Invitae Corp
Form S-3
August 10, 2018
Table of Contents

As filed with the Securities and Exchange Commission on August 9, 2018

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Invitae Corporation

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**27-1701898**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**

1400 16th Street

San Francisco, CA 94103

(415) 374-7782

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)

Sean E. George, Ph.D.

President and Chief Executive Officer

Invitae Corporation

1400 16th Street

San Francisco, CA 94103

(415) 374-7782

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

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Invitae Corporation

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Palo Alto, CA 94304-1115

Telephone: (650) 233-4500

Approximate date of commencement of proposed sale to the public:

From time to time after this registration statement becomes effective, as determined by market conditions and other factors.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)	Smaller reporting company
	Emerging growth company

If an emerging growth company, indicate by checkmark 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 7(a)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	**Proposed**	**Amount of Registration Fee**

	Maximum Aggregate Offering Price (1)(2)(3)	
Debt Securities (4)		
Common Stock, $0.0001 par value per share (4)		
Preferred Stock, $0.0001 par value per share (4)		
Depositary Shares (5)		
Warrants		
Rights		
Total	$250,000,000	$31,125

(1) Such indeterminate number or amount of debt securities, common stock, preferred stock and depositary shares, warrants to purchase any combination of the foregoing securities, and rights, as may from time to time be issued at indeterminate prices, with an aggregate initial offering price not to exceed $250,000,000. Securities registered hereunder may be sold separately or together in any combination with other securities registered hereunder.

(2) Estimated solely for the purpose of calculating the registration fee for a primary offering pursuant to Rule 457(o) under the Securities Act of 1933 (the Securities Act). Pursuant to Rule 457(o) under the Securities Act and General Instruction II.D. of Form S-3, the table does not specify by each class information as to the amount to be registered or proposed maximum offering price per unit.

(3) In accordance with Rule 415(a)(6) under the Securities Act, the securities registered pursuant to this Registration Statement include unsold debt securities, common stock, preferred stock, and depositary shares, and warrants to purchase any combination of the foregoing securities, and rights, in the amount of $91,900,011 (the Unsold Securities) that previously were registered pursuant to the Registrant s Registration Statement on Form S-3 initially declared effective by the Securities and Exchange Commission on June 20, 2016 (File No. 333-211368). Pursuant to Rule 415(a)(6), the registration fees with respect to such Unsold Securities will continue to be applied to such Unsold Securities.

(4) Subject to footnote (1), there are also being registered hereunder an indeterminate principal amount or number of shares of debt securities, preferred stock or common stock that may be issued upon conversion of, or in exchange for, debt securities or preferred stock registered hereunder or upon exercise of warrants registered hereunder, as the case may be.

(5) Subject to footnote (1), there are being registered hereunder an indeterminate number of depositary shares to be evidenced by depositary receipts issued pursuant to a deposit agreement. If the Registrant elects to offer to the public fractional interests in shares of preferred stock registered hereunder, depositary receipts will be distributed to those persons purchasing such fractional interests, and the shares of preferred stock will be issued to the depositary under the deposit agreement.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

EXPLANATORY NOTE

This registration statement contains:

- a base prospectus that covers the offering, issuance and sale by the registrant of up to $250,000,000 in the aggregate of the registrant s common stock, preferred stock, debt securities, depositary shares, warrants or rights from time to time in one or more offerings; and

- a sales agreement prospectus supplement covering the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of $75,000,000 of the registrant s common stock that may be issued and sold from time to time under a sales agreement with Cowen and Company, LLC.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The sales agreement prospectus supplement immediately follows the base prospectus. The $75,000,000 of common stock that may be offered, issued and sold by the registrant under the sales agreement prospectus supplement is included in the $250,000,000 of securities that may be offered, issued and sold by the registrant under the base prospectus.

Upon termination of the sales agreement with Cowen and Company, LLC, any portion of the $75,000,000 covered by the sales agreement prospectus supplement that is not sold pursuant to the sales agreement will be available for sale in one or more other offerings pursuant to the base prospectus and an accompanying prospectus supplement, and if no shares are sold under the sales agreement, the full $75,000,000 of securities may be sold in one or more other offerings pursuant to the base prospectus and an accompanying prospectus supplement.

Table of Contents

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated August 9, 2018

PROSPECTUS

$250,000,000

Invitae Corporation

Debt Securities

Common Stock

Preferred Stock

Depositary Shares

Warrants

Rights

We may, from time to time, offer and sell the securities identified above in one or more offerings. The aggregate initial offering price of all securities sold under this prospectus will not exceed $250,000,000.

This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the manner in which these securities will be offered and may also add to, update or change information contained in this prospectus. You should read carefully this prospectus and the accompanying prospectus supplement before you invest.

We may offer and sell the securities separately or together in any combination for sale directly to investors or through underwriters, dealers or agents. If any underwriters, dealers or agents are involved in the sale of these securities we will set forth their names and describe their compensation in the applicable prospectus supplement.

Our common stock is listed on The New York Stock Exchange under the symbol NVTA. On August 8, 2018, the last reported sale price of our common stock on The New York Stock Exchange was $9.44 per share.

Investing in our securities involves risks. See the section entitled Risk Factors included in or incorporated by reference into the accompanying prospectus supplement and in the documents we incorporate by reference in this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2018

Table of Contents

TABLE OF CONTENTS

	Page
About This Prospectus	1
Risk Factors	1
Invitae Corporation	1
Forward-Looking Statements	2
Use of Proceeds	2
Ratio of Earnings to Fixed Charges	3
Description of Debt Securities	4
Description of Capital Stock	10
Description of Depositary Shares	13
Description of Warrants	15
Description of Rights	16
Forms of Securities	17
Plan of Distribution	19
Legal Matters	21
Experts	21
Where You Can Find More Information	21

You should rely only on the information incorporated by reference or provided in this prospectus, any prospectus supplement, any applicable free writing prospectus and the registration statement. We have not authorized anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus, any prospectus supplement, any applicable free writing prospectus or the documents incorporated by reference, is accurate only as of the dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration, or continuous offering, process. Under this shelf registration process, we may, from time to time, offer and sell separately or together in any combination the securities described in this prospectus in one or more offerings up to a maximum aggregate offering price of $250,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering and the offered securities. Any prospectus supplement, or information incorporated by reference in this prospectus or any prospectus supplement that is of a more recent date, may also add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement. The registration statement we filed with the SEC includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC, any prospectus supplement, and any applicable free writing prospectus, together with additional information described under the headings Where You Can Find More Information, and Incorporation by Reference, before making your investment decision.

Unless the context otherwise requires, references in this prospectus to Invitae, the company, we, us and our refer Invitae Corporation and its consolidated subsidiaries.

RISK FACTORS

Investing in our securities involves risk. The prospectus supplement relating to a particular offering will contain or incorporate by reference a discussion of risks applicable to an investment in the securities offered. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading Risk Factors included in or incorporated by reference into the applicable prospectus supplement together with all of the other information contained in the prospectus supplement or appearing in or incorporated by reference into this prospectus, including the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

INVITAE CORPORATION

Our mission is to bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people. Our goal is to aggregate most of the world s genetic tests into a single service with higher quality, faster turnaround time and lower pricing than many single gene tests today. By aggregating large numbers of currently available genetic tests into a single service, we believe we can achieve great economies of scale that allow us to not only provide primary single gene or multi-gene tests but also to generate and store additional genetic information on behalf of the patient for future use. We refer to the service of managing genetic information over the course of disease or the lifetime of a patient as genome management. In addition, as more individuals gain access to their genetic information, we believe that sharing genetic information will provide an economic opportunity for patients and us to participate in advancing the understanding and treatment of disease.

We were incorporated in the state of Delaware on January 13, 2010, as Locus Development, Inc. and changed our name to Invitae Corporation in 2012. Our principal executive offices are located at 1400 16th Street, San Francisco, California 94103 and our telephone number is (415) 374-7782. Our website address is www.invitae.com. We do not incorporate the information on, or accessible through, our website into this prospectus, and you should not consider

any information on, or accessible through, our website as part of this prospectus.

Table of Contents

Invitae, and the Invitae logo are our trademarks. This prospectus and the documents incorporated by reference into this prospectus may also contain trademarks and trade names that are the property of their respective owners. We do not intend our use or display of other companies trade names, trademarks or service marks to imply relationships with, or endorsements or sponsorship of us by, these other companies.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering of common stock (December 31, 2020), (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which 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 as of the prior June 30th, and (4) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

FORWARD-LOOKING STATEMENTS

When used in this prospectus, words such as believe, may, will, estimate, continue, anticipate, intend, ex similar expressions, are intended to identify forward-looking statements. These statements are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. We will discuss many of these risks and uncertainties in greater detail in any prospectus supplement under the heading Risk Factors. Additional cautionary statements or discussions of risks and uncertainties that could affect our results or the achievement of the expectations described in forward-looking statements may also be contained in the documents we incorporate by reference into this prospectus.

These forward-looking statements speak only as of the date of this prospectus. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC.

USE OF PROCEEDS

Unless we state otherwise in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by this prospectus for general corporate purposes. General corporate purposes may include additions to working capital, financing of capital expenditures, repayment or redemption of existing indebtedness, repurchases of stock and future acquisitions and strategic investment opportunities. Unless we state otherwise in the applicable prospectus supplement, pending the application of net proceeds, we expect to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

Table of Contents

RATIO OF EARNINGS TO FIXED CHARGES

The ratio of earnings to fixed charges for each of the periods indicated are set forth in the following table. Our earnings were insufficient to cover fixed charges for each of those periods. For the periods indicated, we had no outstanding shares of preferred stock with required dividend payments. Accordingly, we have not included ratios of earnings to combined fixed charges and preferred stock dividends because those ratios would be identical to the ratio of earnings to fixed charges.

	Year Ended December 31,					Six Months Ended
	2013	2014	2015	2016	2017	June 30, 2018
Ratio of earnings to fixed charges	(1)	(1)	(1)	(1)	(1)	(1)

(1) The ratio of earnings to fixed charges is computed by dividing loss before taxes plus fixed charges by fixed charges. Fixed charges consist of interest expense (including interest expense from capital leases), debt financing expense and the estimated portion of rental expense deemed by us to be representative of the interest factor of rental payments under operating leases. Earnings were insufficient to cover fixed charges by $24.8 million, $47.5 million, $89.8 million, $100.3 million, $123.4 million and $67.8 million for the years ended December 31, 2013, 2014, 2015, 2016 and 2017 and the six months ended June 30, 2018, respectively.

Table of Contents

DESCRIPTION OF DEBT SECURITIES

The following is a summary of the general terms of the debt securities. We will file a prospectus supplement that may contain additional terms when we issue debt securities. The terms presented here, together with the terms in a related prospectus supplement, together with any pricing supplement or term sheet, will be a description of the material terms of the debt securities.

We may issue, from time to time, debt securities, in one or more series. These debt securities that we may issue include senior debt securities, senior subordinated debt securities, subordinated debt securities, convertible debt securities and exchangeable debt securities. The debt securities we offer will be issued under an indenture between us and the trustee named in the indenture. The following is a summary of the material provisions of the form of indenture filed as an exhibit to the registration statement of which this prospectus is a part. All capitalized terms have the meanings specified in the indentures. For each series of debt securities, the applicable prospectus supplement for the series may change and supplement the summary below.

As used in this section only, we, us and our refer to Invitae Corporation excluding our subsidiaries, unless expressly stated or the context otherwise requires.

General Terms of the Indenture

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities for any series of debt securities up to the principal amount that we may authorize. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us. For each series of debt securities, any restrictive covenants for those debt securities will be described in the applicable prospectus supplement for those debt securities.

We may issue the debt securities issued under the indenture as discount securities, which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may, for United States federal income tax purposes, be treated as if they were issued with original issue discount, or OID, because of interest payment and other characteristics. Special United States federal income tax considerations applicable to debt securities issued with original issue discount will be described in more detail in any applicable prospectus supplement.

You should refer to the prospectus supplement relating to a particular series of debt securities for a description of the following terms of the debt securities offered by that prospectus supplement and by this prospectus:

- the title of those debt securities;
- any limit on the aggregate principal amount of that series of debt securities;
- the date or dates on which principal and premium, if any, of the debt securities of that series is payable;

the interest rate or rates (which may be fixed or variable) or the method or methods used to determine the rate or rates, and the date or dates from which interest, if any, on the debt securities of that series will accrue, and the dates when interest is payable and related record dates, and the maturity;

the right, if any, to extend the interest payment periods and the duration of the extensions;

if the amount of payments of principal or interest is to be determined by reference to an index or formula, or based on a coin or currency other than that in which the debt securities are stated to be payable, the manner in which these amounts are determined and the calculation agent, if any, with respect thereto;

Table of Contents

the place or places where and the manner in which principal of, premium, if any, and interest, if any, on the debt securities of that series will be payable and the place or places where those debt securities may be presented for transfer and, if applicable, conversion or exchange;

the period or periods within which, the price or prices at which, and other terms and conditions upon which those debt securities may be redeemed, in whole or in part, at our option or the option of a holder of those securities, if we or a holder is to have that option;

our obligation or right, if any, to redeem, repay or purchase those debt securities pursuant to any sinking fund or analogous provision or at the option of a holder of those securities, and the terms and conditions upon which the debt securities will be redeemed, repaid or purchased, in whole or in part, pursuant to that obligation;

the terms, if any, on which the debt securities of that series will be subordinate in right and priority of payment to our other debt;

the denominations in which those debt securities will be issuable;

if other than the entire principal amount of the debt securities when issued, the portion of the principal amount payable upon acceleration of maturity as a result of a default on our obligations;

whether any securities of that series are to be issued in whole or in part in the form of one or more global securities and the depositary for those global securities;

if the principal of or any premium or interest on the debt securities of that series is to be payable, or is to be payable at our election or the election of a holder of those securities, in securities or other property, the type and amount of those securities or other property, or the manner of determining that amount, and the period or periods within which, and the terms and conditions upon which, any such election may be made;

the events of default and covenants relating to the debt securities that are in addition to, modify or delete those described in this prospectus;

conversion or exchange provisions, if any, including conversion or exchange prices or rates and adjustments thereto;

whether and upon what terms the debt securities may be defeased, if different from the provisions set forth in the indenture;

the nature and terms of any security for any secured debt securities;

the terms applicable to any debt securities issued at a discount from their stated principal amount; and

any other specific terms of any debt securities.

The applicable prospectus supplement will present material United States federal income tax considerations for holders of any debt securities and the securities exchange or quotation system on which any debt securities are to be listed or quoted.

Conversion or Exchange Rights

Debt securities may be convertible into or exchangeable for shares of our equity securities or other securities. The terms and conditions of conversion or exchange will be stated in the applicable prospectus supplement. The terms will include, among others, the following:

the conversion or exchange price;

the conversion or exchange period;

provisions regarding our ability or the ability of any holder to convert or exchange the debt securities;

Table of Contents

events requiring adjustment to the conversion or exchange price; and

provisions affecting conversion or exchange in the event of our redemption of the debt securities.

Consolidation, Merger or Sale

We cannot consolidate with or merge with or into, or transfer or lease all or substantially all of our assets to, any person, unless we are the surviving corporation or the successor person is a corporation organized under the laws of the United States, any state of the United States or the District of Columbia and expressly assumes our obligations under the debt securities and the indenture. In addition, we cannot complete such a transaction unless immediately after completing the transaction, no event of default under the indenture, and no event that, after notice or lapse of time or both, would become an event of default under the indenture, has occurred and is continuing. When the successor person has assumed our obligations under the debt securities and the indenture, we will be discharged from all our obligations under the debt securities and the indenture except in limited circumstances.

This covenant would not apply to any recapitalization transaction, a change of control affecting us or a highly leveraged transaction, unless the transaction or change of control were structured to include a merger or consolidation or transfer or lease of all or substantially all of our assets.

Events of Default

The indenture provides that the following will be events of default with respect to any series of debt securities:

failure to pay interest for 30 days after the date payment is due and payable;

failure to pay principal or premium, if any, on any debt security when due, either at maturity, upon any redemption, by declaration or otherwise and, in the case of technical or administrative difficulties, only if such default persists for a period of more than three business days;

failure to make sinking fund payments when due and continuance of such default for a period of 30 days;

failure to perform other covenants for 60 days after notice that performance was required;

certain events in bankruptcy, insolvency or reorganization relating to us; or

any other event of default provided in the applicable officer s certificate, resolution of our board of directors or the supplemental indenture under which we issue a series of debt securities.

An event of default for a particular series of debt securities does not necessarily constitute an event of default for any other series of debt securities issued under the indenture. For each series of debt securities, any modifications to the above events of default will be described in the applicable prospectus supplement for those debt securities.

The indenture provides that if an event of default specified in the first, second, third, fourth or sixth bullets above occurs and is continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series may declare the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) to be due and payable immediately. If an event of default specified in the fifth bullet above occurs and is continuing, then the principal amount of all those debt securities (or, in the case of discount securities or indexed securities, that portion of the principal amount as may be specified in the terms of that series) will be due and payable immediately, without any declaration or other act on the part of the trustee or any holder. In certain cases, holders of a majority in principal amount of the outstanding debt securities of any series may, on behalf of holders of all those debt securities, rescind and annul a declaration of acceleration.

Table of Contents

The indenture imposes limitations on suits brought by holders of debt securities against us. Except for actions for payment of overdue principal or interest, no holder of debt securities of any series may institute any action against us under the indenture unless:

- the holder has previously given to the trustee written notice of default and continuance of such default;
- the holders of at least 25% in principal amount of the outstanding debt securities of the affected series have requested that the trustee institute the action;
- the requesting holders have offered the trustee indemnity for the reasonable expenses and liabilities that may be incurred by bringing the action;
- the trustee has not instituted the action within 60 days of the request and offer of indemnity; and
- the trustee has not received inconsistent direction by the holders of a majority in principal amount of the outstanding debt securities of the affected series.

We will be required to file annually with the trustee a certificate, signed by one of our officers, stating whether or not the officer knows of any default by us in the performance, observance or fulfillment of any condition or covenant of the indenture.

Discharge, Defeasance and Covenant Defeasance

We can discharge or decrease our obligations under the indenture as stated below.

We may discharge obligations to holders of any series of debt securities that have not already been delivered to the trustee for cancellation and that have either become due and payable or are by their terms to become due and payable, or are scheduled for redemption, within one year. We may effect a discharge by irrevocably depositing with the trustee cash or government obligations, as trust funds, in an amount certified to be enough to pay when due, whether at maturity, upon redemption or otherwise, the principal of, and any premium and interest on, the debt securities and any mandatory sinking fund payments.

Unless otherwise provided in the applicable prospectus supplement, we may also discharge any and all of our obligations to holders of any series of debt securities at any time, which we refer to as defeasance. We may also be released from the obligations imposed by any covenants of any outstanding series of debt securities and provisions of the indenture, and we may omit to comply with those covenants without creating an event of default under the trust declaration, which we refer to as covenant defeasance. We may effect defeasance and covenant defeasance only if, among other things:

- we irrevocably deposit with the trustee cash or government obligations denominated in the currency of the debt securities, as trust funds, in an amount certified to be enough to pay at maturity, or upon redemption,

the principal (including any mandatory sinking fund payments) of, and any premium and interest on, all outstanding debt securities of the series; and

we deliver to the trustee an opinion of counsel from a nationally recognized law firm to the effect that the holders of the series of debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the defeasance or covenant defeasance and that defeasance or covenant defeasance will not otherwise alter the holders U.S. federal income tax treatment of principal, and any premium and interest payments on, the series of debt securities.

In the case of a defeasance by us, the opinion we deliver must be based on a ruling of the Internal Revenue Service issued, or a change in U.S. federal income tax law occurring, after the date of the indenture, since such a result would not occur under the U.S. federal income tax laws in effect on that date.

Although we may discharge or decrease our obligations under the indenture as described in the two preceding paragraphs, we may not avoid, among other things, our duty to register the transfer or exchange of any series of debt securities, to replace any temporary, mutilated, destroyed, lost or stolen series of debt securities or to maintain an office or agency in respect of any series of debt securities.

Table of Contents

Modification of the Indenture

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of debt securities to, among other things:

- evidence the assumption by a successor entity of our obligations;
- add to our covenants for the benefit of the holders of debt securities, or to surrender any rights or power conferred upon us;
- add any additional events of default;
- add to, change or eliminate any of the provisions of the indenture in a manner that will become effective only when there is no outstanding debt security which is entitled to the benefit of the provision as to which the modification would apply;
- add guarantees with respect to or secure any debt securities;
- establish the forms or terms of debt securities of any series;
- evidence and provide for the acceptance of appointment by a successor trustee and add to or change any of the provisions of the indenture as is necessary for the administration of the trusts by more than one trustee;
- cure any ambiguity or correct any inconsistency or defect in the indenture;
- modify, eliminate or add to the provisions of the indenture as shall be necessary to effect the qualification of the indenture under the Trust Indenture Act of 1939 or under any similar federal statute later enacted, and to add to the indenture such other provisions as may be expressly required by the Trust Indenture Act; and
- make any other provisions with respect to matters or questions arising under the indenture that will not be inconsistent with any provision of the indenture as long as the new provisions do not adversely affect the interests of the holders of any outstanding debt securities of any series created prior to the modification.

The indenture also provides that we and the trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of debt securities of each series of debt securities affected by such supplemental indenture then outstanding, add any provisions to, or change in any manner, eliminate or modify in any way the provisions of, the indenture or any supplemental indenture or modify in any manner the rights of the holders of the debt securities. We and the trustee may not, however, without the consent of the holder of each outstanding debt security affected

thereby:

extend the final maturity of any debt security;

reduce the principal amount or premium, if any;

reduce the rate or extend the time of payment of interest;

reduce the amount of the principal of any debt security issued with an original issue discount that is payable upon acceleration;

change the currency in which the principal, and any premium or interest, is payable;

impair the right to institute suit for the enforcement of any payment on any debt security when due;

if applicable, adversely affect the right of a holder to convert or exchange a debt security; or

reduce the percentage of holders of debt securities of any series whose consent is required for any modification of the indenture or for waivers of compliance with or defaults under the indenture with respect to debt securities of that series.

Table of Contents

The indenture provides that the holders of not less than a majority in aggregate principal amount of the then outstanding debt securities of any series, by notice to the relevant trustee, may on behalf of the holders of the debt securities of that series waive any default and its consequences under the indenture except:

- a default in the payment of, any premium and any interest on, or principal of, any such debt security held by a non-consenting holder; or

- a default in respect of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each outstanding debt security of each series affected.

Concerning the Trustee

The indenture provides that there may be more than one trustee under the indenture, each for one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust under the indenture separate and apart from the trust administered by any other trustee under that indenture. Except as otherwise indicated in this prospectus or any prospectus supplement, any action permitted to be taken by a trustee may be taken by such trustee only on the one or more series of debt securities for which it is the trustee under the indenture. Any trustee under the indenture may resign or be removed from one or more series of debt securities. All payments of principal of, and any premium and interest on, and all registration, transfer, exchange, authentication and delivery of, the debt securities of a series will be effected by the trustee for that series at an office designated by the trustee in New York, New York.

The indenture provides that, except during the continuance of an event of default, the trustee will perform only such duties as are specifically set forth in the indenture. During the existence of an event of default, the trustee will exercise those rights and powers vested in it under the indenture and use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person s own affairs.

If the trustee becomes a creditor of ours, the indenture places limitations on the right of the trustee to obtain payment of claims or to realize on property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions. If it acquires any conflicting interest relating to any duties concerning the debt securities, however, it must eliminate the conflict or resign as trustee.

No Individual Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no past, present or future director, officer, stockholder or employee of ours, any of our affiliates, or any successor corporation, in their capacity as such, shall have any individual liability for any of our obligations, covenants or agreements under the debt securities or the indenture.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

This section describes the general terms and provisions of the shares of our common stock, $0.0001 par value per share, and preferred stock, $0.0001 par value per share. This description is only a summary. Our restated certificate of incorporation, the certificate of designation with respect to our Series A convertible preferred stock and our amended and restated bylaws have been filed as exhibits to our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. You should read our restated certificate of incorporation, the certificate of designation with respect to our Series A convertible preferred stock and our amended and restated bylaws for additional information before you buy any of our common stock, preferred stock or other securities. See Where You Can Find More Information.

Common Stock

We are authorized to issue 400,000,000 shares of common stock. As of June 30, 2018, there were 68,976,036 shares of common stock issued and outstanding. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our restated certificate of incorporation. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time. Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable.

Preferred Stock

We are authorized to issue 20,000,000 shares of preferred stock, of which 3,458,823 shares are designated as Series A convertible preferred stock, or the Series A Preferred Stock. As of June 30, 2018, 3,458,823 shares of Series A Preferred Stock were outstanding. The Series A Preferred Stock is a non-voting common stock equivalent and conversion of the Series A Preferred Stock is prohibited if the holder exceeds a specified threshold of voting security ownership. The Series A Preferred Stock is convertible into common stock on a one-for-one basis, subject to adjustment for events such as stock splits, combinations and the like. The Series A Preferred Stock has the right to receive dividends first or simultaneously with payment of dividends on common stock, in an amount equal to the product of (i) the dividend payable on each share of common stock and (ii) the number of shares of common stock issuable upon conversion of a share of Series A Preferred Stock. The Series A Preferred Stock has no voting rights except as required by law, as modified by our restated certificate of incorporation. In the event of any liquidation or dissolution of the company, the Series A Preferred Stock is entitled to receive $0.001 per share prior to the payment of any amount to any holders of our capital stock ranking junior to the Series A Preferred Stock and thereafter shall participate pari passu with the holders of our common stock (on an as-if-converted-to-common-stock basis).

We may issue additional preferred stock, in series, with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, without further action by our stockholders, including:

the distinctive designation of each series and the number of shares that will constitute the series;

the voting rights, if any, of shares of the series and the terms and conditions of the voting rights;

the dividend rate on the shares of the series, the dates on which dividends are payable, any restriction, limitation or condition upon the payment of dividends, whether dividends will be cumulative, and the dates from and after which dividends shall accumulate;

the prices at which, and the terms and conditions on which, the shares of the series may be redeemed, if the shares are redeemable;

Table of Contents

the terms and conditions of a sinking or purchase fund for the purchase or redemption of shares of the series, if such a fund is provided;

any preferential amount payable upon shares of the series in the event of the liquidation, dissolution or winding up of, or upon the distribution of any of our assets; and

the prices or rates of conversion or exchange at which, and the terms and conditions on which, the shares of the series may be converted or exchanged into other securities, if the shares are convertible or exchangeable.

The particular terms of any series of preferred stock, and the transfer agent and registrar for that series, will be described in a prospectus supplement. Any material United States federal income tax consequences and other special considerations with respect to any preferred stock offered under this prospectus will also be described in the applicable prospectus supplement.

The issuance of additional preferred stock could decrease the amount of earnings and assets available for distribution to holders of our common stock or adversely affect the rights and powers, including voting rights, of the holders of our common stock. The issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company, which could depress the market price of our common stock.

Registration Rights

As of June 30, 2018, the holders of approximately 15,408,903 shares of our common stock, including shares of our common stock issuable upon conversion of our Series A Preferred Stock, are entitled to contractual rights to require us to register those shares under the Securities Act of 1933, subject to certain exceptions. These rights are provided under the terms of our amended and restated registration rights agreement. We generally must pay all expenses relating to any such registration, other than underwriting discounts and selling commissions. The registration rights terminate automatically upon the earlier of the sale of the registrable securities (as such term is defined in the agreement), the date such registrable securities may be resold without volume or manner of sale limitations pursuant to Rule 144 under the Securities Act of 1933 or July 31, 2027.

Anti-Takeover Effects of Delaware Law and Our Restated Certificate of Incorporation and Bylaws

Certain provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging such proposals, including proposals that are priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could result in an improvement of their terms.

Certificate of Incorporation and Bylaws. Our restated certificate of incorporation and amended and restated bylaws include provisions that:

divide our board of directors into three classes, each serving staggered, three-year terms;

authorize the board of directors to issue, without further action by the stockholders, up to 20,000,000 shares of undesignated preferred stock, of which 16,541,177 shares remain undesignated as of the date of this prospectus;

require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;

specify that special meetings of our stockholders can be called only by the board of directors, the chairman of the board, or the chief executive officer;

Table of Contents

establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors;

provide that directors may be removed only for cause;

establish the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain derivative actions or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim against us arising pursuant to the General Corporation Law of the State of Delaware (the DGCL), or any action asserting a claim governed by the internal affairs doctrine;

require the affirmative vote of holders of at least 66 2/3 % of the total votes eligible to be cast in the election of directors to amend, alter, change or repeal our bylaws; and provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum.

Delaware anti-takeover statute. We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which 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 commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by 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 at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2 / 3 % of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder and an interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation s outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in a premium over the market price for the shares of common stock held by our stockholders. The provisions of DGCL, our restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to

accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent s address is 6201 5th Avenue, Brooklyn, New York 11219.

Table of Contents

DESCRIPTION OF DEPOSITARY SHARES

The following description of the depositary shares does not purport to be complete and is subject to and qualified in its entirety by the relevant deposit agreement and the depositary receipts with respect to the depositary shares relating to any particular series of preferred stock. You should read these documents as they, and not this description, will define your rights as a holder of depositary shares. Forms of these documents will be filed with the SEC in connection with the offering of depositary shares.

General

If we elect to offer fractional interests in shares of preferred stock, we will provide for the issuance by a depositary to the public of receipts for depositary shares. Each depositary share will represent fractional interests of preferred stock. We will deposit the shares of preferred stock underlying the depositary shares under a deposit agreement between us and a bank or trust company selected by us. The bank or trust company must have its principal office in the United States and a combined capital and surplus of at least $50 million. The depositary receipts will evidence the depositary shares issued under the deposit agreement.

The deposit agreement will contain terms applicable to the holders of depositary shares in addition to the terms stated in the depositary receipts. Each owner of depositary shares will be entitled to all the rights and preferences of the preferred stock underlying the depositary shares in proportion to the applicable fractional interest in the underlying shares of preferred stock. The depositary will issue the depositary receipts to individuals purchasing the fractional interests in shares of the related preferred stock according to the terms of the offering described in a prospectus supplement.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received for the preferred stock to the entitled record holders of depositary shares in proportion to the number of depositary shares that the holder owns on the relevant record date. The depositary will distribute only an amount that can be distributed without attributing to any holder of depositary shares a fraction of one cent. The depositary will add the undistributed balance to and treat it as part of the next sum received by the depositary for distribution to holders of depositary shares.

If there is a non-cash distribution, the depositary will distribute property received by it to the entitled record holders of depositary shares, in proportion, insofar as possible, to the number of depositary shares owned by the holders, unless the depositary determines, after consultation with us, that it is not feasible to make such distribution. If this occurs, the depositary may, with our approval, sell such property and distribute the net proceeds from the sale to the holders. The deposit agreement also will contain provisions relating to how any subscription or similar rights that we may offer to holders of the preferred stock will be available to the holders of the depositary shares.

Conversion, Exchange, Redemption and Liquidation

If any series of preferred stock underlying the depositary shares may be converted or exchanged, each record holder of depositary receipts will have the right or obligation to convert or exchange the depositary shares represented by the depositary receipts.

The terms on which the depositary shares relating to the preferred stock of any series may be redeemed, and any amounts distributable upon our liquidation, dissolution or winding up, will be described in the relevant prospectus supplement.

13

Table of Contents

Voting

When the depositary receives notice of a meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the particulars of the meeting to the record holders of the depositary shares. Each record holder of depositary shares on the record date may instruct the depositary on how to vote the shares of preferred stock underlying the holder s depositary shares. The depositary will try, if practical, to vote the number of shares of preferred stock underlying the depositary shares according to the instructions. We will agree to take all reasonable action requested by the depositary to enable it to vote as instructed.

Amendments

We and the depositary may agree to amend the deposit agreement and the depositary receipt evidencing the depositary shares. Any amendment that (a) imposes or increases certain fees, taxes or other charges payable by the holders of the depositary shares as described in the deposit agreement or that (b) otherwise prejudices any substantial existing right of holders of depositary shares, will not take effect until 30 days after the depositary has mailed notice of the amendment to the record holders of depositary shares. Any holder of depositary shares that continues to hold its shares at the end of the 30-day period will be deemed to have agreed to the amendment.

Termination

We may direct the depositary to terminate the deposit agreement by mailing a notice of termination to holders of depositary shares at least 30 days prior to termination. In addition, a deposit agreement will automatically terminate if:

the depositary has redeemed all related outstanding depositary shares, or

we have liquidated, terminated or wound up our business and the depositary has distributed the preferred stock of the relevant series to the holders of the related depositary shares.

Payment of Fees and Expenses

We will pay all fees, charges and expenses of the depositary, including the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges as are stated in the deposit agreement for their accounts.

Resignation and Removal of Depositary

At any time, the depositary may resign by delivering notice to us, and we may remove the depositary. Resignations or removals will take effect upon the appointment of a successor depositary and its acceptance of the appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least $50 million.

Reports

The depositary will forward to the holders of depositary shares all reports and communications from us that are delivered to the depositary and that we are required by law, the rules of an applicable securities exchange or our

restated certificate of incorporation to furnish to the holders of the preferred stock. Neither we nor the depositary will be liable if the depositary is prevented or delayed by law or any circumstances beyond its control in performing its obligations under the deposit agreement. The deposit agreement limits our obligations and the depositary s obligations to performance in good faith of the duties stated in the deposit agreement. Neither we nor the depositary will be obligated to prosecute or defend any legal proceeding connected with any depositary shares or preferred stock unless the holders of depositary shares requesting us to do so furnish us with satisfactory indemnity. In performing our obligations, we and the depositary may rely upon the written advice of our counsel or accountants, on any information that competent people provide to us and on documents that we believe are genuine.

Table of Contents

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of debt securities, preferred stock, common stock, depositary shares, or any combination thereof. We may issue warrants independently or together with any other securities offered by any prospectus supplement and may be attached to or separate from the other offered securities. Each series of warrants may be issued under a separate warrant agreement to be entered into by us with a warrant agent. The applicable warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. Further terms of the warrants and the applicable warrant agreements will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement relating to any particular issue of warrants will describe the terms of the warrants, including, as applicable, the following:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, terms and number of shares of debt securities, preferred stock or common stock purchasable upon exercise of the warrants;
- the designation and terms of the offered securities, if any, with which the warrants are issued and the number of the warrants issued with each offered security;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the price at which each share of debt securities, preferred stock or common stock purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants shall commence and the date on which that right shall expire;
- the minimum or maximum amount of the warrants which may be exercised at any one time;
- information with respect to book-entry procedures, if any;

a discussion of certain federal income tax considerations; and

any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

We and the applicable warrant agent may amend or supplement the warrant agreement for a series of warrants without the consent of the holders of the warrants issued thereunder to effect changes that are not inconsistent with the provisions of the warrants and that do not materially and adversely affect the interests of the holders of the warrants.

Table of Contents

DESCRIPTION OF RIGHTS

We may issue rights to purchase common stock or preferred stock. This prospectus and any accompanying prospectus supplement will contain the material terms and conditions for each right. The accompanying prospectus supplement may add, update or change the terms and conditions of the rights as described in this prospectus.

We will describe in the applicable prospectus supplement the terms and conditions of the issue of rights being offered, the rights agreement relating to the rights and the rights certificates representing the rights, including, as applicable:

- the title of the rights;
- the date of determining the stockholders entitled to the rights distribution;
- the title, aggregate number of shares of common stock or preferred stock purchasable upon exercise of the rights;
- the exercise price;
- the aggregate number of rights issued;
- the date, if any, on and after which the rights will be separately transferable;
- the date on which the right to exercise the rights will commence and the date on which the right will expire; and
- any other terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights.

Each right will entitle the holder of rights to purchase for cash the principal amount of shares of common stock or preferred stock at the exercise price provided in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will be void.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of common stock or preferred stock purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as described in the applicable prospectus supplement.

16

Table of Contents

FORMS OF SECURITIES

Each debt security, depositary share, warrant and right will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities will be issued in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, depositary shares, warrants or rights represented by these global securities. The depositary maintains a computerized system that will reflect each investor s beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Registered Global Securities

We may issue the registered debt securities, depositary shares, warrants and rights in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any underwriters, dealers or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, deposit agreement, warrant agreement or rights agreement. Except as described below, owners of beneficial interests in a registered global security:

will not be entitled to have the securities represented by the registered global security registered in their names;

will not receive or be entitled to receive physical delivery of the securities in definitive form; and

will not be considered the owners or holders of the securities under the applicable indenture, deposit agreement, warrant agreement or rights agreement.

Table of Contents

Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, deposit agreement, warrant agreement or rights agreement.

We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, deposit agreement, warrant agreement or rights agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

We will make payments of principal, premium, if any, and interest, if any, on debt securities, and any payments to holders with respect to depositary shares, warrants or rights, represented by a registered global security registered in the name of a depositary or its nominee to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of us, the trustees, the depositaries for depositary shares, the warrant agents, the rights agents or any other agent of ours, agent of the trustees, agent of such depositaries, agent of the warrant agents or agent of the rights agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that standing customer instructions and customary practices will govern payments by participants to owners of beneficial interests in a registered global security held through the participants, as is now the case with the securities held for the accounts of customers registered in street name. We also expect that any of these payments will be the responsibility of those participants.

If the depositary for any of the securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Securities Exchange Act of 1934, or Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary s instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

Table of Contents

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus to one or more underwriters or dealers for public offering and sale by them or to investors directly or through agents. The accompanying prospectus supplement will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

- the name or names of any underwriters, dealers or agents;
- the purchase price of the securities and the proceeds to us from the sale;
- any underwriting discounts and other items constituting compensation to underwriters, dealers or agents;
- any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities offered in the prospectus supplement may be listed.

Only those underwriters identified in such prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, or at prices determined as the applicable prospectus supplement specifies. The securities may be sold through an at-the-market offering, a rights offering, forward contracts or similar arrangements. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or

commissions from the purchasers for whom they may act as agent.

We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions that underwriters allow to dealers. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts, commissions or concessions they receive and any profit they realize on the resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act of 1933. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act. Some of the underwriters, dealers or agents who participate in the securities distribution may engage in other transactions with, and perform other services for, us or our subsidiaries in the ordinary course of business.

Table of Contents

Our common stock is currently listed on The New York Stock Exchange, but any other securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

Table of Contents

LEGAL MATTERS

The validity of any securities offered by this prospectus will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in this registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP s report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of CombiMatrix Corporation as of December 31, 2016 and for the year then ended incorporated by reference in this prospectus have been incorporated by reference in reliance upon the report of Haskell & White LLP, an independent registered public accounting firm, and given on the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act of 1933. This prospectus is part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any other document we file with the SEC at the public reference room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that site on the worldwide web is http://www.sec.gov. The information on the SEC s web site is not part of this prospectus, and any references to this web site or any other web site are inactive textual references only.

The SEC permits us to incorporate by reference the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus, and will be considered to be a part of this prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2017;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018;

our Current Reports on Form 8-K filed with the SEC on November 15, 2017 (as amended by Forms 8-K/A filed with the SEC on January 26, 2018 and March 6, 2018), February 28, 2018, March 13, 2018, April 2, 2018, May 18, 2018, and June 29, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A filed on February 11, 2015, including any amendment or report filed for the purpose of updating such description.

Table of Contents

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act that are made after the initial filing date of the registration statement of which this prospectus is a part and the effectiveness of the registration statement, as well as between the date of this prospectus and the termination of any offering of securities offered by this prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus, at no cost, by writing or telephoning us at the following address and number: Investor Relations, Invitae Corporation, 1400 16th Street, San Francisco, California 94103 and (415) 374-7782. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.

We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, as soon as reasonably practicable after we electronically file or furnish such materials to the Securities and Exchange Commission, or SEC. You may obtain a free copy of these reports in the Investor Relations section of our website, www.invitae.com.

Table of Contents

The information in this preliminary prospectus supplement is not complete and may be changed. We may not sell any of these securities until the registration statement filed with Securities and Exchange Commission is effective. This preliminary prospectus supplement is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated August 9, 2018

PROSPECTUS SUPPLEMENT

(To Prospectus dated , 2018)

Invitae Corporation

Up to $75,000,000

Common Stock

We have entered into a sales agreement with Cowen and Company, LLC, or Cowen, relating to shares of our common stock offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to $75,000,000 from time to time through Cowen acting as our agent.

Our common stock is listed on The New York Stock Exchange under the symbol NVTA. On August 8, 2018, the last reported sale price of our common stock on The New York Stock Exchange was $9.44 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made in sales deemed to be an at the market offering as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. Cowen is not required to sell any specific amount of securities, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Cowen and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Cowen for sales of common stock sold pursuant to the sales agreement will be an amount up to 3.0% of the gross proceeds of any shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, Cowen will be deemed to be an underwriter within the meaning of the Securities Act and the compensation of Cowen will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Cowen with respect to certain liabilities, including liabilities

under the Securities Act or the Securities Exchange Act of 1934, as amended.

Investing in our common stock involves risks. See the section entitled Risk Factors beginning on page S-5 of this prospectus supplement and in the documents we incorporate by reference into this prospectus supplement and the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement and the accompanying prospectus. Any representation to the contrary is a criminal offense.

Cowen

The date of this prospectus is , 2018

Table of Contents

TABLE OF CONTENTS

	Page
Prospectus Supplement	
About This Prospectus Supplement	S-1
Prospectus Supplement Summary	S-2
The Offering	S-4
Risk Factors	S-5
Forward-Looking Statements	S-7
Use of Proceeds	S-8
Dilution	S-9
Plan of Distribution	S-11
Legal Matters	S-13
Experts	S-13
Where You Can Find More Information	S-13
Prospectus	
About This Prospectus	1
Risk Factors	1
Invitae Corporation	1
Forward-Looking Statements	2
Use of Proceeds	2
Ratio of Earnings to Fixed Charges	3
Description of Debt Securities	4
Description of Capital Stock	10
Description of Depositary Shares	13
Description of Warrants	15
Description of Rights	16
Forms of Securities	17
Plan of Distribution	19
Legal Matters	21
Experts	21
Where You Can Find More Information	21

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document contains two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also supplements and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to this offering. If the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus, you should rely on the information set forth in this prospectus supplement.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and Cowen has not, authorized anyone else to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, along with the information contained in any permitted free writing prospectuses we have authorized for use in connection with this offering.

We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement or the date of the accompanying prospectus, and the information in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus in making your investment decision. You should read both this prospectus supplement and the accompanying prospectus, as well as the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and the additional information described under Where You Can Find More Information in this prospectus supplement and in the accompanying prospectus, before investing in our common stock.

Unless the context otherwise requires, references in this prospectus supplement to Invitae, the company, we, us and our refer to Invitae Corporation and its consolidated subsidiaries.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights certain information about us and this offering. Because it is a summary, it does not contain all of the information that you should consider before investing. Before investing in our common stock, you should read this entire prospectus supplement and the accompanying prospectus carefully, including the Risk Factors, and the financial statements and accompanying notes and other information incorporated by reference in this prospectus supplement and the accompanying prospectus.

Our Company

Our mission is to bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people. Combining genetic testing services that support patient care throughout life s journey from family planning, to proactive health screening, to inherited disease diagnosis with a unique, rapidly expanding network of patients, healthcare providers, biopharma and advocacy partners, we seek to capture the broad potential of genetics and expand its use across the healthcare continuum.

We offer high quality, comprehensive, affordable genetic testing across multiple clinical areas, including hereditary cancer, cardiology, neurology, pediatrics, metabolic conditions and rare diseases. To augment our offering and realize our mission, we have acquired multiple assets. We acquired four businesses in 2017 and in doing so expanded our suite of genome management offerings and completed our entry into prenatal and perinatal genetic testing.

In 2017, we established a leading position in family health genetic information services through the strategic acquisition of reproductive health testing capabilities. In January 2017, we acquired AltaVoice, formerly PatientCrossroads, a patient-centered data company with a global platform for collecting, curating, coordinating and delivering safeguarded data from patients and clinicians. This acquisition was complemented by the acquisition in June 2017 of Ommdom, Inc. and its product, CancerGene Connect, an end-to-end platform for collecting and managing genetic family histories to deliver personalized genetic risk information. In August 2017, we acquired Good Start Genetics Inc., or Good Start, a molecular diagnostics company focused on preimplantation and carrier screening for inherited disorders. In November 2017, we completed our acquisition of CombiMatrix Corporation, or CombiMatrix, a company which specialized in prenatal diagnosis, miscarriage analysis and pediatric developmental disorders.

We have experienced rapid growth. For the years ended December 31, 2017, 2016 and 2015, our revenue was $68.2 million, $25.0 million and $8.4 million, respectively, and we incurred net losses of $123.4 million, $100.3 million and $89.8 million, respectively. For the six months ended June 30, 2018 and 2017, our revenue was $65.0 million and $24.7 million, respectively, and we incurred net losses of $67.8 million and $55.5 million, respectively. At June 30, 2018, our accumulated deficit was $455.1 million. To meet the demands of scaling our business, we increased our number of employees to 688 at June 30, 2018 from 395 on June 30, 2017. We grew our sales force to 109 at June 30, 2018 from 63 at June 30, 2017. We expect headcount will continue to increase in 2018 as we add to the team to support anticipated growth.

Sales of our tests have grown significantly. In 2017, 2016 and 2015, we generated approximately 145,000, 57,000 and 19,000 billable tests, respectively. In the six months ended June 30, 2018, we generated approximately 131,000 billable tests compared to approximately 53,000 billable tests in the same period in 2017. Approximately 29% of the billable tests we performed in the first six months of 2018 were billable to institutions and patients, and the remainder were billable to third-party payers. Many of the gene tests on our assays are tests for which private insurers reimburse. However, when we do not have reimbursement policies or contracts with private insurers, our claims for reimbursement may be denied upon submission, and we must appeal the claims. The appeals process is time

consuming and expensive, and may not result in payment. Even if we are successful

Table of Contents

in achieving reimbursement, we may be paid at lower rates than if we were under contract with the third-party payer. When there is not a contracted rate for reimbursement, there is typically a greater co-insurance or co-payment requirement from the patient which may result in further delay or decreased likelihood of collection.

We expect to incur operating losses for the near-term future and may need to raise additional capital in order to fund our operations. If we are unable to achieve our revenue growth objectives and successfully manage our costs, we may not be able to achieve profitability.

We believe that the keys to our future growth will be to increase billable test volume, achieve broad reimbursement coverage for our tests from third-party payers, consistently drive down the price for genetic analysis and interpretation, steadily increase the amount of genetic content we offer, consistently improve the client experience, drive physician and patient utilization of our website for ordering and delivery of results and increase the number of strategic partners working with us to add value for our clients.

Corporate Information

We were incorporated in the state of Delaware on January 13, 2010, as Locus Development, Inc. and changed our name to Invitae Corporation in 2012. Our principal executive offices are located at 1400 16th Street, San Francisco, California 94103 and our telephone number is (415) 374-7782. Our website address is www.invitae.com. We do not incorporate the information on, or accessible through, our website into this prospectus supplement, and you should not consider any information on, or accessible through, our website as part of this prospectus supplement.

Invitae, and the Invitae logo are our trademarks. This prospectus supplement and the documents incorporated by reference into this prospectus supplement may also contain trademarks and trade names that are the property of their respective owners. We do not intend our use or display of other companies trade names, trademarks or service marks to imply relationships with, or endorsements or sponsorship of us by, these other companies.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering of common stock (December 31, 2020), (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which 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 as of the prior June 30th, and (4) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Table of Contents

THE OFFERING

Common stock offered by us	7,944,915 shares
Common stock to be outstanding immediately after the offering	76,920,951 shares
Manner of offering	At the market offering that may be made from time to time through our sales agent, Cowen and Company, LLC. See Plan of Distribution.
Use of proceeds	We currently intend to use the net proceeds from this offering for working capital and general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, assets or technologies, although we have no present commitments or agreements to do so. See Use of Proceeds.
Risk factors	See Risk Factors for a discussion of factors you should consider carefully before deciding to invest in our common stock.
NYSE symbol	NVTA

The number of shares of common stock to be outstanding immediately after this offering is based on 68,976,036 shares outstanding as of June 30, 2018 and excludes:

- 4,216,507 shares of common stock issuable upon exercise of stock options outstanding as of June 30, 2018 under our equity incentive plans, with a weighted-average exercise price of $8.50 per share;
- 4,011,941 shares of common stock issuable upon vesting of restricted stock units as of June 30, 2018 under our equity incentive plans;
- 547,104 shares of common stock available for future issuance under our 2015 Stock Incentive Plan;
- 567,707 shares of common stock available for future issuance under our 2015 Employee Stock Purchase Plan;
- 3,458,823 shares of common stock issuable upon the conversion of our Series A convertible preferred stock;

444,609 shares of common stock issuable in 2018 in connection with acquisitions and up to 680,272 shares of common stock potentially issuable in connection with an earn-out in 2019, in each case as of June 30, 2018; and

1,500,886 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of June 30, 2018, with a weighted-average exercise price of $17.12 per share.

Table of Contents

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below and in our Annual Report on Form 10-K for the year ended December 31, 2017, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K incorporated by reference in this prospectus supplement and the accompanying prospectus, any amendment or update thereto reflected in our subsequent filings with the SEC, and all of the other information in this prospectus supplement and the accompanying prospectus, including our financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. If any of these risks is realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline and you could lose part or all of your investment. Additional risks and uncertainties that are not yet identified or that we think are immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment.

Risks related to this offering

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The common stock sold in this offering from time to time will be sold at various prices; however, we expect the price per share of common stock will be substantially higher than the net tangible book value of our common stock. Therefore, purchasers of our common stock in this offering will experience immediate dilution in the net tangible book value of the common stock purchased in this offering. Assuming that an aggregate of 7,944,915 shares of common stock are sold at a public offering price of $9.44 per share, the last reported sale price of our common stock on The New York Stock Exchange on August 8, 2018, for an aggregate gross proceeds of $75,000,000 and after deducting estimated commissions and estimated offering expenses payable by us, our adjusted net tangible book value as of June 30, 2018, would have been approximately $130.9 million, or approximately $1.70 per share of our common stock. As a result, if you purchase shares of common stock in this offering at that assumed public offering price, you would suffer immediate and substantial dilution of $7.74 per share with respect to the net tangible book value of the common stock. See Dilution in this prospectus supplement for a detailed illustration of the dilution you will incur if you purchase shares in this offering.

We will have broad discretion in how we use the net proceeds of this offering. We may not use these proceeds effectively, which could affect our results of operations and cause our stock price to decline.

Although we currently intend to use the net proceeds from this offering in the manner described in the section entitled Use of Proceeds in this prospectus supplement, we will have considerable discretion in the application of the net proceeds of this offering. We may use the net proceeds for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

If we raise additional capital in the future, your ownership in us could be diluted.

Any issuance of equity we may undertake in the future to raise additional capital could cause the price of our common stock to decline, or require us to issue shares at a price that is lower than that paid by holders of our common stock in the past, which would result in those newly issued shares being dilutive. If we obtain funds through a credit facility or

through the issuance of debt or preferred securities, these securities would likely have rights senior to your rights as a common shareholder, which could impair the value of our common stock.

Table of Contents

We have never paid dividends on our capital stock and we do not anticipate paying dividends in the foreseeable future.

We have never paid dividends on any of our capital stock and currently intend to retain any future earnings to fund the growth of our business. In addition, our loan and security agreement restricts our ability to pay cash dividends on our common stock. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for the foreseeable future.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock. In addition, the sale of substantial amounts of our common stock could adversely impact its price. As of June 30, 2018, we had outstanding 68,976,036 shares of our common stock, options to purchase 4,216,507 shares of our common stock (of which 2,716,615 were exercisable as of that date), outstanding restricted stock units representing 4,011,941 shares of our common stock, outstanding Series A convertible preferred stock convertible into 3,458,823 shares of our common stock, 444,609 shares of our common stock issuable in 2018 in connection with acquisitions, up to 680,272 shares of our common stock potentially issuable in connection with an earn-out in 2019 and warrants to purchase 1,500,886 shares of our common stock. The sale or the availability for sale of a large number of shares of our common stock in the public market could cause the price of our common stock to decline.

Table of Contents

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and the documents we have filed with the SEC that are incorporated by reference in this prospectus supplement and the accompanying prospectus contain forward-looking statements that involve risks and uncertainties. These statements relate to future periods, future events or our future operating or financial plans or performance. All statements other than statements of fact, including statements identified by words such as believe, may, will, estimate, continue, anticipate, plan, and similar expressions are forward-looking statements, and include but are not limited to, statements regarding our expected increases in employee headcount, our strategy; our business plan, including expectations regarding future partnerships, acquisitions and networks; future growth and the keys to such growth; continued investment in our business; future operations; the anticipated use of proceeds from this offering; future operating results and expense levels; and the prospects, plans and objectives of management are forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial requirements. These statements are subject to known and unknown risks, uncertainties and assumptions that could cause actual results to differ materially from those projected or otherwise implied by the forward-looking statements, including the following: risks associated with our ability to develop and commercialize new tests and expand into new markets; our ability to use rapidly changing genetic data to interpret test results accurately, consistently and quickly; our history of losses; our need to scale our infrastructure in advance of demand for our tests and our ability to increase demand for our tests; our ability to drive revenue; our ability to successfully operationalize payer contracts; our ability to achieve and maintain positive cash flows and to execute our strategy to create a profitable long-term business; the risk that we may not obtain or maintain sufficient levels of reimbursement for our tests; laws and regulations applicable to our business, including potential regulation by the Food and Drug Administration; the risk that Medicare and other payers may change the pricing or other terms for reimbursement, or not reimburse for our tests in the future; and our ability to compete. You should not place undue reliance on these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus supplement and the accompanying prospectus, many of these risks, uncertainties and assumptions under the heading Risk Factors. Additional cautionary statements or discussions of risks, uncertainties and assumptions that could affect our results or the achievement of the expectations described in forward-looking statements are also contained in the documents we incorporate by reference into this prospectus supplement and the accompanying prospectus. Any forward-looking statement made by us in this prospectus supplement, the accompanying prospectus, or any of the documents incorporated by reference in this prospectus supplement and the accompanying prospectus speaks only as of the date on which it was made. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC.

You should read this prospectus supplement, the accompanying prospectus, and the documents that we incorporate by reference in this prospectus supplement and the accompanying prospectus completely and with the understanding that our actual future results, levels of activity and performance as well as other events and circumstances may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

Table of Contents

USE OF PROCEEDS

We may issue and sell shares of common stock having aggregate sales proceeds of up to $75,000,000 from time to time in this offering. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and net proceeds to us, if any, are not determinable at this time. There can be no assurance that, in the future, we will sell any shares under or fully utilize the sales agreement with Cowen as a source of financing.

We currently intend to use the net proceeds from the sale of common stock offered by this prospectus supplement and the accompanying prospectus for working capital and general corporate purposes. We may also use a portion of the net proceeds from this offering to acquire or invest in complementary businesses, assets or technologies, although we have no present commitments or agreements to do so. Accordingly, we will retain broad discretion over the use of these proceeds. Pending application of the net proceeds as described above, we intend to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

Table of Contents

DILUTION

If you purchase our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock immediately after this offering. Net tangible book value per share is determined by dividing the number of shares of common stock outstanding as of June 30, 2018 into our total tangible assets less total liabilities.

Our net tangible book value as of June 30, 2018 was approximately $58.4 million, or $0.85 per share, based on 68,976,036 shares of our common stock outstanding as of that date. After giving effect to the sale of 7,944,915 shares of common stock by us at an assumed public offering price of $9.44 per share, the last reported sale price of our common stock on The New York Stock Exchange on August 8, 2018, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2018 would have been $130.9 million, or $1.70 per share. This represents an immediate increase in net tangible book value of $0.85 per share to existing stockholders and immediate dilution of $7.74 per share to investors in this offering, as illustrated by the following table:

Assumed public offering price per share		$ 9.44
Net tangible book value per share as of June 30, 2018	$ 0.85	
Increase in net tangible book value per share attributable to investors participating in this offering	0.85	
As adjusted net tangible book value per share after giving effect to this offering		1.70
Dilution per share to investors in this offering		$ 7.74

The table above assumes for illustrative purposes that an aggregate of 7,944,915 shares of our common stock are sold at a price of $9.44 per share, the last reported sale price of our common stock on The New York Stock Exchange on August 8, 2018, for aggregate gross proceeds of $75,000,000. The shares sold in this offering, if any, will be sold from time to time at various prices. A $1.00 increase or decrease in the price at which the shares are sold from the assumed public offering price of $9.44 per share, would increase or decrease our as adjusted net tangible book value by approximately $0.10 per share, and the dilution per share to investors in this offering by approximately $0.90 per share, after deducting estimated commissions and estimated offering expenses payable by us. The as adjusted information provided above is illustrative only. The common stock sold in this offering, if any, will be sold from time to time at various prices.

The number of shares of common stock to be outstanding immediately after this offering is based on 68,976,036 shares outstanding as of June 30, 2018 and excludes:

- 4,216,507 shares of common stock issuable upon exercise of stock options outstanding as of June 30, 2018 under our equity incentive plans, with a weighted-average exercise price of $8.50 per share;

- 4,011,941 shares of common stock issuable upon vesting of restricted stock units as of June 30, 2018 under our equity incentive plans;

547,104 shares of common stock available for future issuance under our 2015 Stock Incentive Plan;

567,707 shares of common stock available for future issuance under our 2015 Employee Stock Purchase Plan;

3,458,823 shares of common stock issuable upon the conversion of our Series A convertible preferred stock;

444,609 shares of common stock issuable in 2018 in connection with acquisitions and up to 680,272 shares of common stock potentially issuable in connection with an earn-out in 2019, in each case as of June 30, 2018; and

Table of Contents

1,500,886 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of June 30, 2018, with a weighted-average exercise price of $17.12 per share.

To the extent that additional shares are issued pursuant to the foregoing, investors purchasing our common stock in this offering will experience further dilution. In addition, we may offer other securities in other offerings due to market conditions or strategic considerations. To the extent we issue such securities, investors may experience further dilution.

Table of Contents

PLAN OF DISTRIBUTION

We have entered into a sales agreement with Cowen, under which we may issue and sell from time to time up to $75,000,000 of our common stock through Cowen as our sales agent. Sales of our common stock, if any, will be made at market prices by any method that is deemed to be an at the market offering as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on The New York Stock Exchange or any other existing trading market for our common stock. If authorized by us in writing, Cowen may purchase shares of our common stock as principal.

Cowen will offer our common stock subject to the terms and conditions of the sales agreement on a daily basis or as otherwise agreed upon by us and Cowen. We will designate the maximum amount of common stock to be sold through Cowen on a daily basis or otherwise determine such maximum amount together with Cowen. Subject to the terms and conditions of the sales agreement, Cowen will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. We may instruct Cowen not to sell common stock if the sales cannot be effected at or above the price designated by us in any such instruction. Cowen or we may suspend the offering of our common stock being made through Cowen under the sales agreement upon proper notice to the other party. Cowen and we each have the right, by giving written notice as specified in the sales agreement, to terminate the sales agreement in each party s sole discretion at any time.

The aggregate compensation payable to Cowen as sales agent will be an amount equal to 3.0% of the gross sales price of the shares sold through it pursuant to the sales agreement. We have also agreed to reimburse Cowen (i) up to an aggregate of $50,000 of Cowen s actual outside legal expenses incurred by Cowen in connection with this offering and (ii) if applicable, up to an aggregate of $10,000 of Cowen s actual outside legal expenses for filings with the FINRA Corporate Financing Department. We estimate that the total expenses of the offering payable by us, excluding commissions payable to Cowen under the sales agreement, will be approximately $300,000.

The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such common stock.

Cowen will provide written confirmation to us following the close of trading on The New York Stock Exchange on each day in which common stock is sold through it as sales agent under the sales agreement. Each confirmation will include the number of shares of common stock sold through it as sales agent on that day, the volume weighted average price of the shares sold, the percentage of the daily trading volume and the net proceeds to us.

We will report at least quarterly the number of shares of common stock sold through Cowen under the sales agreement, the net proceeds to us and the compensation paid by us to Cowen in connection with the sales of common stock.

Settlement for sales of common stock will occur, unless the parties agree otherwise or as otherwise required by law, on the second business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sales of our common stock on our behalf, Cowen will be deemed to be an underwriter within the meaning of the Securities Act, and the compensation paid to Cowen will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to Cowen against certain liabilities, including liabilities under the Securities Act. As sales agent, Cowen will not engage in any transactions that stabilize our common stock.

S-11

Table of Contents

Our common stock is listed on The New York Stock Exchange and trades under the symbol NVTA. The transfer agent of our common stock is American Stock Transfer & Trust Company, LLC.

Cowen and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received and, may in the future receive, customary fees.

Table of Contents

LEGAL MATTERS

The validity of the common stock offered by this prospectus supplement will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, California. Cowen and Company, LLC is being represented by Cooley LLP, New York, New York, in connection with this offering.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017, as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in this registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP s report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of CombiMatrix Corporation as of December 31, 2016 and for the year then ended incorporated by reference in this prospectus supplement have been incorporated by reference in reliance upon the report of Haskell & White LLP, an independent registered public accounting firm, and given on the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-3 with the SEC under the Securities Act of 1933. This prospectus supplement and the accompanying prospectus is part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any other document we file with the SEC at the public reference room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The address of that site on the worldwide web is http://www.sec.gov. The information on the SEC s web site is not part of this prospectus supplement and the accompanying prospectus, and any references to this website or any other web site are inactive textual references only.

The SEC permits us to incorporate by reference the information contained in documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus supplement and the accompanying prospectus. Information that is incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus and you should read it with the same care that you read this prospectus supplement and the accompanying prospectus. Later information that we file with the SEC will automatically update and supersede the information that is either contained, or incorporated by reference, in this prospectus supplement and the accompanying prospectus, and will be considered to be a part of this prospectus supplement and the accompanying prospectus from the date those documents are filed. We have filed with the SEC, and incorporate by reference in this prospectus supplement and the accompanying prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2017;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018;

Table of Contents

our Current Reports on Form 8-K filed with the SEC on November 15, 2017 (as amended by Forms 8-K/A filed with the SEC on January 26, 2018 and March 6, 2018), February 28, 2018, March 13, 2018, April 2, 2018, May 18, 2018, and June 29, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A filed on February 11, 2015, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference all additional documents that we file with the SEC under the terms of Section 13(a), 13(c), 14 or 15(d) of the Exchange Act that are made after the initial filing date of the registration statement of which this prospectus supplement and the accompanying prospectus is a part and the effectiveness of the registration statement, as well as between the date of this prospectus supplement and the termination of any offering of securities offered by this prospectus supplement and the accompanying prospectus. We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

You may request a copy of any or all of the documents incorporated by reference but not delivered with this prospectus supplement and the accompanying prospectus, at no cost, by writing or telephoning us at the following address and number: Investor Relations, Invitae Corporation, 1400 16th Street, San Francisco, California 94103 and (415) 374-7782. We will not, however, send exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents.

Table of Contents

INVITAE CORPORATION

Up to $75,000,000

Common Stock

PROSPECTUS SUPPLEMENT

Cowen

, 2018

Table of Contents

PART II

Information Not Required In Prospectus

Item 14. Other Expenses of Issuance and Distribution.

The following is a statement of estimated expenses in connection with the issuance and distribution of the securities being registered, other than underwriting discounts and commissions.

SEC Registration Fee	$ 31,125
NYSE Listing Fees	(1)
Transfer Agent and Registrar, Trustee and Depositary Fees	(1)
Printing Expenses	(1)
Legal Fees and Expenses	(1)
Accounting Fees and Expenses	(1)
Miscellaneous	(1)
	$ (1)

(1) These fees are calculated based on the securities offered and the number of issuances and, accordingly, cannot be estimated at this time.

Item 15. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law (the DGCL) allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of the DGCL or obtained an improper personal benefit.

Section 145 of the DGCL provides, among other things, that we may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding other than an action by or in the right of the Registrant by reason of the fact that the person is or was a director, officer, agent or employee of the Registrant, or is or was serving at our request as a director, officer, agent or employee of another corporation, partnership, joint venture, trust or other enterprise against expenses, including attorneys fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding. The power to indemnify applies (a) if such person is successful on the merits or otherwise in defense of any action, suit or proceeding, or (b) if such person acting in good faith and in a manner he or she reasonably believed to be in the best interest, or not opposed to the best interest, of the Registrant, and with respect to any criminal action or proceeding had no reasonable cause to believe his or her conduct was unlawful. The power to indemnify applies to actions brought by or in the right of the Registrant as well but only to the extent of defense expenses, including attorneys fees but excluding amounts paid in settlement, actually and reasonably incurred and not to any satisfaction of judgment or settlement of the claim itself, and with the further limitation that in such actions no indemnification

shall be made in the event of any adjudication of liability to the Registrant, unless the court believes that in light of all the circumstances indemnification should apply.

Section 174 of the DGCL provides, among other things, that a director, who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

Table of Contents

The Registrant s restated certificate of incorporation and amended and restated bylaws, filed as Exhibits 3.1 and 3.2 to the Registrant Current Report on Form 8-K filed on February 22, 2015, provide that the Registrant shall indemnify its directors, officers, employees and other agents to the fullest extent not prohibited by the DGCL or any other applicable law. In addition, the Registrant has entered into agreements to indemnify its directors and expects to continue to enter into agreements to indemnify all of its directors. These agreements require the Registrant, among other things, to indemnify its directors and officers against certain liabilities which may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of the Registrant s officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933.

Item 16. Exhibits.

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
1.2	Sales Agreement, dated as of August 9, 2018, between the Registrant and Cowen and Company, LLC.
4.1	Form of Indenture relating to debt securities.
4.2*	Form of supplemental indenture or other instrument establishing the issuance of one or more series of debt securities (including the form of such debt security).
4.3*	Form of Warrant Agreement and Warrant Certificate.
4.4*	Form of Deposit Agreement.
4.5*	Form of Depositary Receipt (included in Exhibit 4.4).
4.6*	Form of Specimen Preferred Stock Certificate.
4.7*	Form of Rights Agreement and Rights Certificate.
4.8	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registrant s Registration Statement on Form S-1 (File No. 333-201433)).
4.9	Amended and Restated Registration Rights Agreement, dated July 31, 2017, between the Registrant and certain investors (incorporated by reference to Exhibit 10.4 to the Registrant s Current Report on Form 8-K filed on August 1, 2017).
5.1	Opinion of Pillsbury Winthrop Shaw Pittman LLP.
5.2	Opinion of Pillsbury Winthrop Shaw Pittman LLP.
12.1	Statement regarding computation of ratios.
23.1	Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1).
23.2	Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.2).
23.3	Consent of Independent Registered Public Accounting Firm.
23.4	Consent of Independent Registered Public Accounting Firm

24.1	Power of Attorney (included on the signature page hereof).
25.1+	Form T-1 Statement of Eligibility of the trustee for the debt securities.

* To be filed by amendment or pursuant to a report to be filed pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, if applicable, and incorporated herein by reference.

\+ To be filed by amendment or pursuant to Trust Indenture Act Section 305(b)(2), if applicable.

Table of Contents

Item 17. Undertakings.

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(A) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into

the registration statement or prospectus that is

Table of Contents

part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(6) That, for the purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(7) To file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act (the Act) in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Act.

The undersigned Registrant hereby undertakes to supplement the prospectus, after the expiration of the subscription period (if any), to set forth the results of the subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to any charter provision, by law or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the

Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of San Francisco, State of California, on this 9th day of August, 2018.

Invitae Corporation

By: /s/ Sean E. George, Ph.D.
Sean E. George, Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Sean E. George and Shelly D. Guyer, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this Registration Statement, and any registration statement relating to the offering covered by this Registration Statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys in fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
/s/ Sean E. George, Ph.D. Sean E. George, Ph.D.	President and Chief Executive Officer, and Director (Principal Executive Officer)	August 9, 2018
/s/ Shelly D. Guyer Shelly D. Guyer	Chief Financial Officer (Principal Financial Officer)	August 9, 2018
/s/ Patricia E. Dumond Patricia E. Dumond	Vice President, Finance (Principal Accounting Officer)	August 9, 2018
/s/ Randal W. Scott, Ph.D.	Executive Chairman of the Board of Directors	August 9, 2018

Randall W. Scott, Ph.D.		
/s/ Eric Aguiar, M.D.	Director	August 9, 2018
Eric Aguiar, M.D.		
/s/ Geoffrey S. Crouse	Director	August 9, 2018
Geoffrey S. Crouse		
/s/ Christine M. Gorjanc	Director	August 9, 2018
Christine M. Gorjanc		