the False Claims Act's "whistleblower" or "qui tam" provisions. The False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal healthcare program. The qui tam provisions of the False Claims Act allow a private individual to bring actions on behalf of the federal government alleging that the defendant has violated the False Claims Act and to share in any monetary recovery. In recent years, the number of suits brought against healthcare providers by private individuals has increased dramatically.

In addition, various states have enacted false claims law analogous to the False Claims Act, many of these state laws apply where a claim is submitted to any third-party payor and not merely a federal healthcare program.

When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties of between $5,500 and $11,000 for each separate instance of false claim, as set by statute. However, the civil penalty amounts are adjusted annually for inflation. For civil penalties assessed after January 29, 2018, whose associated violations occurred after November 2, 2015, the civil penalty amount ranges between $11,181 and $22,363 per claim.

There are many potential bases for liability under the False Claims Act. Liability arises, primarily, when an entity knowingly submits, or causes another to submit, a false claim for reimbursement to the federal government. The federal government has used the False Claims Act to assert liability on the basis of inadequate care, kick-backs, and other improper referrals, and improper use of Medicare numbers when detailing the provider of services, in addition to the more predictable allegations as to misrepresentations with respect to the services rendered. In addition, the federal government has prosecuted companies under the False Claims Act in connection with off-label promotion of products. Our future activities relating to the reporting of wholesale or estimated retail prices of our products, the reporting of discount and rebate information and other information affecting federal, state and third-party reimbursement of our products and the sale and marketing of our products may be subject to scrutiny under these laws.

While we are unaware of any current matters, we are unable to predict whether we will be subject to actions under the False Claims Act or a similar state law, or the impact of such actions. However, the costs of defending such claims, as well as any sanctions imposed, could significantly affect our financial performance.

Physician Sunshine Laws

The federal Physician Payments Sunshine Act imposes reporting requirements on manufacturers of certain devices, drugs and biologics for certain payments and transfers of value by them (and in some cases their distributors) to physicians, teaching hospitals and certain advanced non-physician health care practitioners, as well as ownership and investment interests held by physicians and their immediate family members. The reporting program (known as the Open Payments program) is administered by CMS. Because we manufacture our own LDTs solely for use by or within our own laboratory, we believe we are exempt from these reporting requirements. We may become subject to such reporting requirements under the terms of current CMS regulations, however, if the FDA requires us to obtain premarket clearance or approval for our tests.

Corporate Practice of Medicine

Numerous states have enacted laws, prohibiting business corporations, such as us, from practicing medicine and employing or engaging physicians to practice medicine, generally referred to as the prohibition against the corporate practice of medicine. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed physician. For example, California's Medical Board has indicated that determining the appropriate diagnostic tests for a particular condition and taking responsibility for the ultimate overall care of a patient, including providing treatment options available to the patient, constitutes the unlicensed practice of medicine if performed by an unlicensed person. Violation of these corporate practice of medicine laws may result in civil or criminal fines, as well as sanctions imposed against the business corporation and/or the professional through licensure proceedings. Typically, such laws are only applicable to entities with a physical presence in the applicable state.

Civil Monetary Penalties Law

The federal Civil Monetary Penalties Law, or the CMP Law, prohibits, among other things, (1) the offering or transfer of remuneration to a Medicare or state health care program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state health care program, unless an exception applies; (2) employing or contracting with an individual or entity that the provider knows or should know is excluded from participation in a federal health care program; (3) billing for services requested by an unlicensed physician or an excluded provider; and (4) billing for medically unnecessary services. The penalties for violating the CMP Law include exclusion, substantial fines, and payment of up to three times the amount billed, depending on the nature of the offense.

Reimbursement and Billing

Reimbursement and billing for diagnostic services is highly complex. Laboratories must bill various payors, such as commercial insurers, including managed care organizations, or MCO, as well as state and federal health care programs, such as Medicare and Medicaid, and each may have different billing requirements. Additionally, the audit requirements laboratories must meet to ensure compliance with applicable laws and regulations, as well as internal compliance policies and procedures, add further complexity to the billing process.

In April 2014, Congress passed the Protecting Access to Medicare Act of 2014, or PAMA, which included substantial changes to the way in which clinical laboratory services are paid under Medicare. Under PAMA, certain clinical laboratories are required to report between January 1, 2021 and March 31, 2021 to CMS commercial payor payment rates and volumes for their tests. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. Further, effective January 1, 2018 under PAMA, Medicare reimbursement for diagnostic tests will be based on the weighted- median of the payments made by commercial payors for these tests, rendering commercial payor payment levels even more significant. As a result, future Medicare payments may fluctuate more often and become subject to the willingness of commercial payors to recognize the value of diagnostic tests generally and any given test individually.

The impact of this new payment system on rates for our tests, including any current or future tests we may develop, is uncertain. We cannot predict whether or when these or other recently enacted healthcare initiatives will be implemented at the federal or state level or how any such legislation or regulation may affect us. For instance, the changes to reimbursement amounts paid by Medicare for tests such as ours based on the procedure set forth in PAMA could limit the prices we would be able to charge or the amount of available reimbursement for our tests, which would reduce our revenue. Additionally, these healthcare policy changes could be amended or additional healthcare initiatives could be implemented in the future.

Other Laws Applicable to Our Business

In some cases, we are prohibited from conducting certain tests without a certification of patient consent by the physician ordering the test.

In addition, we are subject to laws and regulations related to the protection of the environment, the health and safety of employees and the handling, transportation and disposal of medical specimens, infectious and hazardous waste, and radioactive materials. For example, the United States Occupational Safety and Health Administration, or OSHA, has established extensive requirements relating specifically to workplace safety for healthcare employers in the United States. This includes requirements to develop and implement multi-faceted programs to protect workers from exposure to blood-borne pathogens, such as HIV and hepatitis B and C, including preventing or minimizing any exposure through needle stick injuries. For purposes of transportation, some biological materials and laboratory supplies are classified as hazardous materials and are subject to regulation by one or more of the following agencies: the United States Department of Transportation, the United States Public Health Service, the United States Postal Service, and the International Air Transport Association. We generally use third-party vendors to dispose of regulated medical waste, hazardous waste, and radioactive materials and contractually requires them to comply with applicable laws and regulations.

Foreign Corrupt Practices Act

In general, the Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, prohibits offering to pay, paying, promising to pay, or authorizing the payment of money or anything of value to a foreign official in order to influence any act or decision of the foreign official in his or her official capacity or to secure any other improper advantage in order to obtain or retain business for or with, or in order to direct business to, any person. The prohibitions apply not only to payments made to “any foreign official,” but also those made to “any foreign political party or official thereof,” to “any candidate for foreign political office” or to any person, while knowing that all or a portion of the payment will be offered, given, or promised to anyone in any of the foregoing categories. “Foreign officials” under the FCPA include officers or employees of a department, agency, or instrumentality of a foreign government. The term “instrumentality” is broad and can include state-owned or state-controlled entities. Importantly, United States authorities deem most healthcare professionals and other employees of foreign hospitals, clinics, research facilities and medical schools in countries with public healthcare and/or public education systems to be “foreign officials” under the FCPA. When we interact with foreign healthcare professionals and researchers in testing and marketing our products abroad, we must have policies and procedures in place sufficient to prevent us and agents acting on our behalf from providing any bribe, gift or gratuity, including excessive or lavish meals, travel or entertainment in connection with marketing our products and services or securing required permits and approvals. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring us to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. We have a policy entitled “Anti-Bribery and Anti-Corruption” that seeks to fully comply with the FCPA.

Foreign Regulations

When we market our tests outside of the United States, we will be subject to foreign regulatory requirements governing laboratory licensure, human clinical testing, use of tissue, privacy and data security, and marketing approval for our tests. These requirements vary by jurisdiction, differ from those in the United States, and may require us to implement additional compliance measures or perform additional pre-clinical or clinical testing. In the European Union, we may be subject to newly enacted legislation that imposes requirements and restrictions on medical devices and in vitro diagnostics; that legislation will become effective in 2020 (for medical devices) and 2022 (for in vitro diagnostics). In addition, we will also be subject to the E.U. General Data Protection Regulation, or the GDPR, that significantly regulates the possession, use, and disclosure of personal information. In many countries outside of the United States, coverage, pricing, and reimbursement approvals are also required. We are also required to maintain accurate information and control over sales and distributors’ activities that may fall within the purview of the FCPA, our books and records provisions, and our anti-bribery provisions.

Employees

As of December 31, 2019, we had 64 employees, 60 of which were full-time employees, including five engaged in research and development, three in clinical operations, 11 in general and administrative, 13 in laboratory operations, and 28 in sales and marketing. We also engage consultants in various areas. None of our employees are represented by a labor union and we believe that our relationships with our employees and contractors are good.

Corporate and Other Information

We incorporated in the British Virgin Islands in 2015 and domesticated in the state of Delaware in 2019. DermTech Operations was incorporated in California in 1995 and reincorporated in the state of Delaware on May 15, 2014. Our principal offices are located at 11099 North Torrey Pines Road, Suite 100, La Jolla, California 92037. Our telephone number is (858) 450-4222 and our website address is www.dermtech.com. The information contained on, or that can be accessed through, our website is not a part of this report, and our reference to the address for our website is intended to be an inactive textual reference only.

Item 1A. Risk Factors

The Company is in a market environment that cannot be predicted and that involves significant risks, many of which are beyond our control. Before making a decision to invest in, hold or sell our common stock, stockholders and potential stockholders should carefully consider the risks and uncertainties described below, in addition to the other information contained in this report, as well as the other information we file with the SEC. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that case, the value of our common stock could decline and stockholders may lose all or part of their investment. Furthermore, additional risks and uncertainties of which we are currently unaware, or which we currently consider to be immaterial, could have a material adverse effect on our business, financial condition or results of operations.

Risks Related to Our Financial Condition and Capital Requirements

We are an emerging growth company with a history of net losses; we expect to incur net losses in the future and may never achieve profitability.

We have historically incurred substantial net losses in each year since our inception, including net losses of $19.7 million for the twelve months ended December 31, 2019. As of December 31, 2019, we had an accumulated deficit of $91.1 million.

We expect our losses to continue as a result of costs relating to ongoing R&D and for increased sales and marketing costs for existing and planned products. These losses have had, and will continue to have, an adverse effect on our working capital, total assets, and stockholders' equity. Because of the numerous risks and uncertainties associated with our commercialization efforts, we are unable to predict when we will become profitable, and we may never become profitable. Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our inability to achieve and then maintain profitability would negatively affect our business, financial condition, results of operations, and cash flows.

We have a limited operating history and we expect a number of factors to cause our operating results to fluctuate on a quarterly and annual basis, which may make our future performance difficult to predict.

We are an emerging molecular diagnostics company with a limited operating history. Our operations to date have been primarily focused on developing and market testing our technology. We have not obtained regulatory approvals from FDA for any of our tests as we operate a clinical laboratory under the CLIA guidelines and believe our tests are laboratory developed tests, or LDTs, that are not currently being regulated by the Food and Drug Administration, or FDA. Consequently, if regulatory approval is determined to be necessary, any predictions made about our future success or viability may not be as accurate as they could be if we had a longer operating history or more commercialized products. Our financial condition and operating results have varied significantly in the past and will continue to fluctuate from quarter-to-quarter or year-to-year due to a variety of factors, many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include other factors described elsewhere in this report and also include:

- our ability to obtain additional funding to develop and market our products and tests;
- the market adoption and demand for our tests;
- the existence of favorable or unfavorable clinical guidelines for our tests;
- the reimbursement of our tests by Medicare and commercial payors;
- our ability to obtain and maintain any necessary regulatory approval for any of our tests in the United States and foreign jurisdictions, if required;
- potential side effects of our tests that could delay or prevent commercialization, limit the use of any of our tests, or cause any of our commercialized tests to be taken off the market;
- our dependence on third-party suppliers and manufacturers, to supply or manufacture our specimen collection products;
- our ability to establish or maintain collaboration, licensing, or other arrangements;
- our ability to maintain and grow an effective sales and marketing infrastructure, either through the expansion of our commercial infrastructure or through strategic collaborations;
- competition from existing tests or new tests that may emerge;
- the ability of patients or healthcare providers to obtain coverage of or sufficient reimbursement for our tests;
- our ability to leverage our proprietary technology platform to discover and develop additional test candidates;

- our ability to successfully obtain, maintain, defend, and enforce intellectual property rights important to our business;
- our ability to attract and retain key personnel to manage our business effectively;
- our ability to build our finance infrastructure and improve our accounting systems and controls;
- potential product liability claims;
- potential liabilities associated with hazardous materials; and
- our ability to obtain and maintain adequate insurance policies.

Accordingly, the results of any quarterly or annual periods should not be relied upon as indications of future operating performance.

We expect to continue to incur increased costs as a result of operating as a public company and our management will be required to devote substantial time to compliance initiatives and corporate governance practices.

As a public company, we incur and expect to continue to incur additional significant legal, accounting and other expenses in relation to our status as a public reporting company. We expect that these expenses will further increase after we are no longer an "emerging growth company." We may need to hire additional accounting, finance and other personnel in connection with our continuing efforts to comply with the requirements of being a public company, and our management and other personnel will need to continue to devote a substantial amount of time towards maintaining compliance with these requirements. In addition, the Sarbanes-Oxley Act of 2002 and rules subsequently implemented by the SEC and The Nasdaq Stock Market LLC have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we will be required to furnish a report by our management on our internal controls over financial reporting, including an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. However, while we remain an "emerging growth company," we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. If we identify one or more material weaknesses, this could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements.

Our commercial success could be compromised if customers do not pay our invoices or if third-party payors, including managed care organizations and Medicare, do not provide coverage and reimbursement, breach, rescind, or modify their contracts or reimbursement policies, reimburse at a low rate, or delay payments for our current tests and our planned future tests.

Physicians, including dermatologists, may not order our PLA, our Nevome test, or our planned tests unless third-party payors, such as managed care organizations and government payors (e.g., Medicare and Medicaid), pay a substantial portion of the test price. Coverage and reimbursement by a third-party payor may depend on a number of factors, including a payor's determination that tests using our technologies are:

- not experimental or investigational;
- medically necessary;
- appropriate for the specific patient;
- cost-effective;
- supported by peer-reviewed publications; and
- included in clinical practice guidelines.

Uncertainty surrounds third-party payor reimbursement of any test incorporating new technology, including tests developed using our technologies. Technology assessments of new medical tests conducted by research centers and other entities may be disseminated to interested parties for informational purposes. Third-party payors and health care providers may use such technology assessments as grounds to deny coverage for a test or procedure. Technology assessments can include evaluation of clinical utility studies, which define how a test is used in a particular clinical setting or situation. In March 2019, the Draft LCD proposed coverage for the PLA. In late October 2019, the AMA provided us with the PLA Code. Pricing of $760 for the PLA Code was published on December 24, 2019 as part of the CLFS for 2020. The Final LCD was made available on December 26, 2019 and our PLA became eligible for Medicare reimbursement on February 10, 2020. Medicare does not currently cover our Nevome test.

Because each payor generally determines for its own enrollees or insured patients whether to cover or otherwise establish a policy to reimburse our tests, seeking payor approvals is a time-consuming and costly process. We cannot be certain that coverage for our current tests and our planned future tests will be provided in the future by additional third-party payors or that existing policy decisions or reimbursement levels will remain in place or be fulfilled under existing terms and provisions. In addition, the coding procedure used by all third-party payors with respect to establishing payment rates for various procedures, including our tests, is complex, does not currently adapt well to the genetic tests we perform and may not enable coverage or adequate reimbursement rates for our tests. If we cannot obtain or maintain coverage and reimbursement from private and governmental payors such as Medicare and Medicaid for our current tests, or new tests or test enhancements that we may develop in the future, our ability to generate revenues could be limited, which may have a material adverse effect on our financial condition, results of operations, and cash flows. Measures have been undertaken to reduce payment rates for and decrease utilization of the clinical laboratory testing generally, including PAMA, which has resulted in reduced rates on the CLFS. These reductions may also impact our PLA and Nevome test and may also impact tests we develop in the future. Because of the cost-trimming trends, third-party payors that cover and provide reimbursement for our tests and our planned tests may suspend, revoke, or discontinue coverage at any time, or may reduce the reimbursement rates payable to us. Any such action could have a negative impact on our revenues, which may have a material adverse effect on our financial condition, results of operations, and cash flows. Additionally, if we are not able to obtain sufficient clinical information in support of our tests, third-party payors could designate our tests as experimental or investigational and decline to cover and reimburse our tests because of this designation. As a result of these factors, obtaining approvals from third-party payors to cover our tests and establishing adequate reimbursement levels is an unpredictable, challenging, time-consuming, and costly process, and we may never be successful. Further, we have experienced in the past, and will likely experience in the future, delays and interruptions in the receipt of payments from third-party payors due to missing documentation and/or other issues, which could cause delay in recognizing our revenue.

Additionally, we are currently considered a “non-contracted provider” or “out of network” by most private third-party payors because we have not entered into a specific contract to provide tests to their insured patients at specified rates of reimbursement. If we were to become a contracted provider with one or more payors in the future, the amount of overall reimbursement we receive would likely decrease because we could be reimbursed less money per test performed at a contracted rate than at a non-contracted rate, which could have a negative impact on our revenues. Further, we pursue payment of patient co-payments, co-insurance and deductibles, but we typically do not collect substantial payments from patients and therefore experience overall loss to revenue as a result.

Billing and collections processing for our tests is complex and time-consuming, and any delay in transmitting and collecting claims could have an adverse effect on our revenue.

Billing for our tests is complex, time-consuming, and expensive. Depending on the billing arrangement and applicable law, we bill, or plan to bill, various different parties for our tests, including Medicare, Medicaid, insurance companies, and patients, all of which may have different billing requirements. We may face increased risk in our collection efforts due to the complexities of these billing requirements, including long collection cycles and lower collection rates, which could adversely affect our business, results of operations and financial condition.

Several factors make the billing process complex, including:

- differences between the list price for our tests and the reimbursement rates of payors;
- compliance with complex federal and state regulations related to billing government health care programs, including Medicare and Medicaid;
- disputes among payors as to which party is responsible for payment;
- differences in coverage among payors and the effect of patient co-payments or co-insurance;
- differences in information and billing requirements among payors;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

We are developing internal systems and procedures to handle these billing and collections functions and have engaged third parties to assist with some of these functions, but we will need to make significant efforts and expend substantial resources to further develop our systems and procedures to handle these aspects of our business. As a result, these billing complexities, along with the related uncertainty in obtaining payment for our tests, could negatively affect our revenue and cash flow, our ability to achieve or sustain profitability, and the consistency and comparability of our results of operations. In addition, if claims for our tests are not submitted to payors on a timely basis, or if we are required to switch to a different provider to handle our processing and collections functions, our revenue and business could be adversely affected.

We will need to raise additional capital to fund our existing operations, commercialize our products, and expand our operations.

As of December 31, 2019, our cash and cash equivalents totaled approximately $15.4 million. On February 28, 2020, we entered into a securities purchase agreement with certain institutional investors for a private placement, which closed on March 4, 2020, of our equity securities for aggregate gross proceeds of approximately $65.0 million, and net proceeds to the Company of approximately $60.0 million, after deducting estimated offering expenses payable by the Company. Based on our current business operations and the additional financing completed in March 2020, we believe our current cash and cash equivalents, will be sufficient to meet our anticipated cash requirements for at least the next twelve months. We intend to raise additional capital through equity offerings, debt financings, collaborations, or licensing arrangements in order to satisfy our anticipated liquidity requirements. We may also consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities, or for other reasons, including to:

- increase our efforts to drive market adoption of our tests and address competitive developments;
- fund research and development activities and efforts of commercializing future products;
- acquire, license, or invest in technologies;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our revenue growth rate and ability to generate cash flows from operating activities;
- our sales and marketing and R&D activities;
- effects of competing technological and market developments;
- costs of and potential delays in product development;
- changes in regulatory oversight applicable to our tests; and
- timing of and costs related to future international expansion.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders could result. Any equity securities issued also could provide for rights, preferences, or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences, and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our platform technologies or products, or grant licenses on terms that are not favorable to us. Additional equity or debt financing might not be available on reasonable terms, if at all. If we cannot secure additional funding when needed, we may have to delay, reduce the scope of, or eliminate one or more R&D programs or sales and marketing initiatives. In addition, we may have to work with a partner on one or more of our development programs, which could lower the economic value of those programs to us. We will also need to raise additional capital to expand our business to meet our long-term business objectives. Additional financing may be from the sale of equity or convertible or other debt securities in a public or private offering, from a credit facility or strategic partnership coupled with an investment in us, or a combination of both. For further discussion of our liquidity requirements as they relate to our long-term plans, see the section entitled "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources*."

If physicians, including dermatologists, decide not to order the PLA, the Nevome test, or our future tests, we may be unable to generate sufficient revenue to sustain our business.

To generate demand for our current tests and our planned tests, we will need to educate dermatologists and other health care professionals on the clinical utility, benefits, and value of the tests we provide through published papers, presentations at scientific conferences, educational programs, and one-on-one education sessions by members of our sales force. In addition, we need to assure dermatologists of their ability to obtain and maintain adequate reimbursement coverage from third-party payors for the adhesive patch sample collection method. Medical professionals are influenced by standard-setting bodies that influence and/or dictate the standard of care. If we are not successful in changing current guidelines from legacy standards to new molecular-based approaches our market adoption will suffer. If we cannot convince medical practitioners to order our current tests and our planned tests, we will likely be unable to create demand in sufficient volume for us to achieve profitability or meet our anticipated revenue projections.

We expect to continue to incur significant expenses to develop and market our tests, which could make it difficult for us to achieve and sustain profitability.

In recent years, we have incurred significant costs in connection with the development of our tests. For the twelve months ended December 31, 2019, our R&D expenses were $2.5 million, our sales and marketing expenses were $6.3 million and our general and administrative expenses were $8.9 million. For the year ended December 31, 2018, our R&D expenses were $2.1 million, our sales and marketing expenses were $2.8 million and our general and administrative expenses were $3.5 million. We expect our expenses to continue to increase for the foreseeable future as we conduct studies of our current tests and our planned other tests, grow our sales and marketing organization, drive adoption of and reimbursement for our tests, and develops new tests. As a result, we need to generate significant revenues in order to achieve profitability.

We may not be able to generate sufficient revenue from the commercialization of PLA or the Nevome test, or successfully develop and commercialize other tests to achieve or sustain profitability.

We launched the PLA assay during the first half of 2016. We launched the Nevome test, in 2018. We are in varying stages of R&D for other tests that we may offer in the future. We believe that our commercialization success is dependent upon our ability to significantly increase the number of customers who are using our tests. In addition, demand for our tests may not increase as quickly as planned and we may be unable to increase our revenue levels as expected. We are currently not profitable. Even if we succeed in increasing adoption of PLA or the Nevome test by dermatologists, in maintaining and creating relationships with our existing and new customers, and developing and commercializing additional molecular diagnostic testing products, we may not be able to generate sufficient revenue to achieve or sustain profitability.

If we are unable to execute our marketing strategy for PLA or the Nevome test and are unable to gain acceptance in the market, we may be unable to generate sufficient revenue to sustain our business.

Although we believe that our current tests and planned future tests represent a promising commercial opportunity, our tests may never gain significant acceptance in the marketplace and therefore may never generate substantial revenue or profits for us. We will need to establish a market for our tests and build that market through physician education, awareness programs, and the publication of clinical trial results. Gaining acceptance in medical communities requires publication in leading peer-reviewed journals of results from studies using our current tests and/or our planned future tests. The process of publication in leading medical journals is subject to a peer-review process, and peer-reviewers may not consider the results of our studies sufficiently novel or worthy of publication. Failure to have our studies published in peer-reviewed journals would limit the adoption of our current tests and our planned tests.

Our ability to successfully market the tests that we develop will depend on numerous factors, including:

- conducting clinical utility studies of such tests in collaboration with key thought leaders to demonstrate their use and value in important medical decisions such as treatment selection;
- the success of our sales force;
- whether health care providers believe such tests provide clinical utility;
- whether the medical community accepts that such tests are sufficiently sensitive and specific to be meaningful in-patient care and treatment decisions; and
- whether health insurers, government health care programs, and other third-party payors will cover and pay for such tests and, if so, whether they will adequately reimburse us.

Failure to achieve widespread market acceptance of our current tests and our planned future tests would materially harm our business, financial condition, and results of operations.

If we cannot develop tests to keep pace with rapid advances in technology, medicine and science, our operating results and competitive position could be harmed.

In recent years, there have been numerous advances in technologies relating to the molecular diagnosis for cancer and other medical conditions. Several new cancer drugs have been approved, including several for melanoma, and a number of new drugs in clinical development may increase patient survival time. There have also been advances in methods used to identify patients likely to benefit from these drugs based on analysis of biomarkers. We must continuously develop new tests and enhance any existing tests to keep pace with evolving standards of care. Our current tests and our planned tests could become obsolete unless we continually innovate and expand them to demonstrate benefit in the diagnosis, monitoring, or prognosis of patients with cancer and other dermatologic conditions. If we cannot adequately demonstrate the applicability of our current tests and our planned future tests to new diagnostic and treatment developments, sales of our tests could decline, which would have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our future success will depend in part upon our ability to enhance PLA and the Nevome test, and to develop, introduce, and commercialize other novel innovative and non-invasive diagnostics tests and services. New test development involves a lengthy and complex process and we may be unable to commercialize new or improved tests or any other products we may develop on a timely basis, or at all.

Our future success will depend in part upon our ability to enhance PLA and the Nevome test, and to develop new innovative products. Our failure to successfully develop new products on a timely basis could have a material adverse effect on our revenue, results of operations, and business.

The development of new or enhanced tests is a complex and uncertain process requiring precise technological execution. In addition, the successful development of new products may depend on the development of new technologies. We may be required to undertake time-consuming and costly development activities. We may experience difficulties that could delay or prevent the successful development, commercialization, and marketing of these new products. Before we can commercialize any new products, we will need to expend significant funds in order to conduct substantial R&D, including validation studies.

Our product development process involves a high degree of risk, and product development efforts may fail for many reasons, including a failure to demonstrate the performance of the product or an inability to obtain any required certification or regulatory approval, if required.

As we develop new test and other products, we will have to make significant investments in product development, as well as sales and marketing resources. In addition, competitors may develop and commercialize competing products faster than we are able to do so, which could have a material adverse effect on our revenue, results of operations and business.

We rely on a limited number of suppliers and, in some cases, a single supplier, for certain of our laboratory substances, equipment and other materials, and any delays or difficulties securing these materials could disrupt our laboratory operations and materially harm our business.

We rely on a limited number of suppliers for certain of our laboratory substances, including reagents, as well as for the sequencers and various other equipment and materials we use in our laboratory operations. In particular, we rely on Fisher Scientific and VWR for supplies and Adhesive Research for our adhesive tape material. We do not have long-term agreements with any of our suppliers and, as a result, they could cease supplying these materials and equipment to us at any time due to an inability to reach agreement with us on supply terms, disruptions in their operations, a determination to pursue other activities or lines of business, or for other reasons, or they could fail to provide us with sufficient quantities of materials that meet our specifications. Transitioning to a new supplier or locating a temporary substitute, if any are available, would be time-consuming and expensive, could result in interruptions in or otherwise affect the performance specifications of our laboratory operations, or could require that we revalidate our tests. In addition, the use of equipment or materials provided by a replacement supplier could require us to alter our laboratory operations and procedures. Moreover, we believe there are currently only a few manufacturers that are capable of supplying and servicing some of the equipment and other materials necessary for our laboratory operations, including sequencers and various associated reagents. As a result, replacement equipment and materials that meet our quality control and performance requirements may not be available on reasonable terms, in a timely manner or at all. If we encounter delays or difficulties securing, reconfiguring or revalidating the equipment, reagents and other materials we require for our tests, our operations could be materially disrupted and our business, financial condition, results of operations, and reputation could be adversely affected.

Our tests employ a novel diagnostic platform and may never be accepted by their intended markets.

Our future success depends on our ability to successfully commercialize PLA and the Nevome test, as well as our ability to develop and market other tests that use our proprietary technology platform. The scientific discoveries that form the basis of our proprietary technology platform and our tests are relatively new. We are not aware of any other gene expression tests such as ours and there can be no assurance that physicians will be willing to use them. If we do not successfully develop and commercialize our tests based upon our technological approach, we may not become profitable and the value of our common stock may decline.

The novel nature of our tests also means that fewer people are trained in or experienced with products of this type, which may make it difficult to find, hire, and retain capable personnel for research, development, and clinical laboratory positions.

Further, our focus solely on gene expression tests, as opposed to multiple, more proven technologies for patient diagnosis, increases the risks associated with the ownership of our common stock. If we do not achieve market acceptance for our tests, we may be required to change the scope and direction of our product development activities. In that case, we may not be able to identify and implement successfully an alternative product development strategy.

If our current tests and our planned tests do not to perform as expected, as a result of human error or otherwise, it could have a material adverse effect on our operating results, reputation, and business.

Our success depends on the market's confidence that we can provide reliable, high-quality diagnostic results. There is no guarantee that any accuracy we have demonstrated to date will continue, particularly as the number of tests using our assays increases and as the number of different tests that we develop and commercialize expands. We believe that our customers are likely to be particularly sensitive to test defects and errors. As a result, the failure of our current or planned tests to perform as expected could significantly impair our reputation and the public image of our tests. As a result, the failure or perceived failure of our products to perform as expected could have a material adverse effect on our business, financial condition, results of operation and cash flows.

We may be unable to manage our future growth effectively, which could make it difficult to execute our business strategy.

As part of our strategy, we expect to increase our number of employees as our business grows. This future growth could create strain on our organizational, administrative, and operational infrastructure, including laboratory operations, quality control, customer service, and sales and marketing. Our ability to manage our growth properly will require us to continue to improve our operational, financial, and management controls, as well as our reporting systems and procedures. If our current infrastructure is unable to handle our growth, we may need to further expand our infrastructure and staff and implement new reporting systems. The time and resources required to implement such expansion and systems could adversely affect our operations. Our expected future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain, and integrate additional employees. Our future financial performance and our ability to commercialize our products and to compete effectively will depend, in part, on our ability to manage this potential future growth effectively, without compromising quality.

If our sole laboratory facility becomes damaged or inoperable, or we are required to vacate the facility, our ability to sell and provide molecular tests and pursue our R&D efforts may be jeopardized.

We do not have any clinical reference laboratory facilities outside of our facility in La Jolla, California. Our facilities and equipment could be harmed or rendered inoperable by natural or man-made disasters, including fire, earthquake, flooding, and power outages, which may render it difficult or impossible for us to perform our diagnostic tests for some period of time. The inability to perform our current tests, our planned tests, or the backlog of tests that could develop if our facility is inoperable for even a short period of time may result in the loss of customers or harm to our reputation or relationships with scientific or clinical collaborators, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment we use to perform our R&D work could be costly and time-consuming to repair or replace.

The San Diego area has recently experienced serious fires and power outages, and is considered to lie in an area with earthquake risk.

Additionally, a key component of our R&D process involves using biological samples as the basis for the development of our diagnostic tests. In some cases, these samples are difficult to obtain. If the parts of our laboratory facility where we store these biological samples were damaged or compromised, our ability to pursue our R&D projects, as well as our reputation, could be jeopardized. We carry insurance for damage to our property and the disruption of our business, but this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Further, if our CLIA certified laboratory became inoperable we may not be able to license or transfer our technology to another facility with the necessary state licensure and CLIA certification under which our current tests and our planned future tests could be performed. Even if we find a facility with such qualifications to perform our tests, it may not be available to us on commercially reasonable terms. In addition, the use of a third-party laboratory to perform our tests could affect their classification as LDTs and require us to seek FDA market authorization for the tests prior to the completion of such a transfer.

If we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenues or achieve and sustain profitability.

Our principal competition comes from mainstream clinical diagnostic methods, used by dermatologists for many years, which focus on visual tumor tissue analysis. It may be difficult to change the methods or behavior of dermatologists to incorporate our PLA, Nevome test, and Adhesive Skin Sample Collection Kits into their practices in conjunction with, or instead of, tissue biopsies and analysis. In addition, companies offering capital equipment and kits or reagents to local dermatologists represent another source of potential competition. These tests are used directly by the dermatologists, which can facilitate adoption. We plan to focus our marketing and sales efforts on medical dermatologists rather than pathologists.

We also face competition from companies that offer device products or are conducting research to develop device products for analysis of pigmented lesions. In particular, MELA Sciences, Inc., used to market its MelaFind® device to dermatologists, but we believe they no longer actively market this product. Scibase AB and Verisante Technology, Inc. have devices under development and may market their medical products directly to dermatologists if and when they obtain FDA approval. In addition to these companies, our competitors also include other device companies selling photographic technologies, whole body photography services, dermatoscopes, or confocal microscopy, such as Fotofinder, Molemate, Canfield Scientific, MedX, and Caliber I.D. Many of these groups, in addition to operating R&D laboratories, are selling equipment and devices.

In addition to these device companies, Myriad Genetics, Inc., offers an expression test for melanoma that is used on surgical biopsy specimens. Myriad Genetics, Inc. could also try and market their test as a biopsy aid at the point-of-care. Gene expression testing is a relatively new area of science, especially in dermatology and we cannot predict what tests others will develop that may compete with or provide results similar or superior to the results we are able to achieve with the tests we develop. There are a number of companies that are focused on the oncology diagnostic market and expression tests including Exact Sciences Corporation, Veracyte, Inc., Genomic Health, Inc. and others.

Additionally, projects related to cancer diagnostics and particularly genomics have received increased government funding, both in the United States and internationally. As more information regarding cancer genomics becomes available to the public, we anticipate that more products aimed at analyzing pigmented lesions and identifying melanoma may be developed and that these products may compete with ours. In addition, competitors may develop their own versions of our current or planned tests in countries where we did not apply for patents or where our patents have not issued or have expired and may compete with us in those countries, including encouraging the use of their test by physicians or patients in other countries. In addition, one or more competitors may seek to invalidate or render unenforceable any of our patents in a court of competent jurisdiction or at the United States Patent and Trademark Office, or USPTO. If any such proceeding were to be successful and result in the invalidation or unenforceability of one or more patents in our intellectual property portfolio, we may be unable to prevent unlicensed third-party competition in the marketplace with respect to our current and planned future tests.

Some of our present and potential competitors have widespread brand recognition and substantially greater financial and technical resources and development, production, and marketing capabilities than we do. Others may develop lower-priced, less complex tests that payors and dermatologists could view as functionally equivalent to our current or planned tests, which could force us to lower the list price of our tests and impact our operating margins and ability to achieve and maintain profitability. In addition, technological innovations that result in the creation of enhanced diagnostic tools that are more sensitive or specific than ours may enable other clinical laboratories, hospitals, physicians, or medical providers to provide specialized diagnostic tests similar to ours in a more patient-friendly, efficient, or cost-effective manner than is currently possible. If we cannot compete successfully against current or future competitors, we may be unable to increase or create market acceptance and sales of our current or planned tests, which could prevent us from increasing or sustaining our revenues or achieving or sustaining profitability.

Our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements. We anticipate that we will face increased competition in the future as existing companies and competitors develop new or improved products and distribution strategies and as new companies enter the market with new technologies and distribution strategies. We may not be able to compete effectively against these organizations. Our ability to compete successfully and to increase our market share is dependent upon our reputation for providing responsive, professional, and high-quality products and services and achieving strong customer satisfaction. Increased competition in the future could adversely affect our revenue, revenue growth rate, if any, margins and market share.

If we are unable to identify collaborators willing to work with us to conduct clinical utility studies, or the results of those studies do not demonstrate that a test provides clinically meaningful information and value, commercial adoption of our tests may be slow, which would negatively impact our business.

We believe clinical utility studies will show how the PLA and the Nevome test changes the decision-making of the dermatologist toward making a surgical biopsy decision, particularly to avoid performing a surgical biopsy when the test is negative. Clinical utility studies also show the impact of the test results on patient care and management. Clinical utility studies are typically performed with collaborating dermatologists at medical centers and hospitals, analogous to a clinical trial, and generally result in peer-reviewed publications.

We are currently conducting a variety of clinical trials for the PLA and other non-melanoma tests with investigators at multiple sites in the U.S. We will need to conduct additional studies for these tests, as well as other tests we may offer in the future, to drive test adoption in the marketplace and reimbursement. Should we not be able to perform these studies, or should their results not provide clinically meaningful data and value for physicians, including dermatologists and oncologists, adoption of our tests could be impaired and we may not be able to obtain reimbursement for them.

We are undergoing a management transition.

We have recently added new executives including a Chief Commercial Officer, Chief Financial Officer, Chief Operating Officer and Senior Vice President of Payor Access. Our management reporting structure may continue to change. Such a management transition subjects us to a number of risks, including risks pertaining to coordination of responsibilities and tasks, creation of new management systems and processes, differences in management style, effects on corporate culture, and the need for transfer of historical knowledge. In addition, our operations will be adversely affected if our management does not work together harmoniously, efficiently allocate responsibilities between themselves, or implement and abide by effective controls.

The loss of key members of our executive management team could adversely affect our business.

Our success in implementing our business strategy depends largely on the skills, experience, and performance of key members of our executive management team and others in key management positions, including John Dobak, M.D., the Company’s Chief Executive Officer. The collective efforts of our executive management team are critical to us as we continue to develop our technologies, tests, and R&D and sales programs. As a result of the difficulty in locating qualified new management, the loss or incapacity of existing members of our executive management team could adversely affect our operations. If we were to lose one or more of these key employees, we could experience difficulties in finding qualified successors, competing effectively, developing our technologies, and implementing our business strategy. Our Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, Chief Commercial Officer, Chief Medical Officer, and Chief Scientific Officer have employment agreements; however, the existence of an employment agreement does not guarantee retention of members of our executive management team and we may not be able to retain those individuals for the duration of or beyond the end of their respective terms. We do not maintain “key person” life insurance on any of our employees.

In addition, we rely on collaborators, consultants, and advisors, including scientific and clinical advisors, to assist us in formulating our R&D commercialization strategy. Our collaborators, consultants, and advisors are generally employed by employers other than us and may have commitments under agreements with other entities that may limit their availability to us.

The loss of a key employee, the failure of a key employee to perform in his or her current position, or our inability to attract and retain skilled employees could result in our inability to continue to grow our business or to implement our business strategy.

Most of our management has limited experience in operating a public company.

Most of our management team has limited experience in the management of a publicly traded company. Our management team may not successfully or effectively manage our transition to operating as a public company that is subject to significant regulatory oversight and reporting obligations under federal securities laws. Our limited experience in dealing with the increasingly complex laws pertaining to public companies could be a significant disadvantage in that it is likely that an increasing amount of our time may be devoted to these activities which will result in less time being devoted to the management and growth of the Company. It is possible that we will be required to expand our employee base and hire additional employees to support our operations as a public company which will increase our operating costs in future periods.

There is a scarcity of experienced professionals in our industry. If we are not able to retain and recruit personnel with the requisite technical skills, we may be unable to successfully execute our business strategy.

The specialized nature of our industry results in an inherent scarcity of experienced personnel in the field. Our future success depends upon our ability to attract and retain highly skilled personnel, including scientific, technical, laboratory, sales, marketing, business, regulatory, and administrative personnel necessary to support our anticipated growth, develop our business, and perform certain contractual obligations. Given the scarcity of professionals with the scientific knowledge that we require and the competition for qualified personnel among life science businesses, we may not succeed in attracting or retaining the personnel we require to continue and grow our operations.

Our inability to attract, hire, and retain a sufficient number of qualified sales professionals would hamper our ability to launch and increase demand for our PLA, to expand geographically, and to successfully commercialize any other tests or products we may develop.

To succeed in selling our PLA, and any other tests or products that we are able to develop, we must expand our sales force in the United States and/or internationally by recruiting sales representatives with extensive experience in dermatology and close relationships with medical dermatologists, dermatopathologists, and other hospital personnel. To achieve our marketing and sales goals, we will need to substantially build our sales and commercial infrastructure, with which to date we have had little experience. Sales professionals with the necessary technical and business qualifications are in high demand, and there is a risk that we may be unable to attract, hire, and retain the number of sales professionals with the right qualifications, scientific backgrounds, and relationships with decision-makers and potential customers needed to achieve our sales goals. We expect to face competition from other companies in our industry, some of whom are much larger than us and who can pay greater compensation and benefits than we can, in seeking to attract and retain qualified sales and marketing employees. If we are unable to hire and retain qualified sales and marketing personnel, our business will suffer.

We may encounter manufacturing problems or delays that could result in lost revenue.

The Adhesive Skin Sample Collection Kits we distribute are manufactured by a third-party supplier. This manufacturer assembles several components, including the key adhesive patch trifold, into a finished product, then labels, stores, and ships this finished product. The adhesive tape subcomponent of the adhesive patches is provided by a single-source third party. This tape is assembled into the individual adhesive patches by another third-party supplier.

We believe we have arranged for adequate manufacturing capacity for the Adhesive Skin Sample Collection Kits through our third-party manufacturer. If demand for our current tests and our planned future tests increases significantly, we will need to either expand manufacturing capabilities through our third-party manufacturer or outsource to other manufacturers. If our third-party or other manufacturers engaged by us fail to manufacture and deliver the Adhesive Skin Sample Collection Kits or certain reagents in a timely manner, or they are unable to fulfil our orders due to regulatory non-compliance or other quality-related issues, our relationships with our customers could be seriously harmed. We cannot assure you that manufacturing or quality control problems will not arise as we attempt to increase the production of the Adhesive Skin Sample Collection Kit or that we can increase our manufacturing capabilities and maintain quality control in a timely manner or at commercially reasonable costs. If we cannot have the Adhesive Skin Sample Collection Kits manufactured consistently on a timely basis because of these or other factors, it could have a significant negative impact on our ability to perform tests and generate revenues.

If we cannot support demand for our current tests and our planned future tests, including successfully managing the evolution of our technology and manufacturing platforms, our business could suffer.

As our test volume grows, we will need to increase our testing capacity, implement automation, increase our scale and related processing, customer service, billing, collection, and systems process improvements, and expand our internal quality assurance program and technology to support testing on a larger scale. We will also need additional technicians, certified laboratory scientists, and other scientific and technical personnel to process these additional tests. Any increases in scale, related improvements and quality assurance may not be successfully implemented and appropriate personnel may not be available. As additional tests are commercialized, we may need to implement new equipment, systems, technology, controls and procedures, and hire personnel with different qualifications. Failure to implement necessary procedures or to hire the necessary personnel could result in a higher cost of processing or an inability to meet market demand. We cannot assure you that we will be able to perform tests on a timely basis at a level consistent with demand, that our efforts to scale our commercial operations will not negatively affect the quality of our test results or that we will respond successfully to the growing complexity of our testing operations. If we encounter difficulty meeting market demand or quality standards for our current tests and our planned future tests, our reputation could be harmed and our future prospects and business could suffer, which may have a material adverse effect on our financial condition, results of operations, and cash flows.

If we were to be sued for product liability or professional liability, we could face substantial liabilities that exceed our resources.

The marketing, sale, and use of our current tests and our planned future diagnostic tests could lead to the filing of product liability claims against us if someone alleges that our tests failed to perform as designed. We may also be subject to liability for errors in the test results we provide to physicians or for a misunderstanding of, or inappropriate reliance upon, the information we provide. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend.

Although we believe that our existing product and professional liability insurance is adequate, our insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could damage our reputation, result in the recall of tests, or cause current partners to terminate existing agreements and potential partners to seek other partners, any of which could impact our results of operations.

If we use biological and hazardous materials in a manner that causes injury or violates laws or regulations, we could be liable for damages or subject to enforcement actions.

Our activities currently require the controlled use of potentially harmful biological and hazardous materials and chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an ongoing basis, federal, state, and local laws and regulations governing the use, storage, handling, and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant and could have a material adverse effect on our financial condition, results of operations and cash flows. In the event of an accident or if we otherwise fail to comply with applicable regulations, we could lose our permits or approvals or be held liable for damages or penalized with fines.

We may acquire other businesses, form joint ventures, or make investments in other companies or technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt, or cause us to incur significant expense.

As part of our business strategy, we may pursue acquisitions of businesses and assets. We also may pursue strategic alliances and joint ventures that leverage our core technology and industry experience to expand our offerings or distribution. We have no experience with acquiring other companies and limited experience with forming strategic alliances and joint ventures. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. Integration of an acquired company also may disrupt ongoing operations and require management resources that would otherwise focus on developing our existing business. We may experience losses related to investments in other companies, which could have a material negative effect on our results of operations. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, technology license, strategic alliance, or joint venture.

To finance any acquisitions or joint ventures, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies or fund a joint venture project using our stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all.

International expansion of our business would expose us to business, regulatory, political, operational, financial, and economic risks associated with doing business outside of the United States.

Our business strategy contemplates possible international expansion, including partnering with academic and commercial testing laboratories, and introducing the PLA, the Nevome test, or other future products outside the United States and exporting the Adhesive Skin Sample Collection Kit. We are currently testing samples through a distributor in Canada. Doing business internationally involves a number of risks, including:

- multiple, conflicting, and changing laws and regulations such as tax laws, export and import restrictions, privacy, data security and data transfer laws, employment laws, intellectual property laws, regulatory requirements, and other governmental approvals, permits and licenses;
- failure by us or our distributors to obtain regulatory approvals for the sale or use of our current tests and our planned future tests in various countries, if required;
- difficulties in managing foreign operations;

- complexities associated with managing government payor systems, multiple payor-reimbursement regimes, or self-pay systems;
- logistics and regulations associated with shipping blood samples, including infrastructure conditions and transportation delays;
- limits on our ability to penetrate international markets if our current tests and our planned future diagnostic tests cannot be processed by an appropriately qualified local laboratory;
- financial risks, such as longer payment cycles, difficulty enforcing contracts and collecting accounts receivable and exposure to foreign currency exchange rate fluctuations;
- reduced protection for intellectual property rights, or lack of them in certain jurisdictions, forcing more reliance on any trade secrets we may have, if such protection is available;
- natural or man-made disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease (such as the recent outbreak of the 2019 novel coronavirus, or COVID-19), boycotts, curtailment of trade, and other business restrictions; and
- failure to comply with the Foreign Corrupt Practices Act, including its books and records provisions and its anti-bribery provisions, by maintaining accurate information and control over sales activities and distributors' activities, as well as similar foreign anti-bribery and anti-corruption laws that may become applicable to our business.

Any of these risks, if encountered, could significantly harm our future international expansion and operations and, consequently, have a material adverse effect on our financial condition, results of operations, and cash flows.

Declining general economic or business conditions, including as a result of the recent COVID-19 outbreak, may have a negative impact on our business.

Continuing concerns over economic and business prospects in the United States and other countries have contributed to increased volatility and diminished expectations for the global economy. These factors, coupled with the prospect of decreased business and consumer confidence and increased unemployment resulting from the recent COVID-19 outbreak, may precipitate an economic slowdown and recession. If the economic climate deteriorates, our business, including our access to patient samples and the addressable market for diagnostic tests that we may successfully develop, as well as the financial condition of our suppliers and our third-party payors, could be adversely affected, resulting in a negative impact on our business, financial condition, results of operations and cash flows.

Intrusions into our computer systems could result in compromise of confidential information and our ability to continue operations (in event of a cyber-attack).

Despite the implementation of security measures, our technology or systems that we interface with, including the Internet and related systems, may be vulnerable to physical break-ins, hackers, improper employee or contractor access, computer viruses, programming errors, or similar problems. Any of these might result in confidential medical, business, or payment information, including as may be disclosed as part of a credit card transaction, or other information of other persons or of us, including employees, being revealed to unauthorized persons.

We may have to comply with laws governing the use and disclosure of genetic testing information.

Many states have adopted laws governing genetic testing and the use and disclosure of genetic test results. These laws impose specific testing consent requirements, patient authorization requirements for the use and disclosure of test results and some impose limits on the retention and secondary use of patient samples. Many of these laws are vaguely written and some are overly broad. We must analyze and ensure compliance with the genetic testing laws in the jurisdictions from which we obtain samples and may be required to expend significant capital and other resources to ensure ongoing compliance. Our failure to comply could interfere with our ability to operate and/or lead to sanctions, fines, or other regulatory actions as well as civil claims.

We depend on our information technology and telecommunications systems, and any failure of these systems could harm our business.

We depend on information technology and telecommunications systems for significant aspects of our operations. In addition, our third-party billing and collections provider depends upon telecommunications and data systems provided by outside vendors and information we provide on a regular basis. These information technology and telecommunications systems support a variety of functions, including test processing, sample tracking, quality control, customer service and support, billing and reimbursement, R&D activities, and our general and administrative activities. Information technology and telecommunications systems are vulnerable to

damage from a variety of sources, including telecommunications or network failures, malicious human acts, and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses, and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology and telecommunications systems, failures or significant downtime of our information technology or telecommunications systems, or those used by our third-party service providers could prevent us from processing tests, providing test results to oncologists, pathologists, billing payors, processing reimbursement appeals, handling patient or physician inquiries, conducting R&D activities, and managing the administrative aspects of our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have a material effect on our business, financial condition, results of operation and cash flows.

We rely on Federal Express Corporation, or FedEx, and United Parcel Service of America, Inc., or UPS, for the distribution of our Adhesive Skin Sample Collection Kits to customers and to transport specimens back to our laboratory facility and, if FedEx or UPS incurs any damage to their facilities or is unable to deliver our products as needed, it could have a material adverse effect on our results of operations and business.

We rely on FedEx and UPS for the distribution of our Adhesive Skin Sample Collection Kits to customers, as well as to transport patient specimens back to our laboratory facility for processing. The FedEx or UPS facilities involved in such distribution may be harmed or rendered inoperable by natural or man-made disasters, including earthquakes, power outages, communications failure, or terrorism. Any material destruction to their facilities could adversely affect the ability of FedEx or UPS to meet the needs of our customers. In addition, a disruption or slowdown in the operations of FedEx or UPS, including as a result of damage to the facilities of FedEx or UPS or a strike by FedEx or UPS employees, could cause delays in our ability to fulfill customer orders and may cause orders to be cancelled, lost, or delivered late, our shipments to be returned, or receipt of shipments to be refused, any of which could adversely affect our business and our results of operations. If our shipping costs were to increase as a result of an increase by FedEx or UPS or as a result of obtaining a new third-party logistics company and if we are unable to pass on these higher costs to our customers, it could have a material adverse effect on our results of operations and business, financial condition, results of operation and cash flows.

Regulatory Risks Related to Our Business

Changes in health care law and policy may have a material adverse effect on our financial condition, results of operations, and cash flows.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, collectively called the ACA, became law. This law substantially changed the way health care is financed by both governmental and commercial payors, and continues to significantly impact our industry. Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA. Both the current Congress and President Trump have expressed their intention to repeal or repeal and replace the ACA, and as a result, certain sections of the ACA have not been fully implemented or were effectively repealed. In December 2019, the Fifth Circuit Court of Appeals upheld a district court's finding that the individual mandate in the Affordable Care Act is unconstitutional following removal of the penalty provision from the law. However, the Fifth Circuit reversed and remanded the case to the district court to determine if other reforms enacted as part of the Affordable Care Act but not specifically related to the individual mandate or health insurance could be severed from the rest of the Affordable Care Act so as not to have the law declared invalid in its entirety. It is unclear how this decision, subsequent appeals including potentially to the U.S. Supreme Court, and other efforts to repeal and replace the Affordable Care Act will affect the implementation of that law and our business. The uncertainty around the future of the ACA, and in particular the impact to reimbursement levels and the number of insured individuals, may lead to delay in the purchasing decisions of our customers, which may in turn negatively impact our product sales. Further, if reimbursement levels are inadequate, our business and results of operations could be adversely affected.

Further, the ACA established the Physician Payments Sunshine Act, or the Sunshine Act, which imposes reporting and disclosure requirements for applicable device manufacturers of covered products and those entities under common ownership that provide assistance and support to applicable manufacturers, with regard to payments or other transfers of value made to certain practitioners (including physicians and teaching hospitals) and certain investment ownership interests held by physicians in the reporting entity. We are not subject to the Physician Payments Sunshine Act provisions at this time. However, if the FDA later determines that the Adhesive Skin Sample Collection Kit or any of our current or future products are subject to premarket clearance or approval process and such products are considered to be reimbursable by Medicare or Medicaid, we would be subject to the Physician Payments Sunshine Act and thus would be subject to its reporting requirements.

In addition to the ACA, there will continue to be proposals by legislators at both the federal and state levels, regulators and commercial payors to reduce costs while expanding individual health care benefits. Certain of these changes could impose additional limitations on the prices we will be able to charge for our tests or the amounts of reimbursement available for our tests from governmental or commercial payors. Any future changes to legal or regulatory requirements or new cost containment initiatives could have a materially adverse effect on our business, financial condition, results of operation, and cash flows.

Our business could be adversely impacted by our failure or the failure of physicians to comply with the ICD-10-CM Code Set.

Compliance with ICD-10-CM is required for all claims with dates of service on or after October 1, 2015. We believe we have fully implemented ICD-10-CM. However, our failure to effectively implement and apply the new code set could adversely impact our business. In addition, if physicians fail to provide appropriate codes for desired tests, we may not be reimbursed for tests we perform.

Billing for our tests is complex and we must dedicate substantial time and resources to the billing process to be paid for our tests; long payment cycles of Medicare, Medicaid, and/or other third-party payors, or other payment delays, could hurt our cash flows and increase our need for working capital.

Billing for clinical laboratory testing services is complex, time-consuming, and expensive. Depending on the billing arrangement and applicable law, we will bill various payors, including Medicare, Medicaid, and commercial payors, all of which have different billing requirements. As required by law or contract, we routinely bill patients for co-payments, co-insurance, and deductible amounts owed. We may also face increased risks in our collection efforts, including potential write-offs of doubtful accounts, long collection cycles, and failure by third parties to properly process payment of claims in a timely manner that could adversely affect our business, results of operations, and financial condition. Several factors make the billing practice complex, including:

- compliance with complex federal and state regulations related to Medicare billing;
- disputes among payors as to which party is responsible for payment; resistance by patients to cover any substantial amount of the payment;
- differences in coverage among payors and effect of patient co-payments, co-insurance, or deductibles;
- differences in information and billing requirements among payors;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

Additionally, our billing activities require us to implement compliance procedures and oversight, train and monitor our employees, challenge coverage and payment denials, assist patients in appealing claims, and undertake internal audits to evaluate compliance with applicable laws and regulations as well as internal compliance policies and procedures. Payors also conduct external audits to evaluate payments, which adds further complexity to the billing process.

Failure to comply with these billing requirements may result in non-payment, refunds, exclusion from government healthcare programs, and civil or criminal liabilities, any of which may have a material adverse effect on our revenues and earnings. These billing complexities and the related uncertainties in obtaining reimbursement could negatively affect our cash flow and our ability to achieve profitability.

Our business could be harmed by the loss, suspension, or other restriction on a license, certification, or accreditation, or by the imposition of a fine or penalties, under CLIA, its implementing regulations, or other state, federal, and foreign laws and regulations affecting licensure or certification, or by future changes in these laws or regulations.

The diagnostic testing industry is subject to extensive laws and regulations, many of which have not been interpreted by the courts. CLIA requires virtually all laboratories to be certified by the federal government and mandates compliance with various operational, personnel, facilities administration, quality, and proficiency testing requirements intended to ensure that testing services are accurate, reliable, and timely. Our clinical laboratory must be certified under CLIA in order for us to perform testing on human specimens. CLIA certification is also a prerequisite to be eligible to bill state and federal health care programs. Further, many commercial payors require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test samples taken from their citizens.

We have a current certificate of accreditation from CMS to perform high-complexity testing, which is managed by California Laboratory Field Services, or CA LFS. To renew this certificate, we are subject to survey and inspection every two years. We hold a certificate of accreditation because we are accredited by the College of American Pathologists, or CAP, which sets standards than are higher than the CLIA regulations. CAP is an independent, non-governmental organization of board-certified pathologists that accredits laboratories nationwide on a voluntary basis. Because CAP has deemed status with CA LFS, our biennial inspections will be performed by teams formed by CAP. Sanctions for failure to comply with CAP or CLIA requirements, including proficiency testing violations, may include suspension, revocation, or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as the imposition of significant fines or criminal penalties. In addition, we are subject to regulation under state laws and regulations governing laboratory licensure. Two states, one of which is New York, have enacted state licensure laws that are more stringent than CLIA.

Failure to maintain CLIA certification, CAP accreditation, or required state licenses could have a material adverse effect on the sales of our tests and the results of our operations. If we were to lose our CLIA certification, CAP accreditation or California laboratory license, whether as a result of a revocation, suspension, or limitation, we would no longer be able to offer our tests, which would limit our revenues and harm our business. If we were to lose our license in any other state where we are required to hold a license, we would not be able to test specimens from those states. In addition, state and foreign requirements for laboratory certification may be costly or difficult to meet and could affect our ability to receive specimens from certain states or foreign countries. Currently we are receiving samples from all 50 U.S. states and certain provinces in Canada. Each state maintains independent licensure, registration, or certification procedures with which we must maintain compliance in order to receive and test samples from that location. Maintaining compliance with the myriad of state and foreign requirements is time consuming and resource intensive and failure to maintain compliance could result in sanctions.

Any sanction imposed under CLIA, its implementing regulations, or state or foreign laws or regulations governing licensure, or our failure to renew a CLIA certificate, a state or foreign license, or accreditation, could have a material adverse effect on our business, financial condition, results of operation and cash flows. If the CLIA certificate of our laboratory is revoked, that could also impact our licensure or certification in the states or in foreign jurisdictions.

If the FDA were to begin requiring approval or clearance of our current tests and our planned future tests, or our proprietary specimen collection kit, we could incur substantial costs and time delays associated with meeting requirements for premarket clearance or approval.

The laws and regulations governing the marketing of diagnostic products are evolving, extremely complex and in many instances, there are no significant regulatory or judicial interpretations of these laws and regulations. Pursuant to its authority under the federal Food, Drug, and Cosmetic Act, or FDCA, the FDA has jurisdiction over medical devices, including in vitro diagnostics and, therefore, potentially our clinical laboratory tests. Among other things, pursuant to the FDCA and its implementing regulations, the FDA regulates the research, testing, manufacturing, safety, labeling, storage, recordkeeping, premarket clearance or approval, marketing and promotion, and sales and distribution of medical devices in the United States to ensure that medical products distributed domestically are safe and effective for their intended uses. Although the FDA has asserted that it has authority to regulate the development and use of LDTs, such as our and many other laboratories' test as medical devices, it has generally exercised enforcement discretion and is not otherwise regulating most tests developed and performed within a single high complexity CLIA-certified laboratory. The FDA could, at any time, change its policy with regard to this matter or Congress could take action to amend the law to change the current regulatory framework for in vitro diagnostics and LDTs. For example, a discussion draft of the Verifying Accurate, Leading-edge IVCT Development (VALID) Act currently being circulated in Congress would codify into law the term "in vitro clinical test" in order to create a new medical product category separate from medical devices that would include products currently regulated as in vitro diagnostics as well as LDTs.

We believe that our tests, as utilized in our clinical laboratory, are and would be LDTs. As a result, we believe that pursuant to the FDA's current policies and guidance, the FDA does not require that we obtain regulatory clearances or approvals for our LDTs. In addition, we believe the Adhesive Skin Sample Collection Kit we provide for collection and transport of skin samples from a health care provider to our clinical laboratory is considered a Class I medical device subject to the FDA's general device controls but exempt from premarket review. However, the FDA could assert the specimen collection kit is a Class II device, which would subject it to premarket clearance or approval processes, which could be time-consuming and expensive. While we believe that we are currently in material compliance with applicable laws and regulations, we cannot assure you that the FDA, or other regulatory agencies, would agree with our determinations, and any determination by the government that we have violated the FDCA or any FDA regulations, or a public announcement that we are being investigated for possible violations of these laws, could adversely affect our business, prospects, results of operations, or financial condition.

Even though we commercialize our tests as LDTs, our tests may in the future become subject to more onerous regulation by the FDA. For example, the FDA may disagree with our assessment that our tests fall within the definition of an LDT and seek to regulate our tests as medical devices. The FDA has, for over the past decade, been introducing proposals to end enforcement discretion and to bring LDTs clearly under existing FDA regulatory frameworks and Congress has recently been working on legislation to create an LDT and in vitro diagnostic regulatory framework that would be separate and distinct from the existing medical device regulatory framework. On March 5, 2020, U.S. Representatives Diana DeGette (D-CO) and Dr. Larry Bucshon (R-IN) formally introduced the VALID Act in the House and an identical version of the bill was introduced in the U.S. Senate by Senators Michael Bennet (D-CO) and Richard Burr (R-NC). As anticipated from a discussion draft of the legislation released for stakeholder comment in December 2018, the VALID Act would codify into law the term "in vitro clinical test" (IVCT) to create a new medical product category separate from medical devices, and bring all such products within the scope of FDA's oversight. It is unclear whether the VALID Act would be passed by Congress in its current form or signed into law by the President.

Absent any Congressional action, if the FDA begins to enforce its medical device requirements for LDTs, or if the FDA disagrees with our assessment that our tests are LDTs, our tests could for the first time be subject to a variety of regulatory requirements, including registration and listing, medical device reporting, and quality control, and we could be required to obtain premarket clearance or approval for our existing tests and any new tests we may develop, which may force us to cease marketing our tests until we obtain the required clearance or approval. The premarket review process for diagnostic products can be lengthy, expensive, time-consuming, and unpredictable. Further, obtaining premarket clearance or approval may involve, among other things, successfully completing clinical trials. Clinical trials require significant time and cash resources and are subject to a high degree of risk, including risks of experiencing delays, failing to complete the trial or obtaining unexpected or negative results. If we are required to obtain premarket clearance or approval and/or conduct premarket clinical trials, our development costs could significantly increase, our introduction of any new tests we may develop may be delayed, and sales of our existing tests could be interrupted or stopped. Any of these outcomes could reduce our revenue or increase our costs and materially adversely affect our business, prospects, results of operations, or financial condition. Moreover, any cleared or approved labeling claims may not be consistent with our current claims or adequate to support continued adoption of and reimbursement for our tests. For instance, if we are required by the FDA to label our tests as investigational, or if labeling claims the FDA allows us to make are limited, order levels may decline and reimbursement may be adversely affected. As a result, we could experience significantly increased development costs and a delay in generating additional revenue from our existing tests or from tests we may develop. Until the FDA finalizes its regulatory position regarding LDTs, or federal legislation is passed concerning regulation of LDTs, it is unknown how the FDA may regulate our tests in the future and what testing and data may be required to support any required clearance or approval as an medical device or an “in vitro clinical test” (as that category is being defined in the VALID Act, as introduced).

The requirement of premarket review could negatively affect our business until such review is completed and regulatory clearance or approval is obtained. The FDA could require that we stop selling our tests pending premarket clearance or approval. The regulatory approval process may involve, among other things, successfully completing additional clinical trials and making a premarket submission, such as a 510(k) notification, a premarket approval, or PMA, application or a de novo device classification request to the FDA. If the FDA requires any form of premarket review, our tests may not be cleared or approved on a timely basis, if at all. We may also decide voluntarily to pursue FDA premarket review and authorization of our tests if we determine that doing so would be appropriate.

Additionally, should future regulatory actions affect any of the reagents we obtain from suppliers and uses in conducting our tests, our business could be adversely affected in the form of increased costs of testing or delays, limits, or prohibitions on the purchase of reagents necessary to perform our testing. While we qualify all materials used in our products in accordance with the regulations and guidelines of CLIA, the FDA could promulgate regulations or guidance documents impacting our ability to purchase materials necessary for the performance of our tests. If any of the reagents we obtain from suppliers and use in our tests are affected by future regulatory actions, our business could be adversely affected, including by increasing the cost of testing or delaying, limiting, or prohibiting the purchase of reagents necessary to perform testing with our products.

Failure to comply with any applicable FDA requirements could trigger a range of enforcement actions by the FDA, including warning letters, civil monetary penalties, injunctions, criminal prosecution, recall or seizure, operating restrictions, partial suspension or total shutdown of operations and denial of or challenges to applications for clearance or approval, as well as significant adverse publicity.

If we were to be required by the FDA to conduct additional clinical studies or trials before continuing to offer tests that we have developed or may develop as LDTs, those studies or trials could lead to delays or failure to obtain necessary regulatory clearance or approval, which could cause significant delays in commercializing any future products and harm our ability to achieve profitability.

If the FDA decides to require that we obtain 510(k) clearance, premarket approvals pursuant to a PMA, or any other type of premarket submission in order for us to commercialize our current PLA, the Nevome test, or our planned future tests, we may be required to conduct additional clinical testing before submitting a regulatory notification or other application for commercial marketing authorization. In addition, as part of our long-term strategy we may plan to seek FDA clearance or approval for certain gene expression tests in order to permit them to be offered by other clinical laboratories in addition to our own; however, we would need to conduct additional clinical validation activities on our tests before we could submit an application for FDA approval or clearance. Clinical trials must be conducted in compliance with FDA regulations or the FDA may take certain enforcement actions or reject the data. We believe we would likely take two years or more to conduct the clinical studies and trials necessary to obtain approval from the FDA to commercially launch our current tests and our planned future tests outside of our clinical laboratory.

Even if clinical trials are completed as planned, we cannot be certain that their results would be able to support our test claims or that the FDA or foreign authorities will agree with our conclusions regarding the results of our clinical trials. Success in early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior clinical trials and studies. If we are required to conduct clinical trials to support a premarket submission to the FDA, whether using prospectively acquired samples or archival samples, delays in the commencement or completion of clinical testing could significantly increase our test development costs and delay commercialization. Many of the factors that may cause or lead to a delay in the commencement or completion of clinical trials may also ultimately lead to delay or denial of regulatory clearance or approval. The commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the clinical trial. Moreover, the clinical trial process may fail to demonstrate that our current tests and our planned future tests are effective for the proposed indications for use, which could cause us to abandon a test candidate and may delay development of other tests.

We may find it necessary to engage contract research organizations to perform data collection and analysis and other aspects of our clinical trials, which would increase the cost and complexity of our trials. We may also depend on clinical investigators, medical institutions, and contract research organizations to perform the trials properly. If these parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, or if the quality, completeness, or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or for other reasons, our clinical trials may have to be extended, delayed or terminated. Many of these factors would be beyond our control. We may not be able to enter into replacement arrangements without undue delays or considerable expenditures. If there are delays in testing or approvals as a result of the failure to perform by third parties, our R&D costs would increase, and we may not be able to obtain regulatory clearance or approval for our current tests and our planned future tests, if needed. In addition, we may not be able to establish or maintain relationships with these parties on favorable terms, if at all. Each of these outcomes would harm our ability to market our tests outside of the LDT context or to achieve profitability.

We are subject to numerous federal, local and foreign laws and regulations; complying with laws pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties and a material adverse effect to our business and operations

Our operations are subject to extensive federal, state, local and foreign laws and regulations, all of which are subject to change. These laws and regulations currently include, among other things:

- CLIA, which requires that laboratories obtain certification from the federal government, and state licensure laws;
- FDA laws and regulations;
- HIPAA, which imposes comprehensive federal standards with respect to the privacy and security of protected health information, or PHI, and requirements for the use of certain standardized electronic transactions; amendments to HIPAA under the Health Information Technology for Economic and Clinical Health Act, or HITECH, which strengthened and expanded HIPAA privacy and security compliance requirements, increased penalties for violators, extended enforcement authority to state attorneys general and imposed requirements for breach notification;
- state laws regulating genetic testing and protecting the privacy of genetic test results, as well as state laws protecting the privacy and security of health information and personal data and mandating reporting of breaches to affected individuals and state regulators;
- the federal Anti-Kickback Statute, which prohibits knowingly and willfully offering, paying, soliciting, receiving, or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing, arranging for, or recommending of an item or service that is reimbursable, in whole or in part, by a federal health care program;
- the federal False Claims Act, which imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment to the federal government;
- the federal Civil Monetary Penalties Law, which prohibits, among other things, the offering or transfer of remuneration to a Medicare or state health care program beneficiary if the person knows or should know it is likely to influence the beneficiary’s selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state health care program, unless an exception applies;
- other federal and state fraud and abuse laws, such as anti-kickback laws, prohibitions on self-referral, and false claims acts, which may extend to services reimbursable by any third-party payor, including private insurers;

- Section 216 of the PAMA, which requires applicable laboratories to report commercial payor data in a timely and accurate manner beginning in 2017 and every three years thereafter (and in some cases annually);
- state laws that impose reporting and other compliance-related requirements; and
- similar foreign laws and regulations that apply to us in the countries in which we operate.

In addition, in October 2018, EKRA was enacted as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act, or SUPPORT Act. EKRA is an all-payor anti-kickback law that makes it a criminal offense to pay any remuneration to induce referrals to, or in exchange for, patients using the services of a recovery home, a substance use clinical treatment facility, or laboratory. Although it appears that EKRA was intended to reach patient brokering and similar arrangements to induce patronage of substance use recovery and treatment, the language in EKRA is broadly written. Further, certain of EKRA's exceptions, such as the exception applicable to relationships with employees that effectively prohibits incentive compensation, are inconsistent with the federal anti-kickback statute and regulations, which permit payment of employee incentive compensation, a practice that is common in the industry. Significantly, EKRA permits the U.S. Department of Justice to issue regulations clarifying EKRA's exceptions or adding additional exceptions, but such regulations have not yet been issued. Laboratory industry stakeholders are reportedly seeking clarification regarding EKRA's scope and/or amendments to its language.

As a clinical laboratory, our business practices may face heightened scrutiny from government enforcement agencies such as the Department of Justice, the U.S. Department of Health and Human Services Office of Inspector General, or OIG, and CMS. The OIG has issued fraud alerts in recent years that identify certain arrangements between clinical laboratories and referring physicians as implicating the Anti-Kickback Statute. The OIG has stated that it is particularly concerned about these types of arrangements because the choice of laboratory, as well as the decision to order laboratory tests, typically are made or strongly influenced by the physician, with little or no input from the patient. Moreover, the provision of payments or other items of value by a clinical laboratory to a referral source could be prohibited under the federal self-referral prohibition, commonly known as the Stark Law or the Physician Self-Referral Law, unless the arrangement meets all criteria of an applicable exception. The government has actively enforced these laws against clinical laboratories in recent years.

These laws and regulations are complex and are subject to interpretation by the courts and by government agencies. Our failure to comply could lead to significant civil or criminal penalties, exclusion from participation in state and federal health care programs, individual imprisonment, disgorgement of profits, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with the law, curtailment or restructuring of our operations, or prohibitions or restrictions on our laboratories' ability to provide or receive payment for our services, any of which could adversely affect our ability to operate our business and pursue our strategy. We believe that we are in material compliance with all statutory and regulatory requirements, but there is a risk that one or more government agencies could take a contrary position, or that a private party could file suit under the qui tam provisions of the federal False Claims Act or a similar state law. Such occurrences, regardless of their outcome, could damage our reputation and adversely affect important business relationships with third parties, including managed care organizations, and other private third-party payors.

Numerous states have enacted laws prohibiting business corporations, such as us, from practicing medicine and other professions and from employing or engaging physicians and other professionals to practice medicine, generally referred to as the prohibition against the corporate practice of medicine and the professions, which could include physician laboratory directors. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed professional. For example, California's Medical Board has indicated that determining the appropriate diagnostic tests for a particular condition and taking responsibility for the ultimate overall care of a patient, including providing treatment options available to the patient, would constitute the unlicensed practice of medicine if performed by an unlicensed person. Violation of these corporate practice of medicine laws may result in civil or criminal fines, as well as sanctions imposed against the business corporation and/or the professional through licensure proceedings and criminal penalties.

The growth of our business and our expansion outside of the United States may increase the potential of violating similar foreign laws or our internal policies and procedures. The risk of us being found in violation of these or other laws and regulations is further increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action brought against us for violation of these or other laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Any of the foregoing consequences could seriously harm our business and our financial results.

We must comply with complex and overlapping laws protecting the privacy and security of health information and personal data.

There are a number of state, federal and international laws protecting the privacy and security of health information and personal data. Under the administrative simplification provisions of HIPAA, HHS has issued regulations which establish uniform standards governing the conduct of certain electronic health care transactions and protecting the privacy and security of PHI used or disclosed by health care providers and other covered entities.

The privacy regulations regulate the use and disclosure of PHI by health care providers engaging in certain electronic transactions or "standard transactions." They also set forth certain rights that an individual has with respect to his or her PHI maintained by a covered health care provider, including the right to access or amend certain records containing PHI or to request restrictions on the use or disclosure of PHI. The HIPAA security regulations establish administrative, physical, and technical standards for maintaining the integrity and availability of PHI in electronic form. These standards apply to covered health care providers and also to "business associates" or third parties providing services involving the use or disclosure of PHI. The HIPAA privacy and security regulations establish a uniform federal "floor" and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing PHI. As a result, we may be required to comply with both HIPAA privacy regulations and varying state privacy and security laws.

Moreover, HITECH, among other things, established certain health information security breach notification requirements. In the event of a breach of unsecured PHI, a covered entity must notify each individual whose PHI is breached, federal regulators and in some cases, must publicize the breach in local or national media. Breaches affecting 500 individuals or more are publicized by federal regulators who publicly identify the breaching entity, the circumstances of the breach and the number of individuals affected.

These laws contain significant fines and other penalties for wrongful use or disclosure of PHI. Given the complexity of HIPAA and HITECH and their overlap with state privacy and security laws, and the fact that these laws are rapidly evolving and are subject to changing and potentially conflicting interpretation, our ability to comply with the HIPAA, HITECH and state privacy requirements is uncertain and the costs of compliance are significant. Adding to the complexity is that our operations are evolving and the requirements of these laws will apply differently depending on such things as whether or not we bill electronically for our services, or provide services involving the use or disclosure of PHI and incur compliance obligations as a business associate. The costs of complying with any changes to the HIPAA, HITECH and state privacy restrictions may have a negative impact on our operations. Noncompliance could subject us to criminal penalties, civil sanctions and significant monetary penalties as well as reputational damage.

We also are required to collect and maintain personal information about our employees, and we collect information about customers as part of some of our marketing programs, as well as receive and transfer certain payment information, to accept payments from our customers, including credit card information. Most states have adopted laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Many state laws impose significant data security requirements, such as encryption or mandatory contractual terms to ensure ongoing protection of personal information. Activities outside of the United States implicate local and national data protection standards, impose additional compliance requirements, and generate additional risks of enforcement for non-compliance. The collection and use of such information may be subject to contractual obligations as well. If the security and information systems that we or our outsourced third-party providers use to store or process such information are compromised or if we, or such third parties, otherwise fail to comply with these laws, regulations, and contractual obligations, we could face litigation and the imposition of penalties that could adversely affect our financial performance.

We must comply with all applicable privacy and data security laws in order to operate our business and may be required to expend significant capital and other resources to ensure ongoing compliance, to protect against security breaches and hackers or to alleviate problems caused by such breaches. Breaches of health information and/or personal data may be extremely expensive to remediate, may prompt federal or state investigation, fines, civil and/or criminal sanctions and significant reputational damage.

Our services present the potential for embezzlement, identity theft or other similar illegal behavior by our employees, consultants, service providers or commercial partners.

Our operations involve the use and disclosure of personal and business information that could be used to impersonate third parties or otherwise gain access to their data or funds. If any of our employees, consultants, service providers or commercial partners takes, converts or misuses these funds or data, we could be liable for any resulting damages, which could harm our financial condition and damage our business reputation.

Clinical research is heavily regulated and failure to comply with human subject protection regulations may disrupt our research program leading to significant expense, regulatory enforcement, private lawsuits, and reputational damage.

Clinical research is subject to federal, state, and, for studies conducted outside of the United States, international regulation. At the federal level, the Department of Health and Human Services imposes regulations for the protection of human subjects and requirements such as initial and ongoing institutional review board review, informed consent requirements, adverse event reporting and other protections to minimize the risk and maximize the benefit to research participants. Clinical studies done under an investigational device exemption for purposes of an anticipated FDA premarket submission are subject to an additional layer of human subject protection regulations. Many states also impose human subject protection laws that mirror or in some cases exceed federal requirements. HIPAA and other privacy laws also regulate the use and disclosure of PHI in connection with research activities. Research conducted overseas is subject to a variety of national protections such as mandatory ethics committee review, as well as laws regulating the use, disclosure and cross-border transfer of personal data. The costs of compliance with these laws may be significant and compliance with regulatory requirements may result in delay. Noncompliance may disrupt our research and result in data that is unacceptable to regulatory authorities, data lock, or other sanctions that may significantly disrupt our operations.

Violation of a state's prohibition on the corporate practice of medicine could result in a material adverse effect on our business, financial condition, results of operation and cash flows.

A number of states, including California, do not allow business corporations, such as us, to employ physicians to provide professional services. This prohibition against the "corporate practice of medicine" is aimed at preventing corporations such as us from exercising control over the medical judgments or decisions of physicians. The state licensure statutes and regulations and agency and court decisions that enumerate the specific corporate practice rules vary considerably from state to state and are enforced by both the courts and regulatory authorities, each with broad discretion. If regulatory authorities or other parties in any jurisdiction successfully assert that we are engaged in the unauthorized corporate practice of medicine, we could be required to restructure our contractual and other arrangements. In addition, violation of these laws may result in sanctions imposed against us and/or the professional through licensure proceedings, and we could be subject to civil and criminal penalties that could result in exclusion from state and federal health care programs.

We could be adversely affected by alleged violations of the Federal Trade Commission Act or other truth-in-advertising and consumer protection laws.

Our advertising for laboratory services and tests is subject to federal truth-in-advertising laws enforced by the Federal Trade Commission, or FTC, as well as comparable state consumer protection laws. Under the Federal Trade Commission Act, the FTC is empowered, among other things, to (a) prevent unfair methods of competition and unfair or deceptive acts or practices in or affecting commerce; (b) seek monetary redress and other relief for conduct injurious to consumers; and (c) gather and compile information and conduct investigations relating to the organization, business, practices, and management of entities engaged in commerce. The FTC has very broad enforcement authority, and failure to abide by the substantive requirements of the FTC Act and other consumer protection laws can result in administrative or judicial penalties, including civil penalties, injunctions affecting the manner in which we would be able to market services or products in the future, or criminal prosecution. Our direct-to-consumer advertising and social media presence, as well as our physician-directed advertising, are subject to these federal and state truth-in-advertising laws. Any actual or perceived non-compliance with those laws could lead to an investigation by the FTC or a comparable state agency, or could lead to allegations of misleading advertising by private plaintiffs. Any such action against us would disrupt our business operations, cause damage to our reputation, and result in a material adverse effects on our business, financial condition, results of operation, and cash flows.

Medical product manufacturers' use of social media platforms presents new risks.

We believe that our customer base and potential patient populations are active on social media and intend to engage through those platforms to elevate our national marketing presence. Social media practices in the pharmaceutical and biotechnology industries are evolving, which creates uncertainty and risk of noncompliance with regulations applicable to our business. For example, patients may use social media platforms to comment on the effectiveness of, or adverse experiences with, one of our products, which could result in reporting obligations or the need for us to conduct an investigation. In addition, there is a risk of inappropriate disclosure of sensitive information or negative or inaccurate posts or comments about us or our products on any social networking website. If any of these events were to occur or we otherwise fail to comply with any applicable regulations, we could incur liability, face restrictive regulatory actions or incur other harm to our business.

Intellectual Property Risks Related to Our Business

Our collaborators may assert ownership or commercial rights to inventions we develop from our use of the biological materials which they provide to us, or otherwise arising from the collaboration.

We collaborate with several institutions, physicians, and researchers in scientific matters. Also, we rely on numerous third parties to provide us with adhesive patch samples and biological materials that we use to develop tests. If we cannot successfully negotiate sufficient ownership, licensing, and/or commercial rights to any inventions that result from our use of a third-party collaborator's materials, or if disputes arise with respect to the intellectual property developed with the use of a collaborator's samples, or data developed in a collaborator's study, our ability to capitalize on the market potential of these inventions or developments may be limited or precluded altogether.

If we are unable to maintain intellectual property protection, our competitive position could be harmed.

Our ability to protect our discoveries and technologies affects our ability to compete and to achieve profitability. Currently, we rely on a combination of U.S. and foreign patents and patent applications, copyrights, trademarks and trademark applications, confidentiality or non-disclosure agreements, material transfer agreements, licenses, consulting agreements, work-for-hire agreements, and invention assignment agreements to protect our intellectual property rights. We also maintain certain company know-how, trade secrets, and technological innovations designed to provide us with a competitive advantage in the marketplace as trade secrets. Currently, we own five issued U.S. patents, six pending U.S. patent applications (three provisional and three non-provisional), several corresponding foreign counterpart patents and patent applications, and two PCT applications, relevant to our testing methodology and expression profiles. While we intend to pursue additional patent applications, it is possible that our pending patent applications and any future applications may not result in issued patents. Even if patents are issued, third parties may independently develop similar or competing technology that avoids our patents. Further, we cannot be certain that the steps we have taken will prevent the misappropriation of our trade secrets and other confidential information as well as the misuse of our patents and other intellectual property, particularly in foreign countries where we have not filed for patent protection.

From time-to-time the U.S. Supreme Court, other federal courts, the USPTO, may change the standards of patentability and any such changes could have a negative impact on our business. For instance, in 2008, the Court of Appeals for the Federal Circuit issued a decision that methods or processes cannot be patented unless they are tied to a machine or involve a physical transformation. The U.S. Supreme Court later reversed that decision in *Bilski v. Kappos*, finding that the "machine-or-transformation" test is not the only test for determining patent eligibility. The Court, however, declined to specify how and when processes are patentable. In 2012, in the case *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the U.S. Supreme Court reversed the Federal Circuit's application of *Bilski* and invalidated a patent focused on a diagnostic process because the patent claim embodied a law of nature.

In 2013, in *Association for Molecular Pathology v. Myriad Genetics*, the Supreme Court unanimously ruled that, "[a] naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated," thereby invalidating Myriad Genetics' patents on the BRCA1 and BRCA2 breast cancer genes. However, the Supreme Court also held that manipulation of a gene to create something not found in nature, such as a strand of synthetically-produced complementary DNA, or cDNA, could still be eligible for patent protection. The Supreme Court noted that method patents, which concern technical procedures for carrying out a certain process, are not affected by the ruling.

More recently, the Federal Circuit has ruled on several patent cases—such as *Univ. of Utah Research Found. v. Ambry Genetics Corp.*, 774 F.3d 755 (Fed. Cir. 2014), *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371 (Fed. Cir. 2015), *Genetic Tech. Ltd. v. Merial LLC*, 818 F.3d 1369 (Fed. Cir. 2016), and *Cleveland Clinic Found. v. True Health Diagnostics*, 859 F.3d 1352 (Fed. Cir. 2017)—that some diagnostic method claims are patent ineligible. These decisions have narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in certain situations. Some aspects of our technology involve processes that may be subject to this evolving standard and we cannot guarantee that any of our pending process claims will be patentable as a result of such evolving standards. In addition, this combination of decisions has created uncertainty as to the value of certain issued patents, in particular patents in the molecular biology analysis and diagnostic space. Moreover, there is additional uncertainty around the evolving standard in light of the USPTO Revised Patent Subject Matter Eligibility Guidance issued in Jan. 2019.

It should also be noted that in 2010, the Secretary's Advisory Committee on Genetics, Health and Society voted to approve a report entitled "*Gene Patents and Licensing Practices and Their Impact on Patient Access to Genetic Tests*." That report defines "patent claims on genes" broadly to include claims to isolated nucleic acid molecules as well as methods of detecting particular sequences or mutations. The report also contains six recommendations, including the creation of an exemption from liability for infringement of patent claims on genes for anyone making, using, ordering, offering for sale, or selling a test developed under the patent for patient care purposes, or for anyone using the patent-protected genes in the pursuit of research. The report also recommended that HHS should explore, identify, and implement mechanisms that will encourage more voluntary adherence to current guidelines that promote nonexclusive in-licensing of diagnostic genetic and genomic technologies. It is unclear whether HHS will act upon these recommendations, or if the recommendations would result in a change in law or process that could negatively impact our patent portfolio or future R&D. If acted upon, implementation of such provisions could have a material negative impact on our business.

We may face intellectual property infringement claims that could be time-consuming and costly to defend, and could result in the loss of significant rights, the implementation of an injunction, and the assessment of treble damages.

From time-to-time we may face intellectual property infringement or misappropriation claims from third parties. Some of these claims may lead to litigation. The outcome of any such litigation can never be guaranteed, and an adverse outcome could affect us negatively. For example, were a third party to succeed on an infringement claim against us, we may be required to pay substantial damages, including treble damages if such infringement were found to be willful. In addition, we could face an injunction barring us from conducting the allegedly infringing activity, including an order preventing us from offering our current tests and future planned tests in the marketplace. The outcome of the litigation could require us to enter into a license agreement which may not be pursuant to acceptable or commercially reasonable or practical terms or which may not be available at all.

It is also possible that an adverse finding of infringement against us may require us to dedicate substantial resources and time in developing non-infringing alternatives, which may or may not be possible. In the case of diagnostic tests, we would also need to include non-infringing technologies, which would require us to re-validate the test. Any such re-validation, in addition to being costly and time-consuming, may be unsuccessful. Finally, we may initiate claims to assert or defend our own intellectual property against third parties. Any intellectual property litigation, irrespective of whether we are the plaintiff or the defendant, and regardless of the outcome, is expensive and time-consuming, and could divert and distract our management's attention from our business and negatively affect our operating results or financial condition.

Tax Risks Related to Our Business

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the IRC, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its carryforwards to offset future taxable income. Our existing net operating loss carryforwards, or NOLs, may be subject to limitations arising from previous ownership changes, and if we underwent an ownership change in connection with or after the Business Combination, our ability to utilize NOLs could be further limited by Section 382 of the IRC. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the IRC. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing and any future NOLs could expire or otherwise be unavailable to offset future income tax liabilities. We have not conducted a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since inception due to the significant complexity and cost associated with such a study.

The comprehensive tax reform bill passed in 2017 could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act, or TCJA, that significantly reforms the IRC. The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation on the deductibility of interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses generated after December 31, 2017 to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, reduction or elimination of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. Many aspects of the TCJA are unclear and future guidance from the Internal Revenue Service and other tax authorities with respect to the TCJA may adversely affect our business and our financial condition. The impact of the TCJA on holders of our common stock is also uncertain and could be adverse. You are urged to consult with your legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

Risks Related to Our Securities

There is no assurance that we will continue satisfying the listing requirements of the Nasdaq Capital Market.

Our common stock is listed on the Nasdaq Capital Market. To maintain our listing, we are required to satisfy continued listing requirements. There can be no assurance we will continue satisfying such continued listing requirements, which include that the closing bid price of our common stock be at least $1 per share, that we have at least 300 round lot holders and at least 500,000 publicly held shares, that the market value of our publicly held securities be at least $1 million, and that we meet one of these standards: stockholders' equity of at least $2.5 million; market value of listed securities of at least $35 million; or net income from continuing operations of $500,000 in the most recently completed fiscal year or in two of the three most recently completed fiscal years. The delisting of our common stock for whatever reason could, among other things, substantially impair our ability to raise additional capital; result in the loss of interest from institutional investors, the loss of confidence in our company by investors and employees, and in fewer financing,

strategic and business development opportunities; and result in potential breaches of agreements under which we made representations or covenants relating to our compliance with applicable listing requirements. Claims related to any such breaches, with or without merit, could result in costly litigation, significant liabilities and diversion of our management's time and attention and could have a material adverse effect on our financial condition, business and results of operations. In addition, the delisting of our common stock for whatever reason may materially impair our stockholders' ability to buy and sell shares of our common stock and could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock.

We are an emerging growth company, and a smaller reporting company, and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our securities less attractive to investors.

We are an emerging growth company, under the Jumpstart Our Business Startups Act and a smaller reporting company under SEC regulations. For so long as we remain an emerging growth company or smaller reporting company, we will be permitted to and intend to rely on exemptions from certain disclosure requirements applicable to other public companies that are not emerging growth companies or smaller reporting companies. These exemptions include:

- for so long as we are an emerging growth company, not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved for so long as we are an emerging growth company.

We may choose to take advantage of some, but not all, of the available exemptions. Emerging growth companies may take advantage of an extended transition period for complying with new or revised accounting standards, allowing emerging growth companies to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies.

We will continue to be an emerging growth company until the earliest to occur of (i) the last day of the fiscal year during which we had total annual gross revenues of at least $1.07 billion, (ii) the day we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million, measured as of our most recently completed second fiscal quarter, (iii) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period, and (iv) December 31, 2022. In addition, we are eligible to remain a smaller reporting company for so long as we have a public float (based on our common equity) of less than $250 million measured as of the last business day of our most recently completed second fiscal quarter or, a public float (based on our common equity) of less than $700 million as of this date and annual revenues of less than $100 million during the most recently completed fiscal year.

We cannot predict whether investors will find our securities less attractive if we rely on these exemptions. If some investors find our securities less attractive as a result, there may be a less active trading market for our securities and the price of our securities price may be more volatile.

Future issuances of equity securities may dilute the interests of our security holders and reduce the price of our securities.

Any future issuance of our equity securities could dilute the interests of our then existing security holders and could substantially decrease the trading price of our securities. We may issue equity or equity-linked securities for a number of reasons, including to finance our operations and business strategy, to adjust our ratio of debt to equity, to satisfy our obligations upon the exercise of then-outstanding options or other equity-linked securities, if any, or for other reasons.

We may amend the terms of our publicly traded warrants currently trading on the Pink Market under the ticker symbol "DMTKW," or the publicly traded warrants, in a manner that may be adverse to holders with the approval by the holders of a majority of the then outstanding publicly traded warrants. As a result, the exercise price of the publicly traded warrants could be increased, the exercise period could be shortened and the number of shares purchasable upon exercise of a publicly traded warrant could be decreased, all without your approval.

Our publicly traded warrants are subject to the Warrant Agreement. The Warrant Agreement provides that the terms of the publicly traded warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of a majority of the then outstanding publicly traded warrants to make any change that adversely affects the interests of the registered holders. Accordingly, we may amend the terms of the publicly traded warrants in a manner adverse to a holder if holders of a majority of the then outstanding publicly traded warrants approve of such amendment. Although our ability to amend the terms of the publicly traded warrants with the consent of a majority of the then outstanding publicly traded warrants is unlimited, examples of such amendments could be amendments to, among other things, increase the exercise price of the publicly traded warrants, shorten the exercise period or decrease the number of shares of common stock purchasable upon exercise of the publicly traded warrants.

We may redeem your unexpired publicly traded warrants prior to their exercise at a time that is disadvantageous to you, thereby making your publicly traded warrants worthless.

We will have the ability to redeem our outstanding publicly traded warrants at any time after they become exercisable and prior to their expiration, at a price of $0.01 per warrant, provided that the last reported sales price of our common stock equals or exceeds $36.00 per share for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date we give notice of redemption. If and when the publicly traded warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. Redemption of the outstanding publicly traded warrants could force you (i) to exercise your publicly traded warrants and pay the exercise price therefor at a time when it may be disadvantageous for you to do so, (ii) to sell your publicly traded warrants at the then-current market price when you might otherwise wish to hold your publicly traded warrants or (iii) to accept the nominal redemption price which, at the time the outstanding publicly traded warrants are called for redemption, is likely to be substantially less than the market value of your publicly traded warrants.

Because we have no current plans to pay cash dividends on our shares for the foreseeable future, you may not receive any return on investment unless you sell your shares for a price greater than that which you paid for it.

We may retain future earnings, if any, for future operations, expansion and debt repayment and have no current plans to pay any cash dividends for the foreseeable future. Any decision to declare and pay dividends as a public company in the future will be made at the discretion of our board of directors and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that our board of directors may deem relevant. In addition, our ability to pay dividends may be limited by covenants of any existing and future outstanding indebtedness we or our subsidiaries incur. As a result, you may not receive any return on an investment in our shares unless you sell your shares of the Company for a price greater than that which you paid for them.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our securities adversely, the price and trading volume of our securities could decline.

The trading market for our securities will be influenced by the research and reports that industry or securities analysts may publish about us, our business, market or competitors. If no securities or industry analysts publish reports about us, our share price and trading volume would likely be negatively impacted. If any of the analysts who may cover us change their recommendation regarding our shares of common stock adversely, or provide more favorable relative recommendations about our competitors, the price of our shares of common stock would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline.

Provisions of our charter documents or Delaware law could delay or prevent an acquisition of us, even if the acquisition would be beneficial to our stockholders, and could make it more difficult for you to change management.

Provisions in our Amended and Restated Certificate of Incorporation and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control that our stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempt by our stockholders to replace or remove our current management by making it more difficult to replace or remove our board of directors. These provisions include:

- a classified board of directors so that not all directors are elected at one time;
- a prohibition on stockholder action through written consent;
- no cumulative voting in the election of directors;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director;
- a requirement that special meetings of our stockholders be called only by our board of directors, the chairman of our board of directors, the chief executive officer or, in the absence of a chief executive officer, the president;
- an advance notice requirement for stockholder proposals and nominations;
- the authority of our board of directors to issue preferred stock with such terms as our board of directors may determine; and
- a requirement of approval of not less than 66 2/3% of all outstanding shares of our capital stock entitled to vote to amend any bylaws by stockholder action, or to amend specific provisions of our certificate of incorporation.

In addition, Delaware law prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person who, together with his, her or its affiliates, owns or within the last three years has owned 15% or more of the company's voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Accordingly, Delaware law may discourage delay or prevent a change in control of the Company.

In addition, our Amended and Restated Certificate of Incorporation, to the fullest extent permitted by law, provides that the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our Amended and Restated Certificate of Incorporation, or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. This exclusive forum provision does not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended, or the Exchange Act. It could apply, however, to a suit that falls within one or more of the categories enumerated in the exclusive forum provision and asserts claims under the Securities Act, inasmuch as Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rule and regulations thereunder. There is uncertainty as to whether a court would enforce such provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions contained in our Amended and Restated Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations and financial condition.

Provisions in our charter and other provisions of Delaware law could limit the price that investors are willing to pay in the future for shares of our common stock.

We expect the price of our common stock may be volatile and may fluctuate substantially.

The stock market in general and the market for life sciences companies in particular, have experienced extreme volatility that has often been unrelated to companies' operating performance. The market price for our common stock may be influenced by many factors, including:

- the results of our efforts to develop and commercialize our tests;
- actual or anticipated results from, and any delays in, any future clinical trials, as well as results of regulatory reviews relating to the approval of any test candidates we may choose to develop that require such approval;
- commencement or termination of any collaboration or licensing arrangement;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technology;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures and capital commitments;
- additions or departures of key scientific or management personnel;
- variations in our financial results or those of companies that are perceived to be similar to us;
- new products, product candidates or new uses for existing products introduced or announced by our competitors, and the timing of these introductions or announcements;
- results of clinical trials of product candidates of our competitors;
- general economic and market conditions and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including changes in market valuations of similar companies;
- regulatory or legal developments in the United States and other countries;
- changes in the structure of healthcare payment systems;
- conditions or trends in the life sciences industry;
- actual or anticipated changes in earnings estimates, development timelines or recommendations by securities analysts;
- announcement or expectation of additional financing efforts;
- sales of common stock by us or our stockholders in the future, as well as the overall trading volume of our common stock; and
- other factors described in this "Risk Factors" section.

In the past, following periods of volatility in companies' stock prices, securities class-action litigation has often been instituted against such companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business and financial condition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We currently occupy approximately 15,355 square feet of leased space at 11099 North Torrey Pines Road, La Jolla, California 92037.

On February 5, 2020 we entered into an amendment to our lease to, among other things, expand the size of our existing premises by approximately 13,300 square feet, or the Expansion Premises, to approximately 28,655 square feet following delivery of the Expansion Premises, which we expect to occur in the second or third quarter of 2020. As amended, the lease will expire on the third year following delivery of the Expansion Premises, and we may extend the term at our election to the sixth year following delivery.

We believe these facilities are adequate to meet our current and reasonably foreseeable requirements. We believe that we would be able to obtain additional space, if required, on commercially reasonable terms.

Item 3. Legal Proceedings

We are not currently a party to any material legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is currently listed on the Nasdaq Capital Market under the symbol "DMTK".

As of March 5, 2020, there were 14,844,054 shares of our common stock outstanding held by approximately 303 holders of record.

Item 6. Selected Financial Data

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and the related notes thereto included elsewhere in this Annual Report on Form 10-K.

Overview

We are an emerging growth molecular diagnostic company developing and marketing novel non-invasive genomics tests that seek to transform the practice of dermatology and related fields. Our platform may change the diagnostic paradigm in dermatology from one that is subjective, invasive, less accurate and higher-cost, to one that is objective, non-invasive, more accurate and lower-cost. Our initial focus is skin cancer. We currently have two clinical commercial tests, with a third in development, that enhance the early detection of skin cancer and related conditions. Our scalable genomics platform has been designed to work with a proprietary adhesive patch sample collection kit that provides a skin sample collected non-invasively. We process our tests in a CLIA certified and College of American Pathologists accredited commercial laboratory located in La Jolla, California that is licensed by the State of California and all states requiring out-of-state licensure. We also provide our technology platform on a contract basis to large pharmaceutical companies who use the technology in their clinical trials to test for the existence of genetic targets of various diseases and to measure the response of new drugs under development. We have a history of net losses since our inception.

Events, Trends and Uncertainties

We filed an application for a technology assessment for our Pigmented Lesion Assay, or PLA, with MolDX (Medicare) in April of 2018, and the comment period for the accompanying Medicare Draft Local Coverage Decision, or Draft LCD, closed in August of 2018. In March 2019, a Draft LCD proposed favorable coverage for the PLA. In late October 2019, the AMA provided us with a Proprietary Laboratory Analyses Code, or PLA Code. Pricing of $760 for the PLA Code was published on December 24, 2019 as part of the CMS Laboratory Fee Schedule for 2020. The Medicare Final Coverage Decision, or Final LCD, first made available on December 26, 2019 expanded the coverage proposal in the Draft LCD from one to two tests per date of service and to allow clinicians to order our PLA if they have sufficient skill and experience to decide whether a pigmented lesion should be biopsied. PLA became eligible for Medicare reimbursement on February 10, 2020. With Medicare coverage granted, we have the opportunity to approach commercial payors and as a result, we believe that PLA may generate significant revenues in 2021 and 2022.

Even following the grant of Medicare coverage for the PLA, uncertainty surrounds third-party payor reimbursement, including governmental and commercial payors, of any test incorporating new technology, including tests developed using our technologies. For example, technology assessments of new medical tests conducted by research centers and other entities may be disseminated to interested parties for informational purposes. Third-party payors and health care providers may use such technology assessments as grounds to deny coverage for a test or procedure.

Because each payor generally determines for its own enrollees or insured patients whether to cover or otherwise establish a policy to reimburse our tests, seeking payor approvals is a time-consuming and costly process. We cannot be certain that coverage for our current tests and our planned future tests will be provided in the future by additional third-party payors or that existing policy decisions, or reimbursement levels will remain in place or be fulfilled under existing terms and provisions. If we cannot obtain or maintain coverage and reimbursement from private and governmental payors such as Medicare and Medicaid for our current tests, or new tests or test enhancements that we may develop in the future, our ability to generate revenues could be limited, which may have a material adverse effect on our business financial condition, results of operation, and cash flows.

Financial Overview

Revenue

We generate revenue through laboratory services that are billed to private medical insurance companies and to pharmaceutical companies who order our laboratory services, which can include sample collection kits, assay development, gene expression analysis, data analysis and reporting. Our revenue is generated from two revenue streams, contract revenue and assay revenue. Assay revenue can be highly variable as it is based on payments received by private insurance payors that are not under contract and can vary based on patient insurance coverage, deductibles and co-pays. Contract revenue is ordered by customers on projects that may span over several years. Segments of these contracts may be increased, delayed or eliminated based on the success of each customers' clinical trials or other factors. We account for revenue in accordance with Accounting Standards Codification, or ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606. The core principle of ASC 606 is that the Company recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The ASC 606 revenue recognition model consists of the following five steps: (1) identify the contracts with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when (or as) the entity satisfies a performance obligation. We adopted ASC 606 on January 1, 2019, using the modified retrospective method and elected to utilize Practical Expedient 1 to apply the modified retrospective method to only contracts which were open as of January 1, 2019.

Operating Expenses

Sales and Marketing Expenses

Sales and marketing expenses are primarily related to our specialty field sales force, market research, reimbursement efforts, trade show attendance, public relations, and general marketing.

Research and Development Expenses

Our research and development, or R&D, expenses consist primarily of salaries and fringe benefits, clinical trials, consulting costs, facilities costs, laboratory costs, equipment expense, and depreciation. We also conduct clinical trials to validate the performance characteristics of our tests and to show medical cost benefit in support of our reimbursement efforts. We expect these expenses to increase significantly as we continue to develop new products and expand the use of our existing products.

General and Administrative Expenses

Our general and administrative expenses consist of senior management compensation, consulting, legal, billing and collections, human resources, information technology, accounting, insurance, and general business expenses. We expect our general and administrative expenses, especially insurance, accounting, and legal fees, to increase due to operating as a publicly traded company.

Financing Activities

Convertible Bridge Notes

On May 23, 2019, DermTech Operations, Inc. (formerly known as DermTech, Inc.), or DermTech Operations, and various holders of its convertible bridge notes agreed to amend DermTech Operations' then outstanding convertible notes that were issued prior to June 5, 2019. As part of the amendment, the maturity dates of the notes were extended to the earliest of (i) September 24, 2019; (ii) the occurrence of an Event of Default; (iii) the consummation of a liquidation or dissolution of DermTech Operations (iv) a Liquidation Transaction; or (v) the consummation of a merger with or into the Company or any of its subsidiaries.

Between June 5, 2019 and June 10, 2019, DermTech Operations issued additional convertible bridge notes to its existing investors for aggregate gross proceeds of $2.6 million. These convertible bridge notes carried an interest rate of 10% and matured after the earliest to occur of: (i) September 25, 2019; (ii) the occurrence of an Event of Default; (iii) the consummation of a liquidation or dissolution of DermTech Operations; (iv) a Liquidation Transaction: or (v) the consummation of a merger of DermTech Operations with DT Merger Sub, Inc., a subsidiary of the Company, in accordance with the Merger Agreement (as defined below).

On August 29, 2019, in connection with the completion of the Business Combination (as defined below), all of the outstanding convertible bridge notes of DermTech Operations converted into Company common stock, in accordance with their respective terms.

Business Combination

On August 29, 2019, the Company and DermTech Operations consummated the transactions contemplated by the Agreement and Plan of Merger, dated as of May 29, 2019, by and among the Company, DT Merger Sub, Inc., or Merger Sub, and DermTech Operations. We refer to this agreement, as amended by that certain First Amendment to Agreement and Plan of Merger dated as of August 1, 2019, as the Merger Agreement. Pursuant to the Merger Agreement, Merger Sub merged with and into DermTech Operations, with DermTech Operations surviving as a wholly-owned subsidiary of the Company. We refer to this transaction as the Business Combination.

Immediately following the completion of the Business Combination, the Company changed its name from Constellation Alpha Capital Corp. to DermTech, Inc. and effected a one-for-two reverse stock split of its common stock. Prior to the closing of the Business Combination, the Company's stock was listed on the Nasdaq Capital Market under the ticker symbol "CNAC." On August 30, 2019, the Company's common stock commenced trading on the Nasdaq Capital Market under the ticker symbol "DMTK."

2019 PIPE Financing

On August 29, 2019, immediately prior to the completion of the Business Combination, the Company issued, in a private placement transaction, or the 2019 PIPE Financing, an aggregate of 3,076,925 shares of common stock and 1,231 shares of Series A Convertible Preferred Stock, which are convertible into an aggregate of up to 615,385 shares of common stock, for an aggregate purchase price of $24.0 million, to certain accredited investors pursuant to the terms of separate Subscription Agreements and Amended and Restated Subscription Agreements, dated between May 22, 2019 and August 1, 2019, entered into by the Company and such investors.

Results of Operations

Fiscal Years Ended December 31, 2019 and 2018

Assay Revenue

Assay revenues grew $0.1 million or 9% to $1.4 million for fiscal year 2019 compared to $1.3 million for fiscal year 2018. As much of our assay revenue is driven by the samples that are sent by physicians and physician assistants to our central lab for testing, a key performance measure for us is samples that are received and processed by our central lab successfully, also known as billable samples. Billable samples increased to 13,714 for fiscal year 2019 compared to 11,077 for fiscal year 2018. Sample volume is dependent on two major factors; the number of physicians or physician assistants who order an assay in any given quarter and the number of assays ordered by each physician during the period. The number of ordering physicians and the utilization per physician can vary based on a number of factors including the types of patients presenting skin cancer conditions, physician reimbursement, office workflow, market awareness, physician education and other factors.

Contract Revenue

Contract revenues with major pharmaceutical companies increased $0.8 million to $2.0 million for fiscal year 2019, or 69%, compared to $1.2 million for fiscal year 2018, due to accelerating activity with ongoing clinical trial contracts and new contracts. Contract revenue can be highly variable as it is dependent on the pharmaceutical customers' clinical trial progress which can be difficult to forecast due to variability of patient enrollment, drug safety and efficacy and other factors. Many of our contracts with third parties are structured to contain milestone billing payments, which typically are advance payments on work yet to be performed. These advanced payments are structured to help fund operations and are included in deferred revenue as the work has not yet been performed. At December 31, 2019, the deferred revenue amount for these contracts, which is the advance payments minus the value of work performed, was $1.4 million. These advance payments will remain in deferred revenue until we process the laboratory portion of the contracts allowing us to recognize the revenue.

Cost of Revenue

Cost of revenues increased $0.7 million, or 26%, to $3.3 million for fiscal year 2019 compared to $2.6 million for fiscal year 2018. The increase was driven by the costs incurred by the growing volume of our assay and contract revenue activities, which lead to increase spending on laboratory supplies and shipping costs. In addition, we implemented a new laboratory information system during 2019, which led to additional incurred costs; however, we believe the new system will allow us to facilitate the automation of several processes in our central laboratory to increase efficiency and decrease costs in our sample analysis process over the next several years. Much of the cost of revenue expenses incurred primarily relate to salaries and benefits, laboratory supplies, shipping costs, equipment maintenance and calibration, utilities and depreciation. In the near- and long-term future, we remain committed to continuing the automation of our laboratory processes in order to become more cost efficient and productive.

Operating Expenses

Sales and Marketing

Sales and marketing expenses increased $3.5 million, or 125%, to $6.3 million for fiscal year 2019 compared to $2.8 million for fiscal year 2018. The increase was largely due to a $1.9 million increase in higher compensation-related costs, including salaries, commissions and benefits, due to an increase in our sales force and establishment of our payor access team throughout fiscal year 2019. In connection with our expanded sales force, we incurred an increase of $0.4 million in meals, entertainment and travel expenses as well as a $0.2 million increase in recruiting expenses. In addition, we incurred a $0.7 million in higher consulting expenses in connection with our new marketing campaign and sales force strategy. We expect to significantly add to our specialty sales force and payor access teams in 2020 and this would significantly increase our sales and marketing expenses.

Research and Development

R&D expenses increased $0.4 million, or 22%, to $2.5 million for fiscal year 2019 compared to $2.1 million for fiscal year 2018. The increase was due to $0.2 million in higher compensation related costs associated with additional headcount, and a $0.1 million increase in laboratory supplies to help expand our research and development efforts. The primary expenses in R&D include salaries and benefits, clinical trials, facility and lab supplies. We expect these expenses to increase as we continue the development of our non-melanoma skin cancer assays and other new products.

General and Administrative

General and administrative expenses increased $5.4 million, or 152%, to $8.9 million for fiscal year 2019 compared to $3.5 million for fiscal year 2018. The increase was due to $2.3 million of additional legal fees, $1.2 million of additional accounting fees, $0.6 million in additional headcount-related costs and $0.4 million of additional insurance costs. The increase was primarily due to significant costs incurred in association with our Business Combination and costs required to operate as a publicly traded company. We expect to these expenses to continue to increase as we add additional infrastructure such as human resources, information technology and legal resources. Ongoing expenses include salaries and benefits, facility costs, billing and collections, auditing and legal expenses.

Interest Expense, net

Interest expense increased to approximately $2.7 million for fiscal year 2019 compared to approximately $1.1 million for fiscal year 2018. During 2018 through 2019, DermTech Operations issued $9.4 million in convertible promissory notes and the recorded interest expense includes both the stated interest on the notes as well as amortization of debt discount on the notes. As these convertible bridge notes were extinguished in connection with the Business Combination, we do not expect any additional significant interest expense during the next fiscal year.

Other Expense

Other expense of $0.4 million for fiscal year 2019 is related to the change in fair value of the derivative liability from the various reporting periods throughout 2019. As these convertible bridge notes were extinguished in connection with the Business Combination, we do not expect to incur significant other expense during the next fiscal year.

Gain on Debt Extinguishment

Gain on debt extinguishment of $0.9 million for fiscal year 2019 is related to the conversion of our convertible notes in connection with our Business Combination. The net carrying amounts of the convertible notes, including remaining unamortized debt discount and issuance costs, and the bifurcated embedded derivative liability were extinguished on the date of the Business Combination. A gain on debt extinguishment was recognized, which represented the unamortized debt discounts and issuance costs remaining at the time of the debt extinguishment. As these convertible bridge notes were extinguished in connection with the Business Combination, we do not expect to incur other gain during the next fiscal year.

Liquidity and Capital Resources

We have never been profitable and have historically incurred substantial net losses, including net losses of $10.0 million in 2018 and $19.7 million in 2019. As of December 31, 2019, our accumulated deficit was $91.1 million, and we had negative operating cash flow of $17.8 million. In connection with the Business Combination, we completed the 2019 PIPE financing that raised a total of $24.0 million in gross proceeds in addition to the $1.8 million in cash the Company had on hand at the close of the Business Combination. We have historically financed operations through private placement equity offerings and convertible debt offerings.

We expect our losses to continue as a result of costs relating to ongoing R&D expenses and increased sales and marketing costs for existing and planned products. These losses have had, and will continue to have, an adverse effect on our working capital. Because of the numerous risks and uncertainties associated with our commercialization and development efforts, we are unable to predict when we will become profitable, and we may never become profitable. Our inability to achieve and then maintain profitability would negatively affect our business, financial condition, results of operation and cash flows.

As of December 31, 2019, our cash and cash equivalents totaled approximately $15.4 million. On February 28, 2020, we entered into a securities purchase agreement with certain institutional investors for a private placement, which closed on March 4, 2020, of our equity securities for aggregate gross proceeds of approximately $65.0 million, and net proceeds to us of approximately $60.0 million, after deducting estimated offering expenses payable by us. Based on our current business operations and the additional financing completed in March 2020, we believe our current cash and cash equivalents will be sufficient to meet our anticipated cash requirements for at least the next twelve months. While we believe we have enough capital to fund anticipated operating costs for at least the next 12 months, we expect to incur significant additional operating losses over at least the next several years. We anticipate that we will raise additional capital through equity offerings, debt financings, collaborations or licensing arrangements and believe this will be sufficient to continue to support our planned operations and to continue developing and commercializing gene expression tests. We may also consider raising additional capital in the future to expand our business, to pursue strategic investments or to take advantage of financing opportunities. Our present and future funding requirements will depend on many factors, including:

- our revenue growth rate and ability to generate cash flows from operating activities;
- our sales and marketing and R&D activities;
- effects of competing technological and market developments;
- costs of and potential delays in product development;
- changes in regulatory oversight applicable to our tests; and
- timing of and costs related to future international expansion.

There can be no assurances as to the availability of additional financing or the terms upon which additional financing may be available to us. If we are unable to obtain sufficient funding at acceptable terms, we may be forced to significantly curtail our operations, and the lack of sufficient funding may have a material adverse impact on our ability to continue as a going concern.

Cash Flow Analysis

Fiscal Year Ended December 31, 2019

Net cash used in operating activities for the twelve months ended December 31, 2019 totaled $17.8 million, primarily driven by the $19.7 million net loss offset by non-cash related items, including $2.0 million in amortization of the convertible bridge notes debt discount, $1.3 million in stock-based compensation and $0.4 million in the change in the convertible bridge notes derivative liability, offset by the gain on extinguishment of convertible notes of $0.9 million and a tax payment of $1.6 million related to the release of certain employees' restricted stock units. In addition, we had $2.0 million of cash inflow through the increase of accounts payables and accrued compensation offset by the cash outflow of $1.0 million related to payments for prepaid insurance.

Net cash used in investing activities totaled $0.2 million for the twelve months ended December 31, 2019, which related predominantly to the purchase of laboratory equipment. As we scale our sales force and the resulting expected increase to assay volume, additional laboratory equipment investment will be needed to install complex automation systems and other genomic testing equipment.

Net cash provided by financing activities totaled $28.6 million for the twelve months ended December 31, 2019, which was predominantly driven by the $25.6 million in net proceeds raised from the Business Combination and related 2019 PIPE financing and issuing $2.6 million in convertible notes. In order to fund future operations, we completed a private placement in March 2020 with certain institutional investors for a private placement of our equity securities for aggregate gross proceeds of approximately $65.0 million, and net proceeds to the Company of approximately $60.0 million, after deducting estimated offering expenses payable by the Company.

Fiscal Year Ended December 31, 2018

Net cash used in operating activities for the twelve months ended December 31, 2018 totaled $7.6 million primarily driven by a $10.0 million net loss offset by non-cash related items, including $1.0 million in amortization of the convertible bridge notes debt discount, $0.9 million in stock-based compensation and $0.4 million in the change in the convertible bridge notes derivative liability.

Accounts receivable increased by $0.2 million leading to a cash outflow that was primarily attributable to significant billings of advance payments related to our contract revenue business that was partially offset by the resulting increase in deferred revenue.

Net cash used in investing activities totaled $12,000 for the twelve months ended December 31, 2018, which related to the purchase of laboratory equipment. As we scale our sales force and the resulting expected increase to assay volume, additional laboratory equipment investment will be needed to install complex automation systems and other genomic testing equipment.

Net cash provided by financing activities totaled $11.1 million, which included $4.5 million in Series C Preferred Stock sold by DermTech Operations through a private placement and $6.8 million in convertible bridge notes that were partially offset by $0.2 million in debt issuance costs.

Off-Balance Sheet Arrangements

As of December 31, 2019 and 2018, we did not have any off-balance sheet arrangements, as such term is defined under Item 303 of Regulation S-K, that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires that management make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the amounts of revenues and expenses reported during the period. On an ongoing basis, management evaluates these estimates and judgments, including but not limited to those related to revenue, warrants, stock-based compensation, accounts receivable, expense accruals, convertible debt, the realization of deferred tax assets, and common and preferred stock valuations. Actual results may differ from those estimates.

The SEC has defined a company's critical accounting policies as the ones that are most important to the portrayal of the company's financial condition and results of operations, and which require the company to make its most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. While our significant accounting policies are more fully described in Note 1 of our consolidated financial statements included in this report, we believe that the following accounting policies and judgments are most critical to aid in fully understanding and evaluating our reported financial results based upon the SEC's defined criteria.

Revenue Recognition

Our revenue is generated from two revenue streams, contract revenue and assay revenue. We account for revenue in accordance with ASC 606. The core principle of ASC 606 is that we recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. The ASC 606 revenue recognition model consists of the following five steps: (1) identify the contracts with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when (or as) the entity satisfies a performance obligation.

We recognize revenue from our contract and assay goods and service in accordance with that core principle and key aspects considered by us include the following:

(a) Contract Revenue

Contract revenue is generated from the sale of laboratory services and adhesive sample collection kits to third party companies through contract research agreements. Laboratory revenues result from providing gene expression tests to facilitate the development of drugs designed to treat dermatologic conditions. The provision of gene expression services may include sample collection using our patented adhesive patch biopsy devices, assay development for research partners, ribonucleic acid, or RNA isolation, expression, amplification and detection, including data analysis and reporting.

Performance obligations

ASC 606 requires an entity to assess the goods or services promised in a contract and identify as a performance obligation each promise to transfer to the customer either a good or service (or a bundle of goods or services) that is distinct, or a series of distinct goods

or services that are substantially the same and that have the same pattern of transfer to the customer. Based upon review of existing contracts, a majority of our contract revenue contracts contain three performance obligations:

(1) Adhesive patch kits

(2) RNA extractions and analysis

(3) Certain project management fees

Many of the contract revenue contracts contain promises such as start-up activities and quality system setup fees, which are activities that are performed to fulfill the contract and they do not transfer any good or service to the customer. These promises encompass the administrative tasks associated with beginning and initiating a new project or study with a pharmaceutical company. In accordance with ASC 606, an entity does not account for these activities as a promised good or service within the contract nor evaluate whether they are a performance obligation.

Transaction price

The transaction prices of all the performance obligations are listed in each contract on a per unit basis and are fixed based for the adhesive patch kits and RNA extractions and analysis. The project management fees are assessed based on a monthly service fee which range within the contracts depending on certain factors which include length of project and amount of kits or RNA extractions and analysis promised within the contract. The fixed and variable rates are materially consistent within all contracts. Therefore, we utilize the prices listed in each of our contracts as the transaction price for each performance obligation.

Allocate the transaction price

All contracts have a directly observable transaction price pertaining to each promised good or service. Those prices are consistent across all contracts for adhesive patch kits and RNA extractions and analysis, with the exception of project management fees, which encompass a sufficiently narrow range of prices that are dictated upon factors of each contract previously discussed above. Therefore, we rely on those transaction prices as the basis to allocate the stand-alone selling prices to the performance obligations of the contract.

Recognize Revenue

The adhesive patch kits are recognized as point in time when shipped to the customer. The RNA extraction and analysis are recognized at a point in time when the extraction process is complete, and the results are sent to the customer. We provide project management service over the life of the contract, providing equal benefit to the customer throughout the life of the project or study. Therefore, the revenue related to project management fees is recognized straight-line over the life of the contract.

(b) Assay Revenue

We generate revenues from our Pigmented Lesion Assay, or PLA, and Nevome services we provide to healthcare clinicians in various states throughout the United States to assist in a clinician’s diagnosis of melanoma. We provide prescribing clinicians with our adhesive sample collection kits to perform non-invasive skin biopsies of clinically ambiguous pigmented skin lesions on patients. Once the sample is collected by the healthcare clinician, it is returned to our CLIA laboratory for analysis. The patient RNA and deoxyribonucleic acid, or DNA, is extracted from the adhesive patch collection kit and analyzed using gene expression technology to determine if the pigmented skin lesion contains certain genomic features indicative of melanoma. Upon completion of the gene expression analysis, a final report is drafted and provided to the clinicians detailing the results of the pigmented skin lesion indicating whether the sample collected is indicative of melanoma or not. A detailed analysis of payments made to us by private health insurance payors for the assays over several quarters is used to estimate the ultimate receipt of funds for payment of billed amounts. These payments can vary widely from payor to payor and can be halted for routine audits or other reasons.

Contracts

Our customer is the patient. However, we do not enter into a formal reimbursement contract with a patient, as formal reimbursement contracts are more commonly established with insurance payors. Accordingly, we establish a contract with a patient in accordance with other customary business practices.

Performance obligations

A performance obligation is a promise in a contract to transfer a distinct good or service (or a bundle of goods or services) to the customer. The customer is able to order a PLA test. However, a Nevome test cannot be ordered separately from the PLA test and it is contingent on being run only when a PLA test comes back positive on a sample. The Nevome test would not qualify as a distinct service. Therefore, the PLA test is recognized as a single performance obligation and the Nevome test, if rendered, is bundled with the single PLA performance obligation.

Transaction price

The consideration derived from our contracts is deemed to be variable, though the variability is not explicitly stated in any contract. Rather, the implied variability is due to several factors, such as the amount of contractual adjustments, any patient co-payments, deductibles or patient compliance incentives, the existence of secondary payors and claim denials.

We estimate the amount of variable consideration using the expected value method, which represents the sum of probability-weighted amounts in a range of possible consideration amounts. When estimating the amount of variable consideration, we consider several factors, such as historical collections experience, patient insurance eligibility and payor reimbursement contracts.

We monitor our estimates of transaction price to depict conditions that exist at each reporting date. If we subsequently determine that we will collect more consideration than we originally estimated for a contract with a patient, we will account for the change as an increase in the estimate of the transaction price (i.e., an upward revenue adjustment) in the period identified. Similarly, if we subsequently determine that the amount we expect to collect from a patient is less than it originally estimated, we will generally account for the change as a decrease in the estimate of the transaction price (i.e., a downward revenue adjustment), provided that such downward adjustment does not result in a significant reversal of cumulative revenue recognized.

Recognize revenue

Our single performance obligation is satisfied at a point in time, and that point in time is defined as the date a patient’s successful test result is delivered to the patient’s ordering physician. We consider this date to be the time at which the patient obtains control of the final results of the promised test service.

If a Nevome test service is ordered and completed in conjunction with our PLA service, then we will recognize revenue at a point in time upon the delivery of both the final reports to the physician. The delivery of our Nevome test results is commonly after our PLA results are delivered due to the circumstances of how we process the Nevome test. However, this length in time is determined to not materially impact the final overall revenue recognition timing.

Stock-Based Compensation

Compensation costs associated with stock option awards and other forms of equity compensation are measured at the grant-date fair value of the awards and recognized over the requisite service period of the awards on a straight-line basis.

We grant stock options to purchase common stock to employees with exercise prices equal to the fair market value of the underlying stock, as determined by the board of directors, management, outside valuation experts and subsequent to the completion of the Business Combination, the closing stock price on the date of grant. The board of directors and outside valuation experts determine the fair value of the underlying stock by considering a number of factors, including historical and projected financial results, the risks we faced at the time, the preferences of our debt holders and preferred stockholders, and the lack of liquidity of our common stock that occurred prior to the Business Combination.

The fair value of each stock option award is estimated using the Black-Scholes-Merton valuation model. Such value is recognized as expense over the requisite service period, net of estimated forfeitures, using the straight-line method. The expected term of options is based on the simplified method which defines the expected term as the average of the contractual term of the options and the weighted average vesting period for all option tranches. The expected volatility of stock options is based upon the historical volatility of a number of related publicly traded companies in similar stages of development. The risk-free interest rate is based on the average yield of

U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards. The assumed dividend yield was based on our expectation of not paying dividends in the foreseeable future.

Restricted stock units, or RSUs, are considered restricted stock. The fair value of restricted stock is equal to the fair market value of the underlying stock, as determined by the board of directors, management, input from outside valuation experts and subsequent to the completion of the Business Combination, the closing stock price on the date of grant. We recognize stock-based compensation expense based on the fair value on a straight-line basis over the requisite service periods of the awards, taking into consideration estimated forfeitures. RSUs that are granted to employees have a requisite service period between two and four years.

Recent accounting pronouncements

See Note 1(r) of our consolidated financial statements for a discussion of the impact of new accounting pronouncements on our consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk from interest rates which could affect our results of operations, financial condition and cash flows. We manage our exposure to this market risk through our regular operating and financing activities.

Interest Rate Risk

We have no cash and cash equivalents that are held in any marketable securities.

Foreign Currency Risk

We have limited revenues from outside the United States and we do not expect to be impacted significantly by foreign currency fluctuations.

Item 8. Consolidated Financial Statements and Supplementary Data

DERMTECH, INC.
Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

DermTech, Inc.
San Diego, California

To the Stockholders and Board of Directors
DermTech, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of DermTech, Inc. and its subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the years in the two-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for revenue as of January 1, 2019 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2016.

San Diego, California
March 10, 2020

DERMTECH, INC.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 15,374	$ 4,753
Accounts receivable, net	680	580
Inventory	35	40
Prepaid expenses and other current assets	1,061	26
Total current assets	17,150	5,399
Property and equipment, net	977	215
Other assets	84	50
Total assets	$ 18,211	$ 5,664
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 1,609	$ 286
Accrued compensation	1,142	480
Accrued liabilities	218	286
Deferred revenue	1,390	1,552
Deferred underwriting fees	1,363	—
Convertible notes payable, net	—	5,019
Derivative liability	—	2,880
Total current liabilities	5,722	10,503
Notes payable, noncurrent	—	516
Total liabilities	5,722	11,019
Commitments and contingencies		
Series A convertible preferred stock, $0.0001 par value per share; 5,000,000 and zero Series A shares authorized as of December 31, 2019 and 2018, respectively; 1,231 and zero shares issued and outstanding at December 31, 2019 and 2018, respectively; $7.6 million and zero liquidation preference at December 31, 2019 and 2018, respectively	—	—
Series C convertible preferred stock, $0.0001 par value per share; zero and 1,626,106 Series C shares authorized as of December 31, 2019 and 2018, respectively; zero and 1,524,122 shares issued and outstanding at December 31, 2019 and 2018, respectively; zero and $14.5 million liquidation preference at December 31, 2019 and 2018, respectively	—	—
Stockholders' equity (deficit):		
Common stock, $0.0001 par value per share; 50,000,000 and 15,099,554 shares authorized as of December 31, 2019 and 2018, respectively; 12,344,818 and 4,411,567 shares issued and outstanding at December 31, 2019 and 2018, respectively	1	1
Additional paid-in capital	103,599	66,021
Accumulated deficit	(91,111)	(71,377)
Total stockholders' equity (deficit)	12,489	(5,355)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 18,211	$ 5,664

See accompanying notes to consolidated financial statements.

DERMTECH, INC.

Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except share and per share data)

	Year Ended December 31,	
	2019	2018
Revenues:		
Assay revenue	$ 1,403	$ 1,281
Contract revenue	1,961	1,161
Total revenues	3,364	2,442
Cost of revenues	3,304	2,627
Gross profit / (loss)	60	(185)
Operating expenses:		
Sales and marketing	6,303	2,806
Research and development	2,497	2,054
General and administrative	8,865	3,515
Total operating expenses	17,665	8,375
Loss from operations	(17,605)	(8,560)
Other income (expense), net:		
Gain on debt extinguishment	928	—
Interest expense, net	(2,657)	(1,093)
Other expense	(355)	(351)
Total other income (expense), net	(2,084)	(1,444)
Net loss and comprehensive loss	$ (19,689)	$ (10,004)
Weighted average shares outstanding used in computing net loss per share, basic and diluted	7,005,037	4,410,913
Net loss per common share outstanding, basic and diluted	$ (2.81)	$ (2.27)

See accompanying notes to consolidated financial statements.

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DERMTECH, INC.

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except share and per share data)

	Series A convertible preferred stock		Series C convertible preferred stock		Common stock		Additional paid-in	Accumulated	Total stockholders' equity
	Shares	Amount	Shares	Amount	Shares	Amount	capital	deficit	(deficit)
Balance, December 31, 2017	—	$ —	1,017,583	$ —	4,410,841	$ 1	$ 60,567	$ (61,373)	$ (805)
Issuance of Series C preferred stock and common stock warrants at $9.54 per share, net of $0.3 million issuance costs	—	—	506,539	—	—	—	4,537	—	4,537
Issuance of common stock	—	—	—	—	726	—	5	—	5
Stock-based compensation	—	—	—	—	—	—	912	—	912
Net loss	—	—	—	—	—	—	—	(10,004)	(10,004)
Balance, December 31, 2018	—	$ —	1,524,122	$ —	4,411,567	$ 1	$ 66,021	$ (71,377)	$ (5,355)
Cumulative effect adjustment of accounting method change	—	—	—	—	—	—	—	(45)	(45)
Issuance of common stock	—	—	—	—	726,139	—	934	—	934
Conversion of Series C preferred stock to common stock	—	—	(1,524,122)	—	1,524,122	—	—	—	—
Conversion of convertible notes to common stock	—	—	—	—	2,267,042	—	12,687	—	12,687
Additional paid in capital assumed in Business Combination	—	—	—	—	—	—	420	—	420
Issuance of Series A preferred stock at $3,250 per share	1,231	—	—	—	—	—	4,000	—	4,000
Issuance of common stock at $6.50 per share, net of $0.2 million issuance costs	—	—	—	—	3,076,923	—	19,802	—	19,802
Restricted stock unit release					339,025	—	(1,569)		(1,569)
Stock-based compensation	—	—	—	—	—	—	1,304	—	1,304
Net loss	—	—	—	—	—	—	—	(19,689)	(19,689)
Balance, December 31, 2019	1,231	$ —	—	$ —	12,344,818	$ 1	$103,599	$ (91,111)	$ 12,489

See accompanying notes to consolidated financial statements.

DERMTECH, INC.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,	
	2019	2018
Cash flows from operating activities:		
Net loss	$ (19,689)	$ (10,004)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	89	76
Stock-based compensation	1,304	912
Amortization of debt discount and issuance costs	1,983	963
Change in fair value of derivative liability	355	351
Gain on extinguishment of convertible notes	(928)	—
Payment in connection with restricted stock unit release	(1,569)	—
Changes in operating assets and liabilities:		
Accounts receivable, net	(100)	(219)
Inventory	5	8
Prepaid expenses and other current assets	(1,069)	60
Accounts payable and accrued compensation	1,337	(145)
Accrued liabilities and deferred revenue	491	393
Net cash used in operating activities	(17,791)	(7,605)
Cash flows from investing activities:		
Purchases of property and equipment	(210)	(12)
Net cash used in investing activities	(210)	(12)
Cash flows from financing activities:		
Proceeds from convertible notes payable	2,600	6,800
Payments of debt issuance costs	—	(215)
Payments of notes payable	(516)	—
Proceeds from issuance of Series A Convertible Preferred Stock	4,000	—
Proceeds received from close of Business Combination	1,802	—
Proceeds from issuance of common stock	19,802	—
Proceeds from sale of convertible preferred stock and common stock warrants, net of issuance costs	—	4,538
Proceeds from exercise of common stock warrants	5	—
Proceeds from exercise of stock options	929	5
Net cash provided by financing activities	28,622	11,128
Net increase/(decrease) in cash and cash equivalents	10,621	3,511
Cash and cash equivalents, beginning of period	4,753	1,242
Cash and cash equivalents, end of period	$ 15,374	$ 4,753
Supplemental cash flow information:		
Income taxes paid	$ —	$ 1
Purchases of property and equipment recorded in accounts payable	$ 641	$ —
Non-cash investing and financing activities		
Debt discount and derivative liability at issuance of convertible notes payable	$ 270	$ 2,529

See accompanying notes to consolidated financial statements.

DERMTECH, INC.

Notes to Consolidated Financial Statements

1. The Company and a Summary of its Significant Accounting Policies

(a) Nature of Operations

On August 29, 2019, DermTech, Inc., formerly known as Constellation Alpha Capital Corp, (the Company), and DermTech Operations, Inc., formerly known as DermTech, Inc., (DermTech Operations), consummated the transactions contemplated by the Agreement and Plan of Merger, dated as of May 29, 2019, by and among the Company, DT Merger Sub, Inc., a wholly owned subsidiary of the Company (Merger Sub), and DermTech Operations. The Company refers to this agreement, as amended by that certain First Amendment to Agreement and Plan of Merger dated as of August 1, 2019, as the Merger Agreement. Pursuant to the Merger Agreement, Merger Sub merged with and into DermTech Operations, with DermTech Operations surviving as a wholly-owned subsidiary of the Company. The Company refers to this transaction as the Business Combination. In connection with and two days prior to the completion of the Business Combination, the Company domesticated from the British Virgin Islands to Delaware. DermTech Operations changed its name from DermTech, Inc. to DermTech Operations, Inc. shortly before the completion of the Business Combination. On August 29, 2019, immediately following the completion of the Business Combination, the Company changed its name from Constellation Alpha Capital Corp. to DermTech, Inc., and then effected a one-for-two reverse stock split of its common stock (Reverse Stock Split).

The Company is an emerging growth molecular diagnostic company developing and marketing its Clinical Laboratory Improvement Amendments of 1988, (CLIA), laboratory services including molecular pathology tests to facilitate the diagnosis of dermatologic conditions including melanoma. The Company has developed a proprietary, non-invasive technique for sampling the surface layers of the skin using an adhesive patch in order to collect individual biological information for commercial applications in the medical diagnostic field.

(b) Basis of Presentation, Reverse Stock Split and Going Concern

These consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles, (U.S. GAAP). In the opinion of management, all adjustments, which include only normal recurring adjustments considered necessary for a fair presentation, have been included.

The accompanying consolidated financial statements and notes to the consolidated financial statements give retroactive effect to the one-for-two Stock Split for all periods presented.

The Company has incurred net losses since the Company’s formation and has an accumulated deficit of $91.1 million and a negative operating cash flow of $17.8 million as of December 31, 2019, which previously raised doubts of the Company’s ability to continue as a going concern.

The Company expects to incur significant additional operating losses over at least the next several years. Management intends to pursue additional capital through equity offerings, debt financings, collaborations or licensing arrangements and believes this will be sufficient to provide the Company with the ability to continue to support its planned operations and to continue developing and commercializing gene expression tests. There can be no assurances as to the availability of additional financing or the terms upon which additional financing may be available to the Company. If the Company is unable to obtain sufficient funding at acceptable terms, it may be forced to significantly curtail its operations, and the lack of sufficient funding may have a material adverse impact on the Company’s ability to continue as a going concern.

On February 28, 2020, the Company entered into a securities purchase agreement with certain institutional investors for a private placement of the Company’s equity securities for aggregate gross proceeds of approximately $65.0 million, and net proceeds to the Company of approximately $60.0 million, after deducting estimated offering expenses payable by the Company. The private placement financing closed on March 4, 2020. Following the closing of the private placement financing and in light of the fact that the Company does not have any debt, the Company has evaluated the expected cash requirements for a 12-month period from the issuance date of the consolidated financial statements through March 2021 and believes it will have sufficient cash on hand to fund anticipated operations during this time. The financial statements included in this annual report reflect that our previous going concern position has been alleviated.

(c) Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires that management make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the amounts of revenues and expenses reported during the period. On an ongoing basis, management evaluates these estimates and judgments, including those related to assay revenue, stock-based compensation, accounts receivable and the realization of deferred tax assets. Actual results may differ from those estimates.

(d) Cash and Cash Equivalents

The Company considers all highly liquid investments with remaining maturities of three months or less when purchased to be cash equivalents. The Company maintains its cash balances at banks and financial institutions. The balances are insured up to the legal limit. The Company maintains cash balances that may, at times, exceed this insured limit.

(e) Property and Equipment

Property and equipment is recorded at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, which range from two to five years. Leasehold improvements are depreciated over the shorter of the remaining term of the lease or the useful life of the asset. The Company recorded depreciation expense of $0.1 million and $0.1 million for the years ended December 31, 2019 and 2018, respectively. No property or equipment was disposed of during the years ended December 31, 2019 and 2018. The Company assesses its long-lived assets, consisting primarily of property and equipment, for impairment when material events or changes in circumstances indicate that the carrying value may not be recoverable. There were no impairment losses for the years ended December 31, 2019 and 2018.

(f) Research and Development

Costs incurred in connection with research and development (R&D) activities are expensed as incurred. R&D expenses consist of (i) employee-related expenses, including salaries, benefits, travel and stock compensation expense; (ii) facilities and other expenses, which include direct and allocated expenses for rent and maintenance of facilities and laboratory and other supplies.

The Company expenses all costs as incurred in connection with patent applications (including direct application fees and the legal and consulting expenses related to making such applications) and such costs are included in general and administrative expenses.

(g) Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents. The Company maintains $15.1 million in a bank deposit account that is in excess of the $250,000 insurance provided by the Federal Deposit Insurance Corporation in one federally insured financial institution. The Company has not experienced any losses in such accounts.

(h) Income Taxes

The Company provides for federal and state income taxes on the asset and liability approach which requires deferred tax assets and liabilities to be recognized based on temporary differences between the consolidated financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the temporary differences are expected to reverse.

Deferred tax assets are reduced by a valuation allowance when, in management’s opinion, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The Company considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. The Company’s valuation allowance is based on available evidence, including its current year and prior year operating losses, evaluation of positive and negative evidence with respect to certain specific deferred tax assets including evaluation sources of future taxable income to support the realization of the deferred tax assets. The Company has established a full valuation allowance on the deferred tax assets as of December 31, 2019 and 2018.

Current and deferred tax assets and liabilities are recognized based on the tax positions taken or expected to be taken in the Company's income tax returns. U.S. GAAP requires that the tax benefits of an uncertain tax position can only be recognized when it is more likely than not that the tax position will be sustained upon examination by the relevant taxing authority. Tax benefits related to tax positions that do not meet this criterion are not recognized in the consolidated financial statements.

The Company recognizes interest and penalties related to income tax matters in income tax expense.

(i) Revenue Recognition

The Company's revenue is generated from two revenue streams, contract revenue and assay revenue. The Company has changed its method of accounting for revenue as of January 1, 2019 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended, and accounts for revenue in accordance with Accounting Standards Codification Topic 606 (ASC 606). The core principle of ASC 606 is that the Company recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The ASC 606 revenue recognition model consists of the following five steps: (1) identify the contracts with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when (or as) the entity satisfies a performance obligation.

The Company recognizes revenue from its contract and assay goods and service in accordance with the core principles and key aspects considered by the Company. These considerations are described in detail below, first for Contract Revenue and then for Assay Revenue.

(1) Contract Revenue

Contract revenue is generated from the sale of laboratory services and adhesive sample collection kits to third party companies through contract research agreements. Laboratory revenues result from providing gene expression tests to facilitate the development of drugs designed to treat dermatologic conditions. The provision of gene expression services may include sample collection using the Company's patented adhesive patch biopsy devices, assay development for research partners, ribonucleic acid (RNA) isolation, expression, amplification and detection, including data analysis and reporting.

Contracts

As part of the Company's contract revenue, the Company has established agreements and work orders with the Company's pharmaceutical partners that fall under the scope of ASC 606.

Performance Obligations

ASC 606 requires an entity to assess the goods or services promised in a contract and identify as a performance obligation each promise to transfer to the customer either a good or service (or a bundle of goods or services) that is distinct, or a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer. Based upon review of existing contracts, a majority of the Company's contract revenue agreements contain three performance obligations:

(1) Adhesive patch kits

(2) RNA extractions and analysis

(3) Certain project management fees

Many of the Company's contract revenue agreements contain promises such as start-up activities and quality system setup fees, which are activities that the Company performs to fulfill the agreement and they do not transfer any good or service to the customer. These promises encompass the administrative tasks associated with beginning and initiating a new project or study with a pharmaceutical company. In accordance with ASC 606, an entity does not account for these activities as a promised good or service within the agreement nor evaluate whether they are a performance obligation.

Transaction Price

The transaction price is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer. The consideration promised in an agreement with a customer may include fixed amounts, variable amounts, or both.

The transaction prices of the Company's performance obligations are listed in its agreements on a per unit basis and are fixed for adhesive patch kits and RNA extractions and analysis. The project management fees are assessed based on a monthly service fee which range within the agreements depending on certain factors which include length of the project and the amount of kits or RNA extractions and analysis promised within the agreement. The fixed and variable rates are materially consistent within the Company's agreements. Therefore, the Company utilizes the prices listed in our agreements as the transaction price for each performance obligation.

In determining the transaction price, ASC 606 requires an entity to adjust the promised amount of consideration for the effects of the time value of money if the agreement contains a significant financing component. The Company's agreements state fixed transaction prices for each deliverable associated with the agreement and do not qualify for the significant financing component of ASC 606.

Allocate the Transaction Price

The Company's contracts have a directly observable transaction price pertaining to each promised good or service. Those prices are consistent across agreements for adhesive patch kits and RNA extractions and analysis, with the exception of the Company's project management fees, which the Company's believes encompass a sufficiently narrow range of prices that are dictated upon factors of each agreement previously discussed above. Therefore, the Company's relies on those transaction prices as the basis to allocate the stand-alone selling prices to the performance obligations of the agreement.

Most of the Company's agreements contain a discount that is allocated to items within the agreement, whether they are performance obligations or not. Those items that are not performance obligations (e.g. quality system setup and start up fees) have the associated discount allocated to the transaction prices of the performance obligations evenly.

Recognize Revenue

An entity should recognize revenue when (or as) it satisfies a performance obligation by transferring a promised good or service to a customer. A good or service is transferred when (or as) the customer obtains control of that good or service. The adhesive patch kits are recognized at a point in time when shipped to the customer. The RNA extraction and analysis are recognized at a point in time when the extraction and analysis process is complete and the results are sent to the customer. The Company provides its project management service over the life of the agreement, providing equal benefit to the customer throughout the life of the project or study. Therefore, the revenue related to the Company's project management fees is recognized straight-line over the life of the agreement.

Deferred Revenue and Remaining Performance Obligations

The Company records a deferred revenue liability if a customer pays consideration before the Company transfers a good or service to the customer. Deferred revenue primarily represents upfront milestone payments, for which consideration is received prior to goods/services are completed or delivered. Deferred revenue at December 31, 2019 and 2018 was $1.4 million and $1.6 million, respectively.

Remaining performance obligations include deferred revenue and amounts the Company expects to receive for goods and services that have not yet been delivered or provided under existing agreements. For agreements that have an original duration of one year or less, the Company has elected the practical expedient applicable to such agreements and does not disclose the remaining performance obligations at the end of each reporting period and when the Company expects to recognize this revenue. As of December 31, 2019, the estimated revenue expected to be recognized in future periods related to performance obligations that are unsatisfied for executed agreements with an original duration of one year or more was approximately $0.7 million. The Company expects to recognize revenue on the majority of these remaining performance obligations over the next two to three years.

(2) Assay Revenue

The Company generates revenues from its Pigmented Lesion Assay (PLA) and Nevome services it provides to healthcare clinicians in various states throughout the United States to assist in a clinician's diagnosis of melanoma. The Company provides prescribing clinicians with its adhesive sample collection kits to perform non-invasive skin biopsies of clinically ambiguous pigmented skin lesions on patients. Once the sample is collected by the healthcare clinician, it is returned to the Company's CLIA laboratory for analysis. The patient RNA and deoxyribonucleic acid (DNA) is extracted from the adhesive patch collection kit and analyzed using gene expression technology to determine if the pigmented skin lesion contains certain genomic features indicative of melanoma. Upon completion of the gene expression analysis, a final report is drafted and provided to the dermatologists detailing the test results for the pigmented skin lesion indicating whether the sample collected is indicative of melanoma or not.

Contracts

The Company's customer is the patient. However, the Company does not enter into a formal reimbursement agreement with a patient, as formal reimbursement agreements are more commonly established with insurance payors. Accordingly, the Company establishes an agreement with a patient in accordance with other customary business practices.

- Approval of an agreement is established by the use of the Company's adhesive patch kit on a patient by an ordering physician, which is then sent to the Company's central lab for testing.
- The Company is obligated to perform the Company's laboratory services upon receipt of a sample from a physician, and the patient and/or applicable payor are obligated to reimburse us for services rendered based on the patient's insurance benefits.
- Payment terms are a function of a patient's existing insurance benefits.
- Once the Company delivers a patient's test result to the ordering physician, the Company is legally able to collect payment and bill an insurer and/or patient, depending on payor agreement status or patient insurance benefit status.
- The Company's consideration is deemed to be variable, and the Company considers collection of such consideration to be probable to the extent that it is unconstrained.

Performance Obligations

A performance obligation is a promise in an agreement to transfer a distinct good or service (or a bundle of goods or services) to the customer. The customer is able to order a PLA test. However, a Nevome test cannot be ordered separately from the PLA test and it is contingent on being run only when a PLA test comes back positive on a sample. The Nevome test would not qualify as a distinct service. Therefore, the PLA test is recognized as a single performance obligation and the Nevome test, if rendered, is bundled with the single PLA performance obligation.

Transaction Price

The transaction price is the amount of consideration that the Company expects to collect in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties (for example, some sales taxes). The consideration expected from an agreement with a customer may include fixed amounts, variable amounts, or both.

The consideration derived from the Company's agreements is deemed to be variable, though the variability is not explicitly stated in any agreement. Rather, the implied variability is due to several factors, such as the amount of contractual adjustments, any patient co-payments, deductibles or patient compliance incentives, the existence of secondary payors and claim denials.

The Company estimates the amount of variable consideration using the expected value method, which represents the sum of probability-weighted amounts in a range of possible consideration amounts. When estimating the amount of variable consideration, the Company considers several factors, such as historical collections experience, patient insurance eligibility and payor reimbursement agreements.

The Company limits the amount of variable consideration included in the transaction price to the unconstrained portion of such consideration. In other words, the Company recognizes revenue up to the amount of variable consideration that is not subject to a significant reversal until additional information is obtained or the uncertainty associated with the additional payments or refunds is subsequently resolved. Differences between original estimates and subsequent revisions, including final settlements, represent changes in the estimate of variable consideration and are included in the period in which such revisions are made. Revenue recognized from changes in transaction prices was not material for the years ended December 31, 2019 and 2018, respectively.

The Company monitors its estimates of transaction price to depict conditions that exist at each reporting date. If the Company subsequently determines that it will collect more consideration than it originally estimated for an agreement with a patient, it will account for the change as an increase in the estimate of the transaction price (i.e., an upward revenue adjustment) in the period identified. Similarly, if the Company subsequently determines that the amount it expects to collect from a patient is less than it originally estimated, it will generally account for the change as a decrease in the estimate of the transaction price (i.e., a downward revenue adjustment), provided that such downward adjustment does not result in a significant reversal of cumulative revenue recognized.

When the Company does not have significant historical experience or that experience has limited predictive value, the constraint over estimates of variable consideration may result in no revenue being recognized upon delivery of a patient's test result to the ordering physician, with recognition, generally occurring at the date of cash receipt.

Allocate the Transaction Price

The entire transaction price is allocated entirely to the single performance obligation contained within the agreement with a patient.

Recognize Revenue

The Company's single performance obligation is satisfied at a point in time, and that point in time is defined as the date a patient's successful test result is delivered to the patient's ordering physician. The Company considers this date to be the time at which the patient obtains control of the final results of the promised test service.

If a Nevome test service is ordered and completed in conjunction with the Company's PLA service, then the Company will recognize revenue upon the delivery of both final reports to the physician. The delivery of the Company's Nevome test results is typically after the Company's PLA results are delivered due to the circumstances of how the Company processes the Nevome test. However, this length in time is determined to not materially impact the final overall revenue recognition timing.

(3) Disaggregation of Revenue

The following tables present the Company's revenues disaggregated by revenue source during the years ended December 31, 2019 and 2018, respectively (in thousands):

	Year Ended December 31,	
	2019	2018
Assay Revenue		
PLA Test	$ 1,403	$ 1,281
Contract Revenue		
Adhesive Patch kits	476	441
RNA Extractions	626	396
Project Management Fees	336	223
Other	523	101
Total Revenue	$ 3,364	$ 2,442

(4) Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable and deferred revenue on the consolidated balance sheets.

Generally, contract revenue has a majority of agreements in which the Company receives a substantial up-front payment upon various milestones over the life of the agreement. This results in deferred revenue and is relieved upon delivery of the applicable adhesive patch kits or RNA extraction results. Changes in accounts receivable and deferred revenue were not materially impacted by any other factors.

Deferred revenue balances are presented on the Company's consolidated balance sheets and were $1.4 million and $1.6 million as of December 31, 2019 and 2018, respectively.

(j) Accounts Receivable

Contract Accounts Receivable

Contract accounts receivable are recorded at the net invoice value and are not interest bearing. The Company reserves specific receivables if collectability is no longer reasonably assured, and as of December 31, 2019, the Company did not maintain any reserve over contract receivables as they deal with large established credit worthy customers. The Company re-evaluates such reserves on a regular basis and adjusts its reserves as needed. Once a receivable is deemed to be uncollectible, such balance is charged against the reserve. The Company recorded $0.3 million and $0.3 million of contract accounts receivable as of December 31, 2019 and 2018, respectively.

Assay Accounts Receivable

Due to the nature of the Company's assay revenue, it can take a significant amount of time to collect upon billed PLA services. The Company prepares an analysis on reimbursement collections and data obtained for each financial reporting period to determine the amount of receivables to be recorded relating to PLA services performed in the applicable period. The Company accrues an allowance for doubtful accounts against its accounts receivable when it is probable that an account is not collectible, based on write off history, credit risk of specific accounts, aging analysis and other information available on specific accounts. The Company generally does not perform evaluations of customers' financial condition and generally does not require collateral. Accounts receivable are written off when all efforts to collect the balance have been exhausted. Historically, the Company's bad debt expense has not been significant. Adjustments for implicit price concessions attributable to variable consideration are incorporated into the measurement of the accounts receivable balances and are not part of the allowance for doubtful accounts. The Company recorded $0.5 million and $0.3 million of gross assay accounts receivable as of December 31, 2019 and 2018, respectively. In addition, the Company established an allowance for doubtful accounts of $0.1 million and $0.1 million as of December 31, 2019 and 2018, respectively.

(k) Freight and Shipping Costs

The Company records outbound freight and shipping costs for its contract and assay revenues in cost of revenues.

(l) Comprehensive Income (Loss)

Comprehensive income/(loss) is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources. The Company's comprehensive loss was the same as its reported net loss for all periods presented.

(m) Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision-making group, in making decisions on how to allocate resources and assess performance. The Company views its operations and manages its business as one operating segment.

(n) Net Loss Per Share

Basic and diluted net loss per common share is determined by dividing net loss applicable to common shareholders by the weighted average common shares outstanding during the period. Because there is a net loss attributable to common shareholders during the years ended December 31, 2019 and 2018, the outstanding common stock warrants, stock options, restricted stock units and preferred stock have been excluded from the calculation of diluted loss per common share because their effect would be anti-dilutive. Therefore, the weighted average shares used to calculate both basic and diluted loss per share are the same. Diluted net loss per common share for the year ended December 31, 2019 excludes the effect of anti-dilutive equity instruments including 615,385 shares of common stock issuable upon conversion of the Company's preferred stock, 4,200,497 shares of common stock issuable upon the exercise of outstanding common stock warrants and 443,547 shares of common stock issuable upon the exercise stock options. Diluted net loss per common share for the year ended December 31, 2018 excludes the effect of anti-dilutive equity instruments including 1,524,122 shares of common stock issuable upon conversion of the Company's preferred stock, 1,177,486 shares of common stock issuable upon the exercise of outstanding warrants and 1,000,618 shares of common stock issuable upon the exercise stock options and release of restricted stock units. The Company did not consider a two-class method of earnings (loss) per share given that the Company's convertible participating securities do not participate in losses.

(o) Stock-Based Compensation

Compensation costs associated with stock option awards and other forms of equity compensation are measured at the grant-date fair value of the awards and recognized over the requisite service period of the awards on a straight-line basis.

The Company grants stock options to purchase common stock to employees with exercise prices equal to the fair market value of the underlying stock, as determined by the board of directors, management and outside valuation experts prior to the Business Combination. The board of directors and outside valuation experts determined the fair value of the underlying stock by considering a number of factors, including historical and projected financial results, the risks the Company faced at the time, the preferences of the Company's debt holders and preferred stockholders, and the lack of liquidity of the Company's common stock. Subsequent to the close of the Business Combination, the fair market value of stock options is based on the closing stock price on the grant date.

The fair value of each stock option award is estimated using the Black-Scholes-Merton valuation model. Such value is recognized as expense over the requisite service period, net of estimated forfeitures, using the straight-line method. The expected term of options is based on the simplified method which defines the expected term as the average of the contractual term of the options and the weighted average vesting period for all option tranches. The expected volatility of stock options is based upon the historical volatility of a number of related publicly traded companies in similar stages of development. The risk-free interest rate is based on the average yield of U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future.

The Company accounts for stock options to non-employees using the fair value approach. The fair value of these options is measured using the Black-Scholes-Merton option pricing model, reflecting the same assumptions applied to employee options, other than expected life, which is assumed to be the remaining contractual life of the award. Options that are granted to employees have a requisite service period of four years. Equity instruments awarded to non-employees are periodically re-measured as the underlying awards vest unless the instruments are fully vested, immediately exercisable, and non-forfeitable on the date of grant.

Restricted stock units (RSUs), are considered restricted stock. The fair value of restricted stock is equal to the fair market value of the underlying stock, as determined by the board of directors, management and input from outside valuation experts prior to the Business Combination. Subsequent to the close of the Business Combination, the fair market value of RSUs is based on the closing stock price on the grant date. The Company recognizes stock-based compensation expense based on the fair value on a straight-line basis over the requisite service periods of the awards, taking into consideration estimated forfeitures. RSUs that are granted to employees have a requisite service period between two and four years.

The fair value of each option for employees was estimated on the date of grant using the following assumptions:

	Year Ended December 31,	
	2019	2018
Assumed risk-free interest rate	1.68% - 2.50%	2.46% - 3.00%
Assumed volatility	72.30% - 73.50%	72.30% - 78.25%
Expected option term	6.02 - 6.08 years	5.76 - 6.04 years
Expected dividend yield	—	—

The Company recorded stock-based compensation expense for employee options, RSUs, common stock warrants, and consultant options of $1.3 million and $0.9 million for the years ended December 31, 2019 and 2018. The total compensation cost related to non-vested awards not yet recognized at December 31, 2019 was $0.4 million, which is expected to be recognized on a straight-line basis over a weighted average term of 2.07 years.

(p) Derivative Liability

From time-to-time, the Company may issue convertible notes that contain embedded features that require derivative accounting including the determination of the fair value of the financial instruments at the execution of the contract and the change in such fair values through each reporting period until such time the liability is extinguished. The Company's convertible notes, as further discussed in Note 3, had embedded derivatives that required bifurcation from the host instrument.

(q) Fair Value Measurements

The Company uses a three-tier fair value hierarchy to prioritize the inputs used in the Company's fair value measurements. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets for identical assets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions. There were no other assets or liabilities that were measured at fair value on a recurring basis as of December 31, 2019. The following table provides a summary of the assets and liabilities that are measured at fair value on a recurring basis as of December 31, 2018 (in thousands):

Fair Value Measurements at Reporting Date Using

	December 31, 2018			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Liabilities:				
Derivative liability	$ —	$ —	$ 2,880	$2,880
Total liabilities	$ —	$ —	$ 2,880	$2,880

The fair value of the derivative liability was determined based on a probability weighted valuation model of the various embedded features of the Company's outstanding convertible debt. The fair value is subjective and is affected by changes in inputs to the valuation model including management's assumptions regarding estimates of timing and the probability of each embedded conversion feature occurring. An initial fair value valuation was performed at each date of issuance of the outstanding convertible debt and subsequently remeasured as of August 29, 2019, which was the date the convertible debt converted to common stock and eliminated the derivative liability. The accumulated change in fair value between measurement dates was determined to be a $0.4 million loss for the year ended December 31, 2019, which was recognized as Other expense within the consolidated Statement of Operations and Comprehensive Loss. Changes in these assumptions can materially affect the fair value.

There were no other assets or liabilities that were measured at fair value on a recurring basis as of December 31, 2019 and 2018. The Company believes the carrying amount of cash and cash equivalents, accounts payable and accrued expenses approximate their estimated fair values due to the short-term nature of these accounts.

(r) Accounting Pronouncement Recently Adopted

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended, which will supersede virtually all existing revenue guidance. Under this standard, an entity is required to recognize revenue upon transfer of promised goods or services to customers in an amount that reflects the expected consideration received in exchange for those goods or services. As such, an entity will need to use more judgment and make more estimates than under the current guidance. This standard should be applied retrospectively either to each prior reporting period presented in the consolidated financial statements, or only to the most current reporting period presented in the consolidated financial statements with a cumulative effect adjustment recorded in retained earnings. This new standard is effective for interim and annual periods beginning after December 15, 2018 and early adoption is permitted.

The Company adopted ASC 606 on January 1, 2019, using the modified retrospective method and elected to utilize Practical Expedient 1 to apply the modified retrospective method to only contracts which were open as of January 1, 2019. Application of the modified retrospective method for the Company's contract revenue did require a cumulative effect adjustment upon adoption, which resulted in an adjustment of $45,000 to increase accumulated deficit and deferred revenue. Application of the modified retrospective method for the Company's assay revenue does not materially impact amounts previously reported by the Company, nor does it require a cumulative effect adjustment upon adoption, as the Company's method of recognizing revenue under ASC 606 was analogous to the method utilized immediately prior to adoption. Accordingly, there is no need for the Company to disclose the amount by which each financial statement line item was affected as a result of applying the new standard and an explanation of significant changes.

(s) Accounting Pronouncements Issued But Not Yet Effective

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which requires lessees to generally recognize on the balance sheet operating and financing lease liabilities and corresponding right-of-use assets, and to recognize on the income statement the expenses in a manner similar to current practice. In July 2018, the FASB issued ASU 2018-10, *Codification Improvements to Topic 842, Leases* and ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which improves the clarity of the new lease standard and corrects unintended application of the guidance. In December 2018, the FASB issued ASU 2018-20, *Narrow-Scope Improvements for Lessors*, which increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing transactions. In March 2019, the FASB issued ASU 2019-01, *Lease (Topic 842): Codification Improvements*, which increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing essential information about leasing transactions. Per ASU 2019-10, this new standard is effective for interim and annual periods of smaller reporting companies beginning January 1, 2021 and early adoption is permitted. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

In June 2019, the FASB issued ASU 2018-07, *Compensation-Stock Compensation (Topic 718) – Improvements to Nonemployee Share-Based Payment Accounting*, which simplifies accounting for nonemployee share-based payment transactions to now include share-based payment transactions for acquiring goods and services from nonemployees. This new standard is effective for interim and annual periods beginning December 15, 2019 and early adoption is permitted. We will adopt this guidance on January 1, 2020, and we do not anticipate it will have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modified the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement, based on the concepts in the Concepts Statement, including the consideration of costs and benefits. This new standard is effective for interim and annual periods beginning December 15, 2019 and early adoption is permitted. We will adopt this guidance on January 1, 2020, and we do not anticipate it will have a material impact on our consolidated financial statements.

2. Balance Sheet Details

Consolidated balance sheet details are as follows (in thousands):

	December 31, 2019	December 31, 2018
Prepaid expenses and other current assets:		
Prepaid insurance	$ 951	$ 2
Prepaid trade shows	85	19
Other current assets	25	5
Total prepaid expenses and other current assets	$ 1,061	$ 26
Property and equipment, gross:		
Laboratory equipment	$ 1,135	$ 314
Computer equipment	15	3
Furniture and fixtures	34	34
Leasehold improvements	32	14
Total property and equipment, gross	1,216	365
Less accumulated depreciation	(239)	(150)
Total property and equipment, net	$ 977	$ 215

	December 31, 2019	December 31, 2018
Accrued liabilities:		
Accrued consulting services	$ 37	$ 23
Accrued interest	—	164
Accrued printing fees	55	—
Deferred rent	88	85
Other accrued expenses	38	14
Total accrued liabilities	$ 218	$ 286
Accrued compensation:		
Accrued paid time off	$ 309	$ 234
Accrued bonus and deferred compensation	465	246
Accrued severance	368	—
Total accrued compensation	$ 1,142	$ 480

3. Debt

Wilson, Sonsini, Goodrich & Rosati Note

On January 7, 2016, DermTech Operations converted $0.6 million of its accounts payable due to Wilson, Sonsini, Goodrich & Rosati (DermTech Operations' general legal counsel) into a three-year promissory note bearing 3% interest and maturing on January 7, 2019, or earlier under certain circumstances. There were no principal payments due until the note reached maturity. On October 25, 2017, DermTech Operations amended and restated its promissory note with Wilson, Sonsini, Goodrich & Rosati by paying down $0.1 million on the principal balance of the note while extending its maturity date to January 7, 2020, or earlier under certain circumstances, at a continued interest rate of 3%. The Company recorded $11,000 and $15,000 of interest expense relating to this note payable during the years ended December 31, 2019 and 2018, respectively. On September 16, 2019, the Company paid all outstanding principal and accrued interest in the amount of $0.6 million on this note payable.

2018 Convertible Bridge Notes

From August to November 2018, DermTech Operations issued $6.8 million aggregate principal amount of convertible bridge notes (2018 Bridge Notes), resulting in $6.6 million in net proceeds. The 2018 Bridge Notes carried a 10% interest rate and matured on March 31, 2019. Since the 2018 Bridge Notes were not paid or converted by March 31, 2019, the interest rate increased to 15%.

The 2018 Bridge Notes were subject to automatic conversion into equity securities of DermTech Operations at the closing of a single capital raising transaction or series of related capital raising transactions in which DermTech Operations issued equity securities with aggregate gross proceeds to DermTech Operations of at least $20 million (Qualified Financing) that occurred on or prior to the maturity date. Upon automatic conversion of these 2018 Bridge Notes, the note holders were entitled to receive shares of DermTech Operations' equity securities equal to the quotient obtained by dividing the unpaid principal amount of these 2018 Bridge Notes plus interest accrued but unpaid by the lesser of:

1) the lowest price per share of the new stock paid in the Qualified Financing by investors multiplied by 70%.

2) the price per share obtained by dividing $45 million by DermTech Operations' fully-diluted capitalization immediately prior to such Qualified Financing assuming exercise or conversion of all outstanding options and issuance of all outstanding restricted stock unit awards, including all shares of common stock reserved and available for future grant under any equity incentive plan of the Company, and/or any equity incentive or similar plan to be created or increased in connection with the Qualified Financing, but excluding any shares issuable upon exercise of the DermTech Operations' outstanding common stock warrants or conversion of the 2018 Bridge Notes.

In the event DermTech Operations consummated, on or before the maturity date, an equity financing pursuant to which it sold shares of equity in a transaction that did not constitute a Qualified Financing, then the note holders had the option, but not the obligation, to elect to treat such equity financing as a Qualified Financing on the same terms set forth in these 2018 Bridge Notes.

In addition, the note holders could have elected to convert at any time all of the outstanding principal balance under these 2018 Bridge Notes, together with any accrued but unpaid interest, into shares of the DermTech Operations' Series C Preferred Stock (Optional Conversion). Upon Optional Conversion of these notes, the note holders were entitled to receive a number of shares of DermTech Operations' Series C Preferred Stock equal to the quotient obtained by dividing the unpaid principal amount of these notes plus interest accrued but unpaid by $9.54, subject to adjustment upon certain events. The note holders would have also received common stock warrants, in substantially the same form as the common stock warrants issued to any purchasers of DermTech Operations' Convertible Series C Preferred Stock.

In the event of a Change of Control (as defined in the 2018 Bridge Note agreements) transaction prior to the payment in full or conversion of these 2018 Bridge Notes, then the note holders could have elected to either:

1) effect the Optional Conversion feature, as discussed above, or

2) demand payment of the outstanding principal amount and the current accrued but unpaid interest of these 2018 Bridge Notes (Base Amount) plus an amount equal to the Base Amount multiplied by a specified percentage.

Several of the embedded features of the 2018 Bridge Notes were identified as meeting the criteria of a derivative and ultimately bifurcated from the host contract. DermTech Operations accounted for this by separating the derivative component of the 2018 Bridge Notes as a derivative liability on the consolidated balance sheet. DermTech Operations assigned a value to the debt component of the 2018 Bridge Notes equal to the difference between the estimated fair value of the 2018 Bridge Notes with and without the conversion features, which resulted in DermTech Operations recording the 2018 Bridge Notes at a discount. The total debt discount amount as of the respective date of issuance of the 2018 Bridge Notes was determined to be $2.5 million. DermTech Operations amortized the debt discount over the contractual life (i.e., March 31, 2019) of the 2018 Bridge Notes as additional non-cash interest expense utilizing the effective interest method. At each financial reporting period, DermTech Operations remeasured the fair value of the embedded features bifurcated from the 2018 Bridge Notes (i.e., the derivative liability) and changes in the fair value are recognized in earnings. Losses relating to the change in fair value of the derivative liability recognized as other expense on the Statement of Operations were $0.4 million for both the years ended December 31, 2019 and 2018.

On May 23, 2019, DermTech Operations and the various convertible 2018 Bridge Note holders agreed to amend the outstanding convertible notes that were issued in the last half of 2018. As part of the amendment, the maturity dates of the notes were extended to the earliest of (i) September 24, 2019; (ii) the occurrence of an Event of Default (as defined in the 2018 Bridge Notes); (iii) the consummation of a liquidation or dissolution of DermTech Operations (iv) a Liquidation Transaction (as defined in the 2018 Bridge Notes); or (v) the consummation of a merger with or into the Company or any of its subsidiaries.

In addition, immediately prior to the consummation of a DermTech Operations merger with or into the Company or any of its subsidiaries substantially on the terms contemplated as of the date of the amendment to the outstanding convertible notes on or before September 24, 2019 (a Qualifying Merger), the outstanding principal amount of and all accrued but unpaid interest on each of the convertible notes would automatically be converted into shares of the DermTech Operations' common stock at a price per share equal to 70% of the Merger Consideration. For purposes of the preceding sentence, the "Merger Consideration" means (i) the lesser of $6.46 and (ii) the offering price per share of the private investment in public equity (PIPE) transaction to be consummated concurrently with the consummation of the Qualifying Merger multiplied by the Conversion Ratio. For the purposes of the preceding sentence, the "Conversion Ratio" means the quotient resulting from dividing 8,000,000 by the number of fully diluted shares of the Company as of immediately after the conversion of the notes.

This new embedded Qualifying Merger feature of the 2018 Bridge Notes was identified as meeting the criteria of a derivative and ultimately bifurcated from the host contract with the previously identified embedded features that met the criteria of being a derivative. In addition, this amendment was accounted for as a debt modification of the existing 2018 Bridge Notes.

2019 Convertible Bridge Notes

Between June 5th and June 10th, 2019, DermTech Operations issued additional convertible bridge notes (the 2019 Bridge Notes) to existing investors for aggregate gross proceeds of $2.6 million. These convertible bridge notes carried an interest rate of 10% and matured after the earliest to occur of: (i) September 25, 2019; (ii) the occurrence of an Event of Default; (iii) the consummation of a liquidation or dissolution of DermTech Operations; (iv) a Liquidation Transaction; or (v) the consummation of a merger of DermTech Operations with Merger Sub, a subsidiary of the Company, in accordance with the Merger Agreement.

The unpaid principal amount of these convertible bridge notes together with any interest accrued but unpaid thereon, would automatically be converted into shares of DermTech Operations' common stock immediately prior to the consummation of a Qualifying Merger. Upon the conversion of these notes, the note holders were entitled to receive a number of shares of DermTech Operations' common stock equal to the quotient obtained by dividing (i) the unpaid principal amount of these notes plus interest accrued but unpaid thereon, by (1) if the Qualifying Merger consummates prior to the maturity date, the lesser of (x) $5.80 and (y) 90% of the Merger Consideration (as defined below), or (2) if the Qualifying Merger consummates on or after the maturity date, the lesser of (x) $4.51 and (y) 70% of the Merger Consideration. For purposes of the preceding sentence, the "Merger Consideration" means the offering price per share of the PIPE transaction between Constellation and the investors thereto, consummated substantially concurrently with the consummation of the Qualifying Merger, multiplied by the Conversion Ratio (as defined below). For purposes of the preceding sentence, the "Conversion Ratio" means the quotient resulting from dividing 8,000,000 by the number of the Company's fully diluted shares immediately prior to the consummation of the Qualifying Merger, assuming exercise of all outstanding options, issuance of all common stock underlying outstanding restricted stock unit awards, exercise of all outstanding warrants, and conversion of all outstanding convertible promissory notes, including these notes and any other note of substantially the same form, but excluding all shares of DermTech Operations' common stock reserved and available for future grant under any equity incentive or similar plan of DermTech Operations, and in each case as adjusted for stock splits, combinations and similar transactions, all calculated in accordance with the final allocation schedule delivered in connection with the Qualifying Merger.

In addition to the Qualifying Merger feature, the 2019 Bridge Notes were issued with the same embedded features as the 2018 Bridge Notes, as discussed above, prior to the May 23, 2019 amendment. Several of the embedded features of the 2019 Bridge Notes were identified as meeting the criteria of a derivative and ultimately bifurcated from the host contract. DermTech Operations accounted for this by separating the derivative component of the 2019 Bridge Notes as a derivative liability on the consolidated balance sheet. The Company assigned a value to the debt component of the 2019 Bridge Notes equal to the difference between the estimated fair value of the 2019 Bridge Notes with and without the conversion features, which resulted in DermTech Operations recording the 2019 Bridge Notes at a discount. The total debt discount amount as of the respective date of issuance of the 2019 Bridge Notes was determined to be $0.3 million. DermTech Operations amortized the debt discount over the contractual life (i.e., September 25, 2019) of the 2019 Bridge Notes as additional non-cash interest expense utilizing the effective interest method. At each financial reporting period, DermTech Operations remeasured the fair value of the embedded features bifurcated from the 2019 Bridge Notes (i.e., the derivative liability) and changes in the fair value were recognized in earnings. For the years ended December 31, 2019 and 2018, the Company recognized losses of $14,000 and $0, respectively, on the change in fair value of the derivative liability recognized as other expense on the consolidated Statement of Operations and Comprehensive Loss.

Exchange of Convertible Debt for Common Shares

On August 29, 2019, immediately prior to the completion of the Business Combination, all unpaid principal and interest on the 2019 Bridge Notes and the 2018 Bridge Notes (collectively, the Bridge Notes) was converted into 2,267,042 common shares of DermTech Operations.

The conversion of the Bridge Notes debt for common shares of DermTech Operations was accounted for as an extinguishment of the Bridge Notes. The conversion resulted in DermTech Operations having legally settled the debt obligations. DermTech Operations' equity was increased by the settlement-date fair value of the common shares issued. Certain bifurcated embedded derivative instruments also were settled as part of the transaction.

The net carrying amounts of the Bridge Notes, including remaining unamortized debt discount and issuance costs, and the bifurcated embedded derivative liability were extinguished on the date of the Business Combination. A gain on debt extinguishment of $0.9 million was recognized, which represented the unamortized debt discounts and issuance costs remaining at the time of the debt extinguishment.

The following table summarizes information about the liability components the Company's 2018 Bridge Notes (in thousands):

2018 Bridge Notes	December 31, 2019	December 31, 2018
Principal amount outstanding	$ —	$ 6,800
Unamortized discount and issuance costs	—	(1,781)
Total current convertible notes payable, net	$ —	$ 5,019

There was no liability balance for the Company's 2019 Bridge Notes as of December 31, 2019 and 2018.

4. Stockholders' Equity

(a) Classes of Stock

The Company's amended and restated certificate of incorporation authorizes it to issue 50,000,000 shares of common stock and 5,000,000 shares of preferred stock. Both classes of stock have a par value of $0.0001 per share.

Pursuant to the Business Combination, the Company issued shares of its common stock to DermTech Operations common stockholders, at an exchange ratio of approximately 1.16 shares of the Company's common stock for each share of DermTech Operations common stock. In connection with and immediately following the Business Combination, the Company filed a certificate of amendment to its amended and restated certificate of incorporation to affect a one-for-two reverse stock split of its common stock. All stock information presented throughout this document have been adjusted to reflect these capital structure changes.

(b) Series C Convertible Preferred Stock Financing

In an effort to raise additional capital, DermTech Operations conducted a Series C Convertible Preferred Stock private offering in August of 2016 for a total offering amount of $15 million at a price per share of $9.54. During 2017, 559,849 shares of Series C Convertible Preferred Stock were issued for gross cash proceeds of $5.3 million, reduced by issuance costs of $0.4 million. In addition, 102,740 common stock warrants were issued with this offering, exclusive of compensatory warrants issued to the placement agent. During 2018, 506,539 shares of Series C Convertible Preferred Stock were issued for gross cash proceeds of $4.8 million, reduced by issuance costs of $0.3 million.

On May 23, 2019, DermTech Operations agreed to an amendment with the Series C Convertible Preferred Stockholders that immediately prior the consummation of a merger with or into the Company or any of its subsidiaries on or before September 24, 2019, the outstanding Series C Convertible Preferred Stock would convert into common stock at a one to one ratio in accordance with DermTech Operations' amended and restated certificate of incorporation. Immediately prior to the completion of the Business Combination, each share of Series C Convertible Preferred Stock of DermTech Operations outstanding as of such time was automatically converted into one share of common stock of DermTech Operations.

(c) Series A Convertible Preferred Stock Issued in Connection with PIPE Financing

In connection with the PIPE transaction and on August 29, 2019, immediately following the completion of the Business Combination, the Company filed a Certificate of Designation of Preferences, Rights and Limitations for the Company's Series A Convertible Preferred Stock. An aggregate of 1,231 shares of Series A Convertible Preferred Stock for an aggregate purchase price of $4.0 million was issued to certain accredited investors in lieu of common stock where the investor elected to receive shares that would not be convertible to common stock if the conversion would result in the holder beneficially owning more than 9.99% of the Company's then-outstanding shares of common stock.

Preferred Dividends

Holders of Series A Convertible Preferred Stock are entitled to receive dividends on an as-converted basis equal to and in the same form as dividends paid on shares of the Company's common stock when, as and if these dividends are paid on the Company's common stock.

Preferred Liquidation Preference

Holders of Series A Convertible Preferred Stock will participate pari passu with the holders of the Company's common stock on an as-converted basis in the event of dissolution, liquidation or winding up of the Company.

Redemption

Series A Convertible Preferred Stock does not contain any mandatory redemption features. The Company's convertible preferred stock has been classified as temporary equity in the accompanying consolidated balance sheets in accordance with authoritative guidance for the classification and measurement of potentially redeemable securities whose redemption is based upon certain change in beneficial ownership events outside of the Company's control. The Company has determined not to adjust the carrying values of the convertible preferred stock to the liquidation preferences of such shares because of the uncertainty of whether or when such events would occur.

Conversion

Each share of the Company's Series A Convertible Preferred Stock is convertible into shares of the Company's common stock at a conversion price per share equal to $3.25, provided that in no event may any shares of the Company's Series A Convertible Preferred Stock be convertible if the conversion would result in the holder beneficially owning more than 9.99% of the Company's then-outstanding shares of common stock.

Voting Rights

The shares of the Company's Series A Convertible Preferred Stock have no voting rights, except with respect to certain protective provisions set forth in the Series A Certificate of Designation relating to the powers, preferences and rights of such shares.

(d) Accelerated Vesting in Association with Business Combination

On January 4, 2019, in contemplation of the Business Combination (refer to Note 8), DermTech Operations modified certain provisions of its stock-based compensation awards to all employees and certain non-employees to accelerate the vesting period for various outstanding stock awards.

In connection with the modifications, the incremental fair value of certain unvested stock option grants were measured at the date of the modification. For any options in which the fair value immediately after the modification was lower than the fair value immediately prior to the modification, no additional compensation expense was recognized. For options in which the fair value increased as a result of the modification and the award was not fully vested, the incremental fair value is being recognized as an expense over the remaining service period. For options that were modified and became fully vested as a result of the accelerated vesting, the Company recognized an expense for the remaining unrecognized grant date fair value. As a result of the accelerated vesting, the Company recognized stock-based compensation expense of $0.4 million related to this modification.

(e) Warrants

Public Warrants

The Company previously issued 14,936,250 warrants to purchase common stock in a public offering and a private placement which were each consummated on June 23, 2017 (the Public Warrants). The Public Warrants have a five year life from the date the Business Combination was consummated and every four Public Warrants entitle the holder to purchase one share at an exercise price of $23.00 per whole share (as adjusted for the Reverse Stock Split). Outstanding Public Warrants totaled 14,936,250 at both December 31, 2019 and 2018.

Series C Warrants

In connection with DermTech Operations' Series C Preferred Stock financing, investors that purchased at least $1 million of Series C Convertible Preferred Stock in a single closing received a three-year warrant to purchase common shares at an exercise price of $9.54 in the amount equal to 20% of shares of Series C Preferred Stock purchased. Outstanding Series C warrants totaled 202,897 and 292,119 at December 31, 2019 and 2018, respectively.

Placement Agent Warrants

In connection with several of DermTech Operations' financings that took place between 2015 and 2018, DermTech Operations engaged a registered placement agent to assist in marketing and selling of common and preferred units. From 2015 to 2016, 168,522 seven-year warrants were issued to purchase one common share at an exercise price of $8.68. From 2016 to 2018, 72,695 seven-year warrants were issued to purchase one common share at an exercise price of $9.54. Outstanding placement agent warrants totaled 241,217 at both December 31, 2019 and 2018.

(f) Stock-Based Compensation

In connection with the Business Combination, the Company adopted DermTech Operations' Amended and Restated 2010 Stock Option Plan (the Plan), which provides for the granting of incentive and non-statutory stock options and restricted stock purchase rights and bonus awards. Under the Plan, incentive and non-statutory stock options may be granted at not less than 100% of the fair market value of the Company's common stock on the date of grant. For incentive stock options granted to a ten percent shareholder under the Plan, the exercise price shall not be less than 110% of the fair market value of a share of stock on the effective date of grant. DermTech Operations initially reserved 1.0 million shares of common stock for issuance to its employees, non-employee directors and consultants. The Plan includes a provision which annually increases the amount of common stock reserved for issuance under the Plan. The reserved shares for issuance increased by 203,263 and 255,415 shares for the years ended December 31, 2019 and 2018, respectively. The contractual term of options granted under the Plan is ten years. Vesting provisions vary based on the specific terms of the individual option awards. 0.1 million and 0.5 million options remain available for future grant under the Plan as of December 31, 2019 and 2018, respectively.

The following table summarizes stock option transactions for the year ended December 31, 2019:

	Total options	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2017	481,760	$ 3.20	7.44	$ 757
Granted	109,215	3.98		
Exercised	(726)	6.94		
Forfeited	(55,198)	4.10		
Outstanding at December 31, 2018	535,051	$ 3.25	6.86	$ 8
Granted	662,470	1.45		
Exercised	(725,719)	1.28		
Forfeited	(28,255)	2.63		
Outstanding at December 31, 2019	443,547	$ 3.84	7.80	$ 3,796
Options vested and expected to vest as of December 31, 2019	431,220	3.89	7.76	3,669
Options exercisable as of December 31, 2019	354,028	3.86	7.38	3,023

The following table summarizes RSU transactions for the year ended December 31, 2019:

	Total RSUs	Weighted average grant date fair value per share
Outstanding at December 31, 2017	242,574	$ 4.32
Granted	228,015	3.98
Forfeited	(5,022)	4.32
Outstanding at December 31, 2018	465,567	$ 4.15
Released	(339,025)	4.16
Forfeited	(126,542)	4.11
Outstanding at December 31, 2019	—	$ —
RSUs vested and expected to vest as of December 31, 2019	—	—
RSUs vested, but not yet issued as of December 31, 2019	—	—

Management Warrants

Warrants to purchase DermTech Operations common stock were issued to executive officers of DermTech Operations in lieu of issuing certain stock options (the Management Warrants). The Management Warrants were assumed by the Company in connection with the Business Combination. The Management Warrants have a ten year life and are exercisable for Company common stock at $1.08 per common share. The Management Warrants vest monthly over a four-year period. Outstanding Management Warrants totaled 22,320 at December 31, 2019 and 2018.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance consists of the following at December 31, 2019 and December 31, 2018 (in thousands):

	December 31, 2019	December 31, 2018
Warrants to purchase common stock	466	1,177
Public Warrants to purchase common stock*	3,734	3,734
Stock options issued and outstanding	444	535
Restricted stock units issued and outstanding	—	466
Authorized for future option grants	143	689
Total common stock reserved for future issuance	4,787	6,601

* Public Warrants are presented as four Public Warrants are needed to purchase one share of common stock.

5. Income Taxes

The Company has reported net losses since inception and therefore, the minimum provision for state income taxes has been recorded. The following table provides a reconciliation between income taxes computed at the federal statutory rate of 21% at both December 31, 2019 and 2018, respectively, and the Company's provision for income taxes.

	Year ended December 31	
	2019	2018
Income tax at statutory rate	21.0%	21.0%
Permanent items	(0.8)	(1.2)
Tax credits	0.2	0.7
Valuation allowance (decrease) increase	(20.4)	(20.5)
Income tax expense	— %	— %

Significant components of the Company's deferred tax assets and liabilities from federal and state income taxes as of December 31 are shown below (in thousands):

	2019	2018
Deferred tax assets:		
Net operating loss	$ 20,336	$ 15,431
Research and development credits	1,400	1,473
Depreciation and amortization	33	112
Stock based compensation	119	114
Derivative liability	—	735
Accruals and other	194	86
	22,082	17,951
Less valuation allowance	(22,082)	(17,523)
Total deferred tax assets	—	428
Deferred tax liabilities:		
Debt discount	—	(428)
Net deferred tax assets	$ —	$ —

The Company has established a valuation allowance to offset the deferred tax assets as realization of such assets is not likely.

At December 31, 2019 and 2018, the Company had federal tax net operating loss (NOL) carryforwards of approximately $79.4 million and $59.4 million, respectively, as well as state tax net operating loss carryforwards at December 31, 2019 and 2018 of approximately $53.4 million and $45.6 million, respectively. The Company also had federal income tax research and development and other tax credit carryforwards at December 31, 2019 and 2018 of approximately $0.8 million and $0.7 million, respectively, and state income tax research and development and other tax credits totaling $0.8 million and $0.9 million at December 31, 2019 and 2018, respectively. The federal tax loss carryforwards will begin to expire in 2019, while the state tax loss carryforwards will begin to expire in 2028. The federal credit carryforwards will begin to expire in 2021 and the state credit carryforwards do not expire.

The utilization of NOL and tax credit carryforwards to offset future taxable income may be subject to an annual limitation as a result of ownership changes that have occurred previously or may occur in the future. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, (IRC), a corporation that undergoes an ownership change may be subject to limitations on its ability to utilize its pre-change NOLs and other tax attributes otherwise available to offset future taxable income and/or tax liability. An ownership change is defined as a cumulative change of 50% or more in the ownership positions of certain stockholders during a rolling three-year period. The Company has not completed a formal study to determine if any ownership changes within the meaning of IRC Section 382 and 383 have occurred. If an ownership change has occurred, the Company's ability to use its NOL or tax credit carryforwards may be restricted, which could require the Company to pay federal or state income taxes earlier than would be required if such limitations were not in effect.

The Company conducts intensive research and experimentation activities, generating research tax credits for federal and state purposes under IRC Section 41. The Company has not performed a formal study validating these credits claimed in the tax returns. Once a study is prepared, the amount of R&D, tax credits available could vary from what was originally claimed on the tax returns.

During 2018 and 2019, DermTech Operations issued convertible bridge notes that required bifurcation of embedded derivatives for financial statement purposes. As such deferred taxes were established for both the host instrument and the bifurcated embedded derivatives. Although the deferred tax balances offset at issuance, they will differ as the bifurcated embedded derivatives will be marked to fair value on an ongoing basis while the debt discount will be accounted for under the effective interest method. During 2019, all outstanding convertible bridge notes converted into equity that eliminated the debt discounts associated with the convertible bridge notes.

Due to the net operating loss carryforwards, the U.S. federal and state returns are open to examination for all years since inception.

Business Combination Tax Implications

In connection with the Business Combination, the Company changed its jurisdiction of incorporation from the British Virgin Islands to the State of Delaware. This reincorporation constituted a tax-free reorganization within the meaning of Section 368(a)(1)(F) of the IRC. The IRC provides that corporations and shareholders do not recognize gain with respect to certain qualifying reorganizations. To satisfy the requirements for this nonrecognition benefit, a transaction must meet one of the statutory definitions of a "reorganization" set forth in IRC Section 368(a)(1). IRC Section 368(a)(1)(F) provides that a reorganization includes a mere change in identity, form, or place of organization. As a result of the reincorporation, the Company will be treated as a U.S. corporation for federal income tax purposes.

For federal income tax purposes, the Business Combination qualified as a reverse triangular merger within the meaning IRC Sections 368(a) and 368(a)(2)(E). Additionally, the Company, Merger Sub, and DermTech Operations are all parties to the reorganization under IRC Section 368(b). As the transaction qualifies as reorganization under IRC Section 368(a), there are no tax consequences to either DermTech Operations or the Company and all tax attributes retain carryover basis.

6. Commitments and Contingencies

Operating Leases

In January 2013, DermTech Operations entered into a non-cancelable lease agreement for its operating facilities. In January 2014, DermTech Operations signed an amendment to the lease to extend the term through January 2017. In November 2016, DermTech Operations signed a second amendment to the lease to extend the term through March 2022. In August 2019, DermTech Operations signed a third amendment to the lease to add additional space, and in September 2019, the Company signed a fourth amendment to the lease to add additional space. In connection with the Business Combination, the Company assumed all obligations under the lease, as amended, from DermTech Operations. The Company records rent expense on a straight line basis over the life of the lease and the difference between the average rent expense and cash payments for rent is recorded as deferred rent and is included in accrued liabilities on the consolidated balance sheet. Rent and associated common area maintenance expense totaled $0.7 million and $0.6 million for the years ended December 31, 2019 and 2018, respectively.

Future minimum operating lease payments for the operating facilities as of December 31, 2019 were (in thousands):

2020	$ 683
2021	703
2022	180
Total future minimum lease payments	$1,566

Deferred Underwriting Fees

In connection with the execution of the Merger Agreement, the Company, DermTech Operations and Cowen and Company, LLC (Cowen) entered into a letter agreement, dated May 29, 2019, (the Deferred Underwriting Fee Assignment Agreement), pursuant to which the Company agreed to assign to DermTech Operations, and DermTech Operations agreed to assume, the Company's obligations under the Underwriting Agreement, dated as of June 19, 2017 (the Underwriting Agreement), by and among the Company and Cowen. On September 4, 2019, the Company, DermTech Operations and Cowen amended the Deferred Underwriting Fee Assignment Agreement, pursuant to which the Company paid Cowen $0.8 million for the reduction of the balance owed by the Company to Cowen under the Underwriting Agreement to $1.4 million.

Pursuant to the terms of the Deferred Underwriting Fee Assignment Agreement, as amended, if the Company raises at least $15.0 million in proceeds received from equity financings consummated prior to the one-year anniversary of the Business Combination, excluding the proceeds received from any financing consummated prior to or simultaneous with the Business Combination, then the Company will pay to the underwriters $1.4 million within one week of the one-year anniversary of the Business Combination. If the Company fails to raise such funds by the one-year anniversary of the Business Combination, then then Company will pay to the Underwriters $0.7 million within one week of the one-year anniversary of the Business Combination, and Cowen will have the option to extend the Company's payment deadline for the remaining balance of $0.7 million or receive $0.7 million in value of the Company's common stock (the Equity Payment) based on the then fair market value of the Company's common stock. The Company's payment to the Underwriters of $1.4 million, or its payment of $0.7 million plus the Equity Payment, in either case, shall satisfy the Company's obligation to pay Cowen the deferred underwriting fees in full, and no further payment of any kind shall be required of the Company in connection with the deferred underwriting fees.

Legal Proceedings

The Company is not currently party to any material legal proceedings.

7. Retirement Plan

The Company has an IRC Section 401(k) retirement plan, covering all employees. The Company does not offer a contribution percentage match.

8. Business Combination with DermTech Operations

On August 29, 2019, the Company completed the Business Combination with DermTech Operations. Upon the closing of the Business Combination, DermTech Operations became a wholly-owned subsidiary of the Company.

The Business Combination was accounted for as a reverse acquisition in accordance with ASC 805-40, Business Combinations, Reverse Acquisitions, as the stockholders of DermTech Operations obtained effective control of the Company through (1) a majority of the voting common stock of the post-merger company, (2) appointment of a majority of the board of directors, (3) continued business operations of DermTech Operations, including certain directors and management, and (4) the ability to appoint the executive officers of the combined company. Accordingly, the assets, liabilities and results of operations prior periods presented before the Business Combination reflect those of DermTech Operations. Since the Business Combination, the assets, liabilities, and results of operations have been presented on a consolidated basis. Historical stockholders' (deficit) equity of the Company prior to the Business Combination has been retroactively adjusted for the equivalent number of shares received by the stockholders of DermTech Operations after giving effect to any difference in par value of the Company and the DermTech Operations' stock, with any such difference recognized as additional paid-in capital. Retained earnings and other equity balances of the Company/DermTech Operations have been carried forward after the Business Combination. Certain direct costs incurred in connection with the Business Combination were expensed in the period that such costs were incurred and services were received. Approximately $0.2 million in printer fees related to the Business Combination were treated as a reduction of the total amount of equity raised as an offset to additional paid in capital.

9. Related Party Transactions

During 2019, the Company engaged EVERSANA Life Science Services, LLC, or EVERSANA, to provide certain marketing services to the Company. Leana Wood, the spouse of Todd Wood, the Company's Chief Commercial Offer, is an employee of EVERSANA. The Company incurred $0.4 million and $0 in costs for the year ended December 31, 2019 and 2018, respectively.

On October 1, 2019, we entered into a consulting agreement with Michael Dobak pursuant to which we will compensate Michael Dobak, in an amount not to exceed $100,000, for certain public relations and marketing services. Michael Dobak is the brother of Dr. John Dobak, the Company's Chief Executive Officer. The Company incurred $20,000 and $0 in costs for the year ended December 31, 2019 and 2018, respectively.

There were no other related party transactions identified in 2019 or 2018.

10. Subsequent Events

Headquarters Lease Amendment

On February 5, 2020 the Company entered into a fifth amendment with HCP Torrey Pines, LLC to expand the size of their existing premises by approximately 13,300 square feet from approximately 15,355 square feet to approximately 28,655 square feet. The amendment provides that base rent for the new premises will be $0.1 million per month that will increase slightly each year after the delivery of the new premises. Additionally, the amendment increased the security deposit under the existing lease agreement by $0.1 million from $0.1 million to $0.2 million. The amendment also provides the right to perform improvements in the Company's existing premises and the new premises, subject to certain conditions and procedures. The Company is entitled to a tenant improvement allowance for certain costs incurred while performing these improvements in the amount of $0.3 million, which amount may be increased by up to $0.1 million at our election and subject to a corresponding increase in rent. This lease amendment is not reflected in the operating lease section of Note 6 above as it occurred after December 31, 2019.

2020 Private Placement

On February 28, 2020, the Company entered into a securities purchase agreement, or the Purchase Agreement, with certain institutional investors for a private placement of the Company's equity securities, or the Private Placement. Cowen and Company, LLC served as lead placement agent for the Private Placement, with William Blair & Company, L.L.C. acting as joint placement agent. Lake Street Capital Markets, LLC acted as co-placement agent.

The Private Placement consisted of 2,467,724 shares of common stock at a price of $10.50 per share, 3,198.9419 shares of Series B-1 Convertible Preferred Stock at a price of $10,500 per share, and 523.8094 shares of Series B-2 Convertible Preferred Stock at a price of $10,500 per share, for aggregate gross proceeds of approximately $65.0 million, and net proceeds to the Company of approximately $60.0 million, after deducting estimated offering expenses payable by the Company.

The Company considered subsequent events through March 10, 2020, the date the consolidated financial statements were available to be issued.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures.

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934 (the Exchange Act), our management, including our principal executive officer and principal financial officer, conducted an evaluation as of the end of the period covered by this report, of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e) under the Exchange Act.

Based on that evaluation, our principal executive officer and principal financial officer have concluded that these disclosure controls and procedures were effective as of December 31, 2019 to provide reasonable assurance that information required to be disclosed by us in reports that we file under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in Securities and Exchange Commission rules and forms and that material information relating to the Company is accumulated and communicated to management, including our principal executive officer and our principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

Changes in Internal Control over Financial Reporting.

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) under the Exchange Act during the quarter ended December 31, 2019, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting.

Management of the Company is responsible for establishing and maintaining effective internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. The Company's internal control over financial reporting is designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework (2013)*. Based on our assessment, we concluded that, as of December 31, 2019, our internal control over financial reporting was effective based on those criteria.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required under this item is incorporated by reference to the following sections of our proxy statement for our 2020 Annual Meeting of Stockholders: "Management and Corporate Governance," "Delinquent Section 16(a) Reports," and "Code of Conduct and Ethics."

Item 11. Executive Compensation

The information required under this item is incorporated by reference to the following section of our proxy statement for our 2020 Annual Meeting of Stockholders: "Executive Officer and Director Compensation."

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required under this item is incorporated by reference to the following sections of our proxy statement for our 2020 Annual Meeting of Stockholders: "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information."

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required under this item is incorporated by reference to the following sections of our proxy statement for our 2020 Annual Meeting of Stockholders: "Certain Relationships and Related Person Transactions" and "Management and Corporate Governance."

Item 14. Principal Accountant Fees and Services

The information required under this item is incorporated by reference to the following section of our proxy statement for our 2020 Annual Meeting of Stockholders: "Independent Registered Public Accounting Firm."

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this Form 10-K:

(1) Financial Statements (see "Consolidated Financial Statements and Supplementary Data" at Item 8 and incorporated herein by reference).

(2) Financial Statement Schedules (Schedules to the Financial Statements have been omitted because the information required to be set forth therein is not applicable or is shown in the accompanying Financial Statements or notes thereto).

(3) Exhibits

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/ Registration Number
2.1	Agreement and Plan of Merger, dated as of May 29, 2019, by and among the Company, DermTech Operations, Inc. and DT Merger Sub, Inc., as amended, included as Annex A to the proxy statement/prospectus/information statement forming a part of the referenced filing.		S-4/A	8/7/2019	333-232181
2.2	First Amendment to Agreement and Plan of Merger, dated as of August 1, 2019, by and among the Company, DermTech Operations, Inc. and DT Merger Sub, Inc.		S-4/A	8/2/2019	333-232181
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended	X			
3.2	Bylaws of the Company.	X			
4.1	Specimen Warrant Certificate of the Company		S-1/A	6/9/2017	333-218093
4.2	Warrant Agreement, dated June 19, 2017, between the Company and Continental Stock Transfer & Trust Company		8-K	6/23/2017	001-38118
4.3*	Form of Management Warrant		8-K	9/5/2019	001-38118
4.4	Form of Series C Warrant		8-K	9/5/2019	001-38118
4.5	Form of Placement Agent Warrant		8-K	9/5/2019	001-38118
4.6	Form of 2020 Placement Agent Warrant		S-1/A	2/6/2020	333-235780
4.7	Description of the Company's securities	X			
10.1	Registration Rights Agreement by and among the Company, certain stockholders of the Company and certain stockholders of DermTech Operations, Inc.		8-K	9/5/2019	001-38118
10.2	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital (AM) Investors, L.P.		S-4/A	8/2/2019	333-232181
10.3	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital F5 Master I, L.P.		S-4/A	8/2/2019	333-232181
10.4	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital Institutional Partners, L.P.		S-4/A	8/2/2019	333-232181
10.5	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital Institutional Partners II, L.P.		S-4/A	8/2/2019	333-232181

10.6	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital Institutional Partners III, L.P.	S-4/A	8/2/2019	333-232181
10.7	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital Offshore Investors II, L.P.	S-4/A	8/2/2019	333-232181
10.8	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Farallon Capital Partners, L.P.	S-4/A	8/2/2019	333-232181
10.9	Amended and Restated Subscription Agreement, dated August 1, 2019, between the Company and Four Crossings Institutional Partners V, L.P.	S-4/A	8/2/2019	333-232181
10.10	Subscription Agreement, dated May 22, 2019, between the Company and Victory RS Science and Technology Fund	S-4/A	8/2/2019	333-232181
10.11	Subscription Agreement, dated May 22, 2019, between the Company and The Irwin Mark and Joan Klein Jacobs Family Trust UA DTD 6/20/80	S-4/A	8/2/2019	333-232181
10.12	Subscription Agreement, dated May 23, 2019, between the Company and Jacobs Investment Company LLC	S-4/A	8/2/2019	333-232181
10.13	Subscription Agreement, dated May 23, 2019, between the Company and RTW Master Fund, Ltd. and RTW Innovation Master Fund, Ltd.	S-4/A	8/2/2019	333-232181
10.14	Omnibus Common Share Subscription Agreement Amendment, dated as of August 1, 2019, by and among the Company and the Common Share Purchasers	S-4/A	8/2/2019	333-232181
10.15	Subscription Agreement, dated August 1, 2019, between the Company and HLM Venture Partners IV, L.P.	S-4/A	8/2/2019	333-232181
10.16	Letter Agreement, dated June 19, 2017, by and among the Company, Centripetal, LLC, and certain former directors and officers of the Company	8-K	6/23/2017	001-38118
10.17	Amendment No. 1 to Letter Agreement, dated August 28, 2019 by and among the Company, Centripetal, LLC, and certain former directors and officers of the Company	10-Q	11/7/2019	001-38118
10.18	Amended and Restated Unit Purchase Agreement, dated June 2017, between the Company and Cowen Investments LLC	S-1/A	6/14/2017	333-218093
10.19*	Employment Agreement, dated June 26, 2012, between DermTech Operations and John Dobak	S-4	6/18/2019	333-232181
10.20*	Amendment to Employment Agreement, dated February 28, 2014, between DermTech Operations and John Dobak	S-4	6/18/2019	333-232181
10.21*	Offer of Employment Letter, dated March 5, 2015, from DermTech, Inc. to Zuxu Yao	S-4	6/18/2019	333-232181
10.22*	Offer of Employment Letter, dated October 1, 2015, from DermTech Operations to Burkhard Jansen	S-4	6/18/2019	333-232181
10.23*	Offer of Employment Letter, dated December 7, 2018, from DermTech Operations to Todd Wood	S-4	6/18/2019	333-232181
10.24*	Offer of Employment Letter, dated August 14, 2019, from the Company to Kevin Sun	8-K	9/17/2019	001-38118

10.25	Amendment Number 1 to Deferred Underwriting Fee Assignment Agreement, dated September 4, 2019, by and among the Company, DermTech Operations and Cowen and Company, LLC		8-K	9/5/2019	001-38118
10.26	Standard Multi-Tenant Officer Lease–Net and Addendum to Lease, dated January 25, 2013, by and between DermTech Operations and AG/Touchstone TP, LLC		8-K	9/5/2019	001-38118
10.27	First Amendment to Standard Rental Lease, Storage Lease and Signage to Expand and Extend Term, dated January 30, 2014, by and between DermTech Operations and AG/Touchstone TP, LLC		8-K	9/5/2019	001-38118
10.28	Assignment, Consent to Assignment, and Second Amendment to Standard Multi-Lease–Net, dated November 21, 2016, by and between DermTech Operations and AG/Touchstone TP, LLC		8-K	9/5/2019	001-38118
10.29	Third Amendment to Lease, dated August 6, 2019, by and between DermTech Operations and HCP Torrey Pines, LLC		8-K	9/5/2019	001-38118
10.30	Fourth Amendment to Lease, dated as of September 10, 2019, by and between the Company and HCP Torrey Pines, LLC		8-K	9/23/2019	001-38118
10.31	Fifth Amendment to Lease and Signage Lease, dated February 5, 2020, by and between the Company and HCP Torrey Pines, LLC		S-1/A	2/6/2020	333-235780
10.32*	Amended and Restated 2010 Stock Plan of the Company, included as Annex E to the proxy statement/prospectus/information statement forming a part of the referenced filing		S-4/A	8/7/2019	333-232181
10.33*	Form of Stock Option Grant Notice and Stock Option Agreement under the Amended and Restated 2010 Stock Plan of the Company		S-1	1/3/2020	333-235780
10.34*	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Agreement under the Amended and Restated 2010 Stock Plan of the Company		S-1	1/3/2020	333-235780
10.35*	2020 Form of Stock Option Agreement and Forms of Stock Option Grant Notice under Amended and Restated 2010 Stock Plan		8-K	1/21/2020	001-38118
10.36*	2020 Form of Restricted Stock Unit Agreement and Forms of Restricted Stock Unit Award Grant Notice under Amended and Restated 2010 Stock Plan		8-K	1/21/2020	001-38118
10.37	Form of Indemnification Agreement		8-K	9/5/2019	001-38118
10.38*	Employment Agreement, dated April 1, 2014, between DermTech International and Steven Kemper		S-4	6/18/2019	333-232181
10.39*	Letter Agreement, dated November 22, 2019, by and between the Company and Steven Kemper		8-K	11/29/2019	001-38118
10.40*	Non-Employee Director Compensation Policy, dated January 30, 2020	X			
16.1	Letter from Marcum LLP, dated September 5, 2019		8-K	9/5/2019	001-38118
21.1	Subsidiaries of the Company		S-1	1/3/2020	333-235780
23.1	Consent of KPMG LLP, independent registered public accounting firm	X			
24.1	Powers of Attorney (included on signature page)	X			
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			

31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X
101.INS	XBRL Instance Document	X
101.SCH	XBRL Taxonomy Extension Schema Document	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X

* Management contract or compensatory plan or arrangement.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

DERMTECH, INC.

Date: March 10, 2020

By: /s/ John Dobak, M.D.
John Dobak, M.D.
Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of DermTech, Inc., hereby severally constitute and appoint John Dobak, M.D. and Kevin Sun, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for her or him and in her or his name, place and stead, and in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and generally to do all things in our names and on our behalf in such capacities to enable DermTech, Inc. to comply with the provisions of the Securities Exchange Act of 1934, as amended, and all the requirements of the Securities Exchange Commission.

Pursuant to the requirements of the Securities and Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ John Dobak, M.D. John Dobak, M.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 10, 2020
/s/ Kevin Sun Kevin Sun	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	March 10, 2020
/s/ Cynthia Collins Cynthia Collins	Director	March 10, 2020
/s/ Gary Jacobs Gary Jacobs	Director	March 10, 2020
/s/ Scott Pancoast Scott Pancoast	Director	March 10, 2020
/s/ Enrico Picozza Enrico Picozza	Director	March 10, 2020
/s/ Matthew Posard Matthew Posard	Director	March 10, 2020
/s/ Herm Rosenman Herm Rosenman	Director	March 10, 2020
/s/ Gene Salkind, M.D. Gene Salkind, M.D.	Director	March 10, 2020

Exhibit 3.1

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

CONSTELLATION ALPHA CAPITAL CORP.

(originally incorporated on August 27, 2019 under the name Constellation Alpha Capital Corp.)

FIRST: The name of the Corporation is DermTech, Inc.

SECOND: The address of the Corporation's registered office in the State of Delaware is 251 Little Falls Drive, in the City of Wilmington, County of New Castle 19808. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of all classes of stock that the Corporation shall have authority to issue is 55,000,000 shares, consisting of (i) 50,000,000 shares of Common Stock, $0.0001 par value per share ("Common Stock"), and (ii) 5,000,000 shares of Preferred Stock, $0.0001 par value per share ("Preferred Stock").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK.

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights of the holders of the Preferred Stock of any series as may be designated by the Board of Directors upon any issuance of the Preferred Stock of any series.

2. Voting. The holders of the Common Stock shall have voting rights at all meetings of stockholders, each such holder being entitled to one vote for each share thereof held by such holder; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation (which, as used herein, shall mean the certificate of incorporation of the Corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Certificate of Incorporation. There shall be no cumulative voting.

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

3. Dividends. Dividends may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend or other rights of any then outstanding Preferred Stock.

4. Liquidation. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders, subject to any preferential or other rights of any then outstanding Preferred Stock.

B. PREFERRED STOCK.

Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated or expressed herein and in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors of the Corporation as hereinafter provided. Any shares of Preferred Stock which may be redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by law.

Authority is hereby expressly granted to the Board of Directors from time to time to issue the Preferred Stock in one or more series, and in connection with the creation of any such series, by adopting a resolution or resolutions providing for the issuance of the shares thereof and by filing a certificate of designations relating thereto in accordance with the General Corporation Law of the State of Delaware, to determine and fix the number of shares of such series and such voting powers, full or limited, or no voting powers, and such designations, preferences and relative participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated and expressed in such resolutions, all to the full extent now or hereafter permitted by the General Corporation Law of the State of Delaware. Without limiting the generality of the foregoing, the resolutions providing for issuance of any series of Preferred Stock may provide that such series shall be superior or rank equally or be junior to any other series of Preferred Stock to the extent permitted by law.

The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote of the holders of a majority of the voting power of the capital stock of the Corporation entitled to vote thereon, voting as a single class, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

FIFTH: Except as otherwise provided herein, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

SIXTH: In furtherance and not in limitation of the powers conferred upon it by the General Corporation Law of the State of Delaware, and subject to the terms of any series of Preferred Stock, the Board of Directors shall have the power to adopt, amend, alter or repeal the By-laws of the Corporation by the affirmative vote of a majority of the directors present at any regular or special meeting of the Board of Directors at which a quorum is present. The stockholders may not adopt, amend, alter or repeal the By-laws of the Corporation, or adopt any provision inconsistent therewith, unless such action is approved, in addition to any other vote required by this Certificate of Incorporation, by the affirmative vote of the holders of at least seventy-five percent (75%) of the votes that all the stockholders would be entitled to cast in any annual election of directors or class of directors. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article SIXTH.

SEVENTH: Except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal. If the General Corporation Law of the State of Delaware is amended to permit further elimination or limitation of the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware as so amended.

EIGHTH: The Corporation shall provide indemnification as follows:

1. Actions, Suits and Proceedings Other than by or in the Right of the Corporation. The Corporation shall indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974), and amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that Indemnitee did not act in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

2. Actions or Suits by or in the Right of the Corporation. The Corporation shall indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that Indemnitee is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, except that no indemnification shall be made under this Section 2 in respect of any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the Corporation, unless, and only to the extent, that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnity for such expenses (including attorneys' fees) which the Court of Chancery of Delaware or such other court shall deem proper.

3. Indemnification for Expenses of Successful Party. Notwithstanding any other provisions of this Article EIGHTH, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article EIGHTH, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, Indemnitee shall be indemnified against all expenses (including attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection therewith. Without limiting the foregoing, if any action, suit or proceeding is disposed of, on the merits or otherwise (including a disposition without prejudice), without (i) the disposition being adverse to Indemnitee, (ii) an adjudication that Indemnitee was liable to the Corporation, (iii) a plea of guilty or nolo contendere by Indemnitee, (iv) an adjudication that Indemnitee did not act in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation, and (v) with respect to any criminal proceeding, an adjudication that Indemnitee had reasonable cause to believe his or her conduct was unlawful, Indemnitee shall be considered for the purposes hereof to have been wholly successful with respect thereto.

4. Notification and Defense of Claim. As a condition precedent to an Indemnitee's right to be indemnified, such Indemnitee must notify the Corporation in writing as soon as practicable of any action, suit, proceeding or investigation involving such Indemnitee for which indemnity will or could be sought unless the Corporation has confirmed to the Indemnitee that it is aware of such action, suit, proceeding or investigation and that indemnity will or could be sought. With respect to any action, suit, proceeding or investigation of which the Corporation is so notified,

the Corporation will be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to Indemnitee. After notice from the Corporation to Indemnitee of its election so to assume such defense, the Corporation shall not be liable to Indemnitee for any legal or other expenses subsequently incurred by Indemnitee in connection with such action, suit, proceeding or investigation, other than as provided below in this Section 4. Indemnitee shall have the right to employ his or her own counsel in connection with such action, suit, proceeding or investigation, but the fees and expenses of such counsel incurred after notice from the Corporation of its assumption of the defense thereof shall be at the expense of Indemnitee unless (i) the employment of counsel by Indemnitee has been authorized by the Corporation, (ii) counsel to Indemnitee shall have reasonably concluded that there may be a conflict of interest or position on any significant issue between the Corporation and Indemnitee in the conduct of the defense of such action, suit, proceeding or investigation or (iii) the Corporation shall not in fact have employed counsel to assume the defense of such action, suit, proceeding or investigation, in each of which cases the fees and expenses of counsel for Indemnitee shall be at the expense of the Corporation, except as otherwise expressly provided by this Article EIGHTH. The Corporation shall not be entitled, without the consent of Indemnitee, to assume the defense of any claim brought by or in the right of the Corporation or as to which counsel for Indemnitee shall have reasonably made the conclusion provided for in clause (ii) above. The Corporation shall not be required to indemnify Indemnitee under this Article EIGHTH for any amounts paid in settlement of any action, suit, proceeding or investigation effected without its written consent. The Corporation shall not settle any action, suit, proceeding or investigation in any manner which would impose any penalty or limitation on Indemnitee without Indemnitee's written consent. Neither the Corporation nor Indemnitee will unreasonably withhold or delay its consent to any proposed settlement.

5. Advance of Expenses. Subject to the provisions of Section 6 of this Article EIGHTH, in the event of any threatened or pending action, suit, proceeding or investigation of which the Corporation receives notice under this Article EIGHTH, any expenses (including attorneys' fees) incurred by or on behalf of Indemnitee in defending an action, suit, proceeding or investigation or any appeal therefrom shall be paid by the Corporation in advance of the final disposition of such matter; provided, however, that the payment of such expenses incurred by or on behalf of Indemnitee in advance of the final disposition of such matter shall be made only upon receipt of an undertaking by or on behalf of Indemnitee to repay all amounts so advanced in the event that it shall ultimately be determined by final judicial decision from which there is no further right to appeal that Indemnitee is not entitled to be indemnified by the Corporation as authorized in this Article EIGHTH; and provided further that no such advancement of expenses shall be made under this Article EIGHTH if it is determined (in the manner described in Section 6) that (i) Indemnitee did not act in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Corporation, or (ii) with respect to any criminal action or proceeding, Indemnitee had reasonable cause to believe his or her conduct was unlawful. Such undertaking shall be accepted without reference to the financial ability of Indemnitee to make such repayment.

6. Procedure for Indemnification and Advancement of Expenses. In order to obtain indemnification or advancement of expenses pursuant to Section 1, 2, 3 or 5 of this Article EIGHTH, an Indemnitee shall submit to the Corporation a written request. Any such advancement of expenses shall be made promptly, and in any event within 60 days after receipt by the Corporation of the written request of Indemnitee, unless (i) the Corporation has assumed the defense pursuant to Section 4 of this Article EIGHTH (and none of the circumstances described in Section 4 of this Article EIGHTH that would nonetheless entitle the Indemnitee to indemnification for the fees and expenses of separate counsel have occurred) or (ii) the Corporation determines within such 60-day period that Indemnitee did not meet the applicable standard of conduct set forth in Section 1, 2 or 5 of this Article EIGHTH, as the case may be. Any such indemnification, unless ordered by a court, shall be made with respect to requests under Section 1 or 2 only as authorized in the specific case upon a determination by the Corporation that the indemnification of Indemnitee is proper because Indemnitee has met the applicable standard of conduct set forth in Section 1 or 2, as the case may be. Such determination shall be made in each instance (a) by a majority vote of the directors of the Corporation consisting of persons who are not at that time parties to the action, suit or proceeding in question ("disinterested directors"), whether or not a quorum, (b) by a committee of disinterested directors designated by majority vote of disinterested directors, whether or not a quorum, (c) if there are no disinterested directors, or if the disinterested directors so direct, by independent legal counsel (who may, to the extent permitted by law, be regular legal counsel to the Corporation) in a written opinion, or (d) by the stockholders of the Corporation.

7. Remedies. Subject to Article TWELFTH, the right to indemnification or advancement of expenses as granted by this Article EIGHTH shall be enforceable by Indemnitee in any court of competent jurisdiction. Neither the failure of the Corporation to have made a determination prior to the commencement of such action that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation pursuant to Section 6 of this Article EIGHTH that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct. In any suit brought by Indemnitee to enforce a right to indemnification, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall have the burden of proving that Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article EIGHTH. Indemnitee's expenses (including attorneys' fees) reasonably incurred in connection with successfully establishing Indemnitee's right to indemnification, in whole or in part, in any such proceeding shall also be indemnified by the Corporation. Notwithstanding the foregoing, in any suit brought by Indemnitee to enforce a right to indemnification hereunder, it shall be a defense that the Indemnitee has not met any applicable standard for indemnification set forth in the General Corporation Law of the State of Delaware.

8. Limitations. Notwithstanding anything to the contrary in this Article EIGHTH, except as set forth in Section 7 of this Article EIGHTH, the Corporation shall not indemnify an Indemnitee pursuant to this Article EIGHTH in connection with a proceeding (or part thereof) initiated by such Indemnitee unless the initiation thereof was approved by the Board of Directors of the Corporation. Notwithstanding anything to the contrary in this Article EIGHTH, the Corporation shall not indemnify an Indemnitee to the extent such Indemnitee is reimbursed from the proceeds of insurance, and in the event the Corporation makes any indemnification payments to an Indemnitee and such Indemnitee is subsequently reimbursed from the proceeds of insurance, such Indemnitee shall promptly refund indemnification payments to the Corporation to the extent of such insurance reimbursement.

9. Subsequent Amendment. No amendment, termination or repeal of this Article EIGHTH or of the relevant provisions of the General Corporation Law of the State of Delaware or any other applicable laws shall adversely affect or diminish in any way the rights of any Indemnitee to indemnification under the provisions hereof with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the final adoption of such amendment, termination or repeal.

10. Other Rights. The indemnification and advancement of expenses provided by this Article EIGHTH shall not be deemed exclusive of any other rights to which an Indemnitee seeking indemnification or advancement of expenses may be entitled under any law (common or statutory), agreement or vote of stockholders or disinterested directors or otherwise, both as to action in Indemnitee's official capacity and as to action in any other capacity while holding office for the Corporation, and shall continue as to an Indemnitee who has ceased to be a director or officer, and shall inure to the benefit of the estate, heirs, executors and administrators of Indemnitee. Nothing contained in this Article EIGHTH shall be deemed to prohibit, and the Corporation is specifically authorized to enter into, agreements with officers and directors providing indemnification rights and procedures different from those set forth in this Article EIGHTH. In addition, the Corporation may, to the extent authorized from time to time by its Board of Directors, grant indemnification rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article EIGHTH.

11. Partial Indemnification. If an Indemnitee is entitled under any provision of this Article EIGHTH to indemnification by the Corporation for some or a portion of the expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) or amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with any action, suit, proceeding or investigation and any appeal therefrom but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify Indemnitee for the portion of such expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) or amounts paid in settlement to which Indemnitee is entitled.

12. Insurance. The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) against any expense, liability or loss incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the General Corporation Law of the State of Delaware.

13. Savings Clause. If this Article EIGHTH or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Indemnitee as to any expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article EIGHTH that shall not have been invalidated and to the fullest extent permitted by applicable law.

14. Definitions. Terms used herein and defined in Section 145(h) and Section 145(i) of the General Corporation Law of the State of Delaware shall have the respective meanings assigned to such terms in such Section 145(h) and Section 145(i).

NINTH: This Article NINTH is inserted for the management of the business and for the conduct of the affairs of the Corporation.

1. General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

2. Number of Directors; Election of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the Corporation shall be established by the Board of Directors. Election of directors need not be by written ballot, except as and to the extent provided in the By-laws of the Corporation.

3. Classes of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the Board of Directors shall be and is divided into three classes, designated Class I, Class II and Class III. Each class shall consist, as nearly as may be possible, of one-third of the total number of directors constituting the entire Board of Directors. The Board of Directors is authorized to assign members of the Board of Directors already in office to Class I, Class II or Class III at the time such classification becomes effective.

4. Terms of Office. Subject to the rights of holders of any series of Preferred Stock to elect directors, each director shall serve for a term ending on the date of the third annual meeting of stockholders following the annual meeting of stockholders at which such director was elected; provided that each director initially assigned to Class I shall serve for a term expiring at the Corporation's first annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; each director initially assigned to Class II shall serve for a term expiring at the Corporation's second annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; and each director initially assigned to Class III shall serve for a term expiring at the Corporation's third annual meeting of stockholders held after the effectiveness of this Restated Certificate of Incorporation; provided further, that the term of each director shall continue until the election and qualification of his or her successor and be subject to his or her earlier death, resignation or removal.

5. Quorum. The greater of (a) a majority of the directors at any time in office and (b) one third of the number of directors fixed pursuant to Section 2 of this Article NINTH shall constitute a quorum of the Board of Directors. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

6. Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law or by this Certificate of Incorporation.

7. Removal. Subject to the rights of holders of any series of Preferred Stock, directors of the Corporation may be removed only for cause and only by the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors.

8. Vacancies. Subject to the rights of holders of any series of Preferred Stock, any vacancy or newly-created directorship in the Board of Directors, however occurring, shall be filled only by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director and shall not be filled by the stockholders. A director elected to fill a vacancy shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of a successor and to such director's earlier death, resignation or removal.

9. Stockholder Nominations and Introduction of Business, Etc. Advance notice of stockholder nominations for election of directors and other business to be brought by stockholders before a meeting of stockholders shall be given in the manner provided by the By-laws of the Corporation.

10. Amendments to Article. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article NINTH.

TENTH: Stockholders of the Corporation may not take any action by written consent in lieu of a meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article TENTH.

ELEVENTH: Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board of Directors, the Chairman of the Board or the Chief Executive Officer, and may not be called by any other person or persons. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article ELEVENTH.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware does not have subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer or other employee of the Corporation, to the Corporation or the Corporation's stockholders, (iii) any action or proceeding asserting a claim against the Corporation or any current or former director, officer or other employee of the Corporation, arising out of or pursuant to any provision of the Delaware General Corporation Law or this Certificate of Incorporation or the By-Laws of the Corporation (in each case, as they may be amended from time to time), (iv) any action or proceeding to interpret, apply, enforce or determine the validity of this Certificate of Incorporation or the Bylaws of the Corporation (including any right, obligation, or remedy thereunder), (v) any action or proceeding as to which the Delaware General Corporation Law confers jurisdiction to the Court of Chancery of the State of Delaware, or (vi) any action asserting a claim against the Corporation or any director, officer or other employee of the Corporation, governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to the provisions of this Article TWELFTH. This Article TWELFTH shall not apply to actions brought to enforce a duty or liability created by the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, or any claim for which the federal courts have exclusive jurisdiction.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation, which restates, integrates and amends the certificate of incorporation of the Corporation, and which has been duly adopted in accordance with Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware, has been executed by its duly authorized officer on this 29th day of August, 2019.

DERMTECH, INC.

By: /s/ John Dobak
John Dobak, CEO

CERTIFICATE OF AMENDMENT TO THE
AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION OF
DERMTECH, INC.

DermTech, Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), hereby certifies as follows:

1. The Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on August 27, 2019. The original Certificate of Incorporation was amended and restated on August 29, 2019 (the "**Amended and Restated Certificate of Incorporation**").

2. The following paragraph is hereby inserted after the first paragraph in Paragraph FOURTH of the Amended and Restated Certificate of Incorporation:

"Upon the close of trading on The Nasdaq Capital Market on August 29, 2019 (the "Effective Time"), each two (2) shares of the Common Stock issued and outstanding or held in treasury at the Effective Time shall be reclassified as and changed into one (1) share of Common Stock, par value $0.0001 per share, without any action by the holders thereof. In lieu of any fractional shares to which a holder of shares of Common Stock would be otherwise entitled, the Corporation shall, at its election, either (i) pay in cash, without interest, an amount equal to such fractional interest (after taking into account and aggregating all shares of Common Stock then held by such holder) multiplied by the closing price of the Common Stock as last reported on the Nasdaq Capital Market on the day of the Effective Time (determined on a post-split basis), or (ii) round up to the next whole share."

3. This Certificate of Amendment has been duly authorized and adopted by the Corporation's Board of Directors in accordance with the provisions of Section 242 of the Delaware General Corporation Law.

(*Signature page follows*)

IN WITNESS WHEREOF, DermTech, Inc. has caused this Certificate of Amendment to be signed by John Dobak, a duly authorized officer of the Corporation, on August 29, 2019.

DERMTECH, INC.,
a Delaware corporation

By: /s/ John Dobak
Name: John Dobak
Title: Chief Executive Officer

DERMTECH, INC.

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES A CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, John Dobak and Steven Kemper, do hereby certify that:

1. They are the President and Secretary, respectively, of DermTech, Inc., a Delaware corporation (the "Corporation").

2. The Corporation is authorized to issue 5,000,000 shares of preferred stock, none of which are issued and outstanding.

3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of 5,000,000 shares, $0.0001 par value per share, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a series of the preferred stock, which shall consist of up to 1,250 shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

TERMS OF PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

"Alternate Consideration" shall have the meaning set forth in Section 7(d).

"Beneficial Ownership Limitation" shall have the meaning set forth in Section 6(d).

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the Corporation's common stock, par value $0.0001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Stock Equivalents" means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"Conversion Amount" means the sum of the Stated Value at issue.

"Conversion Date" shall have the meaning set forth in Section 6(a).

"Conversion Price" shall have the meaning set forth in Section 6(b).

"Conversion Shares" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Preferred Stock in accordance with the terms hereof.

"Effective Date" means the date that the Conversion Shares Registration Statement filed by the Corporation pursuant to the Subscription Agreements is first declared effective by the Commission.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Fundamental Transaction" shall have the meaning set forth in Section 7(d).

"Holder" shall have the meaning given such term in Section 2.

"Liquidation" shall have the meaning set forth in Section 5.

"Notice of Conversion" shall have the meaning set forth in Section 6(a).

"Original Issue Date" means the date of the first issuance of any shares of the Preferred Stock regardless of the number of transfers of any particular shares of Preferred Stock and regardless of the number of certificates which may be issued to evidence such Preferred Stock. The Preferred Stock may be issued in certificated form or in book-entry form at the election of the Holder. To the extent that any shares of Preferred Stock are issued in book-entry form, references herein to "certificates" shall instead refer to the book-entry notation relating to such shares.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Preferred Stock" shall have the meaning set forth in Section 2.

"Registration Statement" means a registration statement that registers the resale of the Conversion Shares of the Holders, who shall be named as "selling stockholders" therein and meets the requirements of the Subscription Agreements.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Share Delivery Date" shall have the meaning set forth in Section 6(c).

"Stated Value" shall have the meaning set forth in Section 2.

"Subscription Agreements" means those certain subscription agreements entered into on or about August 1, 2019, each by and between the Corporation and the purchaser thereto, and each as amended, modified or supplemented from time to time in accordance with its terms.

"Subsidiary" means any direct or indirect subsidiary of the Corporation formed or acquired before or after the date of the Subscription Agreements.

"Successor Entity" shall have the meaning set forth in Section 7(d).

"Trading Day" means a day on which the principal Trading Market is open for business.

"Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, an OTC market place or the OTC Bulletin Board (or any successors to any of the foregoing).

"Transaction Documents" means the Subscription Agreements, this Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder

"Transfer Agent" means Continental Stock Transfer & Trust Company, the current transfer agent for the Common Stock, and any successor transfer agent of the Corporation.

"Underlying Shares" means the shares of Common Stock issued and issuable upon conversion of the Preferred Stock.

Section 2. Designation, Amount and Par Value. The series of preferred stock shall be designated as its Series A Convertible Preferred Stock (the "Preferred Stock") and the number of shares so designated shall be up to 1,250 (which shall not be subject to increase without the written consent of a majority of the holders of the Preferred Stock (each, a "Holder" and collectively, the "Holders")). Each share of Preferred Stock shall have a par value of $0.0001 per share and a stated value equal to $3,250 (the "Stated Value").

Section 3. Dividends.

a) Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the Delaware General Corporation Law, the Preferred Stock shall have no voting rights. However, as long as any shares of Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of Preferred Stock, (a) (i) alter or change adversely the powers, preferences or rights given to the Preferred Stock, (ii) alter or amend this Certificate of Designation, subject to the restriction on amending the Beneficial Ownership Limitation set forth in Section 6(d), or (iii) amend or repeal any provision of, or add any provision to, the certificate of incorporation or

bylaws of the Corporation, or file any articles of amendment or certificate of designations of preferences, limitations and relative rights of any series of preferred stock, if such action would adversely alter or change the powers, preferences or rights of the Preferred Stock in a manner materially different than the effect of such actions on the Common Stock (regardless, in the case of clause (i), (ii) or (iii), of whether any of the foregoing actions shall be by means of amendment to the certificate of incorporation of the Corporation or by merger, consolidation or otherwise), (b) issue further shares of Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of Preferred Stock or (c) enter into any agreement with respect to any of the foregoing.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a "Liquidation"), after the satisfaction in full of the debts of the Corporation and the payment of any liquidation preference owed to the holders of shares of capital stock of the Corporation ranking senior to the Preferred Stock upon liquidation, the Holders of the Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock) in the net assets of the Corporation. The Corporation shall mail written notice of any such Liquidation to each Holder.

Section 6. Conversion.

a) Conversions at Option of Holder. Each share of Preferred Stock shall be convertible, at any time and from time to time from and after the Original Issue Date at the option of the Holder thereof, into that number of shares of Common Stock (subject to the limitations set forth in Section 6(d)) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as Annex A (a "Notice of Conversion"). Each Notice of Conversion shall specify the number of shares of Preferred Stock to be converted, the number of shares of Preferred Stock owned prior to the conversion at issue, the number of shares of Preferred Stock owned subsequent to the conversion at issue and the date on which such conversion is to be effected, which date may not be prior to the date the applicable Holder delivers by facsimile such Notice of Conversion to the Corporation (such date, the "Conversion Date"). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion to the Corporation is deemed delivered hereunder. The calculations and entries set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. Provided the Transfer Agent is participating in the Depository Trust Company ("DTC") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable conversion shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "DWAC Delivery"). To effect conversions of shares of Preferred Stock, a Holder shall not be required to surrender the certificate(s) representing the shares of Preferred Stock to the Corporation unless all of the shares of Preferred

Stock represented thereby are so converted, in which case such Holder shall deliver the certificate representing such shares of Preferred Stock promptly following the Conversion Date at issue. Shares of Preferred Stock converted into Common Stock in accordance with the terms hereof shall be canceled and shall not be reissued.

b) Conversion Price. The conversion price for the Preferred Stock shall equal $3.25, subject to adjustment herein (the "Conversion Price").

c) Mechanics of Conversion

i. Delivery of Certificate Upon Conversion. Not later than three (3) Trading Days after each Conversion Date (the "Share Delivery Date"), the Corporation shall (A) deliver, or cause to be delivered, to the converting Holder a certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Preferred Stock or (B) in the case of a DWAC Delivery, electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system which, on or after the earlier of (i) the six month anniversary of the Original Issue Date or (ii) the Effective Date, shall be free of restrictive legends and trading restrictions (other than those which may then be required by the Subscription Agreements or applicable law). If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Notice of Conversion by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to the Holder any original Preferred Stock certificate delivered to the Corporation and the Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Preferred Stock unsuccessfully tendered for conversion to the Corporation.

ii. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Subscription Agreements) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable and, if the

Conversion Shares Registration Statement is then effective under the Securities Act, shall be registered for public resale in accordance with such Conversion Shares Registration Statement (subject to such Holder's compliance with its obligations under the Registration Rights Agreement) to the extent required by the Subscription Agreements.

iii. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

iv. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Corporation shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion.

d) Beneficial Ownership Limitation. The Corporation shall not effect any conversion of the Preferred Stock, and a Holder shall not have the right to convert any portion of the Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted Stated Value of Preferred Stock beneficially owned by such Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Preferred Stock) beneficially owned by such Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 6(d), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that

the limitation contained in this Section 6(d) applies, the determination of whether the Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates) and of how many shares of Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates) and how many shares of the Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to the Corporation each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the restrictions set forth in this paragraph and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6(d), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Corporation's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Corporation or (iii) a more recent written notice by the Corporation or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Corporation shall within two Trading Days confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Corporation, including the Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall initially be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of Preferred Stock held by the applicable Holder. Notwithstanding the foregoing, by written notice to the Corporation, which will not be effective until the sixty-first (61st) day after such notice is delivered to the Corporation, the Holder may reset the Beneficial Ownership Limitation percentage to a higher or lower percentage; provided that such notice shall not be required in the event of a Fundamental Transaction (as defined below). Upon such a change by a Holder to the Beneficial Ownership Limitation, the Beneficial Ownership Limitation may not be further amended by such Holder without first providing the minimum 61-day notice required by this Section 6(d) (except in the event of a Fundamental Transaction). The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(d) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of Preferred Stock. The determination of whether the conversion of shares of Preferred Stock into Common Stock is permitted under this Section 6(d) shall be made by the record holder of such shares of Preferred Stock in such record holder's sole discretion,

and the submission of a Notice of Conversion shall be conclusively deemed to constitute such record holder's determination that the conversion of the shares of Preferred Stock identified in such Notice of Conversion is permitted under this Section 6(d).

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder of will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete Conversion of this Preferred Stock (without regard to any limitations on Conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to

any limitation in Section 6(d) on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6(d) on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents in accordance with the provisions of this Section 7(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the "Corporation" shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other

Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

e) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 11099 N. Torrey Pines Road #100, La Jolla, CA 92037 **Attention:** John Dobak, or such other address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder, as set forth in the Subscription Agreements. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

c) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all

legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in Court of Chancery of the State of Delaware. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the Court of Chancery of the State of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such Delaware Chancery Courts, or such Delaware Chancery Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

d) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

e) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

f) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

g) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

h) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Subscription Agreements. If any shares of Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series A Convertible Preferred Stock.

i) Redemption. The Preferred Stock is not redeemable.

Section 9. Fractional Shares. Preferred Stock may be issued in fractions of a share that shall entitle the holder, in proportion to such holder's fractional shares, to receive dividends, participate in distributions and to have the benefit of all other rights of holders of Preferred Stock.

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RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate this 29th day of August, 2019.

/s/ John Dobak
Name: John Dobak
Title: Chief Executive Officer

/s/ Steven Kemper
Name: Steven Kemper
Title: Secretary

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF PREFERRED STOCK)

The undersigned hereby elects to convert the number of shares of Series A Convertible Preferred Stock indicated below into shares of common stock, par value $0.0001 per share (the "Common Stock"), of DermTech, Inc., a Delaware corporation (the "Corporation"), according to the conditions hereof, as of the date written below. If shares of Common Stock are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates and opinions as may be required by the Corporation in accordance with the Subscription Agreements. No fee will be charged to the Holders for any conversion, except for any such transfer taxes.

Conversion calculations:

Date to Effect Conversion: _____

Number of shares of Preferred Stock owned prior to Conversion: _____

Number of shares of Preferred Stock to be Converted: _____

Stated Value of shares of Preferred Stock to be Converted: _____

Number of shares of Common Stock to be Issued: _____

Applicable Conversion Price: _____

Number of shares of Preferred Stock subsequent to Conversion: _____

Address for Delivery: _____
or
DWAC Instructions:
Broker no: _____
Account no: _____

[HOLDER]

By: _____
Name:
Title:

DERMTECH, INC.

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B-1 CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, John Dobak and Kevin Sun, do hereby certify that:

1. They are the President and Secretary, respectively, of DermTech, Inc., a Delaware corporation (the "Corporation").

2. The Corporation is authorized to issue 5,000,000 shares of preferred stock, 1,230.77 of which are issued and outstanding.

3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of 5,000,000 shares, $0.0001 par value per share, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a new series of the preferred stock, which shall consist of up to 3,200 shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a new series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

TERMS OF PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

"Alternate Consideration" shall have the meaning set forth in Section 7(d).

"Automatic Conversion" shall have the meaning set forth in Section 6(c).

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the Corporation's common stock, par value $0.0001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Stock Equivalents" means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"Conversion Price" shall have the meaning set forth in Section 6(b).

"Conversion Shares" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Preferred Stock in accordance with the terms hereof.

"Effective Date" means the date that the Registration Statement filed by the Corporation pursuant to the Registration Rights Agreement is first declared effective by the Commission.

"Fundamental Transaction" shall have the meaning set forth in Section 7(d).

"Holder" shall have the meaning given such term in Section 2.

"Liquidation" shall have the meaning set forth in Section 5.

"Original Issuance Date" means the date of the "Closing" as defined in the Securities Purchase Agreement.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Preferred Stock" shall have the meaning set forth in Section 2.

"Registration Rights Agreement" means that certain Registration Rights Agreement entered into on or about March 4, 2020, by and among the Corporation and the signatories thereto, as amended, modified or supplemented from time to time in accordance with its terms.

"Registration Statement" means a registration statement that registers the resale of the Conversion Shares of the Holders, who shall be named as "selling stockholders" therein and meets the requirements of the Registration Rights Agreement.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Securities Purchase Agreement" means that certain Securities Purchase Agreement entered into on or about February 28, 2020, by and among the Corporation and the purchasers thereto, as amended, modified or supplemented from time to time in accordance with its terms.

"Stated Value" shall have the meaning set forth in Section 2.

"Stockholder Approval" means such approval as is required by the applicable rules and regulations of the Nasdaq Stock Market (or any successor entity), including Nasdaq Listing Standard Rule 5635(d), from the stockholders of the Corporation with respect to the transactions contemplated by the Transaction Documents, including the approval of the issuance of all of the Conversion Shares in excess of 19.99% of the issued and outstanding Common Stock on the execution date of the Securities Purchase Agreement.

"Subsidiary" means any direct or indirect subsidiary of the Corporation formed or acquired before or after the date of the Securities Purchase Agreement.

"Successor Entity" shall have the meaning set forth in Section 7(d).

"Trading Day" means a day on which the principal Trading Market is open for business.

"Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, an OTC market place or the OTCMarkets (or any successors to any of the foregoing).

"Transaction Documents" means the Securities Purchase Agreement, the Registration Rights Agreement, this Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

"Transfer Agent" means Continental Stock Transfer & Trust Company, the current transfer agent for the Common Stock, and any successor transfer agent of the Corporation.

Section 2. Designation, Amount and Par Value. The series of preferred stock of the Corporation shall be designated as the Series B-1 Convertible Preferred Stock (the "Preferred Stock") and the number of shares so designated shall be up to 3,200 (which shall not be subject to increase without the written consent of the holders (each, a "Holder" and collectively, the "Holders") of a majority of the then outstanding shares of Preferred Stock). Each share of Preferred Stock shall have a par value of $0.0001 per share and a stated value equal to $10,500.00 (the "Stated Value").

Section 3. Dividends. Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the Delaware General Corporation Law, the Preferred Stock shall have no voting rights. However, as long as any shares of Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of Preferred Stock, (a) (i) alter or change adversely the powers, preferences or rights given to the Preferred Stock, (ii) alter or amend this Certificate of Designation, or (iii) amend or repeal any provision of, or add any provision to, the certificate of incorporation or bylaws of the Corporation, or file any certificate of amendment or certificate of designations of preferences, limitations and relative rights of any series of preferred stock, if such action would adversely alter or change the powers, preferences or rights of the Preferred Stock in a manner materially different than the effect of such actions on the Common Stock (regardless, in the case of clause (i), (ii) or (iii), of whether any of the foregoing actions shall be by means of amendment to the certificate of incorporation of the Corporation or by merger, consolidation or otherwise), (b) issue further shares of Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of Preferred Stock or (c) enter into any agreement with respect to any of the foregoing.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a "Liquidation"), after the satisfaction in full of the debts of the Corporation and the payment of any liquidation preference owed to the holders of shares of capital stock of the Corporation ranking senior to the Preferred Stock upon

liquidation, the Holders of the Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis without regard to any limitation in Section 6 on the conversion of this Preferred Stock) in the net assets of the Corporation. The Corporation shall mail written notice of any such Liquidation to each Holder.

Section 6. Conversion.

e) No Optional Conversion. The Preferred Stock shall only be convertible upon receipt of Stockholder Approval and pursuant to an Automatic Conversion (as defined below). The Preferred Stock shall not be convertible at the option of the Holder. Shares of Preferred Stock converted into Common Stock in accordance with the terms hereof shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B-1 Convertible Preferred Stock.

f) Conversion Price. The conversion price for the Preferred Stock shall equal $10.50, subject to adjustment herein (the "Conversion Price").

g) Automatic Conversion. Notwithstanding anything herein to the contrary, on the first Trading Day after the Corporation obtains Stockholder Approval, all outstanding shares of Preferred Stock shall automatically be converted into such number of shares of Common Stock as determined by dividing the Stated Value by the Conversion Price then in effect (the "Automatic Conversion"). Upon the occurrence of such Automatic Conversion, the Holder shall promptly surrender any certificates representing such shares at the office of the Corporation or the Transfer Agent. On the date such Automatic Conversion takes place, the outstanding shares of Preferred Stock shall be converted automatically without any further action by the Holder and whether or not any certificates representing such shares are surrendered to the Corporation or the Transfer Agent; provided, however, that in the case of converting shares of Preferred Stock then held in certificated form, the Corporation shall not be obligated to issue certificates evidencing the applicable Conversion Shares unless either (i) the certificates evidencing such shares of Preferred Stock are delivered to the Corporation or the Transfer Agent or (ii) the Holder notifies the Corporation or the Transfer Agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. On the date of such Automatic Conversion, each Holder shall be deemed to be the holder of record of the Common Stock issuable upon such conversion, notwithstanding that any certificates representing such shares of Preferred Stock shall not have been surrendered at the office of the Corporation or that any such certificates evidencing such Conversion Shares shall not then be actually delivered to such Holder. Provided the Transfer Agent is participating in the Depository Trust Company ("DTC") Fast Automated Securities Transfer program (and subject to Section 6(e)(i)), the Holder may provide written notice to the Corporation that the applicable Conversion Shares be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "DWAC Delivery").

h) Conversion and Issuance Limitations. Until the Corporation has obtained Stockholder Approval, (i) the Preferred Stock shall not be convertible and (ii) the Corporation may not issue any Conversion Shares.

i) Mechanics of Automatic Conversion

v. Delivery of Book-Entry Statement Upon Automatic Conversion. Not later than three (3) Trading Days after the date of the Automatic Conversion, the Corporation shall (A) deliver, or cause to be delivered, to the converting Holder a book-entry statement evidencing the number of Conversion Shares being acquired upon the Automatic Conversion (or, subject to Section 6(c), a stock certificate representing such Conversion Shares upon request of the Holder), which, on or after the earlier of (i) the Effective Date or (ii) the twelve-month anniversary of the Original Issuance Date, shall be free of restrictive legends and trading restrictions (other than those which may then be required by the Securities Purchase Agreement or applicable law) or (B) in the case of an election for DWAC Delivery (which shall be available if, and only if, on the date of the Automatic Conversion neither restrictive legends nor trading restrictions are then required by the Securities Purchase Agreement or applicable law), electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system.

vi. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Securities Purchase Agreement) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable and, if the Registration Statement is then effective under the Securities Act, shall be registered for public resale in accordance with such Registration Statement (subject to such Holder's compliance with its obligations under the Registration Rights Agreement).

vii. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

viii. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the

Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

Section 7. Certain Adjustments.

f) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

g) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.

h) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of this Preferred Stock (without regard to any limitations on conversion hereof) immediately before the date of which a record is taken for such Distribution, or, if no such record

is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

i) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6 on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6 on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the survivor (the "Successor Entity") to assume in writing all of

the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents in accordance with the provisions of this Section 7(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the "Corporation" shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

j) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

Section 8. Miscellaneous.

j) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder shall be in writing and delivered personally or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 11099 N. Torrey Pines Road #100, La Jolla, CA 92037 Attention: John Dobak, or such other address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by email, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the email address, facsimile number or address of such Holder appearing on the books of the Corporation, or if no such email address, facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder, as set forth in the Securities Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via email to the email address set forth in this Section, (ii) the date of

transmission, if such notice or communication is delivered via facsimile to the facsimile number set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (iii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile to the facsimile number set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iv) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (v) upon actual receipt by the party to whom such notice is required to be given.

k) Book-Entry; Certificates. The Preferred Stock will be issued in book-entry form; provided that, if a Holder requests that such Holder's shares of Preferred Stock be issued in certificated form, the Corporation will instead issue a stock certificate to such Holder representing such Holder's shares of Preferred Stock. To the extent that any shares of Preferred Stock are issued in book-entry form, references herein to "certificates" shall instead refer to the book-entry notation relating to such shares.

A.

l) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

m) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in Court of Chancery of the State of Delaware. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the Court of Chancery of the State of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such Delaware Chancery Courts, or such Delaware Chancery Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall

commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

n) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

o) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

p) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

q) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

r) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Securities Purchase Agreement. If any shares of Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B-1 Convertible Preferred Stock.

s) Redemption. The Preferred Stock is not redeemable.

B.

Section 9. Fractional Shares. Preferred Stock may be issued in fractions of a share that shall entitle the holder, in proportion to such holder's fractional shares, to receive dividends, participate in distributions and to have the benefit of all other rights of holders of Preferred Stock.

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RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations of Series B-1 Convertible Preferred Stock in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Designation this 2nd day of March, 2020.

/s/ John Dobak
Name: John Dobak
Title: President

/s/ Kevin Sun
Name: Kevin Sun
Title: Secretary

DERMTECH, INC.

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B-2 CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, John Dobak and Kevin Sun, do hereby certify that:

1. They are the President and Secretary, respectively, of DermTech, Inc., a Delaware corporation (the "Corporation").

2. The Corporation is authorized to issue 5,000,000 shares of preferred stock, 1,230.77 of which are issued and outstanding.

3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of 5,000,000 shares, $0.0001 par value per share, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a new series of the preferred stock, which shall consist of up to 525 shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a new series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

TERMS OF PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

"Alternate Consideration" shall have the meaning set forth in Section 7(d).

"Beneficial Ownership Limitation" shall have the meaning set forth in Section 6(e).

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the Corporation's common stock, par value $0.0001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Stock Equivalents" means any securities of the Corporation or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"Conversion Date" shall have the meaning set forth in Section 6(a).

"Conversion Price" shall have the meaning set forth in Section 6(b).

"Conversion Shares" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Preferred Stock in accordance with the terms hereof.

"Effective Date" means the date that the Registration Statement filed by the Corporation pursuant to the Registration Rights Agreement is first declared effective by the Commission.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Fundamental Transaction" shall have the meaning set forth in Section 7(d).

"Holder" shall have the meaning given such term in Section 2.

"Liquidation" shall have the meaning set forth in Section 5.

"Notice of Conversion" shall have the meaning set forth in Section 6(a).

"Original Issuance Date" means the date of the "Closing" as defined in the Securities Purchase Agreement.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Preferred Stock" shall have the meaning set forth in Section 2.

"Registration Rights Agreement" means that certain Registration Rights Agreement entered into on or about March 4, 2020, by and among the Corporation and the signatories thereto, as amended, modified or supplemented from time to time in accordance with its terms.

"Registration Statement" means a registration statement that registers the resale of the Conversion Shares of the Holders, who shall be named as "selling stockholders" therein and meets the requirements of the Registration Rights Agreement.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Securities Purchase Agreement" means that certain Securities Purchase Agreement entered into on or about February 28, 2020, by and among the Corporation and the purchasers thereto, as amended, modified or supplemented from time to time in accordance with its terms.

"Share Delivery Date" shall have the meaning set forth in Section 6(d).

"Stated Value" shall have the meaning set forth in Section 2.

"Stockholder Approval" means such approval as is required by the applicable rules and regulations of the Nasdaq Stock Market (or any successor entity), including Nasdaq Listing Standard Rule 5635(d), from the stockholders of the Corporation with respect to the transactions contemplated by the Transaction Documents, including the approval of the issuance of all of the Conversion Shares in excess of 19.99% of the issued and outstanding Common Stock on the execution date of the Securities Purchase Agreement.

"Subsidiary" means any direct or indirect subsidiary of the Corporation formed or acquired before or after the date of the Securities Purchase Agreement.

"Successor Entity" shall have the meaning set forth in Section 7(d).

"Trading Day" means a day on which the principal Trading Market is open for business.

"Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, an OTC market place or the OTCMarkets (or any successors to any of the foregoing).

"Transaction Documents" means the Securities Purchase Agreement, the Registration Rights Agreement, this Certificate of Designation and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

"Transfer Agent" means Continental Stock Transfer & Trust Company, the current transfer agent for the Common Stock, and any successor transfer agent of the Corporation.

Section 2. Designation, Amount and Par Value. The series of preferred stock of the Corporation shall be designated as the Series B-2 Convertible Preferred Stock (the "Preferred Stock") and the number of shares so designated shall be up to 525 (which shall not be subject to increase without the written consent of the holders (each, a "Holder" and collectively, the "Holders") of a majority of the then outstanding shares of Preferred Stock). Each share of Preferred Stock shall have a par value of $0.0001 per share and a stated value equal to $10,500.00 (the "Stated Value").

Section 3. Dividends.

Subject to the limitations set forth in Section 7(c), Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the Delaware General Corporation Law, the Preferred Stock shall have no voting rights. However, as long as any shares of Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of Preferred Stock, (a) (i) alter or change adversely the powers, preferences or rights given to the Preferred Stock, (ii) alter or amend this Certificate of Designation, subject to the restriction on amending the Beneficial Ownership Limitation set forth in Section 6(e), or (iii)

amend or repeal any provision of, or add any provision to, the certificate of incorporation or bylaws of the Corporation, or file any certificate of amendment or certificate of designations of preferences, limitations and relative rights of any series of preferred stock, if such action would adversely alter or change the powers, preferences or rights of the Preferred Stock in a manner materially different than the effect of such actions on the Common Stock (regardless, in the case of clause (i), (ii) or (iii), of whether any of the foregoing actions shall be by means of amendment to the certificate of incorporation of the Corporation or by merger, consolidation or otherwise), (b) issue further shares of Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of Preferred Stock or (c) enter into any agreement with respect to any of the foregoing.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a "Liquidation"), after the satisfaction in full of the debts of the Corporation and the payment of any liquidation preference owed to the holders of shares of capital stock of the Corporation ranking senior to the Preferred Stock upon liquidation, the Holders of the Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis without regard to any limitation in Section 6 on the conversion of this Preferred Stock) in the net assets of the Corporation. The Corporation shall mail written notice of any such Liquidation to each Holder.

Section 6. Conversion.

j) Conversions at Option of Holder. The Preferred Stock shall only be convertible on or following the first Trading Day after the Corporation obtains Stockholder Approval. On or following the first Trading Day after the Corporation obtains Stockholder Approval, the Preferred Stock shall be convertible at the option of the Holder thereof, into that number of shares of Common Stock (subject to the limitations set forth in Section 6(e)) determined by dividing the Stated Value of such share of Preferred Stock by the Conversion Price. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as Annex A (a "Notice of Conversion"). Each Notice of Conversion shall specify the number of shares of Preferred Stock to be converted, the number of shares of Preferred Stock owned prior to the conversion at issue, the number of shares of Preferred Stock owned subsequent to the conversion at issue and the date on which such conversion is to be effected, which date may not be prior to the date the applicable Holder delivers by electronic mail (with receipt confirmed) or by facsimile such Notice of Conversion to the Corporation (such date, the "Conversion Date"). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion to the Corporation is deemed delivered hereunder. The calculations and entries set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. Provided the Transfer Agent is participating in the Depository Trust Company ("DTC") Fast Automated Securities Transfer program (and subject to Section 6(d)(i)), the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "DWAC Delivery"). To effect conversions of shares of Preferred Stock, a Holder shall not be required to surrender any

certificates representing the shares of Preferred Stock to the Corporation unless all of the shares of Preferred Stock represented thereby are so converted (a "Full Conversion"), in which case such Holder shall deliver to the Corporation any such certificates representing such shares of Preferred Stock promptly following the Conversion Date at issue. In the event of a Full Conversion, if the converting shares of Preferred Stock are then held in certificated form, the Corporation shall not be obligated to issue certificates evidencing the applicable Conversion Shares unless either (i) the certificates evidencing such shares of Preferred Stock are delivered to the Corporation or the Transfer Agent or (ii) the Holder notifies the Corporation or the Transfer Agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. Shares of Preferred Stock converted into Common Stock in accordance with the terms hereof shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B-2 Convertible Preferred Stock.

k) Conversion Price. The conversion price for the Preferred Stock shall equal $10.50, subject to adjustment herein (the "Conversion Price").

l) Conversion and Issuance Limitations. Notwithstanding any other terms set forth herein, until the Corporation has obtained Stockholder Approval, (i) the Preferred Stock shall not be convertible and (ii) the Corporation may not issue any Conversion Shares.

C.

m) Mechanics of Conversion

ix. Delivery of Book-Entry Statement Upon Conversion. Not later than three (3) Trading Days after each Conversion Date (the "Share Delivery Date"), the Corporation shall (A) deliver, or cause to be delivered, to the converting Holder a book-entry statement evidencing the number of Conversion Shares being acquired upon the conversion of shares of Preferred Stock (or, subject to Section 6(a), a stock certificate representing such Conversion Shares upon request of the Holder), which, on or after the earlier of (i) the Effective Date or (ii) the twelve-month anniversary of the Original Issuance Date, shall be free of restrictive legends and trading restrictions (other than those which may then be required by the Securities Purchase Agreement or applicable law) or (B) in the case of an election for DWAC Delivery (which shall be available if, and only if, on the applicable Conversion Date neither restrictive legends nor trading restrictions are then required by the Securities Purchase Agreement or applicable law), electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such book-entry statement (or stock certificate, if applicable) is not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Notice of Conversion by written notice to the Corporation at any time on or before its electronic receipt of such book-entry statement (or stock certificate, if applicable) for Conversion Shares, in which event the Corporation shall promptly return to the Holder any original Preferred Stock certificate delivered to the Corporation and the Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder

through the DWAC system, representing the shares of Preferred Stock unsuccessfully tendered for conversion to the Corporation.

x. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Preferred Stock and payment of dividends on the Preferred Stock, each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holder (and the other holders of the Preferred Stock), not less than such aggregate number of shares of the Common Stock as shall (subject to the terms and conditions set forth in the Securities Purchase Agreement) be issuable (taking into account the adjustments and restrictions of Section 7) upon the conversion of the then outstanding shares of Preferred Stock and payment of dividends hereunder. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable and, if the Registration Statement is then effective under the Securities Act, shall be registered for public resale in accordance with such Registration Statement (subject to such Holder's compliance with its obligations under the Registration Rights Agreement).

xi. Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

xii. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of this Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Corporation shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion.

n) Beneficial Ownership Limitation. The Corporation shall not effect any conversion of the Preferred Stock, and a Holder shall not have the right to convert any portion of the Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion

of the remaining, unconverted Stated Value of Preferred Stock beneficially owned by such Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Preferred Stock) beneficially owned by such Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 6(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 6(e) applies, the determination of whether the Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates) and of how many shares of Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates) and how many shares of the Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to the Corporation each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the restrictions set forth in this paragraph and the Corporation shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Corporation's most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by the Corporation or (iii) a more recent written notice by the Corporation or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Corporation shall within two Trading Days confirm orally and in writing to such Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Corporation, including the Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall initially be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of Preferred Stock held by the applicable Holder. Notwithstanding the foregoing, by written notice to the Corporation, which will not be effective until the sixty-first (61st) day after such notice is delivered to the Corporation, the Holder may reset the Beneficial Ownership Limitation percentage to a higher or lower percentage; provided that such notice shall not be required in the event of a Fundamental Transaction (as defined below). Upon such a change by a Holder to the Beneficial Ownership Limitation, the Beneficial Ownership Limitation may not be further amended by such Holder without first providing the minimum 61-day notice required by this Section 6(e) (except in the event of a Fundamental Transaction). The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 6(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of Preferred Stock. The determination of whether the conversion of shares of Preferred Stock into Common Stock is permitted under this Section 6(e) shall be made by the record holder of such shares of Preferred Stock in such record holder's

sole discretion, and the submission of a Notice of Conversion shall be conclusively deemed to constitute such record holder's determination that the conversion of the shares of Preferred Stock identified in such Notice of Conversion is permitted under this Section 6(e).

Section 7. Certain Adjustments.

k) Stock Dividends and Stock Splits. If the Corporation, at any time while this Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, this Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

l) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

m) Pro Rata Distributions. During such time as this Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement,

scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of this Preferred Stock (without regard to any limitations on conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

n) Fundamental Transaction. If, at any time while this Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent conversion of this Preferred Stock, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6 on the conversion of this Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6 on the conversion of this Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the

amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents in accordance with the provisions of this Section 7(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the holder of this Preferred Stock, deliver to the Holder in exchange for this Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Preferred Stock which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Preferred Stock (without regard to any limitations on the conversion of this Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the conversion price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the "Corporation" shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

o) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder, including, without limitation, any Notice of Conversion, shall be in writing and delivered personally or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 11099 N. Torrey Pines Road #100, La Jolla, CA 92037 Attention: John Dobak, or such other address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by email, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the email address, facsimile number or address of such Holder appearing on the books of the Corporation, or if no such email address, facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder, as set forth in the Securities Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via email to the email address set forth in this Section, (ii) the date of transmission, if such notice or communication is delivered via facsimile to the facsimile number set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (iii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile to the facsimile number set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iv) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (v) upon actual receipt by the party to whom such notice is required to be given.

b) Book-Entry; Certificates. The Preferred Stock will be issued in book-entry form; provided that, if a Holder requests that such Holder's shares of Preferred Stock be issued in certificated form, the Corporation will instead issue a stock certificate to such Holder representing such Holder's shares of Preferred Stock. To the extent that any shares of Preferred Stock are issued in book-entry form, references herein to "certificates" shall instead refer to the book-entry notation relating to such shares.

c) Lost or Mutilated Preferred Stock Certificate. If a Holder's Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in Court of Chancery of the State of Delaware. Each party hereto hereby irrevocably submits to the exclusive

jurisdiction of the Court of Chancery of the State of Delaware for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such Delaware Chancery Courts, or such Delaware Chancery Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

e) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

f) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

g) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

h) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

i) Status of Converted or Redeemed Preferred Stock. Shares of Preferred Stock may only be issued pursuant to the Securities Purchase Agreement. If any shares of Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B-2 Convertible Preferred Stock.

j) Redemption. The Preferred Stock is not redeemable.

Section 9. Fractional Shares. Preferred Stock may be issued in fractions of a share that shall entitle the holder, in proportion to such holder's fractional shares, to receive dividends, participate in distributions and to have the benefit of all other rights of holders of Preferred Stock.

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RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be and they hereby are authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations of Series B-2 Convertible Preferred Stock in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate of Designation this 2nd day of March, 2020.

/s/ John Dobak
Name: John Dobak
Title: President

/s/ Kevin Sun
Name: Kevin Sun
Title: Secretary

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF PREFERRED STOCK)

The undersigned hereby elects to convert the number of shares of Series B-2 Convertible Preferred Stock indicated below into shares of common stock, par value $0.0001 per share (the "Common Stock"), of DermTech, Inc., a Delaware corporation (the "Corporation"), according to the conditions hereof, as of the date written below. If shares of Common Stock are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates and opinions as may be required by the Corporation in accordance with the Securities Purchase Agreement. No fee will be charged to the Holders for any conversion, except for any such transfer taxes.

Conversion calculations:

Date to Effect Conversion: _____

Number of shares of Preferred Stock owned prior to Conversion: _____

Number of shares of Preferred Stock to be Converted: _____

Stated Value of shares of Preferred Stock to be Converted: _____

Number of shares of Common Stock to be Issued: _____

Applicable Conversion Price: _____

Number of shares of Preferred Stock subsequent to Conversion: _____

Address for Delivery: _____
or
DWAC Instructions:
Broker no: _____
Account no: _____

[HOLDER]

By: _____
Name:
Title:

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Exhibit 3.2

BYLAWS OF
DERMTECH, INC.

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ARTICLE I

STOCKHOLDERS

1.1 Place of Meetings. All meetings of stockholders shall be held at such place as may be designated from time to time by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President or, if not so designated, at the principal office of the corporation.

1.2 Annual Meeting. The annual meeting of stockholders for the election of directors to succeed those whose terms expire and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President. The corporation may postpone, reschedule or cancel any previously scheduled annual meeting of stockholders.

1.3 Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by only the Board of Directors, the Chairman of the Board or the Chief Executive Officer, and may not be called by any other person or persons. The corporation may postpone, reschedule or cancel any previously scheduled special meeting of stockholders. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

1.4 Notice of Meetings. Except as otherwise provided by law, the Certificate of Incorporation or these By-laws, notice of each meeting of stockholders, whether annual or special, shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. Without limiting the manner by which notice otherwise may be given to stockholders, any notice shall be effective if given by a form of electronic transmission consented to (in a manner consistent with the General Corporation Law of the State of Delaware) by the stockholder to whom the notice is given. The notices of all meetings shall state the place, date and time of the meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. If notice is given by mail, such notice shall be deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder’s address as it appears on the records of the corporation. If notice is given by electronic transmission, such notice shall be deemed given at the time specified in Section 232 of the General Corporation Law of the State of Delaware.

1.5 Voting List. The Secretary shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least 10 days prior to the meeting: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be

inspected by any stockholder who is present. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to inspect the list of stockholders required by this Section 1.5 or to vote in person or by proxy at any meeting of stockholders.

1.6 Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these By-laws, the holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum for the transaction of business; provided, however, that where a separate vote by a class or classes or series of capital stock is required by law or the Certificate of Incorporation, the holders of a majority in voting power of the shares of such class or classes or series of the capital stock of the corporation issued and outstanding and entitled to vote on such matter, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum entitled to take action with respect to the vote on such matter. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

1.7 Adjournments. Any meeting of stockholders may be adjourned from time to time to any other time and to any other place at which a meeting of stockholders may be held under these By-laws by the chairman of the meeting or by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum. It shall not be necessary to notify any stockholder of any adjournment of less than 30 days if the time and place of the adjourned meeting, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

1.8 Voting and Proxies. Each stockholder shall have one vote for each share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided by law or the Certificate of Incorporation. Each stockholder of record entitled to vote at a meeting of stockholders may vote in person (including by means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting) or may authorize another person or persons to vote for such stockholder by a proxy executed or transmitted in a manner permitted by the General Corporation Law of the State of Delaware by the stockholder or such stockholder’s authorized agent and delivered (including by electronic transmission) to the Secretary of the corporation. No such proxy shall be voted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period.

1.9 Action at Meeting. When a quorum is present at any meeting, any matter other than the election of directors to be voted upon by the stockholders at such meeting shall be decided by the vote of the holders of shares of stock having a majority in voting power of the votes cast by the holders of all of the shares of stock present or represented at the meeting and voting affirmatively or negatively on such matter (or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each such class or series, the holders of a majority in voting power of the shares of stock of that class or series present or represented at the meeting and voting affirmatively or negatively on such matter), except when a different vote is required by law, the Certificate of Incorporation or these By-laws. When a quorum is present at any meeting, any election by stockholders of directors shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election.

1.10 Nomination of Directors.

(a) Except for (1) any directors entitled to be elected by the holders of preferred stock, (2) any directors elected in accordance with Section 2.9 hereof by the Board of Directors to fill a vacancy or newly-created directorship or (3) as otherwise required by applicable law or stock exchange regulation, at any meeting of stockholders, only persons who are nominated in accordance with the procedures in this Section 1.10 shall be eligible for election as directors. Nomination for election to the Board of Directors at a meeting of stockholders may be made (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who (x) timely complies with the notice procedures in Section 1.10(b), (y) is a stockholder of record on the date of the giving of such notice and on the record date for the determination of stockholders entitled to vote at such meeting and (z) is entitled to vote at such meeting.

(b) To be timely, a stockholder's notice must be received in writing by the Secretary at the principal executive offices of the corporation as follows: (1) in the case of an election of directors at an annual meeting of stockholders, not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (x) in the case of the annual meeting of stockholders of the corporation to be held in 2018 or (y) in the event that the date of the annual meeting in any other year is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received not earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs; or (2) in the case of an election of directors at a special meeting of stockholders, provided that the Board of Directors, the Chairman of the Board or the Chief Executive Officer has determined, in accordance with Section 1.3, that directors shall be elected at such special meeting and provided further that the nomination made by the stockholder is for one of the director positions that the Board of Directors, the Chairman of the Board or the Chief Executive Officer, as the case may be, has determined will be filled at such special meeting, not earlier than the 120th day prior to such special meeting and not later than the close of business on the later of (x) the 90th day prior to such special meeting and (y) the tenth day following the day on which notice of the date of such special meeting was mailed or public disclosure of the date of such special meeting was made, whichever first occurs. In no event shall the adjournment or postponement of a meeting (or the public disclosure thereof) commence a new time period (or extend any time period) for the giving of a stockholder's notice.

The stockholder's notice to the Secretary shall set forth: (A) as to each proposed nominee (1) such person's name, age, business address and, if known, residence address, (2) such person's principal occupation or employment, (3) the class and series and number of shares of stock of the corporation that are, directly or indirectly, owned, beneficially or of record, by such person, (4) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among (x) the stockholder, the beneficial owner, if any, on whose behalf the nomination is being made and the respective affiliates and associates of, or others acting in concert with, such stockholder and such beneficial owner, on the one hand, and (y) each proposed nominee, and his or her respective affiliates and associates, or others acting in concert with such nominee(s), on the other hand, including all information that would be required to be disclosed pursuant to Item 404 of Regulation S-K if the stockholder making the nomination and any beneficial owner on whose behalf the nomination is made or any affiliate or associate thereof or person acting in concert therewith were the "registrant" for purposes of such Item and the proposed nominee were a director or executive officer of such registrant, and (5) any other information concerning such person that must be disclosed as to nominees in proxy solicitations pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and (B) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is being made (1) the name and address of such stockholder, as they appear on the corporation's books, and of such beneficial owner, (2) the class and series and number of shares of stock of the corporation that are, directly or indirectly, owned, beneficially or of record, by such stockholder and such beneficial owner, (3) a description of any agreement, arrangement or understanding between or among such stockholder and/or such beneficial owner and each proposed nominee and any other person or persons (including their names) pursuant to which the nomination(s) are being made or who may participate in the solicitation of proxies in favor of electing such nominee(s), (4) a description of any agreement, arrangement or understanding (including any derivative or short positions, swaps, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into by, or on behalf of, such stockholder or such beneficial owner, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner with respect to shares of stock of the corporation, (5) any other information relating to such stockholder and such beneficial owner that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the election of directors in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder, (6) a representation that such stockholder intends to appear in person or by proxy at the meeting to nominate the person(s) named in its notice, and (7) a representation whether such stockholder and/or such beneficial owner intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the corporation's outstanding capital stock reasonably believed by such stockholder or such beneficial owner to be sufficient to elect the nominee (and such representation shall be included in any such proxy statement and form of proxy) and/or (y) otherwise to solicit proxies from stockholders in support of such nomination (and such representation shall be included in any such solicitation materials). Not later than 10 days after the record date for the meeting, the information required by Items (A)(1)(5) and (B)(1)(5) of the prior sentence shall be

supplemented by the stockholder giving the notice to provide updated information as of the record date. In addition, to be effective, the stockholder's notice must be accompanied by the written consent of the proposed nominee to serve as a director if elected. The corporation may require any proposed nominee to furnish such other information as the corporation may reasonably require to determine the eligibility of such proposed nominee to serve as a director of the corporation or whether such nominee would be independent under applicable Securities and Exchange Commission and stock exchange rules and the corporation's publicly disclosed corporate governance guidelines. A stockholder shall not have complied with this Section 1.10(b) if the stockholder (or beneficial owner, if any, on whose behalf the nomination is made) solicits or does not solicit, as the case may be, proxies or votes in support of such stockholder's nominee in contravention of the representations with respect thereto required by this Section 1.10.

(c) The chairman of any meeting shall have the power and duty to determine whether a nomination was made in accordance with the provisions of this Section 1.10 (including whether the stockholder or beneficial owner, if any, on whose behalf the nomination is made solicited (or is part of a group which solicited) or did not so solicit, as the case may be, proxies in support of such stockholder's nominee in compliance with the representations with respect thereto required by this Section 1.10), and if the chairman should determine that a nomination was not made in accordance with the provisions of this Section 1.10, the chairman shall so declare to the meeting and such nomination shall not be brought before the meeting.

(d) Except as otherwise required by law, nothing in this Section 1.10 shall obligate the corporation or the Board of Directors to include in any proxy statement or other stockholder communication distributed on behalf of the corporation or the Board of Directors information with respect to any nominee for director submitted by a stockholder.

(e) Notwithstanding the foregoing provisions of this Section 1.10, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the meeting to present a nomination, such nomination shall not be brought before the meeting, notwithstanding that proxies in respect of such nominee may have been received by the corporation. For purposes of this Section 1.10, to be considered a "qualified representative of the stockholder", a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, at the meeting of stockholders.

(f) For purposes of this Section 1.10, "public disclosure" shall include disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

1.11 Notice of Business at Annual Meetings.

(a) At any annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (1) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (2) otherwise properly brought before the meeting by or at the direction of the Board of Directors, or (3) properly brought before the meeting by a stockholder. For business to be properly brought before an annual meeting by a stockholder, (i) if such business relates to the nomination of a person for election as a director of the corporation, the procedures in Section 1.10 must be complied with and (ii) if such business relates to any other matter, the business must constitute a proper matter under Delaware law for stockholder action and the stockholder must (x) have given timely notice thereof in writing to the Secretary in accordance with the procedures in Section 1.11(b), (y) be a stockholder of record on the date of the giving of such notice and on the record date for the determination of stockholders entitled to vote at such annual meeting and (z) be entitled to vote at such annual meeting.

(b) To be timely, a stockholder's notice must be received in writing by the Secretary at the principal executive offices of the corporation not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (1) in the case of the annual meeting of stockholders of the corporation to be held in 2018 or (2) in the event that the date of the annual meeting in any other year is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received not earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (x) the 90th day prior to such annual meeting and (y) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. In no event shall the adjournment or postponement of an annual meeting (or the public disclosure thereof) commence a new time period (or extend any time period) for the giving of a stockholder's notice.

The stockholder's notice to the Secretary shall set forth: (A) as to each matter the stockholder proposes to bring before the annual meeting (1) a brief description of the business desired to be brought before the annual meeting, (2) the text of the proposal (including the exact text of any resolutions proposed for consideration and, in the event that such business includes a proposal to amend the By-laws, the exact text of the proposed amendment), and (3) the reasons for conducting such business at the annual meeting, and (B) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is being made (1) the name and address of such stockholder, as they appear on the corporation's books, and of such beneficial owner, (2) the class and series and number of shares of stock of the corporation that are, directly or indirectly, owned, beneficially or of record, by such stockholder and such beneficial owner, (3) a description of any material interest of such stockholder or such beneficial owner and the respective affiliates and associates of, or others acting in concert with, such stockholder or such beneficial owner in such business, (4) a description of any agreement, arrangement or understanding between or among such stockholder and/or such beneficial owner and any other person or persons (including their names) in connection with the proposal of such business or who may participate in the solicitation of proxies in favor of such proposal, (5) a description of any agreement, arrangement or understanding (including any derivative or short positions, swaps, profit interests, options,

warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into by, or on behalf of, such stockholder or such beneficial owner, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner with respect to shares of stock of the corporation, (6) any other information relating to such stockholder and such beneficial owner that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the business proposed pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder, (7) a representation that such stockholder intends to appear in person or by proxy at the annual meeting to bring such business before the meeting, and (8) a representation whether such stockholder and/or such beneficial owner intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the corporation's outstanding capital stock required to approve or adopt the proposal (and such representation shall be included in any such proxy statement and form of proxy) and/or (y) otherwise to solicit proxies or votes from stockholders in support of such proposal (and such representation shall be included in any such solicitation materials). Not later than 10 days after the record date for the meeting, the information required by Items (A)(3) and (B)(1)-(6) of the prior sentence shall be supplemented by the stockholder giving the notice to provide updated information as of the record date. Notwithstanding anything in these By-laws to the contrary, no business shall be conducted at any annual meeting of stockholders except in accordance with the procedures in this Section 1.11; provided that any stockholder proposal that complies with Rule 14a-8 of the proxy rules (or any successor provision) promulgated under the Exchange Act and is to be included in the corporation's proxy statement for an annual meeting of stockholders shall be deemed to comply with the notice requirements of this Section 1.11. A stockholder shall not have complied with this Section 1.11(b) if the stockholder (or beneficial owner, if any, on whose behalf the proposal is made) solicits or does not solicit, as the case may be, proxies in support of such stockholder's proposal in contravention of the representations with respect thereto required by this Section 1.11.

(c) The chairman of any annual meeting shall have the power and duty to determine whether business was properly brought before the annual meeting in accordance with the provisions of this Section 1.11 (including whether the stockholder or beneficial owner, if any, on whose behalf the proposal is made solicited (or is part of a group which solicited) or did not so solicit, as the case may be, proxies or votes in support of such stockholder's proposal in compliance with the representation with respect thereto required by this Section 1.11), and if the chairman should determine that business was not properly brought before the annual meeting in accordance with the provisions of this Section 1.11, the chairman shall so declare to the meeting and such business shall not be brought before the annual meeting.

(d) Except as otherwise required by law, nothing in this Section 1.11 shall obligate the corporation or the Board of Directors to include in any proxy statement or other stockholder communication distributed on behalf of the corporation or the Board of Directors information with respect to any proposal submitted by a stockholder.

(e) Notwithstanding the foregoing provisions of this Section 1.11, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual meeting to present business, such business shall not be considered,

notwithstanding that proxies in respect of such business may have been received by the corporation.

(f) For purposes of this Section 1.11, the terms “qualified representative of the stockholder” and “public disclosure” shall have the same meaning as in Section 1.10.

1.12 Conduct of Meetings.

(a) Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or in the Chairman’s absence by the Vice Chairman of the Board, if any, or in the Vice Chairman’s absence by the Chief Executive Officer, or in the Chief Executive Officer’s absence by the President, or in the President’s absence by a Vice President, or in the absence of all of the foregoing persons by a chairman designated by the Board of Directors. The Secretary shall act as secretary of the meeting, but in the Secretary’s absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

(b) The Board of Directors may adopt by resolution such rules, regulations and procedures for the conduct of any meeting of stockholders of the corporation as it shall deem appropriate including, without limitation, such guidelines and procedures as it may deem appropriate regarding the participation by means of remote communication of stockholders and proxyholders not physically present at a meeting. Except to the extent inconsistent with such rules, regulations and procedures as adopted by the Board of Directors, the chairman of any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting and prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as shall be determined; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(c) The chairman of the meeting shall announce at the meeting when the polls for each matter to be voted upon at the meeting will be opened and closed. After the polls close, no ballots, proxies or votes or any revocations or changes thereto may be accepted.

(d) In advance of any meeting of stockholders, the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President shall appoint one or more inspectors of election to act at the meeting and make a written report thereof. One or more other persons may be designated as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is present, ready and willing to act at a meeting of stockholders, the chairman of the meeting shall appoint one or more inspectors to act at the meeting. Unless otherwise required by law, inspectors may be officers, employees or agents of the corporation. Each

inspector, before entering upon the discharge of such inspector's duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability. The inspector shall have the duties prescribed by law and shall take charge of the polls and, when the vote is completed, shall make a certificate of the result of the vote taken and of such other facts as may be required by law. Every vote taken by ballots shall be counted by a duly appointed inspector or duly appointed inspectors.

1.13 No Action by Consent in Lieu of a Meeting. Stockholders of the corporation may not take any action by written consent in lieu of a meeting.

ARTICLE II

DIRECTORS

2.1 General Powers. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law or the Certificate of Incorporation.

2.2 Number, Election and Qualification. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the corporation shall be established by the Board of Directors. Election of directors need not be by written ballot. Directors need not be stockholders of the corporation.

2.3 Chairman of the Board; Vice Chairman of the Board. The Board of Directors may appoint from its members a Chairman of the Board and a Vice Chairman of the Board, neither of whom need be an employee or officer of the corporation. If the Board of Directors appoints a Chairman of the Board, such Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors and, if the Chairman of the Board is also designated as the corporation's Chief Executive Officer, shall have the powers and duties of the Chief Executive Officer prescribed in Section 3.7 of these By-laws. If the Board of Directors appoints a Vice Chairman of the Board, such Vice Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors. Unless otherwise provided by the Board of Directors, the Chairman of the Board or, in the Chairman's absence, the Vice Chairman of the Board, if any, shall preside at all meetings of the Board of Directors.

2.4 Classes of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the Board of Directors shall be and is divided into three classes: Class I, Class II and Class III. Each class shall consist, as nearly as may be possible, of one-third of the total number of directors constituting the entire Board of Directors. The allocation of directors among classes shall be determined by resolution of the Board of Directors.

2.5 Terms of Office. Subject to the rights of holders of any series of Preferred Stock to elect directors, each director shall serve for a term ending on the date of the third annual meeting of stockholders following the annual meeting of stockholders at which such director was elected; provided that each director initially assigned to Class I shall serve for a term expiring at the corporation's first annual meeting of stockholders held after the effectiveness of these Amended and Restated By-laws; each director initially assigned to Class II shall serve for a term expiring at

the corporation's second annual meeting of stockholders held after the effectiveness of these Amended and Restated By-laws; and each director initially assigned to Class III shall serve for a term expiring at the corporation's third annual meeting of stockholders held after the effectiveness of these Amended and Restated By-laws; provided further, that the term of each director shall continue until the election and qualification of his or her successor and be subject to his or her earlier death, resignation or removal.

2.6 Quorum. The greater of a majority of the directors at any time in office and one-third of the number of directors established by the Board of Directors pursuant to Section 2.2 of these By-laws shall constitute a quorum of the Board of Directors. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

2.7 Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors, unless a greater number is required by law or by the Certificate of Incorporation.

2.8 Removal. Subject to the rights of holders of any series of Preferred Stock, directors of the corporation may be removed only for cause and only by the affirmative vote of the holders of at least 75% of the votes which all the stockholders would be entitled to cast in any annual election of directors or class of directors.

2.9 Vacancies. Subject to the rights of holders of any series of Preferred Stock, any vacancy or newly-created directorship on the Board of Directors, however occurring, shall be filled only by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director and shall not be filled by the stockholders. A director elected to fill a vacancy shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of a successor or until such director's earlier death, resignation or removal.

2.10 Resignation. Any director may resign by delivering a resignation in writing or by electronic transmission to the corporation at its principal office or to the Chairman of the Board, the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event.

2.11 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall be given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.

2.12 Special Meetings. Special meetings of the Board of Directors may be held at any time and place designated by the Chairman of the Board, the Chief Executive Officer, the

President, two or more directors, or by one director in the event that there is only a single director in office.

2.13 Notice of Special Meetings. Notice of the date, place and time of any special meeting of directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (a) in person or by telephone at least 24 hours in advance of the meeting, (b) by sending written notice by reputable overnight courier, electronic transmission, or delivering written notice by hand, to such director's last known business, home or electronic transmission address at least 48 hours in advance of the meeting, or (c) by sending written notice by first-class mail to such director's last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.14 Meetings by Conference Communications Equipment. Directors may participate in meetings of the Board of Directors or any committee thereof by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.15 Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

2.16 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation as the Board of Directors shall determine with such lawfully delegable powers and duties as the Board of Directors thereby confers. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these By-laws for the Board of Directors. Except as otherwise provided in the Certificate of Incorporation, these By-laws, or the resolution of the Board of Directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the

committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

2.17 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary entities in any other capacity and receiving compensation for such service.

ARTICLE III

OFFICERS

3.1 Titles. The officers of the corporation shall consist of a Chief Executive Officer, a President, a Secretary, a Treasurer and such other officers with such other titles as the Board of Directors shall determine, including one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The Board of Directors may appoint such other officers as it may deem appropriate.

3.2 Election. The Chief Executive Officer, President, Treasurer and Secretary shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board of Directors at such meeting or at any other meeting.

3.3 Qualification. No officer need be a stockholder. Any two or more offices may be held by the same person.

3.4 Tenure. Except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws, each officer shall hold office until such officer's successor is elected and qualified, unless a different term is specified in the resolution electing or appointing such officer, or until such officer's earlier death, resignation or removal.

3.5 Resignation and Removal. Any officer may resign by delivering a resignation in writing or by electronic transmission to the corporation at its principal office or to the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event. Any officer may be removed at any time, with or without cause, by vote of a majority of the directors then in office. Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following such officer's resignation or removal, or any right to damages on account of such removal, whether such officer's compensation be by the month or by the year or otherwise, unless such compensation is expressly provided for in a duly authorized written agreement with the corporation.

3.6 Vacancies. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Treasurer and Secretary. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is elected and qualified, or until such officer's earlier death, resignation or removal.

3.7 President; Chief Executive Officer. Unless the Board of Directors has designated another person as the corporation's Chief Executive Officer, the President shall be the Chief Executive Officer of the corporation. The Chief Executive Officer shall have general charge and supervision of the business of the corporation subject to the direction of the Board of Directors, and shall perform all duties and have all powers that are commonly incident to the office of the chief executive or that are delegated to such officer by the Board of Directors. The President shall perform such other duties and shall have such other powers as the Board of Directors or the Chief Executive Officer (if the President is not the Chief Executive Officer) may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer or the President (if the President is not the Chief Executive Officer), the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the Chief Executive Officer and when so performing such duties shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

3.8 Vice Presidents. Each Vice President shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.9 Secretary and Assistant Secretaries. The Secretary shall perform such duties and shall have such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In addition, the Secretary shall perform such duties and have such powers as are incident to the office of the secretary, including without limitation the duty and power to give notices of all meetings of stockholders and special meetings of the Board of Directors, to attend all meetings of stockholders and the Board of Directors and keep a record of the proceedings, to maintain a stock ledger and prepare lists of stockholders and their addresses as required, to be custodian of corporate records and the corporate seal and to affix and attest to the same on documents.

Any Assistant Secretary shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Secretary may from time to time prescribe. In the event of the absence, inability or refusal to act of the Secretary, the Assistant Secretary (or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Secretary.

In the absence of the Secretary or any Assistant Secretary at any meeting of stockholders or directors, the chairman of the meeting shall designate a temporary secretary to keep a record of the meeting.

3.10 Treasurer and Assistant Treasurers. The Treasurer shall perform such duties and shall have such powers as may from time to time be assigned by the Board of Directors or the Chief Executive Officer. In addition, the Treasurer shall perform such duties and have such powers as are incident to the office of treasurer, including without limitation the duty and power to keep and be responsible for all funds and securities of the corporation, to deposit funds of the corporation in depositories selected in accordance with these By-laws, to disburse such funds as ordered by the Board of Directors, to make proper accounts of such funds, and to render as required by the Board of Directors statements of all such transactions and of the financial condition of the corporation.

The Assistant Treasurers shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Treasurer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Treasurer, the Assistant Treasurer (or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Treasurer.

3.11 Salaries. Officers of the corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

3.12 Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

ARTICLE IV

CAPITAL STOCK

4.1 Issuance of Stock. Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the corporation or the whole or any part of any shares of the authorized capital stock of the corporation held in the corporation's treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such lawful consideration and on such terms as the Board of Directors may determine.

4.2 Stock Certificates; Uncertificated Shares. The shares of the corporation shall be represented by certificates, provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of the corporation's stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Every holder of stock of the corporation represented by certificates shall be entitled to have a certificate, in such form as may be prescribed by law and by the Board of Directors, representing the number of shares held by such holder registered in certificate form. Each such certificate shall be signed in a manner that complies with Section 158 of the General Corporation Law of the State of Delaware.

Each certificate for shares of stock which are subject to any restriction on transfer pursuant to the Certificate of Incorporation, these By-laws, applicable securities laws or any agreement among any number of stockholders or among such holders and the corporation shall have conspicuously noted on the face or back of the certificate either the full text of the restriction or a statement of the existence of such restriction.

If the corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of each certificate representing shares of such class or series of stock, provided that in lieu of the foregoing requirements there may be set forth on the face or back of each certificate representing shares of such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests a copy of the full text of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Within a reasonable time after the issuance or transfer of uncertificated shares, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to Sections 151, 202(a) or 218(a) of the General Corporation Law of the State of Delaware or, with respect to Section 151 of the General Corporation Law of the State of Delaware, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

4.3 Transfers. Shares of stock of the corporation shall be transferable in the manner prescribed by law and in these By-laws. Transfers of shares of stock of the corporation shall be made only on the books of the corporation or by transfer agents designated to transfer shares of stock of the corporation. Subject to applicable law, shares of stock represented by certificates shall be transferred only on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Uncertificated shares may be transferred by delivery of a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these By-laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to such stock, regardless of any transfer, pledge or other disposition of such stock until the shares have been transferred on the books of the corporation in accordance with the requirements of these By-laws.

4.4 Lost, Stolen or Destroyed Certificates. The corporation may issue a new certificate of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the corporation may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity and posting of such bond as the corporation may require for the protection of the corporation or any transfer agent or registrar.

4.5 Record Date. The Board of Directors may fix in advance a date as a record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders, or entitled to receive payment of any dividend or other distribution or allotment of any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date shall not precede the date on which the resolution fixing the record date is adopted, and such record date shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action to which such record date relates.

If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. If no record date is fixed, the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

4.6 Regulations. The issue, transfer, conversion and registration of shares of stock of the corporation shall be governed by such other regulations as the Board of Directors may establish.

ARTICLE V

GENERAL PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the corporation shall begin on the first day of January of each year and end on the last day of December in each year.

5.2 Corporate Seal. The corporate seal shall be in such form as shall be approved by the Board of Directors.

5.3 Waiver of Notice. Whenever notice is required to be given by law, by the Certificate of Incorporation or by these By-laws, a written waiver signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before, at or after the time of the event for which notice is to be given, shall be deemed equivalent to notice required to be given to such person. Neither the business nor the purpose of any meeting need be specified in any such waiver. Attendance of a person at a meeting shall constitute a waiver of

notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

5.4 Voting of Securities. Except as the Board of Directors may otherwise designate, the Chief Executive Officer, the President or the Treasurer may waive notice of, vote, or appoint any person or persons to vote, on behalf of the corporation at, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for this corporation (with or without power of substitution) at, any meeting of stockholders or securityholders of any other entity, the securities of which may be held by this corporation.

5.5 Evidence of Authority. A certificate by the Secretary, or an Assistant Secretary, or a temporary Secretary, as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation shall as to all persons who rely on the certificate in good faith be conclusive evidence of such action.

5.6 Certificate of Incorporation. All references in these By-laws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the corporation, as amended and/or restated and in effect from time to time.

5.7 Severability. Any determination that any provision of these By-laws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-laws.

5.8 Pronouns. All pronouns used in these By-laws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

ARTICLE VI

AMENDMENTS

These By-laws may be altered, amended or repealed, in whole or in part, or new By-laws may be adopted by the Board of Directors or by the stockholders as provided in the Certificate of Incorporation.

Exhibit 4.7

DESCRIPTION OF DERMTECH, INC.'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of December 31, 2019, DermTech, Inc., had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended, or the Exchange Act: common stock, $0.0001 par value per share, or Common Stock. Our Common Stock is listed on the Nasdaq Capital Market under the symbol "DMTK."

Unless the context otherwise requires, all references to "DermTech," "we" or "us" in this Exhibit 4.7 refer to DermTech, Inc.

DESCRIPTION OF OUR CAPITAL STOCK

General

The summaries below describe the current rights of our stockholders under (i) our Amended and Restated Certificate of Incorporation, or the Amended and Restated Certificate of Incorporation, filed with the Delaware Secretary of State on August 29, 2019, as amended by a Certificate of Amendment, or the Certificate of Amendment, filed with the Delaware Secretary of State on August 29, 2019, and by the Certificate of Designation of Preferences, Rights and Limitations for our Series A Convertible Preferred Stock, or the Series A Certificate of Designation, filed with the Delaware Secretary of State on August 29, 2019, the Certificate of Designation of Preferences, Rights and Limitations for our Series B-1 Convertible Preferred Stock, or the Series B-1 Certificate of Designation, filed with the Delaware Secretary of State on March 2, 2020, the Certificate of Designation of Preferences, Rights and Limitations for our Series B-2 Convertible Preferred Stock, or the Series B-2 Certificate of Designation, filed with the Delaware Secretary of State on March 2, 2020, and (ii) our bylaws; however, these summaries may not contain all of the information that is important to you. These summaries are not intended to be a complete discussion of the rights of our stockholders and are qualified in their entirety by reference to the Delaware General Corporation Law, or the DGCL, and the various documents of ours that are referred to in the summaries, as well as reference to the Amended and Restated Certificate of Incorporation, as amended, a copy of which is filed as an exhibit to this report.

The share numbers and prices discussed below reflect the effects of our August 29, 2019 one-for-two reverse stock split and, as applicable, the ratio of the exchange of shares of our Common Stock for shares of DermTech Operations, Inc. common stock in connection with our August 29, 2019 business combination, or the Business Combination.

Authorized Capital Stock

The Amended and Restated Certificate of Incorporation, as amended by the Certificate of Amendment, the Series A Certificate of Designation, the Series B-1 Certificate of Designation and the Series B-2 Certificate of Designation, referred to collectively as the Amended and Restated Certificate of Incorporation, authorizes the issuance of up to 50,000,000 shares of Common Stock and 5,000,000 shares of preferred stock, $0.0001 par value per share, of which 1,250 shares are designated Series A Convertible Preferred Stock, 3,200 shares are designated Series B-1 Convertible Preferred Stock and 525 shares are designated Series B-2 Convertible Preferred Stock.

Dividends

The Amended and Restated Certificate of Incorporation provides that holders of the Common Stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any of our preferred stock then outstanding. Our board of directors is authorized, without action by our stockholders, to designate and issue shares of preferred stock in one or more series and to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions, including with respect to the rights of holders of preferred stock to receive dividends. Pursuant to the Series A Certificate of Designation, Series B-1 Certificate of Designation and the Series B-2 Certificate of Designation, holders of the Series A Convertible Preferred Stock, Series B-1 Convertible

Preferred Stock and Series B-2 Convertible Preferred Stock, respectively, are entitled to receive dividends on an as-converted basis equal to and in the same form as dividends actually paid on shares of our Common Stock when, as and if such dividends are paid on such Common Stock.

Liquidation Preference

The Amended and Restated Certificate of Incorporation provides that in the event of dissolution, liquidation or winding up, holders of our Common Stock are entitled to share ratably in our net assets legally available after the payment of all of our debts and other liabilities, subject to the preferential rights of any of our preferred stock then outstanding. Our board of directors is authorized, without action by the our stockholders, to designate and issue shares of preferred stock in one or more series and to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions, including with respect to the liquidation preference of holders of preferred stock. The Series A Certificate of Designation, Series B-1 Certificate of Designation and Series B-2 Certificate of Designation provide that holders of the Series A Convertible Preferred Stock, Series B-1 Convertible Preferred Stock and Series B-2 Convertible Preferred Stock, respectively, shall participate *pari passu* with the holders of our Common Stock on an as-converted basis.

Conversion Rights and Protective Provisions

Holders of our Common Stock have no conversion rights under the Amended and Restated Certificate of Incorporation or our bylaws. Our board of directors is authorized, without action by our stockholders, to designate and issue shares of preferred stock in one or more series and to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions, including with respect to conversion rights. The Series A Certificate of Designation provides that each share of Series A Convertible Preferred Stock is convertible into 500 shares of Common Stock, subject to adjustment as provided in the Series A Certificate of Designation, provided that in no event shall any shares of Series A Convertible Preferred Stock be convertible if such conversion would result in the Holder of such shares beneficially owning more than 9.99% of our then-outstanding shares of Common Stock.

Each share of Series B-1 Convertible Preferred Stock is convertible into 1,000 shares of Common Stock, subject to adjustment as provided in the Series B-1 Certificate of Designation. Each share of Series B-1 Convertible Preferred Stock will automatically convert into Common Stock on the first trading day after the approval of our March 4, 2020 private placement, or the 2020 PIPE, by the stockholders of DermTech, or the Stockholder Approval, which we have agreed to seek at a stockholder meeting to be held on or before June 30, 2020. We will not undertake any conversion of the Series B-1 Convertible Preferred Stock, and no stockholder will have the right to convert any portion of its Series B-1 Convertible Preferred Stock, until after we obtain the Stockholder Approval.

Each share of Series B-2 Convertible Preferred Stock is convertible into 1,000 shares of Common Stock, subject to adjustment as provided in the Series B-2 Certificate of Designation. Each share of Series B-2 Convertible Preferred Stock will be convertible into Common Stock at the option of the holder, provided that conversion will be prohibited (i) until the first trading day after the Stockholder Approval and (ii) following the Stockholder Approval, if, as a result of any such conversion, the holder would beneficially own in excess of 9.99% of our then-outstanding shares of Common Stock.

Number and Classification of Directors

The Amended and Restated Certificate of Incorporation and our bylaws provide that our board of directors is divided into three classes serving three-year terms, with one class being elected each year. The number of directors, which may be fixed from time to time by our board of directors, was fixed at eight upon the completion of the Business Combination and classified into three separate classes.

Preemption Rights

There are no preemption rights applicable to the issuance of new shares under the Amended and Restated Certificate of Incorporation.

Removal of Directors; Vacancies on the Board of Directors

The Amended and Restated Certificate of Incorporation and our bylaws provide that, subject to the rights of the holders of any series of our preferred stock, directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, subject to the rights of the holders of any series of our preferred stock, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office, even if less than a quorum, or by a sole remaining director, and shall not be filled by a vote of the stockholders.

Voting Stock

The Amended and Restated Certificate of Incorporation provides that the holders of our Common Stock are entitled to one vote for each share of Common Stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Notwithstanding the foregoing, pursuant to the terms of our 2020 PIPE, the holders of shares of Common Stock acquired in such private placement and any transferees of such shares may not vote such shares on any proposal for the Stockholder Approval (as defined above).

Our board of directors is authorized, without action by our stockholders, to designate and issue shares of our preferred stock in one or more series and to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions, including with respect to the voting rights of the holders of our preferred stock. The Series A Certificate of Designation provides that holders of the Series A Convertible Preferred Stock shall have no voting rights, except with respect to certain protective provisions set forth in the Series A Certificate of Designation relating to the powers, preferences and rights of the Series A Convertible Preferred Stock. The Series B-1 Certificate of Designation provides that holders of the Series B-1 Convertible Preferred Stock shall have no voting rights, except with respect to certain protective provisions set forth in the Series B-1 Certificate of Designation relating to the powers, preferences and rights of the Series B-1 Convertible Preferred Stock. The Series B-2 Certificate of Designation provides that holders of the Series B-2 Convertible Preferred Stock shall have no voting rights, except with respect to certain protective provisions set forth in the Series B-2 Certificate of Designation relating to the powers, preferences and rights of the Series B-2 Convertible Preferred Stock.

Redemption

The Amended and Restated Certificate of Incorporation and our bylaws do not contain any provisions granting redemption rights to any holder of our Common Stock. Our board of directors is authorized, without action by our stockholders, to designate and issue shares of preferred stock in one or more series and to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions, including with respect to the redemption rights of the holders of preferred stock. The Series A Certificate of Designation, Series B-1 Certificate of Designation and Series B-2 Certificate of Designation provide, respectively that the Series A Convertible Preferred Stock, Series B-1 Convertible Preferred Stock and Series B-2 Convertible Preferred Stock are not redeemable.

Anti-Takeover Provisions

Certain provisions of Delaware law, our Amended and Restated Certificate of Incorporation and/or our bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of DermTech, as described below.

Section 203 of the DGCL

We are subject to Section 203 of the DGCL, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, a business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 of the DGCL defines a "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 of the DGCL defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Amended and Restated Certificate of Incorporation and Bylaws

Our Amended and Restated Certificate of Incorporation and bylaws include a number of provisions that may discourage or delay attempts to take over DermTech or effect change to our management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. We believe the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure DermTech, outweigh the disadvantages of discouraging takeover proposals.

Amendment of Certificate of Incorporation or Bylaws

As required by the DGCL, any amendment of the Amended and Restated Certificate of Incorporation must first be approved by a majority of our board of directors and, if required by law or the Amended and Restated Certificate of Incorporation, thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote on the amendment as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability, exclusive jurisdiction of Delaware Courts and the amendment of our bylaws and Amended and Restated Certificate of

Incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote on these amendments as a class.

Our bylaws may be amended by the affirmative vote of a majority of our directors then in office, subject to any limitations set forth in our bylaws, and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that our stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

No Cumulative Voting Rights

Our Amended and Restated Certificate of Incorporation does not provide for cumulative voting rights in the election of our directors. Accordingly, stockholders holding a majority of our outstanding voting power will be able to elect all of our directors.

Board Composition; Removal of Directors; Number of Directors; Vacancies

The Amended and Restated Certificate of Incorporation and our bylaws provide that our board of directors is divided into three classes serving three-year terms, with one class being elected each year. Our bylaws provide that, subject to the rights of holders of any series of preferred stock, directors may be removed only for cause and only by the affirmative vote of the holders of at least 75% of the votes which all stockholders would be entitled to cast in any annual election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office, even if less than a quorum. These provisions make it difficult for stockholders to remove directors and may prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.

Stockholder Actions; Special Meetings of Stockholders

Our Amended and Restated Certificate of Incorporation provide that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. Additionally, our bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements

Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our bylaws. These provisions may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of DermTech.

Issuance of Undesignated Preferred Stock

The existence of authorized but unissued shares of preferred stock enables our board of directors to render more difficult or to discourage an attempt to obtain control of DermTech by means of a merger, tender offer, proxy contest or otherwise.

Rule 144

Pursuant to Rule 144, a person who has beneficially owned restricted shares for at least six months would be entitled to sell such shares provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least three months before the sale and have filed all required reports under Section 13 or 15(d) of the Exchange Act during the 12 months (or such shorter period as we were required to file reports) preceding the sale.

Persons who have beneficially owned our restricted shares for at least six months but who are our affiliates at the time of, or at any time during the three months preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of shares that does not exceed the greater of:

- 1% of the total number of shares then outstanding; or
- the average weekly reported trading volume of the shares during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales by our affiliates under Rule 144 are also limited by manner of sale provisions and notice requirements and to the availability of current public information about us.

Restrictions on the Use of Rule 144 by Shell Companies or Former Shell Companies

Rule 144 is not available for the resale of securities initially issued by shell companies (other than business combination related shell companies) or issuers that have been at any time previously a shell company. However, Rule 144 also includes an important exception to this prohibition if the following conditions are met:

- the issuer of the securities that was formerly a shell company that has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act;
- the issuer of the securities has filed all Exchange Act reports and material required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Form 8-K reports; and
- at least one year has elapsed from the time that the issuer filed current Form 10 type information with the SEC reflecting its status as an entity that is not a shell company.

The filing of our Current Report on Form 8-K on September 5, 2019 was intended to satisfy the filing of the “Form 10 Information” and commence the one year holding period of Rule 144(i).

Lock-Up Agreements

In connection with our 2020 PIPE, our directors and officers entered into a Lock-Up Agreement, or the Lock-Up Agreement, pursuant to which our directors and officers agreed that they would not sell, offer to sell, pledge, or transfer any Company securities, subject to certain limited exceptions, until May 29, 2020.

Additionally, certain of our securityholders are bound by a Letter Agreement, as amended, among DermTech, DermTech’s previous sponsor Centripetal, LLC and certain former directors and officers of DermTech, or the Letter Agreement, pursuant to which (i) 50% of the shares acquired prior to our initial public offering and currently held by those securityholders were locked up until the earlier of one year after the date of the Business Combination or the date on which the closing price of our common stock has equaled or exceeded $8.00 per share (which dollar amount reflects the reverse stock split) for any 20 trading days within any 30-trading day period

commencing after the Business Combination and (ii) the other 50% of such shares are locked up until one year after the date of the Business Combination. On December 12, 2019, as a result of our stock price during the preceding 30 trading days and in accordance with the Letter Agreement, we released 190,678 shares from the lock-up contained in the Letter Agreement. 190,678 shares remain subject to the lock-up contained in the Letter Agreement until one year after the date of the Business Combination.

Cowen Investments II LLC, a securityholder, is bound by an Amended and Restated Unit Subscription Agreement between DermTech and Cowen Investments LLC, pursuant to which 68,125 shares acquired in connection with our initial public offering are locked up, with (i) 50% of such shares locked up until the earlier of one year after the date of the Business Combination or the date on which the closing price of our common stock has equaled or exceeded $25.00 per share (which dollar amount reflects the reverse stock split) for any 20 trading days within any 30-trading day period commencing after the Business Combination and (ii) the other 50% of such shares locked up until one year after the date of the Business Combination.

Limitations on Liability and Indemnification Matters

Our Amended and Restated Certificate of Incorporation provides that we shall indemnify our directors and officers, provided that they have acted in good faith and in a manner which they reasonably believed to be in or not opposed to our best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. This indemnity shall not extend to a suit by or in the right of DermTech in which any director or officer has been adjudged to be liable to us, unless and to the extent that the court making such adjudication determines that the director or officer in question is fairly and reasonably entitled to indemnity for expenses that the court deems proper. We shall not indemnify any director or officer in respect of a proceeding initiated by such director or officer unless such proceeding was authorized by our board of directors.

Any indemnification of our directors or officers by us is conditioned on the director or officer in question notifying us in writing as soon as possible of any proceeding for which indemnity will or could be sought, unless we have confirmed to the director or officer that we are aware of such proceeding. We may elect to participate in or assume the defense of any such proceeding at our own expense. We shall not be required to indemnify our directors or officers for any amounts paid in settlement without our written consent, which consent will not be unreasonably withheld. Any indemnified director or officer will have the right to advancement of expenses upon our receipt of written notice therefor and an undertaking by or on behalf of any such director or officer to repay all amounts advanced if it shall ultimately be judicially determined that such person is not entitled to be indemnified.

We shall not indemnify any director or officer to the extent such director or officer is reimbursed from the proceeds of insurance. In the event we make any indemnification payments and the director or officer in question is subsequently reimbursed from the proceeds of insurance, such director or officer shall promptly refund us to the extent of such insurance reimbursement.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. The transfer agent’s address is 1 State Street 30th Floor, New York, NY 10004-1561 and its telephone number is (212) 509-4000.

Exhibit 10.40

NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

DERMTECH, INC.

The Board of Directors of DermTech, Inc. (the "Company") has approved the following Non-Employee Director Compensation Policy (this "Policy"), which establishes compensation to be paid to non-employee directors of the Company, effective as of January 30, 2020 (the "Effective Time"), to provide an inducement to obtain and retain the services of qualified persons to serve as members of the Company's Board of Directors.

Applicable Persons

This Policy shall apply to each director of the Company who is not an employee of the Company or any Affiliate (each, a "Non-Employee Director"). "Affiliate" means an entity which is a direct or indirect parent or subsidiary of the Company, as determined pursuant to Section 424 of the Internal Revenue Code of 1986, as amended.

Restricted Stock Unit Grants

1. *Annual Restricted Stock Unit Grants to Incumbent Non-Employee Directors*

Annually, on the date of the first meeting of the Board of Directors held following the Company's annual meeting of stockholders in each year commencing in 2020 (each such meeting, the "Annual Stockholder Meeting"), each incumbent Non-Employee Director shall be granted 8,000 restricted stock units ("RSUs") (each RSU representing the contingent right to receive one share of the Company's common stock) (such grants, the "Annual Grants").

2. *Initial Restricted Stock Unit Grant for Newly Appointed or Elected Directors*

Each new Non-Employee Director after the Effective Time shall be granted 8,000 RSUs at the first regularly scheduled meeting of the Board of Directors on or after his or her initial appointment or election to the Board of Directors; provided, however, that if such first regularly scheduled meeting of the Board of Directors held following appointment or election is not the first meeting of the Board of Directors held following the Annual Stockholder Meeting, the number of RSUs shall be pro-rated based on the nearest number of whole months remaining from such meeting of the Board of Directors until the next Annual Stockholder Meeting (assuming for such purpose that the next Annual Stockholder Meeting will be held on the first anniversary of the most recent Annual Stockholder Meeting) (such grants, the "New Director Grants").

Non-Employee Director Compensation Policy

3. *Terms for All Restricted Stock Unit Grants*

Unless otherwise specified by the Board of Directors or the Compensation Committee at the time of grant, (i) Annual Grants shall vest in a single installment on the first anniversary of the date of grant, subject to the continued service of the Non-Employee Director, (ii) New Director Grants shall vest in a single installment on (A) the first anniversary of the date of grant, if granted at the first meeting of the Board of Directors held following the Annual Stockholder Meeting, or (B) the first anniversary of the most recent Annual Stockholder Meeting, if not granted at the first meeting of the Board of Directors held following the Annual Stockholder Meeting, subject in each case to the continued service of the Non-Employee Director, and (iii) Annual Grants and New Director Grants shall contain such other terms and conditions as set forth in the form of Restricted Stock Unit Agreement approved by the Board of Directors or the Compensation Committee.

All RSU amounts set forth herein shall be subject to automatic adjustment in the event of any stock split or other recapitalization affecting the Company's common stock.

Annual Fees

Each Non-Employee Director serving on the Board of Directors and the Audit Committee, Compensation Committee and/or Nominating and Corporate Governance Committee, as applicable, shall be entitled to annual fees in the following amounts (the "Annual Fees"):

Board of Directors or Committee of Board of Directors	Annual Retainer Amount for Member	Annual Retainer Amount for Chair
Board Member	$ 38,500	$ 69,960
Audit Committee	$ 6,380	$ 16,500
Compensation Committee	$ 4,950	$ 11,000
Nominating and Corporate Governance Committee	$ 3,300	$ 7,150

Except as otherwise set forth in this Policy, all Annual Fees shall be paid for the period from January 1 through December 31 of each year, commencing in 2020. Such Annual Fees shall be paid in cash.

Payments payable to Non-Employee Directors shall be paid quarterly in arrears promptly following the end of each fiscal quarter, provided that (i) the amount of such payment shall be prorated for any portion of such quarter that such director was not serving in the applicable capacity as a member or chair of the Board of Directors or committee thereof and (ii) no fee shall be payable in respect of any period prior to the date such director was elected or appointed to serve in the applicable capacity as a member or chair of the Board of Directors or committee thereof.

Non-Employee Director Compensation Policy

Expenses

Upon presentation of documentation of such expenses reasonably satisfactory to the Company, each Non-Employee Director shall be reimbursed for his or her reasonable out-of-pocket business expenses incurred in connection with attending meetings of the Board of Directors and committees thereof or in connection with other business related to the Board of Directors.

Amendments

The Compensation Committee shall periodically review this Policy to assess whether any amendments in the type and amount of compensation provided herein should be made and shall make recommendations to the Board of Directors for its approval of any amendments to this Policy.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
DermTech, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-234745 and 333-235967) on Form S-8, and to the inclusion in the registration statement (No. 333-235780) on Form S-1, of DermTech, Inc. of our report dated March 10, 2020, with respect to the consolidated balance sheets of DermTech, Inc. as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the years in the two-year period ended December 31, 2019, and the related notes, which report appears in the December 31, 2019 annual report on Form 10-K of DermTech, Inc. Our report also refers to the adoption of Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended.

/s/ KPMG LLP

San Diego, California
March 10, 2020

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Dobak, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2019 of DermTech, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 10, 2020

By: /s/ John Dobak
John Dobak
Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kevin Sun, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2019 of DermTech, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 10, 2020

By: /s/ Kevin Sun
Kevin Sun
Chief Financial Officer
(principal financial and accounting officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K for the year ended December 31, 2019 of DermTech, Inc. (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his capacity as the specified officer of the Company, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 10, 2020

By: /s/ John Dobak
John Dobak
Chief Executive Officer
(principal executive officer)

Date: March 10, 2020

By: /s/ Kevin Sun
Kevin Sun
Chief Financial Officer
(principal financial and accounting officer)

This certification accompanies the Annual Report on Form 10-K to which it relates and shall not be deemed filed with the Securities and Exchange Commission or incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.