

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

Form S-8
Registration Statement
Under
The Securities Act of 1933

Invitae Corporation
(Exact name of the registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

Invitae Corporation 2015 Stock Incentive Plan
(Full titles of plans)

27-1701898
(I.R.S. Employer
Identification No.)

1400 16th Street
San Francisco, CA
(Address of principal executive offices)

Sean E. George, Ph.D.
President and Chief Executive Officer
1400 16th Street
San Francisco, CA 94103
(Name and address agent for service)
(415) 374-7782
(Telephone number, including area code, of agent for
service)

94103
(Zip Code)

Copies to:

Thomas R. Brida
General Counsel
Invitae Corporation
1400 16th Street
San Francisco, CA 94103
(415) 374-7782

Mike Hird
Gabriella A. Lombardi
Pillsbury Winthrop Shaw Pittman LLP
2550 Hanover Street
Palo Alto, CA 94304
(650) 233-4500

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be registered ⁽¹⁾	Proposed maximum offering price per share ⁽³⁾	Proposed maximum aggregate offering price ⁽³⁾	Amount of registration fee ⁽³⁾
Common Stock, \$0.0001 par value per share	8,125,692 shares ⁽²⁾	\$30.17	\$245,152,128	\$26,747

(1) Pursuant to Rule 416 of the Securities Act of 1933 (the “Securities Act”), this registration statement also covers any additional securities that may be offered or become issuable under the Invitae Corporation 2015 Stock Incentive Plan (the “Stock Plan”) in connection with any stock split, stock dividend, recapitalization or any other similar transaction effected without receipt of consideration, which results in an increase in the number of the Registrant’s outstanding shares of common stock.

- (2) Represents a maximum number of shares of common stock reserved for issuance exclusively for the grant of restricted stock units (the “Inducement Awards”) to certain employees of the Registrant granted pursuant to the Stock Plan in compliance with New York Stock Exchange Rule 303A.08.
- (3) Estimated in accordance with Rules 457(h) and 457(c) under the Securities Act, solely for the purposes of calculating the registration fee, based on the average of the high and low prices of the Registrant’s common stock as reported on the New York Stock Exchange on September 13, 2021.

The Registration Statement shall become effective upon filing in accordance with Rule 462 under the Securities Act.

PART I

INFORMATION REQUIRED IN THE PROSPECTUS

General Instruction E Information

This Registration Statement is being filed for the purpose of increasing the number of securities of the same class as other securities for which certain Registration Statements on Form S-8 relating to the same employee benefit plan are effective in order to provide an increase in the pool from which to grant Inducement Awards to certain employees of the Registrant granted pursuant to the Invitae Corporation 2015 Stock Incentive Plan in compliance with New York Stock Exchange Rule 303A.08. The Registrant's Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the "Commission") (File Nos. 333-202066, 333-216761, 333-223455, 333-229972, 333-232208, 333-236799, 333-237073, 333-240360, 333-240137, 333-249894, 333-253615, 333-255770 and 333-258654), excluding reports that the Registrant filed with the Commission that were incorporated into the Form S-8 Registration Statements in order to maintain current information about the Registrant, are hereby incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are hereby incorporated by reference in this Registration Statement:

- (a) The Registrant's Annual Report on [Form 10-K](#) for the year ended December 31, 2020;
- (b) The Registrant's Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2021](#) and [June 30, 2021](#);
- (c) The Registrant's Current Reports on Form 8-K filed on [January 20, 2021](#), [January 26, 2021](#), [February 3, 2021](#), [March 23, 2021](#), [April 5, 2021](#), [April 5, 2021](#) (which amends the Current Report on Form 8-K filed on October 5, 2020), [April 8, 2021](#), [April 23, 2021](#), [May 4, 2021](#), [June 11, 2021](#), [July 7, 2021](#) and [September 7, 2021](#); and
- (d) The description of the Registrant's common stock set forth in [Exhibit 4.2](#) of the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed on March 2, 2020, together with any amendment or report filed with the Commission for the purpose of updating such description.

In addition, all documents filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (excluding any portions thereof furnished by the Registrant, including information furnished under Item 2.02 and Item 7.01 and any exhibits relating to Item 2.02 or Item 7.01 furnished under Item 9.01 of Form 8-K and any certification required by 18 U.S.C. § 1350), subsequent to the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement.

Item 8. Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
5.1	Opinion of Pillsbury Winthrop Shaw Pittman LLP.
23.1	Consent of independent registered public accounting firm.
23.2	Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1).
24.1	Power of Attorney (contained on the signature page hereto).
99.1	Invitae Corporation 2015 Stock Incentive Plan, as amended and restated as of August 31, 2021.
99.2	Invitae Corporation 2015 Stock Incentive Plan Notice of Stock Option Grant and Stock Option Agreement (incorporated by reference to Exhibit 10.6 to the Registrant's Form S-1 (File No. 333-201433), as amended, declared effective on February 11, 2015).
99.3	Invitae Corporation 2015 Stock Incentive Plan Notice of Restricted Stock Award and Restricted Stock Agreement (incorporated by reference to Exhibit 10.7 to the Registrant's Form S-1 (File No. 333-201433), as amended, declared effective on February 11, 2015).

Item 9. Undertakings.

(a) 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;

(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 Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% 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 (a)(1)(i) and (a)(1)(ii) of this section shall 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 Commission by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) 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.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the 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.

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-8 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 September 14, 2021.

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 Yafei (Roxi) Wen, and each of them, his or her true and lawful attorneys-in-fact and agents, each 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 on Form S-8, 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 his or her 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Sean E. George, Ph.D.</u> Sean E. George, Ph.D.	President and Chief Executive Officer and Director (<i>Principal Executive Officer</i>)	September 14, 2021
<u>/s/ Yafei (Roxi) Wen</u> Yafei (Roxi) Wen	Chief Financial Officer (<i>Principal Financial Officer</i>)	September 14, 2021
<u>/s/ Robert F. Werner</u> Robert F. Werner	Chief Accounting Officer (<i>Principal Accounting Officer</i>)	September 14, 2021
<u>/s/ Eric Aguiar, M.D.</u> Eric Aguiar, M.D.	Chair of the Board	September 14, 2021
<u>/s/ Geoffrey S. Crouse</u> Geoffrey S. Crouse	Director	September 14, 2021
<u>/s/ Christine M. Gorjanc</u> Christine M. Gorjanc	Director	September 14, 2021
<u>/s/ Kimber D. Lockhart</u> Kimber D. Lockhart	Director	September 14, 2021
<u>/s/ Chitra Nayak</u> Chitra Nayak	Director	September 14, 2021

PILLSBURY WINTHROP SHAW PITTMAN LLP
2550 Hanover Street
Palo Alto, CA 94304-1115

September 14, 2021

Invitae Corporation
1400 16th Street
San Francisco, CA 94103

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We are acting as counsel for Invitae Corporation, a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-8 (the "Registration Statement") relating to the registration under the Securities Act of 1933 (the "Act") of 8,125,692 shares of the Company's common stock, \$0.0001 par value per share (the "Shares"), issuable pursuant to the Company's 2015 Stock Incentive Plan (the "Plan").

We have reviewed and are familiar with such corporate proceedings and other matters as we have considered relevant or necessary for the opinions expressed in this letter. Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and, when issued and sold in accordance with the Plan, will be validly issued, fully paid and nonassessable. The opinions set forth in this letter are limited to the General Corporation Law of the State of Delaware, as in effect on the date hereof.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/s/ Pillsbury Winthrop Shaw Pittman LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Invitae Corporation 2015 Stock Incentive Plan of our reports dated February 26, 2021, with respect to the consolidated financial statements of Invitae Corporation, and the effectiveness of internal control over financial reporting of Invitae Corporation, included in its Annual Report (Form 10-K) for the year ended December 31, 2020 filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California
September 14, 2021

INVITAE CORPORATION

2015 STOCK INCENTIVE PLAN

(As Amended and Restated by the Board of Directors on August 31, 2021)

Table of Contents

SECTION 1. ESTABLISHMENT AND PURPOSE.	1
SECTION 2. DEFINITIONS.	1
(a) “Affiliate”	1
(b) “Award”	1
(c) “Award Agreement”	1
(d) “Board of Directors” or “Board”	1
(e) “Cash-Based Award”	1
(f) “Change in Control”	1
(g) “Code”	3
(h) “Committee”	3
(i) “Company”	3
(j) “Consultant”	3
(k) “Employee”	3
(l) “Exchange Act”	3
(m) “Exercise Price”	3
(n) “Fair Market Value”	3
(o) “ISO”	4
(p) “Nonstatutory Option” or “NSO”	4
(q) “Option”	4
(r) “Outside Director”	4
(s) “Parent”	4
(t) “Participant”	4
(u) “Performance Based Award”	4
(v) “Plan”	4
(w) “Purchase Price”	4
(x) “Restricted Share”	4
(y) “SAR”	4
(z) “Service”	4
(aa) “Share”	5
(bb) “Stock”	5
(cc) “Stock Unit”	5

(dd)	“Subsidiary”	5
(ee)	“Total and Permanent Disability”	5
SECTION 3. ADMINISTRATION.		5
(a)	Committee Composition	5
(b)	Committee for Non-Officer Grants	5
(c)	Committee Procedures	6
(d)	Committee Responsibilities	6
SECTION 4. ELIGIBILITY.		7
(a)	General Rule	7
(b)	Ten-Percent Stockholders	7
(c)	Attribution Rules	7
(d)	Outstanding Stock	7
SECTION 5. STOCK SUBJECT TO PLAN.		8
(a)	Basic Limitation	8
(b)	Award Limitation	8
(c)	Additional Shares	8
(d)	Substitution and Assumption of Awards	9
SECTION 6. RESTRICTED SHARES.		9
(a)	Restricted Share Award Agreement	9
(b)	Payment for Awards	9
(c)	Vesting	9
(d)	Voting and Dividend Rights	9
(e)	Restrictions on Transfer of Shares	9
SECTION 7. TERMS AND CONDITIONS OF OPTIONS.		9
(a)	Stock Option Award Agreement	9
(b)	Number of Shares	10
(c)	Exercise Price	10
(d)	Withholding Taxes	10
(e)	Exercisability and Term	10
(f)	Exercise of Options	10
(g)	Effect of Change in Control	11

(h)	No Rights as a Stockholder	11
(i)	Modification, Extension and Renewal of Options	11
(j)	Restrictions on Transfer of Shares	11
(k)	Buyout Provisions	11
SECTION 8.	PAYMENT FOR SHARES.	11
(a)	General Rule	11
(b)	Surrender of Stock	11
(c)	Services Rendered	11
(d)	Cashless Exercise	12
(e)	Exercise/Pledge	12
(f)	Net Exercise	12
(g)	Promissory Note	12
(h)	Other Forms of Payment	12
(i)	Limitations under Applicable Law	12
SECTION 9.	STOCK APPRECIATION RIGHTS.	12
(a)	SAR Award Agreement	12
(b)	Number of Shares	12
(c)	Exercise Price	12
(d)	Exercisability and Term	13
(e)	Effect of Change in Control	13
(f)	Exercise of SARs	13
(g)	Modification or Assumption of SARs	13
(h)	Buyout Provisions	13
SECTION 10.	STOCK UNITS.	13
(a)	Stock Unit Award Agreement	13
(b)	Payment for Awards	14
(c)	Vesting Conditions	14
(d)	Voting and Dividend Rights	14
(e)	Form and Time of Settlement of Stock Units	14
(f)	Death of Participant	14
(g)	Creditors' Rights	15

SECTION 11. CASH-BASED AWARDS	15
SECTION 12. ADJUSTMENT OF SHARES.	15
(a) Adjustments	15
(b) Dissolution or Liquidation	15
(c) Reorganizations	15
(d) Reservation of Rights	16
SECTION 13. DEFERRAL OF AWARDS.	16
(a) Committee Powers	16
(b) General Rules	17
SECTION 14. AWARDS UNDER OTHER PLANS.	17
SECTION 15. INDUCEMENT AWARDS POOL.	17
(a) Inducement Share Reserve	17
(b) Inducement Award Rules	18
SECTION 16. PAYMENT OF DIRECTOR'S FEES IN SECURITIES.	18
(a) Effective Date	18
(b) Elections to Receive NSOs, SARs, Restricted Shares or Stock Units	18
(c) Number and Terms of NSOs, SARs, Restricted Shares or Stock Units	18
SECTION 17. LEGAL AND REGULATORY REQUIREMENTS.	18
SECTION 18. TAXES.	19
(a) Withholding Taxes	19
(b) Share Withholding	19
(c) Section 409A	19
SECTION 19. TRANSFERABILITY.	19
SECTION 20. PERFORMANCE BASED AWARDS.	20
SECTION 21. NO EMPLOYMENT RIGHTS.	21
SECTION 22. DURATION AND AMENDMENTS.	21
(a) Term of the Plan	21
(b) Right to Amend the Plan	22
(c) Effect of Termination	22
SECTION 23. EXECUTION.	22

INVITAE CORPORATION

2015 STOCK INCENTIVE PLAN

SECTION 1. ESTABLISHMENT AND PURPOSE.

The Plan was adopted by the Board of Directors on January 8, 2015 and became effective immediately prior to the closing of the initial offering of Stock to the public pursuant to a registration statement filed by the Company with the Securities and Exchange Commission (the “Effective Date”), was amended and restated on June 11, 2019, and was further amended and restated on March 6, 2020, June 12, 2020, December 7, 2020, March 26, 2021, July 16, 2021 and August 31, 2021. The purpose of the Plan is to promote the long-term success of the Company and the creation of stockholder value by (a) encouraging Employees, Outside Directors and Consultants to focus on critical long-range objectives, (b) encouraging the attraction and retention of Employees, Outside Directors and Consultants with exceptional qualifications and (c) linking Employees, Outside Directors and Consultants directly to stockholder interests through increased stock ownership. The Plan seeks to achieve this purpose by providing for Awards in the form of restricted shares, stock units, options (which may constitute incentive stock options or nonstatutory stock options), stock appreciation rights or cash-based awards.

SECTION 2. DEFINITIONS.

- (a) “*Affiliate*” shall mean any entity other than a Subsidiary, if the Company and/or one or more Subsidiaries own not less than 50% of such entity.
- (b) “*Award*” shall mean any award of an Option, a SAR, a Restricted Share or a Stock Unit or a Cash-Based Award under the Plan.
- (c) “*Award Agreement*” shall mean the agreement between the Company and the recipient of an Award which contains the terms, conditions and restrictions pertaining to such Award.
- (d) “*Board of Directors*” or “*Board*” shall mean the Board of Directors of the Company, as constituted from time to time.
- (e) “*Cash-Based Award*” shall mean an Award that entitles the Participant to receive a cash-denominated payment.
- (f) “*Change in Control*” shall mean the occurrence of any of the following events:
 - (i) A change in the composition of the Board of Directors occurs, as a result of which fewer than one-half of the incumbent directors are directors who either:
 - (A) Had been directors of the Company on the “look-back date” (as defined below) (the “original directors”); or

(B) Were elected, or nominated for election, to the Board of Directors with the affirmative votes of at least a majority of the aggregate of the original directors who were still in office at the time of the election or nomination and the directors whose election or nomination was previously so approved (the “continuing directors”);

provided, however, that for this purpose, the “original directors” and “continuing directors” shall not include any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

- (ii) Any “person” (as defined below) who by the acquisition or aggregation of securities, is or becomes the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 50% or more of the combined voting power of the Company’s then outstanding securities ordinarily (and apart from rights accruing under special circumstances) having the right to vote at elections of directors (the “Base Capital Stock”); except that any change in the relative beneficial ownership of the Company’s securities by any person resulting solely from a reduction in the aggregate number of outstanding shares of Base Capital Stock, and any decrease thereafter in such person’s ownership of securities, shall be disregarded until such person increases in any manner, directly or indirectly, such person’s beneficial ownership of any securities of the Company; or
- (iii) The consummation of a merger or consolidation of the Company or a Subsidiary of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization 50% or more of the voting power of the outstanding securities of each of (A) the Company (or its successor) and (B) any direct or indirect parent corporation of the Company (or its successor); or
- (iv) The sale, transfer or other disposition of all or substantially all of the Company’s assets.

For purposes of subsection (e)(i) above, the term “look-back” date shall mean the later of (1) the Effective Date or (2) the date 24 months prior to the date of the event that may constitute a Change in Control.

For purposes of subsection (e)(ii) above, the term “person” shall have the same meaning as when used in Sections 13(d) and 14(d) of the Exchange Act but shall exclude (1) a trustee or other fiduciary holding securities under an employee benefit plan maintained by the Company or a Parent or Subsidiary and (2) a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of the Stock.

Any other provision of this Section 2(e) notwithstanding, a transaction shall not constitute a Change in Control if its sole purpose is to change the state of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction, and a Change in Control shall not be deemed to occur if the Company files a registration statement with the United States Securities and Exchange Commission for the initial or secondary public offering of securities or debt of the Company to the public.

(g) "*Code*" shall mean the Internal Revenue Code of 1986, as amended.

(h) "*Committee*" shall mean the Compensation Committee as designated by the Board of Directors, which is authorized to administer the Plan, as described in Section 3 hereof.

(i) "*Company*" shall mean Invitae Corporation, a Delaware corporation.

(j) "*Consultant*" shall mean a consultant or advisor who provides bona fide services to the Company, a Parent, a Subsidiary or an Affiliate as an independent contractor (not including service as a member of the Board of Directors) or a member of the board of directors of a Parent or a Subsidiary, in each case who is not an Employee.

(k) "*Employee*" shall mean any individual who is a common-law employee of the Company, a Parent, a Subsidiary or an Affiliate.

(l) "*Exchange Act*" shall mean the Securities Exchange Act of 1934, as amended.

(m) "*Exercise Price*" shall mean, in the case of an Option, the amount for which one Share may be purchased upon exercise of such Option, as specified in the applicable Stock Option Agreement. "Exercise Price," in the case of a SAR, shall mean an amount, as specified in the applicable SAR Agreement, which is subtracted from the Fair Market Value of one Share in determining the amount payable upon exercise of such SAR.

(n) "*Fair Market Value*" with respect to a Share, shall mean the market price of one Share, determined by the Committee as follows:

- (i) If the Stock was traded over-the-counter on the date in question, then the Fair Market Value shall be equal to the last transaction price quoted for such date by the OTC Bulletin Board or, if not so quoted, shall be equal to the mean between the last reported representative bid and asked prices quoted for such date by the principal automated inter-dealer quotation system on which the Stock is quoted or, if the Stock is not quoted on any such system, by the Pink Quote system;
- (ii) If the Stock was traded on any established stock exchange (such as the New York Stock Exchange, The Nasdaq Global Market or The Nasdaq Global Select Market) or national market system on the date in question, then the Fair Market Value shall be equal to the closing price reported for such date by the applicable exchange or system; and

-
- (iii) If none of the foregoing provisions is applicable, then the Fair Market Value shall be determined by the Committee in good faith on such basis as it deems appropriate.

In all cases, the determination of Fair Market Value by the Committee shall be conclusive and binding on all persons.

(o) “*ISO*” shall mean an employee incentive stock option described in Section 422 of the Code.

(p) “*Nonstatutory Option*” or “*NSO*” shall mean an employee stock option that is not an ISO.

(q) “*Option*” shall mean an ISO or Nonstatutory Option granted under the Plan and entitling the holder to purchase Shares.

(r) “*Outside Director*” shall mean a member of the Board of Directors who is not a common-law employee of, or paid consultant to, the Company, a Parent or a Subsidiary.

(s) “*Parent*” shall mean any corporation (other than the Company) in an unbroken chain of corporations ending with the Company, if each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Parent on a date after the adoption of the Plan shall be a Parent commencing as of such date.

(t) “*Participant*” shall mean a person who holds an Award.

(u) “*Performance Based Award*” shall mean any Restricted Share Award, Stock Unit Award or Cash-Based Award granted to a Participant pursuant to the terms set forth in Section 20.

(v) “*Plan*” shall mean this 2015 Stock Incentive Plan of Invitae Corporation, as amended from time to time.

(w) “*Purchase Price*” shall mean the consideration for which one Share may be acquired under the Plan (other than upon exercise of an Option), as specified by the Committee.

(x) “*Restricted Share*” shall mean a Share awarded under the Plan.

(y) “*SAR*” shall mean a stock appreciation right granted under the Plan.

(z) “*Service*” shall mean service as an Employee, Consultant or Outside Director, subject to such further limitations as may be set forth in the Plan or the applicable Award Agreement. Service does not terminate when an Employee goes on a bona fide leave of absence, that was approved by the Company in writing, if the terms of the leave provide for continued

Service crediting, or when continued Service crediting is required by applicable law. However, for purposes of determining whether an Option is entitled to ISO status, an Employee's employment will be treated as terminating three months after such Employee went on leave, unless such Employee's right to return to active work is guaranteed by law or by a contract. Service terminates in any event when the approved leave ends, unless such Employee immediately returns to active work. The Company determines which leaves of absence count toward Service, and when Service terminates for all purposes under the Plan.

(aa) "*Share*" shall mean one share of Stock, as adjusted in accordance with Section 12 (if applicable).

(bb) "*Stock*" shall mean the Common Stock of the Company.

(cc) "*Stock Unit*" shall mean a bookkeeping entry representing the Company's obligation to deliver one Share (or distribute cash) on a future date in accordance with the provisions of a Stock Unit Award Agreement.

(dd) "*Subsidiary*" shall mean any corporation, if the Company and/or one or more other Subsidiaries own not less than 50% of the total combined voting power of all classes of outstanding stock of such corporation. A corporation that attains the status of a Subsidiary on a date after the adoption of the Plan shall be considered a Subsidiary commencing as of such date.

(ee) "*Total and Permanent Disability*" shall mean any permanent and total disability as defined by Section 22(e)(3) of the Code.

SECTION 3. ADMINISTRATION.

(a) *Committee Composition.* The Plan shall be administered by a Committee appointed by the Board, or by the Board acting as the Committee. The Committee shall consist of two or more directors of the Company. In addition, to the extent required by the Board, the composition of the Committee shall satisfy (i) such requirements as the Securities and Exchange Commission may establish for administrators acting under plans intended to qualify for exemption under Rule 16b-3 (or its successor) under the Exchange Act; and (ii) such requirements as the Internal Revenue Service may establish for outside directors acting under plans intended to qualify for exemption under Section 162(m)(4)(C) of the Code.

(b) *Committee for Non-Officer Grants.* The Board may also appoint one or more separate committees of the Board, each composed of one or more directors of the Company who need not satisfy the requirements of Section 3(a), who may administer the Plan with respect to Employees who are not considered officers or directors of the Company under Section 16 of the Exchange Act, may grant Awards under the Plan to such Employees and may determine all terms of such grants. Within the limitations of the preceding sentence, any reference in the Plan to the Committee shall include such committee or committees appointed pursuant to the preceding sentence. To the extent permitted by applicable laws, the Board of Directors may also authorize one or more officers of the Company to designate Employees, other than officers under Section 16 of the Exchange Act, to receive Awards and/or to determine the number of such Awards to be received by such persons; provided, however, that the Board of Directors shall specify the total number of Awards that such officers may so award.

(c) *Committee Procedures.* The Board of Directors shall designate one of the members of the Committee as chairman. The Committee may hold meetings at such times and places as it shall determine. The acts of a majority of the Committee members present at meetings at which a quorum exists, or acts reduced to or approved in writing (including via email) by all Committee members, shall be valid acts of the Committee.

(d) *Committee Responsibilities.* Subject to the provisions of the Plan, the Committee shall have full authority and discretion to take the following actions:

- (i) To interpret the Plan and to apply its provisions;
- (ii) To adopt, amend or rescind rules, procedures and forms relating to the Plan;
- (iii) To adopt, amend or terminate sub-plans established for the purpose of satisfying applicable foreign laws including qualifying for preferred tax treatment under applicable foreign tax laws;
- (iv) To authorize any person to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;
- (v) To determine when Awards are to be granted under the Plan;
- (vi) To select the Participants to whom Awards are to be granted;
- (vii) To determine the type of Award and number of Shares or amount of cash to be made subject to each Award;
- (viii) To prescribe the terms and conditions of each Award, including (without limitation) the Exercise Price and Purchase Price, and the vesting or duration of the Award (including accelerating the vesting of Awards, either at the time of the Award or thereafter, without the consent of the Participant), to determine whether an Option is to be classified as an ISO or as a Nonstatutory Option, and to specify the provisions of the agreement relating to such Award;
- (ix) To amend any outstanding Award Agreement, subject to applicable legal restrictions and to the consent of the Participant if the Participant's rights or obligations would be materially impaired;
- (x) To prescribe the consideration for the grant of each Award or other right under the Plan and to determine the sufficiency of such consideration;
- (xi) To determine the disposition of each Award or other right under the Plan in the event of a Participant's divorce or dissolution of marriage;

-
- (xii) To determine whether Awards under the Plan will be granted in replacement of other grants under an incentive or other compensation plan of an acquired business;
 - (xiii) To correct any defect, supply any omission, or reconcile any inconsistency in the Plan or any Award Agreement;
 - (xiv) To establish or verify the extent of satisfaction of any performance goals or other conditions applicable to the grant, issuance, exercisability, vesting and/or ability to retain any Award; and
 - (xv) To take any other actions deemed necessary or advisable for the administration of the Plan.

Subject to the requirements of applicable law, the Committee may designate persons other than members of the Committee to carry out its responsibilities and may prescribe such conditions and limitations as it may deem appropriate, except that the Committee may not delegate its authority with regard to the selection for participation of or the granting of Awards under the Plan to persons subject to Section 16 of the Exchange Act. All decisions, interpretations and other actions of the Committee shall be final and binding on all Participants and all persons deriving their rights from a Participant. No member of the Committee shall be liable for any action that he has taken or has failed to take in good faith with respect to the Plan or any Award under the Plan.

SECTION 4. ELIGIBILITY.

(a) *General Rule.* Only Employees, Consultants and Outside Directors shall be eligible for the grant of Awards. Only common-law employees of the Company, a Parent or a Subsidiary shall be eligible for the grant of ISOs.

(b) *Ten-Percent Stockholders.* An Employee who owns more than 10% of the total combined voting power of all classes of outstanding stock of the Company, a Parent or Subsidiary shall not be eligible for the grant of an ISO unless such grant satisfies the requirements of Section 422(c)(5) of the Code.

(c) *Attribution Rules.* For purposes of Section 4(c) above, in determining stock ownership, an Employee shall be deemed to own the stock owned, directly or indirectly, by or for such Employee's brothers, sisters, spouse, ancestors and lineal descendants. Stock owned, directly or indirectly, by or for a corporation, partnership, estate or trust shall be deemed to be owned proportionately by or for its stockholders, partners or beneficiaries.

(d) *Outstanding Stock.* For purposes of Section 4(c) above, "outstanding stock" shall include all stock actually issued and outstanding immediately after the grant. "Outstanding stock" shall not include shares authorized for issuance under outstanding options held by the Employee or by any other person.

SECTION 5. STOCK SUBJECT TO PLAN.

(a) *Basic Limitation.* Shares offered under the Plan shall be authorized but unissued Shares or treasury Shares. The aggregate number of Shares authorized for issuance as Awards under the Plan (other than Inducement Awards as set forth in Section 15) shall not exceed the sum of (x) 4,250,000 Shares, plus (y) the sum of the number of Shares subject to outstanding awards under the Company's 2010 Stock Plan (the "Predecessor Plan") on the Effective Date that are subsequently forfeited or terminated for any reason before being exercised or settled, plus the number of Shares subject to vesting restrictions under the Predecessor Plan on the Effective Date that are subsequently forfeited, plus the number of reserved Shares not issued or subject to outstanding grants under the Predecessor Plan on the Effective Date, plus (z) an annual increase on the first day of each fiscal year, for a period of not more than ten years, beginning on January 1, 2016, and ending on (and including) January 1, 2025, in an amount equal to the lesser of (i) four percent (4%) of the outstanding Shares on the last day of the immediately preceding fiscal or (ii) if the Board acts prior to the first day of the fiscal year, such lesser amount (including zero) that the Board determines for purposes of the annual increase for that fiscal year. Notwithstanding the foregoing: (A) the number of Shares that may be delivered in the aggregate pursuant to the exercise of ISOs granted under the Plan shall not exceed 16,833,333 Shares plus, to the extent allowable under Section 422 of the Code and the Treasury Regulations promulgated thereunder, any Shares that become available for issuance under the Plan pursuant to Section 5(c); and (B) an additional 543,872 Shares are authorized for issuance as Awards under the Plan as a result of the Company's assumption of the 2015 ArcherDX, Inc. Stock Incentive Plan, provided such Awards may not be issued (I) to persons who were Employees, Consultants or Outside Directors of the Company or its Subsidiaries prior to October 2, 2020 (*i.e.*, the date of the Company's acquisition of ArcherDX, Inc.) or (II) following September 2, 2025 (*i.e.*, the end of the original term of the 2015 ArcherDX, Inc. Stock Incentive Plan). The limitations of this Section 5(a) shall be subject to adjustment pursuant to Section 12. The number of Shares that are subject to Awards outstanding at any time under the Plan shall not exceed the number of Shares which then remain available for issuance under the Plan. The Company shall at all times reserve and keep available sufficient Shares to satisfy the requirements of the Plan.

(b) *Award Limitation.* No Participant eligible for an Award may receive Options or SARs under the Plan, excluding Inducement Awards, in any calendar year that relate to an aggregate of more than 2,000,000 Shares, and no more than two times this amount in the first year of employment. In applying the foregoing limitation with respect to a Participant, if any Option or SAR is canceled, the canceled Option or SAR shall continue to count against the maximum number of Shares with respect to which Options and SARs may be granted to the Participant. For this purpose, the repricing of an Option or SAR shall be treated as the cancellation of the existing Option or SAR and the grant of a new Option or SAR.

(c) *Additional Shares.* If Restricted Shares or Shares issued upon the exercise of Options are forfeited, then such Shares shall again become available for Awards under the Plan. If Stock Units, Options or SARs are forfeited or terminate for any reason before being exercised or settled, or an Award is settled in cash without the delivery of Shares to the holder, then any Shares subject to the Award shall again become available for Awards under the Plan. Only the number of Shares (if any) actually issued in settlement of Awards (and not forfeited) shall reduce the number available in Section 5(a) and the balance shall again become available for Awards

under the Plan. Any Shares withheld to satisfy the grant or exercise price or tax withholding obligation pursuant to any Award shall again become available for Awards under the Plan. Notwithstanding the foregoing provisions of this Section 5(c), Shares that have actually been issued shall not again become available for Awards under the Plan, except for Shares that are forfeited and do not become vested.

(d) *Substitution and Assumption of Awards.* The Committee may make Awards under the Plan by assumption, substitution or replacement of stock options, stock appreciation rights, stock units or similar awards granted by another entity (including a Parent or Subsidiary), if such assumption, substitution or replacement is in connection with an asset acquisition, stock acquisition, merger, consolidation or similar transaction involving the Company (and/or its Parent or Subsidiary) and such other entity (and/or its affiliate). The terms of such assumed, substituted or replaced Awards shall be as the Committee, in its discretion, determines is appropriate. Any such substitute or assumed Awards shall not count against the Share limitation set forth in Section 5(a).

SECTION 6. RESTRICTED SHARES.

(a) *Restricted Share Award Agreement.* Each grant of Restricted Shares under the Plan shall be evidenced by a Restricted Share Award Agreement between the Participant and the Company. Such Restricted Shares shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various Restricted Share Award Agreements entered into under the Plan need not be identical.

(b) *Payment for Awards.* Restricted Shares may be sold or awarded under the Plan for such consideration as the Committee may determine, including (without limitation) cash, cash equivalents, full-recourse promissory notes, past services and future services.

(c) *Vesting.* Each Award of Restricted Shares may or may not be subject to vesting. Vesting shall occur, in full or in installments, upon satisfaction of the conditions specified in the Restricted Share Award Agreement. A Restricted Share Award Agreement may provide for accelerated vesting in the event of the Participant's death, disability or retirement or other events. The Committee may determine, at the time of granting Restricted Shares or thereafter, that all or part of such Restricted Shares shall become vested in the event that a Change in Control occurs with respect to the Company.

(d) *Voting and Dividend Rights.* The holders of Restricted Shares awarded under the Plan shall have the same voting, dividend and other rights as the Company's other stockholders. A Restricted Share Award Agreement, however, may require that the holders of Restricted Shares invest any cash dividends received in additional Restricted Shares. Such additional Restricted Shares shall be subject to the same conditions and restrictions as the Award with respect to which the dividends were paid.

(e) *Restrictions on Transfer of Shares.* Restricted Shares shall be subject to such rights of repurchase, rights of first refusal or other restrictions as the Committee may determine. Such restrictions shall be set forth in the applicable Restricted Share Award Agreement and shall apply in addition to any general restrictions that may apply to all holders of Shares.

SECTION 7. TERMS AND CONDITIONS OF OPTIONS.

(a) *Stock Option Award Agreement.* Each grant of an Option under the Plan shall be evidenced by a Stock Option Award Agreement between the Participant and the Company. Such Option shall be subject to all applicable terms and conditions of the Plan and may be subject to any other terms and conditions which are not inconsistent with the Plan and which the Committee deems appropriate for inclusion in a Stock Option Award Agreement. The Stock Option Award Agreement shall specify whether the Option is an ISO or an NSO. The provisions of the various Stock Option Award Agreements entered into under the Plan need not be identical.

(b) *Number of Shares.* Each Stock Option Award Agreement shall specify the number of Shares that are subject to the Option and shall provide for the adjustment of such number in accordance with Section 12.

(c) *Exercise Price.* Each Stock Option Award Agreement shall specify the Exercise Price. The Exercise Price of an ISO shall not be less than 100% of the Fair Market Value of a Share on the date of grant, except as otherwise provided in 4(c), and the Exercise Price of an NSO shall not be less 100% of the Fair Market Value of a Share on the date of grant. Notwithstanding the foregoing, Options may be granted with an Exercise Price of less than 100% of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code. Subject to the foregoing in this Section 7(c), the Exercise Price under any Option shall be determined by the Committee in its sole discretion. The Exercise Price shall be payable in one of the forms described in Section 8.

(d) *Withholding Taxes.* As a condition to the exercise of an Option, the Participant shall make such arrangements as the Committee may require for the satisfaction of any federal, state, local or foreign withholding tax obligations that may arise in connection with such exercise. The Participant shall also make such arrangements as the Committee may require for the satisfaction of any federal, state, local or foreign withholding tax obligations that may arise in connection with the disposition of Shares acquired by exercising an Option.

(e) *Exercisability and Term.* Each Stock Option Award Agreement shall specify the date when all or any installment of the Option is to become exercisable. The Stock Option Award Agreement shall also specify the term of the Option; provided that the term of an ISO shall in no event exceed 10 years from the date of grant (five years for ISOs granted to Employees described in Section 4(c)). A Stock Option Award Agreement may provide for accelerated exercisability in the event of the Participant's death, disability, or retirement or other events and may provide for expiration prior to the end of its term in the event of the termination of the Participant's Service. Options may be awarded in combination with SARs, and such an Award may provide that the Options will not be exercisable unless the related SARs are forfeited. Subject to the foregoing in this Section 7(e), the Committee at its sole discretion shall determine when all or any installment of an Option is to become exercisable and when an Option is to expire.

(f) *Exercise of Options.* Each Stock Option Award Agreement shall set forth the extent to which the Participant shall have the right to exercise the Option following termination of the Participant's Service with the Company and its Subsidiaries, and the right to exercise the Option of any executors or administrators of the Participant's estate or any person who has acquired such Option(s) directly from the Participant by bequest or inheritance. Such provisions shall be determined in the sole discretion of the Committee, need not be uniform among all Options issued pursuant to the Plan, and may reflect distinctions based on the reasons for termination of Service.

(g) *Effect of Change in Control.* The Committee may determine, at the time of granting an Option or thereafter, that such Option shall become exercisable as to all or part of the Shares subject to such Option in the event that a Change in Control occurs with respect to the Company.

(h) *No Rights as a Stockholder.* A Participant shall have no rights as a stockholder with respect to any Shares covered by his Option until the date of the issuance of a stock certificate for such Shares. No adjustments shall be made, except as provided in Section 12.

(i) *Modification, Extension and Renewal of Options.* Within the limitations of the Plan, the Committee may modify, extend or renew outstanding options or may accept the cancellation of outstanding options (to the extent not previously exercised), whether or not granted hereunder, in return for the grant of new Options for the same or a different number of Shares and at the same or a different Exercise Price, or in return for the grant of a different Award for the same or a different number of Shares, without stockholder approval. The foregoing notwithstanding, no modification of an Option shall, without the consent of the Participant, materially impair his or her rights or obligations under such Option.

(j) *Restrictions on Transfer of Shares.* Any Shares issued upon exercise of an Option shall be subject to such special forfeiture conditions, rights of repurchase, rights of first refusal and other transfer restrictions as the Committee may determine. Such restrictions shall be set forth in the applicable Stock Option Award Agreement and shall apply in addition to any general restrictions that may apply to all holders of Shares.

(k) *Buyout Provisions.* The Committee may at any time (a) offer to buy out for a payment in cash or cash equivalents an Option previously granted or (b) authorize a Participant to elect to cash out an Option previously granted, in either case at such time and based upon such terms and conditions as the Committee shall establish.

SECTION 8. PAYMENT FOR SHARES.

(a) *General Rule.* The entire Exercise Price or Purchase Price of Shares issued under the Plan shall be payable in lawful money of the United States of America at the time when such Shares are purchased, except as provided in Section 8(b) through Section 8(h) below.

(b) *Surrender of Stock.* To the extent that a Stock Option Award Agreement so provides, payment may be made all or in part by surrendering, or attesting to the ownership of, Shares which have already been owned by the Participant or his representative. Such Shares shall be valued at their Fair Market Value on the date when the new Shares are purchased under the Plan. The Participant shall not surrender, or attest to the ownership of, Shares in payment of the Exercise Price if such action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to the Option for financial reporting purposes.

(c) *Services Rendered.* At the discretion of the Committee, Shares may be awarded under the Plan in consideration of services rendered to the Company or a Subsidiary. If Shares are awarded without the payment of a Purchase Price in cash, the Committee shall make a determination (at the time of the Award) of the value of the services rendered by the Participant and the sufficiency of the consideration to meet the requirements of Section 6(b).

(d) *Cashless Exercise.* To the extent that a Stock Option Award Agreement so provides, payment may be made all or in part by delivery (on a form prescribed by the Committee) of an irrevocable direction to a securities broker to sell Shares and to deliver all or part of the sale proceeds to the Company in payment of the aggregate Exercise Price.

(e) *Exercise/Pledge.* To the extent that a Stock Option Award Agreement so provides, payment may be made all or in part by delivery (on a form prescribed by the Committee) of an irrevocable direction to a securities broker or lender to pledge Shares, as security for a loan, and to deliver all or part of the loan proceeds to the Company in payment of the aggregate Exercise Price.

(f) *Net Exercise.* To the extent that a Stock Option Award Agreement so provides, by a “net exercise” arrangement pursuant to which the number of Shares issuable upon exercise of the Option shall be reduced by the largest whole number of Shares having an aggregate Fair Market Value that does not exceed the aggregate exercise price (plus tax withholdings, if applicable) and any remaining balance of the aggregate exercise price (and/or applicable tax withholdings) not satisfied by such reduction in the number of whole Shares to be issued shall be paid by the Optionee in cash other form of payment permitted under the Stock Option Agreement.

(g) *Promissory Note.* To the extent that a Stock Option Award Agreement or Restricted Share Award Agreement so provides, payment may be made all or in part by delivering (on a form prescribed by the Company) a full-recourse promissory note.

(h) *Other Forms of Payment.* To the extent that a Stock Option Award Agreement or Restricted Share Award Agreement so provides, payment may be made in any other form that is consistent with applicable laws, regulations and rules.

(i) *Limitations under Applicable Law.* Notwithstanding anything herein or in a Stock Option Award Agreement or Restricted Share Award Agreement to the contrary, payment may not be made in any form that is unlawful, as determined by the Committee in its sole discretion.

SECTION 9. STOCK APPRECIATION RIGHTS.

(a) *SAR Award Agreement.* Each grant of a SAR under the Plan shall be evidenced by a SAR Award Agreement between the Participant and the Company. Such SAR shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various SAR Award Agreements entered into under the Plan need not be identical.

(b) *Number of Shares.* Each SAR Award Agreement shall specify the number of Shares to which the SAR pertains and shall provide for the adjustment of such number in accordance with Section 12.

(c) *Exercise Price.* Each SAR Award Agreement shall specify the Exercise Price. The Exercise Price of a SAR shall not be less than 100% of the Fair Market Value of a Share on the date of grant. Notwithstanding the foregoing, SARs may be granted with an Exercise Price of less than 100% of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code. Subject to the foregoing in this Section 9(c), the Exercise Price under any SAR shall be determined by the Committee in its sole discretion.

(d) *Exercisability and Term.* Each SAR Award Agreement shall specify the date when all or any installment of the SAR is to become exercisable. The SAR Award Agreement shall also specify the term of the SAR. A SAR Award Agreement may provide for accelerated exercisability in the event of the Participant's death, disability or retirement or other events and may provide for expiration prior to the end of its term in the event of the termination of the Participant's service. SARs may be awarded in combination with Options, and such an Award may provide that the SARs will not be exercisable unless the related Options are forfeited. A SAR may be included in an ISO only at the time of grant but may be included in an NSO at the time of grant or thereafter. A SAR granted under the Plan may provide that it will be exercisable only in the event of a Change in Control.

(e) *Effect of Change in Control.* The Committee may determine, at the time of granting a SAR or thereafter, that such SAR shall become fully exercisable as to all Common Shares subject to such SAR in the event that a Change in Control occurs with respect to the Company.

(f) *Exercise of SARs.* Upon exercise of a SAR, the Participant (or any person having the right to exercise the SAR after his or her death) shall receive from the Company (a) Shares, (b) cash or (c) a combination of Shares and cash, as the Committee shall determine. The amount of cash and/or the Fair Market Value of Shares received upon exercise of SARs shall, in the aggregate, be equal to the amount by which the Fair Market Value (on the date of surrender) of the Shares subject to the SARs exceeds the Exercise Price.

(g) *Modification or Assumption of SARs.* Within the limitations of the Plan, the Committee may modify, extend or assume outstanding SARs or may accept the cancellation of outstanding SARs (whether granted by the Company or by another issuer) in return for the grant of new SARs for the same or a different number of shares and at the same or a different exercise price, or in return for the grant of a different Award for the same or a different number of Shares, without stockholder approval. The foregoing notwithstanding, no modification of a SAR shall, without the consent of the holder, materially impair his or her rights or obligations under such SAR.

(h) *Buyout Provisions.* The Committee may at any time (a) offer to buy out for a payment in cash or cash equivalents a SAR previously granted, or (b) authorize a Participant to elect to cash out a SAR previously granted, in either case at such time and based upon such terms and conditions as the Committee shall establish.

SECTION 10. STOCK UNITS.

(a) *Stock Unit Award Agreement.* Each grant of Stock Units under the Plan shall be evidenced by a Stock Unit Award Agreement between the Participant and the Company. Such Stock Units shall be subject to all applicable terms of the Plan and may be subject to any other terms that are not inconsistent with the Plan. The provisions of the various Stock Unit Award Agreements entered into under the Plan need not be identical.

(b) *Payment for Awards.* To the extent that an Award is granted in the form of Stock Units, no cash consideration shall be required of the Award recipients.

(c) *Vesting Conditions.* Each Award of Stock Units may or may not be subject to vesting. Vesting shall occur, in full or in installments, upon satisfaction of the conditions specified in the Stock Unit Award Agreement. A Stock Unit Award Agreement may provide for accelerated vesting in the event of the Participant's death, disability or retirement or other events. The Committee may determine, at the time of granting Stock Units or thereafter, that all or part of such Stock Units shall become vested in the event that a Change in Control occurs with respect to the Company.

(d) *Voting and Dividend Rights.* The holders of Stock Units shall have no voting rights. Prior to settlement or forfeiture, any Stock Unit awarded under the Plan may, at the Committee's discretion, carry with it a right to dividend equivalents. Such right entitles the holder to be credited with an amount equal to all cash dividends paid on one Share while the Stock Unit is outstanding. Dividend equivalents may be converted into additional Stock Units. Settlement of dividend equivalents may be made in the form of cash, in the form of Shares, or in a combination of both. Prior to distribution, any dividend equivalents which are not paid shall be subject to the same conditions and restrictions (including without limitation, any forfeiture conditions) as the Stock Units to which they attach.

(e) *Form and Time of Settlement of Stock Units.* Settlement of vested Stock Units may be made in the form of (a) cash, (b) Shares or (c) any combination of both, as determined by the Committee. The actual number of Stock Units eligible for settlement may be larger or smaller than the number included in the original Award, based on predetermined performance factors. Methods of converting Stock Units into cash may include (without limitation) a method based on the average Fair Market Value of Shares over a series of trading days. A Stock Unit Award Agreement may provide that vested Stock Units may be settled in a lump sum or in installments. A Stock Unit Award Agreement may provide that the distribution may occur or commence when all vesting conditions applicable to the Stock Units have been satisfied or have lapsed, or it may be deferred to any later date, subject to compliance with Section 409A of the Code. The amount of a deferred distribution may be increased by an interest factor or by dividend equivalents. Until an Award of Stock Units is settled, the number of such Stock Units shall be subject to adjustment pursuant to Section 12.

(f) *Death of Participant.* Any Stock Unit Award that becomes payable after the Participant's death shall be distributed to the Participant's beneficiary or beneficiaries. Each recipient of a Stock Unit Award under the Plan shall designate one or more beneficiaries for this purpose by filing the prescribed form with the Company. A beneficiary designation may be changed by filing the prescribed form with the Company at any time before the Participant's death. If no beneficiary was designated or if no designated beneficiary survives the Participant, then any Stock Units Award that becomes payable after the Participant's death shall be distributed to the Participant's estate.

(g) *Creditors' Rights.* A holder of Stock Units shall have no rights other than those of a general creditor of the Company. Stock Units represent an unfunded and unsecured obligation of the Company, subject to the terms and conditions of the applicable Stock Unit Award Agreement.

SECTION 11. CASH-BASED AWARDS

The Committee may, in its sole discretion, grant Cash-Based Awards to any Participant in such number or amount and upon such terms, and subject to such conditions, as the Committee shall determine at the time of grant and specify in an applicable Award Agreement. The Committee shall determine the maximum duration of the Cash-Based Award, the amount of cash which may be payable pursuant to the Cash-Based Award, the conditions upon which the Cash-Based Award shall become vested or payable, and such other provisions as the Committee shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula or payment ranges as determined by the Committee. Payment, if any, with respect to a Cash-Based Award shall be made in accordance with the terms of the Award and may be made in cash or in shares of Stock, as the Committee determines.

SECTION 12. ADJUSTMENT OF SHARES.

(a) *Adjustments.* In the event of a subdivision of the outstanding Stock, a declaration of a dividend payable in Shares, a declaration of a dividend payable in a form other than Shares in an amount that has a material effect on the price of Shares, a combination or consolidation of the outstanding Stock (by reclassification or otherwise) into a lesser number of Shares, a recapitalization, a spin-off or a similar occurrence, the Committee shall make appropriate and equitable adjustments in:

- (i) The number of Shares available for future Awards under Section 5;
- (ii) The limitations set forth in Sections 5(a) and (b) and Section 19;
- (iii) The number of Shares covered by each outstanding Award; and
- (iv) The Exercise Price under each outstanding Option and SAR.

(b) *Dissolution or Liquidation.* To the extent not previously exercised or settled, Options, SARs and Stock Units shall terminate immediately prior to the dissolution or liquidation of the Company.

(c) *Reorganizations*. In the event that the Company is a party to a merger or other reorganization, outstanding Awards shall be subject to the agreement of merger or reorganization. Subject to compliance with Section 409A of the Code, such agreement shall provide for:

- (i) The continuation of the outstanding Awards by the Company, if the Company is a surviving corporation;
- (ii) The assumption of the outstanding Awards by the surviving corporation or its parent or subsidiary;
- (iii) The substitution by the surviving corporation or its parent or subsidiary of its own awards for the outstanding Awards;
- (iv) Immediate vesting, exercisability and settlement of outstanding Awards followed by the cancellation of such Awards upon or immediately prior to the effectiveness of such transaction; or
- (v) Settlement of the intrinsic value of the outstanding Awards (whether or not then vested or exercisable) in cash or cash equivalents or equity (including cash or equity subject to deferred vesting and delivery consistent with the vesting restrictions applicable to such Awards or the underlying Shares) followed by the cancellation of such Awards (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Committee determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment); in each case without the Participant's consent. Any acceleration of payment of an amount that is subject to section 409A of the Code will be delayed, if necessary, until the earliest time that such payment would be permissible under Section 409A without triggering any additional taxes applicable under Section 409A.

The Company will have no obligation to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly.

(d) *Reservation of Rights*. Except as provided in this Section 12, a Participant shall have no rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend or any other increase or decrease in the number of shares of stock of any class. Any issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or Exercise Price of Shares subject to an Award. The grant of an Award pursuant to the Plan shall not affect in any way the right or power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure, to merge or consolidate or to dissolve, liquidate, sell or transfer all or any part of its business or assets. In the event of any change affecting the Shares or the Exercise Price of Shares subject to an Award, including a merger or other reorganization, for reasons of administrative convenience, the Company in its sole discretion may refuse to permit the exercise of any Award during a period of up to thirty (30) days prior to the occurrence of such event.

SECTION 13. DEFERRAL OF AWARDS.

(a) *Committee Powers.* Subject to compliance with Section 409A of the Code, the Committee (in its sole discretion) may permit or require a Participant to:

- (i) Have cash that otherwise would be paid to such Participant as a result of the exercise of a SAR or the settlement of Stock Units credited to a deferred compensation account established for such Participant by the Committee as an entry on the Company's books;
- (ii) Have Shares that otherwise would be delivered to such Participant as a result of the exercise of an Option or SAR converted into an equal number of Stock Units; or
- (iii) Have Shares that otherwise would be delivered to such Participant as a result of the exercise of an Option or SAR or the settlement of Stock Units converted into amounts credited to a deferred compensation account established for such Participant by the Committee as an entry on the Company's books. Such amounts shall be determined by reference to the Fair Market Value of such Shares as of the date when they otherwise would have been delivered to such Participant.

(b) *General Rules.* A deferred compensation account established under this Section 13 may be credited with interest or other forms of investment return, as determined by the Committee. A Participant for whom such an account is established shall have no rights other than those of a general creditor of the Company. Such an account shall represent an unfunded and unsecured obligation of the Company and shall be subject to the terms and conditions of the applicable agreement between such Participant and the Company. If the deferral or conversion of Awards is permitted or required, the Committee (in its sole discretion) may establish rules, procedures and forms pertaining to such Awards, including (without limitation) the settlement of deferred compensation accounts established under this Section 13.

SECTION 14. AWARDS UNDER OTHER PLANS.

The Company may grant awards under other plans or programs. Such awards may be settled in the form of Shares issued under this Plan. Such Shares shall be treated for all purposes under the Plan like Shares issued in settlement of Stock Units and shall, when issued, reduce the number of Shares available under Section 5.

SECTION 15. INDUCEMENT AWARDS POOL.

(a) *Inducement Share Reserve.* An additional pool of Shares (the "*Inducement Shares*") are reserved under this Plan to be used exclusively for the grant of Awards in compliance with New York Stock Exchange Rule 303A.08 (the "*Inducement Awards*"). The pool of Inducement Shares shall not exceed in the aggregate (a) 595,000 Shares ("*Share-based*")

Inducement Awards”), plus (b) \$341,225,000, with the specific number of Shares within such \$341,225,000 limit based on (i) the Fair Market Value of a Share on the vesting date of the Inducement Shares or, if so provided in the Award Agreement, the volume-weighted average trading price of a Share for up to 60 days immediately preceding such vesting date, (ii) the Fair Market Value of a Share on the date of grant of an Inducement Award, or (iii) any other value of a Share in the applicable agreement setting forth an Inducement Award including but not limited to an asset acquisition agreement, a stock acquisition agreement, a merger agreement, or any similar agreement (“*Value-based Inducement Awards*”). The number of Inducement Shares shall be subject to adjustment pursuant to Section 12, as applicable. For purposes of clarity, the Inducement Shares that may be awarded are in addition to and shall not reduce the number of Shares reserved under Section 5(a) for Awards other than Inducement Awards. The Shares underlying any Inducement Awards that are forfeited, canceled, held back upon exercise of an Inducement Award or settlement of an Inducement Award to cover the exercise price or tax withholding, reacquired by the Company prior to vesting, settled without the issuance of Shares or otherwise terminated (other than by exercise) shall be added back to the number of Inducement Shares available for grant under this Section 15 based on the number of Shares forfeited, canceled, held back, reacquired, settled without the issuance of Shares or otherwise terminated (other than by exercise) for Share-based Inducement Awards and based on vesting date Fair Market Value of the Inducement Shares returning to the Plan or other valuation method set forth in the Award Agreement for Value-based Inducement Awards, but shall not affect the number of Shares available for Awards under Section 5(a).

(b) *Inducement Award Rules*. Notwithstanding anything to the contrary in this Plan, an Inducement Award may be granted only to an Employee as an inducement material to the individual’s entering into employment with the Company or an Affiliate within the meaning of New York Stock Exchange Rule 303A.08 and only if such individual has not previously been an Employee or has experienced a bona fide period of interruption of employment with the Company and its Affiliates prior to grant of the Inducement Award. In addition, notwithstanding any other provision of the Plan to the contrary, all such Inducement Awards must be granted by the Committee. No Inducement Award may be an ISO.

SECTION 16. PAYMENT OF DIRECTOR’S FEES IN SECURITIES.

(a) *Effective Date*. No provision of this Section 16 shall be effective unless and until the Board has determined to implement such provision.

(b) *Elections to Receive NSOs, SARs, Restricted Shares or Stock Units*. An Outside Director may elect to receive his or her annual retainer payments and/or meeting fees from the Company in the form of cash, NSOs, SARs, Restricted Shares or Stock Units, or a combination thereof, as determined by the Board. Alternatively, the Board may mandate payment in any of such alternative forms. Such NSOs, SARs, Restricted Shares and Stock Units shall be issued under the Plan. An election under this Section 16 shall be filed with the Company on the prescribed form.

(c) *Number and Terms of NSOs, SARs, Restricted Shares or Stock Units*. The number of NSOs, SARs, Restricted Shares or Stock Units to be granted to Outside Directors in lieu of annual retainers and meeting fees that would otherwise be paid in cash shall be calculated in a manner determined by the Board. The terms of such NSOs, SARs, Restricted Shares or Stock Units shall also be determined by the Board.

SECTION 17. LEGAL AND REGULATORY REQUIREMENTS.

Shares shall not be issued under the Plan unless the issuance and delivery of such Shares complies with (or is exempt from) all applicable requirements of law, including (without limitation) the Securities Act of 1933, as amended, the rules and regulations promulgated thereunder, state securities laws and regulations and the regulations of any stock exchange on which the Company's securities may then be listed, and the Company has obtained the approval or favorable ruling from any governmental agency which the Company determines is necessary or advisable. The Company shall not be liable to a Participant or other persons as to: (a) the non-issuance or sale of Shares as to which the Company has not obtained from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares under the Plan; and (b) any tax consequences expected, but not realized, by any Participant or other person due to the receipt, exercise or settlement of any Award granted under the Plan.

SECTION 18. TAXES.

(a) *Withholding Taxes.* To the extent required by applicable federal, state, local or foreign law, a Participant or his or her successor shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise in connection with the Plan. The Company shall not be required to issue any Shares or make any cash payment under the Plan until such obligations are satisfied.

(b) *Share Withholding.* The Committee may permit a Participant to satisfy all or part of his or her withholding or income tax obligations by having the Company withhold all or a portion of any Shares that otherwise would be issued to him or her or by surrendering all or a portion of any Shares that he or she previously acquired. Such Shares shall be valued at their Fair Market Value on the date when taxes otherwise would be withheld in cash. In no event may a Participant have Shares withheld that would otherwise be issued to him or her in excess of the number necessary to satisfy the minimum legally required tax withholding.

(c) *Section 409A.* Each Award that provides for "nonqualified deferred compensation" within the meaning of Section 409A of the Code shall be subject to such additional rules and requirements as specified by the Committee from time to time in order to comply with Section 409A. If any amount under such an Award is payable upon a "separation from service" (within the meaning of Section 409A) to a Participant who is then considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the Participant's separation from service, or (ii) the Participant's death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. In addition, the settlement of any such Award may not be accelerated except to the extent permitted by Section 409A.

SECTION 19. TRANSFERABILITY.

Unless the agreement evidencing an Award (or an amendment thereto authorized by the Committee) expressly provides otherwise, no Award granted under this Plan, nor any interest in such Award, may be sold, assigned, conveyed, gifted, pledged, hypothecated or otherwise transferred in any manner (prior to the vesting and lapse of any and all restrictions applicable to Shares issued under such Award), other than by will or the laws of descent and distribution; provided, however, that an ISO may be transferred or assigned only to the extent consistent with Section 422 of the Code. Any purported assignment, transfer or encumbrance in violation of this Section 19 shall be void and unenforceable against the Company.

SECTION 20. PERFORMANCE BASED AWARDS.

The number of Shares or other benefits granted, issued, retainable and/or vested under an Award may be made subject to the attainment of performance goals. The Committee may utilize any performance criteria selected by it in its sole discretion to establish performance goals; provided, however, that in the case of any Performance Based Award, the following conditions shall apply:

- (i) The amount potentially available under a Performance Based Award shall be subject to the attainment of pre-established, objective performance goals relating to a specified period of service including but not limited to any of the following performance criteria: (a) cash flow, (b) earnings per share, (c) earnings before interest, taxes and amortization, (d) return on equity, (e) total stockholder return, (f) share price performance, (g) return on capital, (h) return on assets or net assets, (i) revenue, (j) income or net income, (k) operating income or net operating income, (l) operating profit or net operating profit, (m) operating margin or profit margin, (n) return on operating revenue, (o) return on invested capital, (p) market segment shares, (q) costs, (r) expenses, (s) initiation or completion of research activities, (t) initiation or completion of development programs, (u) other milestones with respect to research activities or development programs, (v) regulatory body approval, (w) implementation or completion of critical projects, (x) commercial milestones or (z) other milestones with respect to the growth of the Company's business or the development or commercialization of any product or service ("*Qualifying Performance Criteria*"), any of which may be measured either individually, alternatively or in any combination, applied to either the Company as a whole or to a business unit or Subsidiary, either individually, alternatively or in any combination, and measured either annually or cumulatively over a period of years, on an absolute basis or relative to a pre-established target, to previous years' results or to a designated comparison group or index, in each case as specified by the Committee in the Award;

-
- (ii) The Committee may appropriately adjust the method of evaluating performance under a Qualifying Performance Criteria for a performance period as follows: (i) to exclude asset write-downs, (ii) to exclude litigation or claim judgments or settlements, (iii) to exclude the effect of changes in tax law, accounting principles or other such laws or provisions affecting reported results, (iv) to exclude accruals for reorganization and restructuring programs, (v) to exclude any extraordinary nonrecurring items as determined under generally accepted accounting principles and/or described in managements' discussion and analysis of financial condition and results of operations appearing in the Company's annual report to stockholders for the applicable year, (vi) to exclude the dilutive effects of acquisitions or joint ventures, (vii) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a performance period following such divestiture, (viii) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends, (ix) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; and (x) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles;
 - (iii) The Committee shall establish the applicable performance goals in writing and an objective method for determining the Award earned by a Participant if the goals are attained, while the outcome is substantially uncertain, and shall determine and certify in writing, for each Participant, the extent to which the performance goals have been met prior to payment or vesting of the Award; and
 - (iv) The maximum aggregate number of Shares that may be subject to Performance Based Awards granted to a Participant in any calendar year (other than Inducement Awards) is 2,000,000 Shares, and no more than two times this amount in the first year of employment (subject to adjustment under Section 12), and the maximum aggregate amount of cash that may be payable to a Participant under Performance Based Awards granted to a Participant in any calendar year that are Cash-Based Awards is \$10,000,000.

SECTION 21. NO EMPLOYMENT RIGHTS.

No provision of the Plan, nor any Award granted under the Plan, shall be construed to give any person any right to become, to be treated as, or to remain an Employee or Consultant. The Company and its Subsidiaries reserve the right to terminate any person's Service at any time and for any reason, with or without notice.

SECTION 22. DURATION AND AMENDMENTS.

(a) *Term of the Plan.* The Plan, as set forth herein, shall come into existence on the date of its adoption by the Board of Directors; provided, however, that no Award may be granted hereunder prior to the Effective Date. The Board of Directors may suspend or terminate the Plan at any time. No ISOs may be granted after the tenth anniversary of the earlier of (i) the date the Plan is adopted by the Board of Directors, or (ii) the date the Plan is approved the stockholders of the Company.

(b) *Right to Amend the Plan.* The Board of Directors may amend the Plan at any time and from time to time. Rights and obligations under any Award granted before amendment of the Plan shall not be materially impaired by such amendment, except with consent of the Participant. An amendment of the Plan shall be subject to the approval of the Company's stockholders only to the extent required by applicable laws, regulations or rules.

(c) *Effect of Termination.* No Awards shall be granted under the Plan after the termination thereof. The termination of the Plan shall not affect Awards previously granted under the Plan.

SECTION 23. EXECUTION.

To record the amendment and restatement of the Plan by the Board of Directors, the Company has caused its authorized officer to execute the same.

INVITAE CORPORATION

By /s/ Thomas Brida
Name : Thomas Brida
Title: General Counsel and Secretary