

INTERLEUKIN GENETICS INC

Form 424B3

December 29, 2014

**Filed pursuant to Rule 424(b)(3)**

**Registration No. 333-189749**

**PROSPECTUS SUPPLEMENT NO. 5**

**To Prospectus dated May 29, 2014**

**120,408,197 SHARES OF COMMON STOCK**

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This prospectus supplement supplements the prospectus dated May 29, 2014, relating to the offering and resale by the selling stockholders of up to 120,408,197 shares of our common stock. We will not receive any proceeds from the sale of these shares by the selling stockholders.

This prospectus supplement incorporates into our prospectus the information contained in our attached current report on Form 8-K, which was filed with the Securities and Exchange Commission on December 23, 2014.

You should read this prospectus supplement in conjunction with the prospectus, including any supplements and amendments thereto. This prospectus supplement is qualified by reference to the prospectus except to the extent that the information in this prospectus supplement supersedes the information contained in the prospectus.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the prospectus, including any supplements and amendments thereto.

Our common stock is traded on the OTCQB under the symbol "ILIU". On December 23, 2014, the closing sale price of our common stock on the OTCQB was \$0.109 per share.

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**AN INVESTMENT IN OUR COMMON STOCK INVOLVES RISKS. SEE THE SECTION ENTITLED "RISK FACTORS" BEGINNING ON PAGE 4 OF THE PROSPECTUS.**

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

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The date of this prospectus supplement is December 23, 2014

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, DC 20549**

**FORM 8-K**

**CURRENT REPORT PURSUANT**

**TO SECTION 13 OR 15(D) OF THE**

**SECURITIES EXCHANGE ACT OF 1934**

Date of report (Date of earliest event reported): **December 23, 2014**

**Interleukin Genetics, Inc.**

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation)

**001-32715**

(Commission File Number)

**94-3123681**

(IRS Employer Identification No.)

**135 Beaver Street Waltham, MA**

(Address of Principal Executive Offices)

**02452**

(Zip Code)

**(781) 398-0700**

(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Item 1.01. Entry into a Material Definitive Agreement**

*Securities Purchase Agreement*

On December 23, 2014, Interleukin Genetics, Inc. (the “Company” or “Interleukin”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) with various accredited investors (the “Purchasers”), pursuant to which Interleukin sold securities to the Purchasers in a private placement transaction (the “Offering”). Under the terms of the Offering, Interleukin sold an aggregate of 50,099,700 shares (the “Shares”) of its common stock, \$0.001 par value per share (the “Common Stock”), at a price of \$0.1003 per share for gross proceeds of \$5.0 million. The Purchasers also received warrants to purchase up to an aggregate of 50,099,700 shares of Common Stock at an exercise price of \$0.1003 per share (the “Warrants”). The Warrants are exercisable immediately and, and have a term of seven (7) years from the date of grant.

Pursuant to the terms of the Purchase Agreement, the number of persons which constitutes the entire Board will remain at seven (7), and shall continue to be composed of:

two (2) Class I directors with terms ending at the 2016 annual meeting of stockholders, consisting of one (i) independent director (currently William C. Mills III) and one director designated by Pyxis Innovations Inc. (“Pyxis”) (currently Joseph M. Landstra);

two (2) Class II directors with terms ending at the 2017 annual meeting of stockholders, consisting of the (ii) Company’s Chief Executive Officer (currently Kenneth Kornman) and one director designated by Bay City Capital Fund V, L.P. (“Bay City”) (currently Dayton Misfeldt); and

three (3) Class III directors with terms ending at the 2015 annual meeting of stockholders, consisting of one (iii) director designated by Pyxis (currently Roger C. Colman), one independent director (currently James Weaver), and one director designated by Bay City (currently Lionel Carnot).

The Purchase Agreement also provides that a board member designated by Pyxis shall serve on the Audit Committee and a board member designated by Bay City shall serve on each of the Audit Committee, the Compensation Committee and the Nominating Committee. Currently, Joseph Landstra serves as the Pyxis designee on the Audit Committee, Lionel Carnot serves as the Bay City designee on the Audit and Nominating Committees and Dayton Misfeldt serves as the Bay City designee on the Compensation Committee.

In addition, pursuant to the Purchase Agreement, Growth Equity Opportunities Fund III, LLC's ("GEOF") has been granted Board observer rights.

In the Offering, (i) Bay City affiliated funds purchased an aggregate of 26,491,952 Shares for an aggregate purchase price of \$2,657,143 and were issued Warrants to purchase an aggregate of 26,491,952 shares of Common Stock and (ii) GEOF purchased an aggregate of 19,868,965 Shares for an aggregate purchase price of \$1,992,857 and were issued Warrants to purchase an aggregate of 19,868,965 shares of Common Stock.

For its services as exclusive placement agent BTIG, LLC ("BTIG") received cash compensation in the amount of approximately \$155,250 and a warrant to purchase 89,731 shares of Common Stock, which has terms identical to those issued to the Purchasers in the Offering (the "BTIG Warrant").

#### *Registration Rights Agreement*

On December 23, 2014, the Company also entered into a Registration Rights Agreement with the Purchasers and BTIG (the "RRA"), pursuant to which the Company is required to file a registration statement on Form S-1 within 45 days to cover the resale of (i) the Shares sold to the Purchasers in the Offering and the shares of Common Stock underlying the Warrants, and (ii) the shares of Common Stock underlying the BTIG Warrants.

The failure on the part of the Company to satisfy certain deadlines described in the RRA may subject the Company to payment of certain monetary penalties.

*Venture Loan and Security Agreement*

On December 23, 2014, the Company also entered into a venture loan and security agreement (the “Loan Agreement”) with Horizon Technology Finance Corporation (the “Lender”) under which the Company has borrowed \$5.0 million (the “Loan” or “Debt Transaction”). The Loan will bear interest at a floating rate equal to the One Month LIBOR Rate (with a floor of 0.50%) plus 8.50%. In the event that the One Month LIBOR Rate, as reported in the Wall Street Journal, exceeds 0.50%, the Interest Rate shall be adjusted by an amount equal to the difference between such rates at the end of that particular month.

The Company has agreed to repay the Loan in forty-five (45) monthly payments consisting of fifteen (15) monthly payments of interest only followed by thirty (30) equal monthly payments of principal and interest. In addition, at the end of the repayment term (or at early termination of the Loan) a final payment equal to 4.5% of the Loan will be due and payable. The Company may prepay the Loan by paying all accrued interest through the date of prepayment, the then outstanding principal balance and a prepayment premium equal to a declining percentage of the principal amount outstanding at the time of prepayment. That percentage will be 4% during the first fifteen months following the issuance of the Loan, 2% during the following twelve months, and 1% thereafter.

The Company’s obligations under the Loan Agreement are secured by a first priority security interest in substantially all of its assets other than its intellectual property. The Company also has agreed not to pledge or otherwise encumber its intellectual property assets, subject to certain exceptions.

The Loan Agreement includes customary affirmative and restrictive covenants, but does not include any covenants to attain or maintain certain financial metrics, and also includes customary events of default, including payment defaults, breaches of covenants, change of control and a material adverse change default. Upon the occurrence of an event of default and following any applicable cure periods, a default interest rate of an additional 5% may be applied to the outstanding loan balances, and the Lender may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement.

In connection with the Loan Agreement, the Company issued to the Lender and its affiliates warrants to purchase a total of 2,492,523 shares of Common Stock at an exercise price of \$0.1003 per share (the “Lender Warrants”). The Lender Warrants have a term of ten (10) years.

*Copies of the Purchase Agreement, the form of Warrant, the RRA, the Lender Warrant and the Loan Agreement are filed herewith as Exhibits 10.1, 4.1, 10.2, 4.2 and 10.3, respectively, to this Report and are incorporated herein by reference. The foregoing description of the Offering and the Debt Transaction and the documentation related thereto does not purport to be complete and is qualified in its entirety by reference to such Exhibits. The Purchase Agreement*

*and the Loan Agreement have been included to provide investors and security holders with information regarding their terms. They are not intended to provide any other factual information about the Company. The representations, warranties and covenants contained in such documents were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties. The representations and warranties have been made for the purposes of allocating contractual risk between the parties to the agreement instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors.*

**Item 2.03. Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.**

The information set forth above in Item 1.01 under “Venture Loan and Security Agreement” that relates to the creation of a direct financial obligation of the Company is hereby incorporated by reference into this Item 2.03.

**Item 3.02. Unregistered Sales of Equity Securities**

The disclosure set forth above in Item 1.01 is hereby incorporated by reference into this Item 3.02. The Shares and Warrants were sold, the BTIG Warrants were issued, and the Lender Warrants were issued in transactions exempt from registration under the Securities Act of 1933, in reliance on Section 4(2) thereof and Rule 506 of Regulation D thereunder.



**Item 8.01. Other Events.**

On December 23, 2014, the Company issued a press release announcing the Offering and the Debt Transaction. The Company's press release is filed as Exhibit 99.1 to this Report and is incorporated herein by reference.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

4.1 Form of Warrant issued to the Purchasers and to BTIG, LLC.

4.2 Warrant issued to Horizon Technology Finance Corporation and its affiliates.

10.1 Securities Purchase Agreement, dated December 23, 2014, by and among Interleukin and the Purchasers.

10.2 Registration Rights Agreement, dated December 23, 2014, by and among Interleukin, the Purchasers and BTIG, LLC.

10.3 Venture Loan and Security Agreement, dated December 23, 2014, by and between Interleukin and Horizon Technology Finance Corporation.

99.1 Press Release dated December 23, 2014.

**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

INTERLEUKIN GENETICS, INC.

Date: December 23, 2014 /s/ Kenneth S. Kornman  
Kenneth S. Kornman  
President and Chief Executive Officer

## EXHIBIT 4.1

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

## COMMON STOCK PURCHASE WARRANT

### Interleukin Genetics, Inc.

Warrant Shares: [\_\_\_\_\_] December 23, 2014

THIS COMMON STOCK PURCHASE WARRANT (the "**Warrant**") certifies that, for value received, [\_\_\_\_\_] (the "**Holder**") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Initial Exercise Date (as defined below), and on or prior to the close of business on the seven (7) year anniversary of the Initial Exercise Date (the "**Termination Date**") but not thereafter, to subscribe for and purchase from Interleukin Genetics, Inc., a Delaware corporation (the "**Company**"), up to [\_\_\_\_\_] shares (the "**Warrant Shares**") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). The "**Initial Exercise Date**" shall mean the date hereof.

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the "**Purchase Agreement**"), dated December 23, 2014, among the Company and the purchasers signatory thereto.



Section 2.      Exercise.

a)      Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed facsimile copy of the Notice of Exercise Form annexed hereto; and, within three (3) Trading Days of the date said Notice of Exercise is delivered to the Company, the Company shall have received payment in the amount obtained by multiplying the Exercise Price then in effect by the number of Warrant Shares thereby being purchased, as designated in the Notice of Exercise (the “**Aggregate Exercise Price**”) by wire transfer or cashier’s check drawn on a United States bank or pursuant to the cashless exercise procedure specified in Section 2(c) below. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise Form within two (2) Business Days of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b)      Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be \$0.1003, subject to adjustment hereunder (the “**Exercise Price**”).

c)      Cashless Exercise. In lieu of payment of the Aggregate Exercise Price, at the option of the Holder, this Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a certificate for the number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = the VWAP on the Trading Day immediately preceding the date on which Holder elects to exercise this Warrant by means of a “cashless exercise,” as set forth in the applicable Notice of Exercise;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

-2-

“**VWAP**” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if the Common Stock is not then listed or quoted for trading on a Trading Market and if prices for the Common Stock are then reported in the “Pink Sheets” published by Pink OTC Markets, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Company and reasonably acceptable to the Holders of a majority in interest of the Securities then outstanding, the fees and expenses of which shall be paid by the Company.

“**Trading Day**” means a day on which the principal Trading Market is open for trading.

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

d) Mechanics of Exercise.

i. Delivery of Certificates Upon Exercise. Certificates for shares purchased hereunder shall be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s prime broker with the Depository Trust Company through its Deposit Withdrawal Agent Commission (“**DWAC**”) system if the Company is then a participant in such system and the Holder is not an affiliate of the Company and either (A) there is an effective Registration Statement permitting the resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise at least six months following the Initial Exercise Date, and otherwise by physical delivery to the address specified by the Holder in the Notice of Exercise by the date that is three (3) Trading Days after the latest of (A) the delivery to the Company of the Notice of Exercise Form, (B) surrender of this Warrant (if required) and (C) payment of the Aggregate Exercise Price as set forth above (including by cashless exercise). This Warrant shall be deemed to have been exercised on the first date on which all of the foregoing have been delivered to the Company. The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Warrant has been exercised, with payment to the Company of the Exercise Price (or by cashless exercise) and all taxes required to be paid by the Holder, if any, pursuant to Section 2(d)(iv) prior to the issuance of such shares, having been paid.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

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

iv. Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event certificates for Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto.

v. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

### Section 3. Certain Adjustments.

a) Stock Dividends and Splits. In case of: (i) any subdivision or combination of the Common Stock or (ii) any declaration or payment, without consideration, of any dividend on the Common Stock payable in shares of the Company's capital stock or in any right to acquire shares of its capital stock without consideration, the number of shares of Common Stock or other security issuable upon exercise hereof shall be proportionately increased or decreased, as appropriate, and the Exercise Price shall be proportionately adjusted such that the Aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.



- b) **Reclassification.** In case of any reclassification of or similar change in the Common Stock, the Company shall execute a new Warrant having substantially similar terms and providing that the holder of this Warrant shall have the right to exercise such new Warrant for the kind and number of shares of stock, other securities, money or property receivable upon such reclassification or change by holders of the Common Stock.
- c) **Fundamental Transaction.** If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person and the Company is not the surviving corporation, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “**Fundamental Transaction**”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “**Alternate Consideration**”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction. For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “**Successor Entity**”) to assume all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(e) prior to such Fundamental Transaction and shall, at the option of the holder of this Warrant, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental

Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant and the other Transaction Documents referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. “**Person**” shall mean an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

d) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

e) Notice to Holder.

i. Adjustment. Whenever the Exercise Price or the number of shares of Common Stock issuable upon exercise is adjusted pursuant to any provision of this Section 3, the Company shall promptly mail to the Holder a notice setting forth the Exercise Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If during the term during which this Warrant may be exercised (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register (as defined below) of the Company, at least 10 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the subsidiaries of the Company, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4.            Transfer of Warrant.

a)            Transferability. Subject to compliance with any applicable securities laws and the conditions set forth in Section 4(d) hereof and to the provisions of Section 5 of the Purchase Agreement, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form of the Assignment Form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date set forth on the first page of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Transfer Restrictions. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale without volume or manner-of-sale restrictions or current public information requirements pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, comply with the provisions of Section 9(h) of the Purchase Agreement.

e) Representation by the Holder. The Holder, by the acceptance hereof, represents and warrants that it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 5.            Miscellaneous.

a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i).

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon

surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

-8-

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares. The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

e) No Impairment. Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment.

f) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. If the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

i) Limitation of Liability. No provision hereof and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to seek specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

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*(Signature Pages Follow)*

-10-

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

**Interleukin Genetics, Inc.**

By:

Name: Kenneth S. Kornman

Title: Chief Executive Officer

**NOTICE OF EXERCISE**

To: Interleukin Genetics, Inc.

(1) The undersigned hereby elects to purchase \_\_\_\_\_ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price for said Warrant Shares in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

\_\_\_\_\_

The Warrant Shares shall be delivered to the following DWAC Account Number or by physical delivery of a certificate to:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[SIGNATURE OF HOLDER]

Name of Holder: \_\_\_\_\_

*Signature of Authorized Signatory of Holder:* \_\_\_\_\_

Name of Authorized Signatory: \_\_\_\_\_

Title of Authorized Signatory: \_\_\_\_\_

Date: \_\_\_\_\_

**ASSIGNMENT FORM**

(To assign the foregoing warrant, execute this form and supply required information. Do not use this form to exercise the warrant.)

FOR VALUE RECEIVED, [\_\_\_\_] all of or [\_\_\_\_\_] shares of the foregoing Warrant and all rights evidenced thereby are hereby assigned to

\_\_\_\_\_ whose address is  
\_\_\_\_\_  
\_\_\_\_\_.

Dated: \_\_\_\_\_, \_\_\_\_\_

Holder's Signature: \_\_\_\_\_

Holder's Address: \_\_\_\_\_  
\_\_\_\_\_

Signature Guaranteed: \_\_\_\_\_

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

**EXHIBIT 4.2**

THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED OR ANY STATE SECURITIES LAWS. NO SALE OR DISPOSITION MAY BE EFFECTED WITHOUT (i) EFFECTIVE REGISTRATION STATEMENTS RELATED THERETO, (ii) AN OPINION OF COUNSEL OR OTHER EVIDENCE, REASONABLY SATISFACTORY TO THE COMPANY, THAT SUCH REGISTRATIONS ARE NOT REQUIRED, (iii) RECEIPT OF NO-ACTION LETTERS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES, OR (iv) OTHERWISE COMPLYING WITH THE PROVISIONS OF SECTION 7 OF THIS WARRANT.

**INTERLEUKIN GENETICS, INC.**

WARRANT TO PURCHASE 2,492,523 SHARES

OF COMMON STOCK

THIS CERTIFIES THAT, for value received, HORIZON TECHNOLOGY FINANCE CORPORATION and its assignees are entitled to subscribe for and purchase 2,492,523 shares of the fully paid and nonassessable Common Stock (as adjusted pursuant to Section 4 hereof, the “Shares”) of INTERLEUKIN GENETICS, INC., a Delaware corporation (the “Company”), at the price of \$0.1003 per share (such price and such other price as shall result, from time to time, from the adjustments specified in Section 4 hereof is herein referred to as the “Warrant Price”), subject to the provisions and upon the terms and conditions hereinafter set forth. As used herein, (a) the term “Date of Grant” shall mean December 23, 2014, and (b) the term “Other Warrants” shall mean any other warrants issued by the Company in connection with the transaction with respect to which this Warrant was issued, and any warrant issued upon transfer or partial exercise of or in lieu of this Warrant. The term “Warrant” as used herein shall be deemed to include Other Warrants unless the context clearly requires otherwise.

1. Term. The purchase right represented by this Warrant is exercisable, in whole or in part, at any time and from time to time from the Date of Grant through ten (10) years after the Date of Grant (the “Term”).

2. Method of Exercise; Payment; Issuance of New Warrant. Subject to Section 1 hereof, the purchase right represented by this Warrant may be exercised by the holder hereof, in whole or in part and from time to time, at the election of the holder hereof, by (a) the surrender of this Warrant (with the notice of exercise substantially in the form attached hereto as Exhibit A-1 duly completed and executed) at the principal office of the Company and by the

payment to the Company, by certified or bank check, or by wire transfer to an account designated by the Company (a “Wire Transfer”) of an amount equal to the then applicable Warrant Price multiplied by the number of Shares then being purchased; (b) if in connection with a registered public offering of the Company’s securities, the surrender of this Warrant (with the notice of exercise form attached hereto as Exhibit A-2 duly completed and executed) at the principal office of the Company together with notice of arrangements reasonably satisfactory to the Company for payment to the Company either by certified or bank check or by Wire Transfer from the proceeds of the sale of shares to be sold by the holder in such public offering of an amount equal to the then applicable Warrant Price per share multiplied by the number of Shares then being purchased; or (c) exercise of the “net issuance” right provided for in Section 10.2 hereof. The person or persons in whose name(s) any certificate(s) representing the Shares shall be issuable upon exercise of this Warrant shall be deemed to have become the holder(s) of record of, and shall be treated for all purposes as the record holder(s) of, the shares represented thereby (and such shares shall be deemed to have been issued) immediately prior to the close of business on the date or dates upon which this Warrant is exercised. In the event of any exercise of the rights represented by this Warrant, certificates for the shares of stock so purchased shall be delivered to the holder hereof as soon as possible and in any event within thirty (30) days after such exercise and, unless this Warrant has been fully exercised or expired, a new Warrant representing the portion of the Shares, if any, with respect to which this Warrant shall not then have been exercised shall also be issued to the holder hereof as soon as possible and in any event within such thirty-day period; provided, however, at such time as the Company is subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, if requested by the holder of this Warrant, the Company shall cause its transfer agent to deliver the certificate representing Shares issued upon exercise of this Warrant to a broker or other person (as directed by the holder exercising this Warrant) within the time period required to settle any trade made by the holder after exercise of this Warrant.

3. Stock Fully Paid; Reservation of Shares. All Shares that may be issued upon the exercise of the rights represented by this Warrant will, upon issuance pursuant to the terms and conditions herein, be fully paid and nonassessable, and free from all preemptive rights and taxes, liens and charges with respect to the issue thereof. During the period within which the rights represented by this Warrant may be exercised, the Company will at all times have authorized, and reserved for the purpose of the issue upon exercise of the purchase rights evidenced by this Warrant, a sufficient number of shares of its Common Stock to provide for the exercise of the rights represented by this Warrant.

4. Adjustment of Warrant Price and Number of Shares. The number and kind of securities purchasable upon the exercise of this Warrant and the Warrant Price shall be subject to adjustment from time to time upon the occurrence of certain events, as follows:

(a) Reclassification or Merger. In case of any reclassification or change of securities of the class issuable upon exercise of this Warrant (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), or in case of any merger of the Company with or into another corporation (other than a merger with another corporation in which the Company is the acquiring and the surviving corporation and which does not result in any reclassification or change of outstanding securities issuable upon exercise of this Warrant), or in case of any sale of all or substantially all of the assets of the Company, the Company, or such successor or purchasing corporation, as the case may be, shall duly execute and deliver to the holder of this Warrant a new Warrant (in form and substance satisfactory to the holder of this Warrant), so that the holder of this Warrant shall have the right to receive upon exercise of this Warrant, at a total purchase price not to exceed that payable upon the exercise of the unexercised portion of this Warrant, and in lieu of the shares of Common Stock theretofore issuable upon exercise of this Warrant, (i) the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification, change, merger or sale by a holder of the number of shares of Common Stock then purchasable under this Warrant, or (ii) in the case of such a merger or sale in which the consideration paid consists all or in part of assets other than securities of the successor or purchasing corporation, at the option of the holder of this Warrant, the securities of the successor or purchasing corporation having a value at the time of the transaction equivalent to the value of the Common Stock purchasable upon exercise of this Warrant at the time of the transaction. Any new Warrant shall provide for adjustments that shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 4. The provisions of this Section 4(a) shall similarly apply to successive reclassifications, changes, mergers and sales.



(b) Subdivision or Combination of Shares. If the Company at any time while this Warrant remains outstanding and unexpired shall subdivide or combine its outstanding shares of Common Stock, the Warrant Price shall be proportionately decreased and the number of Shares issuable hereunder shall be proportionately increased in the case of a subdivision and the Warrant Price shall be proportionately increased and the number of Shares issuable hereunder shall be proportionately decreased in the case of a combination.

(c) Stock Dividends and Other Distributions. If the Company at any time while this Warrant is outstanding and unexpired shall (i) pay a dividend with respect to its Common Stock payable in Common Stock, then the Warrant Price shall be adjusted, from and after the date of determination of shareholders entitled to receive such dividend or distribution, to that price determined by multiplying the Warrant Price in effect immediately prior to such date of determination by a fraction (A) the numerator of which shall be the total number of shares of Common Stock outstanding immediately prior to such dividend or distribution, and (B) the denominator of which shall be the total number of shares of Common Stock outstanding immediately after such dividend or distribution; or (ii) make any other distribution with respect to Common Stock (except any distribution specifically provided for in Sections 4(a) and 4(b)), then, in each such case, provision shall be made by the Company such that the holder of this Warrant shall receive upon exercise of this Warrant a proportionate share of any such dividend or distribution as though it were the holder of the Shares as of the record date fixed for the determination of the shareholders of the Company entitled to receive such dividend or distribution.

(d) Adjustment of Number of Shares. Upon each adjustment in the Warrant Price, the number of Shares purchasable hereunder shall be adjusted, to the nearest whole share, to the product obtained by multiplying the number of Shares purchasable immediately prior to such adjustment in the Warrant Price by a fraction, the numerator of which shall be the Warrant Price immediately prior to such adjustment and the denominator of which shall be the Warrant Price immediately thereafter.

5. Notice of Adjustments. Whenever the Warrant Price or the number of Shares purchasable hereunder shall be adjusted pursuant to Section 4 hereof, the Company shall make a certificate signed by its chief financial officer setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the Warrant Price and the number of Shares purchasable hereunder after giving effect to such adjustment, and shall cause copies of such certificate to be mailed (without regard to Section 13 hereof, by first class mail, postage prepaid) to the holder of this Warrant.

6. Fractional Shares. No fractional shares of Common Stock will be issued in connection with any exercise hereunder, but in lieu of such fractional shares the Company shall make a cash payment therefor based on the fair market value of the Common Stock on the date of exercise as reasonably determined in good faith by the Company's Board of Directors.

7. Compliance with Securities Act; Disposition of Warrant or Shares of Common Stock.

(a) Compliance with Securities Act. The holder of this Warrant, by acceptance hereof, agrees that this Warrant, and the Shares to be issued upon exercise hereof are being acquired for investment and that such holder will not offer, sell or otherwise dispose of this Warrant, or any Shares except under circumstances which will not result in a violation of the Securities Act of 1933, as amended (the "Act") or any applicable state securities laws. Upon exercise of this Warrant, unless the Shares being acquired are registered under the Act and any applicable state securities laws or an exemption from such registration is available, the holder hereof shall confirm in writing that the Shares so purchased are being acquired for investment and not with a view toward distribution or resale in violation of the Act and shall confirm such other matters related thereto as may be reasonably requested by the Company. This Warrant and all Shares issued upon exercise of this Warrant (unless registered under the Act and any applicable state securities laws) shall be stamped or imprinted with a legend in substantially the following form:

"THE SECURITIES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS. NO SALE OR DISPOSITION MAY BE EFFECTED WITHOUT (i) EFFECTIVE REGISTRATION STATEMENTS RELATED THERETO, (ii) AN OPINION OF COUNSEL OR OTHER EVIDENCE, REASONABLY SATISFACTORY TO THE COMPANY, THAT SUCH REGISTRATIONS ARE NOT REQUIRED, (iii) RECEIPT OF NO-ACTION LETTERS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITIES, OR (iv) OTHERWISE COMPLYING WITH THE PROVISIONS OF SECTION 7 OF THE WARRANT UNDER WHICH THESE SECURITIES WERE ISSUED, DIRECTLY OR INDIRECTLY."

Said legend shall be removed by the Company, upon the request of a holder, at such time as the restrictions on the transfer of the applicable security shall have terminated. In addition, in connection with the issuance of this Warrant, the holder specifically represents to the Company by acceptance of this Warrant as follows:

(1) The holder is aware of the Company's business affairs and financial condition, and has acquired information about the Company sufficient to reach an informed and knowledgeable decision to acquire this Warrant. The holder is acquiring this Warrant for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof in violation of the Act.

(2) The holder understands that this Warrant has not been registered under the Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the holder's investment intent as expressed herein.

-4-

(3) The holder further understands that this Warrant must be held indefinitely unless subsequently registered under the Act and qualified under any applicable state securities laws, or unless exemptions from registration and qualification are otherwise available. The holder is aware of the provisions of Rule 144, promulgated under the Act.

(4) The holder is an “accredited investor” as such term is defined in Rule 501 of Regulation D promulgated under the Act.

(b) Disposition of Warrant or Shares. With respect to any offer, sale or other disposition of this Warrant or any Shares acquired pursuant to the exercise of this Warrant prior to registration of such Warrant or Shares, the holder hereof agrees to give written notice to the Company prior thereto, describing briefly the manner thereof, together with a written opinion of such holder’s counsel, or other evidence, if reasonably satisfactory to the Company, to the effect that such offer, sale or other disposition may be effected without registration or qualification (under the Act as then in effect or any federal or state securities law then in effect) of this Warrant or the Shares and indicating whether or not under the Act certificates for this Warrant or the Shares to be sold or otherwise disposed of require any restrictive legend as to applicable restrictions on transferability in order to ensure compliance with such law. Upon receiving such written notice and reasonably satisfactory opinion or other evidence, the Company, as promptly as practicable but no later than fifteen (15) days after receipt of the written notice, shall notify such holder that such holder may sell or otherwise dispose of this Warrant or such Shares, all in accordance with the terms of the notice delivered to the Company. If a determination has been made pursuant to this Section 7(b) that the opinion of counsel for the holder or other evidence is not reasonably satisfactory to the Company, the Company shall so notify the holder promptly with details thereof after such determination has been made. Notwithstanding the foregoing, this Warrant or such Shares may, as to such federal laws, be offered, sold or otherwise disposed of in accordance with Rule 144 or 144A under the Act, provided that the Company shall have been furnished with such information as the Company may reasonably request to provide a reasonable assurance that the provisions of Rule 144 or 144A have been satisfied. Each certificate representing this Warrant or the Shares thus transferred (except a transfer pursuant to Rule 144 or 144A) shall bear a legend as to the applicable restrictions on transferability in order to ensure compliance with such laws, unless in the aforesaid opinion of counsel for the holder, such legend is not required in order to ensure compliance with such laws. The Company may issue stop transfer instructions to its transfer agent in connection with such restrictions.

(c) Applicability of Restrictions. Neither any restrictions of any legend described in this Warrant nor the requirements of Section 7(b) above shall apply to any transfer of, or grant of a security interest in, this Warrant (or the Common Stock obtainable upon exercise thereof) or any part hereof (i) to a partner of the holder if the holder is a partnership or to a member of the holder if the holder is a limited liability company, (ii) to a partnership of which the holder is a partner or to a limited liability company of which the holder is a member, (iii) to any affiliate of the holder if the holder is a corporation, (iv) notwithstanding the foregoing, to any corporation, company, limited liability company, limited partnership, partnership, or other person managed or sponsored by Horizon Technology Finance Corporation (“HRZN”) or in which HRZN has an interest, (v) or to a lender to the holder or any of the foregoing; provided, however, in any such transfer, if applicable, the transferee shall on the Company’s request agree in writing to be bound by the terms of this Warrant as if an original holder hereof.



8. Rights as Shareholders; Information. No holder of this Warrant, as such, shall be entitled to vote or receive dividends or be deemed the holder of Common Stock which may at any time be issuable upon the exercise hereof for any purpose, nor shall anything contained herein be construed to confer upon the holder of this Warrant, as such, any of the rights of a shareholder of the Company or any right to vote for the election of directors or upon any matter submitted to shareholders at any meeting thereof, or to receive notice of meetings, or to receive dividends or subscription rights or otherwise until this Warrant shall have been exercised and the Shares purchasable upon the exercise hereof shall have become deliverable, as provided herein. Notwithstanding the foregoing, the Company will transmit to the holder of this Warrant such information, documents and reports as are generally distributed to the holders of any class or series of the securities of the Company concurrently with the distribution thereof to the shareholders; provided, that any such item which is available on the SEC's EDGAR system (or successor thereto) or on the Company's website need not be furnished in physical form.

9. Registration Rights. The Shares issuable hereunder initially shall be exempt from registration under the Securities Act. Following the Date of Grant, and in any case within ninety (90) days thereof, Company shall promptly prepare, file and use its reasonable efforts to cause to become effective as soon as practicable thereafter, a registration statement on Form S-1 or such other form as may be appropriate to be filed with the SEC by Company under the Act (together with any amendments or supplements thereto, whether prior to or after the effective date thereof, the "Registration Statement") covering the public resale in the United States of the Shares to be issued pursuant to this Warrant, and Company shall use its reasonable efforts to keep the Registration Statement continuously effective during the Term. Any such registration shall be subject to the customary terms and conditions used in connection with resale prospectuses. Company's obligations under this Section are contingent upon Holder providing promptly all information concerning such Holder and its proposed plan of distribution as Company may reasonably request in connection with any of the foregoing. Company may by written notice to the Holder immediately suspend the use of any resale prospectus for a period not to exceed sixty consecutive days in any one instance and for a period not to exceed one hundred twenty calendar days in any twelve-month period (each, a "Suspension Period") at any time that (i) Company becomes engaged in a business activity or negotiation or any other event has occurred or is anticipated which is not disclosed in that prospectus which Company reasonably believes should be disclosed therein under applicable law and which Company desires to keep confidential for business purposes or (ii) Company determines that a particular disclosure so determined to be required to be disclosed therein be premature or would adversely affect Company or its business or prospects. Company will use its commercially reasonable efforts to ensure that the use of the Registration Statement may be resumed as soon as practicable. Company shall bear all costs and expenses associated with the registration of the Shares as specified in this Section and the preparation and filing of the Registration Statement, including, without limitation, all printing expenses, legal fees and disbursement of Company's outside counsel, commissions, NASDAQ and blue sky registration filing fees and transfer agents' and registrars' fees, but not including underwriting commissions or similar charges and legal fees and disbursements of counsel to Holder. The Company shall keep the Registration Statement effective until the earlier of (a) all Shares have been disposed of in accordance with such effective Registration Statement, (b) all Shares have been previously sold in accordance with Rule 144, or (c) all Shares are eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 (assuming that this Warrant is exercised via the "net issuance" right provided for in Section 10.2 hereof), as reasonably determined by the Company, upon the advice of counsel to the Company.

10. Additional Rights.

10.1 Acquisition Transactions. The Company shall provide the holder of this Warrant with at least twenty (20) days' written notice prior to closing thereof of the terms and conditions of any of the following transactions (to the extent the Company has notice thereof): (i) the sale, lease, exchange, conveyance or other disposition of all or substantially all of the Company's property or business, or (ii) its merger into or consolidation with any other corporation (other than a wholly-owned subsidiary of the Company), or any transaction (including a merger or other reorganization) or series of related transactions, in which more than 50% of the voting power of the Company is disposed of.

10.2 Right to Convert Warrant into Stock: Net Issuance.

(a) Right to Convert. In addition to and without limiting the rights of the holder under the terms of this Warrant, the holder shall have the right to convert this Warrant or any portion thereof (the "Conversion Right") into shares of Common Stock as provided in this Section 10.2 at any time or from time to time during the term of this Warrant. Upon exercise of the Conversion Right with respect to a particular number of shares subject to this Warrant (the "Converted Warrant Shares"), the Company shall deliver to the holder (without payment by the holder of any exercise price or any cash or other consideration) that number of shares of fully paid and nonassessable Common Stock as is determined according to the following formula:

$$X = \frac{B - A}{Y}$$

Where: X = the number of shares of Common Stock that shall be issued to holder

Y = the fair market value of one share of Common Stock

A = the aggregate Warrant Price of the specified number of Converted Warrant Shares immediately prior to the exercise of the Conversion Right (*i.e.*, the number of Converted Warrant Shares *multiplied by* the Warrant Price)

B = the aggregate fair market value of the specified number of Converted Warrant Shares (*i.e.*, the number of Converted Warrant Shares *multiplied by* the fair market value of one Converted Warrant Share)

No fractional shares shall be issuable upon exercise of the Conversion Right, and, if the number of shares to be issued determined in accordance with the foregoing formula is other than a whole number, the Company shall pay to the holder an amount in cash equal to the fair market value of the resulting fractional share on the Conversion Date (as

hereinafter defined). For purposes of Section 10 of this Warrant, shares issued pursuant to the Conversion Right shall be treated as if they were issued upon the exercise of this Warrant.

-7-



(b) Method of Exercise. The Conversion Right may be exercised by the holder by the surrender of this Warrant at the principal office of the Company together with a written statement (which may be in the form of Exhibit A-1 or Exhibit A-2 hereto) specifying that the holder thereby intends to exercise the Conversion Right and indicating the number of shares subject to this Warrant which are being surrendered (referred to in Section 10.2(a) hereof as the Converted Warrant Shares) in exercise of the Conversion Right. Such conversion shall be effective upon receipt by the Company of this Warrant together with the aforesaid written statement, or on such later date as is specified therein (the “Conversion Date”), and, at the election of the holder hereof, may be made contingent upon the closing of the sale of the Company’s Common Stock to the public in a public offering pursuant to a Registration Statement under the Act (a “Public Offering”). Certificates for the shares issuable upon exercise of the Conversion Right and, if applicable, a new warrant evidencing the balance of the shares remaining subject to this Warrant, shall be issued as of the Conversion Date and shall be delivered to the holder within thirty (30) days following the Conversion Date.

(c) Determination of Fair Market Value. For purposes of this Section 10.2, “fair market value” of a share of Common Stock as of a particular date (the “Determination Date”) shall mean:

(i) If the Conversion Right is exercised in connection with and contingent upon a Public Offering, and if the Company’s Registration Statement relating to such Public Offering (“Registration Statement”) has been declared effective by the Securities and Exchange Commission, then the initial “Price to Public” specified in the final prospectus with respect to such offering.

(ii) If the Conversion Right is not exercised in connection with and contingent upon a Public Offering, then as follows:

(A) If traded on a securities exchange, the fair market value of the Common Stock shall be deemed to be the average of the closing prices of the Common Stock on such exchange over the five trading days immediately prior to the Determination Date;

(B) If traded on the NASDAQ Stock Market or other over-the-counter system, the fair market value of the Common Stock shall be deemed to be the average of the closing prices of the Common Stock over the five trading days immediately prior to the Determination Date; and

(C) If there is no public market for the Common Stock, then fair market value shall be determined by mutual agreement of the holder of this Warrant and the Company.

If closing prices or closing bid prices are no longer reported by a securities exchange or other trading system, the closing price or closing bid price shall be that which is reported by such securities exchange or other trading system at 4:00 p.m. New York City time on the applicable trading day.

-8-

10.3 Exercise Prior to Expiration. To the extent this Warrant is not previously exercised as to all of the Shares subject hereto, and if the fair market value of one share of the Common Stock is greater than the Warrant Price then in effect, this Warrant shall be deemed automatically exercised pursuant to Section 10.2 above (even if not surrendered) immediately before its expiration. For purposes of such automatic exercise, the fair market value of one share of the Common Stock upon such expiration shall be determined pursuant to Section 10.2(c). To the extent this Warrant or any portion thereof is deemed automatically exercised pursuant to this Section 10.3, the Company agrees to promptly notify the holder hereof of the number of Shares, if any, the holder hereof is to receive by reason of such automatic exercise.

11. Representations and Warranties. The Company represents and warrants to the holder of this Warrant as follows:

(a) This Warrant has been duly authorized and executed by the Company and is a valid and binding obligation of the Company enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and the rules of law or principles at equity governing specific performance, injunctive relief and other equitable remedies.

(b) The Shares have been duly authorized and reserved for issuance by the Company and, when issued in accordance with the terms hereof, will be validly issued, fully paid and nonassessable and free from preemptive rights.

(c) A true and correct copy of the Company's Restated Certificate of Incorporation, as amended through the Date of Grant has been provided to Holder (the "Charter"). The rights, preferences, privileges and restrictions granted to or imposed upon the classes and series of the Company's capital stock and the holders thereof are as set forth in the Charter.

(d) The execution and delivery of this Warrant are not, and the issuance of the Shares upon exercise of this Warrant in accordance with the terms hereof will not be, inconsistent with the Company's Charter or by-laws, do not and will not contravene any law, governmental rule or regulation, judgment or order applicable to the Company, and do not and will not conflict with or contravene any provision of, or constitute a default under, any indenture, mortgage, contract or other instrument of which the Company is a party or by which it is bound or require the consent or approval of, the giving of notice to, the registration or filing with or the taking of any action in respect of or by, any Federal, state or local government authority or agency or other person, except for the filing of notices pursuant to federal and state securities laws, which filings will be effected by the time required thereby.

(e) There are no actions, suits, audits, investigations or proceedings pending or, to the knowledge of the Company, threatened against the Company in any court or before any governmental commission, board or authority

which, if adversely determined, could have a material adverse effect on the ability of the Company to perform its obligations under this Warrant.

(f) The number of shares of Common Stock of the Company outstanding on the date hereof, on a fully diluted basis (assuming the conversion of all outstanding convertible securities and the exercise of all outstanding options and warrants) and including the issuance of shares of Common Stock and warrants in the concurrent equity offering, does not exceed 267,158,324 shares.

-9-

12. Modification and Waiver. This Warrant and any provision hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of the same is sought.

13. Notices. Any notice, request, communication or other document required or permitted to be given or delivered to the holder hereof or the Company shall be delivered, or shall be sent by certified or registered mail, postage prepaid, to each such holder at its address as shown on the books of the Company or to the Company at the address indicated therefor on the signature page of this Warrant.

14. Binding Effect on Successors. This Warrant shall be binding upon any corporation succeeding the Company by merger, consolidation or acquisition of all or substantially all of the Company's assets, and all of the obligations of the Company relating to the Shares issuable upon the exercise or conversion of this Warrant shall survive the exercise, conversion and termination of this Warrant and all of the covenants and agreements of the Company shall inure to the benefit of the successors and assigns of the holder hereof.

15. Lost Warrants or Stock Certificates. The Company covenants to the holder hereof that, upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant or any stock certificate and, in the case of any such loss, theft or destruction, upon receipt of an indemnity reasonably satisfactory to the Company (including in the case of a lost stock certificate, posting of a bond as required by the Company's transfer agent), or in the case of any such mutilation upon surrender and cancellation of such Warrant or stock certificate, the Company will make and deliver a new Warrant or stock certificate, of like tenor, in lieu of the lost, stolen, destroyed or mutilated Warrant or stock certificate.

16. Descriptive Headings. The descriptive headings of the various Sections of this Warrant are inserted for convenience only and do not constitute a part of this Warrant. The language in this Warrant shall be construed as to its fair meaning without regard to which party drafted this Warrant.

17. Governing Law. This Warrant shall be construed and enforced in accordance with, and the rights of the parties shall be governed by, the laws of the State of Delaware.

18. Survival of Representations, Warranties and Agreements. All representations and warranties of the Company and the holder hereof contained herein shall survive the Date of Grant, the exercise or conversion of this Warrant (or any part hereof) or the termination or expiration of rights hereunder. All agreements of the Company and the holder hereof contained herein shall survive indefinitely until, by their respective terms, they are no longer operative.



19. Remedies. In case any one or more of the covenants and agreements contained in this Warrant shall have been breached, the holders hereof (in the case of a breach by the Company), or the Company (in the case of a breach by a holder), may proceed to protect and enforce their or its rights either by suit in equity and/or by action at law, including, but not limited to, an action for damages as a result of any such breach and/or an action for specific performance of any such covenant or agreement contained in this Warrant.

20. No Impairment of Rights. The Company will not, by amendment of its Charter or through any other means, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the holder of this Warrant against impairment.

21. Severability. The invalidity or unenforceability of any provision of this Warrant in any jurisdiction shall not affect the validity or enforceability of such provision in any other jurisdiction, or affect any other provision of this Warrant, which shall remain in full force and effect.

22. Recovery of Litigation Costs. If any legal action or other proceeding is brought for the enforcement of this Warrant, or because of an alleged dispute, breach, default, or misrepresentation in connection with any of the provisions of this Warrant, the successful or prevailing party or parties shall be entitled to recover reasonable attorneys' fees and other costs incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled.

23. Entire Agreement; Modification. This Warrant constitutes the entire agreement between the parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements, representations, and undertakings of the parties, whether oral or written, with respect to such subject matter.

[Remainder of page intentionally blank. Signature page follows.]

The Company has caused this Warrant to be duly executed and delivered as of the Date of Grant specified above.

INTERLEUKIN GENETICS,  
INC.

By: /s/ Kenneth S. Kornman  
Name: Kenneth S. Kornman  
Title: CEO

Address: 135 Beaver Street  
Lexington, MA 02452

Signature Page to Warrant



EXHIBIT A-1

NOTICE OF EXERCISE

To: INTERLEUKIN GENETICS, INC. (the "Company")

1. The undersigned hereby:

elects to purchase \_\_\_\_\_ shares of Common Stock of the Company pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price of such shares in full, or

elects to exercise its net issuance rights pursuant to Section 10.2 of the attached Warrant with respect to \_\_\_\_\_ shares of Common Stock.

2. Please issue a certificate or certificates representing \_\_\_\_\_ shares in the name of the undersigned or in such other name or names as are specified below:

(Name)

(Address)

3. The undersigned represents that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares, all except as in compliance with applicable securities laws.

(Signature)

(Date)

EXHIBIT A-2

NOTICE OF EXERCISE

To: INTERLEUKIN GENETICS, INC. (the "Company")

1. Contingent upon and effective immediately prior to the closing (the "Closing") of the Company's public offering contemplated by the Registration Statement on Form S\_\_\_\_, filed\_\_\_\_\_, 20\_\_, the undersigned hereby:

.. elects to purchase\_\_\_\_\_shares of Common Stock of the Company (or such lesser number of shares as may be sold on behalf of the undersigned at the Closing) pursuant to the terms of the attached Warrant, or

.. elects to exercise its net issuance rights pursuant to Section 10.2 of the attached Warrant with respect to\_\_\_\_\_shares of Common Stock.

2. Please deliver to the custodian for the selling shareholders a stock certificate representing such\_\_\_\_\_shares.

3. The undersigned has instructed the custodian for the selling shareholders to deliver to the Company \$\_\_\_\_\_or, if less, the net proceeds due the undersigned from the sale of shares in the aforesaid public offering. If such net proceeds are less than the purchase price for such shares, the undersigned agrees to deliver the difference to the Company prior to the Closing.

(Signature)

(Date)

**Exhibit 10.1**

**SECURITIES PURCHASE AGREEMENT**

by and between

Interleukin Genetics, Inc.

and

The Purchasers Identified on Schedule I Hereto

December 23, 2014

**Table of Contents**

	<b>Page</b>
1. PURCHASE AND SALE	1
(a) Authorization of Shares	1
(b) Purchase of Shares and Warrants	1
2. CLOSING	1
(a) The Closing	1
(b) Form of Payment	2
(c) Conditions to the Purchaser’s Obligation to Purchase on the Closing Date	2
(d) Conditions to the Company’s Obligation to Issue and Sell on the Closing Date	3
3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY	4
(a) Organization and Qualification	4
(b) Subsidiaries	4
(c) Authorization; Enforcement; Validity	4
(d) Capitalization	5
(e) Issuance of Shares	6
(f) No Conflicts	6
(g) No Violation or Default	6
(h) SEC Documents	6
(i) Financial Statements	7
(j) No Material Adverse Change	7
(k) Independent Accountants	7
(l) Title to Intellectual Property	8

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(m) Licenses and Permits; Compliance with Law	8
(n) Insurance	8
(o) Related Party Transactions	9
(p) Environmental Matters	9
(q) Tax Matters	9

**Table of Contents**

(continued)

	<b>Page</b>
(r) Employees	10
(s) Internal Control over Financial Reporting	10
(t) Disclosure Controls and Procedures	10
(u) Sarbanes-Oxley Compliance	10
(v) Absence of Litigation	10
(w) Investment Company Act	11
(x) No Market Manipulation	11
(y) Foreign Corrupt Practices	11
(z) Brokers	11
(aa) Regulation	11
4. PURCHASERS' REPRESENTATIONS AND WARRANTIES	12
(a) Transfer or Resale	12
(b) Investment Purpose	12
(c) General Solicitation	12
(d) Information	12
(e) Reliance on Exemptions	12
(f) No Governmental Review	13
(g) Authorization; Enforcement; Validity	13
(h) No Conflicts	13
5. RESTRICTIONS ON TRANSFER	13

(a) Resales	13
(b) Rule 144	13
(c) Legends	14
(d) Legend Removal	15
6. BOARD COMPOSITION	15
(a) Board Composition; Appointment of Director Designees	15
(b) Nominations of Director Designees	15
(c) Successor Director Designees	15



**Table of Contents**

(continued)

	<b>Page</b>
(d) Indemnification Agreements	16
(e) Committees of the Board of Directors	16
(f) Amendment of this Section 6	16
(g) Board Observer Rights	16
<b>7. OTHER AGREEMENTS AND COVENANTS</b>	<b>17</b>
(a) National Market Listing	17
(b) Use of Proceeds	17
(c) Form D; Blue Sky Filings	17
(d) Reservation of Shares	17
(e) Exchange Act Filings	17
(f) Integration	17
(g) Expenses	18
(h) Purchaser/Director Designee Exchange Act Filings	18
<b>8. PUBLIC STATEMENTS</b>	<b>18</b>
<b>9. MISCELLANEOUS</b>	<b>18</b>
(a) Governing Law	18
(b) Entire Agreement	19
(c) Amendments and Waivers	19
(d) Notices	19
(e) No Strict Construction	20

(f) Further Assurances	20
(g) Severability	20
(h) Successors and Assigns	20
(i) Survival	20
(j) No Third-Party Beneficiaries	21
(k) Replacement of Securities	21
(l) Independent Nature of Purchasers' Obligations and Rights	21
(m) Business Day	21

**Table of Contents**

(continued)

**Page**

(n)Headings 21

(o)Execution21

**SCHEDULES**

Schedule I – List of Purchasers

**EXHIBITS**

Exhibit A – Form of Warrant

Exhibit B – Registration Rights Agreement

-iv-

## SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “**Agreement**”) dated as of December 23, 2014 is made by and between Interleukin Genetics, Inc., a Delaware corporation, (the “**Company**”), and each purchaser identified on Schedule I hereto (each a “**Purchaser**”), and together, the “**Purchasers**”).

## RECITALS

In accordance with the terms and conditions of this Agreement and pursuant to exemptions from registration under the Securities Act of 1933, as amended (the “**Securities Act**”), the Company has agreed to issue and sell, and each Purchaser has agreed, severally and not jointly, to purchase a number of shares of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), and a warrant to purchase a number of shares of Common Stock (the “**Warrant**”, and together with all such warrants being issued to Purchasers under this Agreement, the “**Warrants**”), each as set forth opposite such Purchaser’s name on Schedule I to this Agreement.

NOW THEREFORE, in consideration of the promises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and each Purchaser hereby agree as follows:

### 1. PURCHASE AND SALE

(a) Authorization of Shares. The Company has authorized (i) the sale and issuance to the Purchasers of the shares of Common Stock, (ii) the sale and issuance to the Purchasers of the Warrants, and (iii) the issuance of shares of Common Stock to be issued upon exercise of the Warrants (the “**Warrant Shares**”).

(b) Purchase of Shares and Warrants. At the Closing (as defined below), the Company shall issue and sell to each Purchaser, and each Purchaser shall, severally and not jointly, purchase from the Company, upon the terms and subject to the conditions set forth in this Agreement, (i) the number of shares of Common Stock set forth opposite such Purchaser’s name on Schedule I to this Agreement (the “**Shares**”) and (ii) a Warrant to purchase the number of shares of Common Stock set forth opposite such Purchaser’s name on Schedule I to this Agreement, for an aggregate purchase price as set forth opposite such Purchaser’s name on Schedule I to this Agreement (the “**Purchase Price**”), based on a purchase price per Share of \$0.1003 (the “**Per Share Purchase Price**”).

2. CLOSING

(a) The Closing. The date and time of the Closing of the purchase and sale of the Shares and the Warrants (the “**Closing**”) shall occur on December 23, 2014 at 12:00 p.m. Boston time, at the offices of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, Massachusetts, 02111 (subject to the satisfaction or waiver of the conditions set forth in Subsections (c) and (d) of this Section 2), or at such other location, date and time as may be agreed upon between the Company and the Purchasers (the “**Closing Date**”).

(b) Form of Payment. On the Closing Date, each Purchaser shall pay the Company the Purchase Price for the Shares and the Warrant to be issued and sold to such Purchaser on such Closing Date, by wire transfer of immediately available funds in accordance with the Company's written wire instructions previously provided to the Purchasers, and the Company shall deliver to each Purchaser the original certificate or certificates representing the Shares and the original Warrant, duly executed on behalf of the Company and registered in the name of such Purchaser.

(c) Conditions to the Purchaser's Obligation to Purchase on the Closing Date. Each Purchaser's obligation to purchase the Shares and the Warrant at the Closing shall be subject to the satisfaction, on or before the Closing Date, of each of the following conditions, provided that these conditions are for the Purchaser's sole benefit and may be waived by such Purchaser at any time in its sole discretion:

(i) receipt of a copy of this Agreement executed by the Company;

(ii) the Company shall have entered into an agreement with Horizon Technology Finance Management LLC and/or its assignees and/or other lenders with respect to a \$5,000,000 venture loan (the "**Venture Loan Agreement**");

(iii) evidence of irrevocable instructions from the Company to the transfer agent for the Common Stock with respect to the issuance and delivery of one or more certificates representing the Shares;

(iv) receipt of the Warrant in the form attached as Exhibit A;

(v) all actions required by the Board of Directors of the Company (the "**Board**") to effect the provisions of Section 6 of this Agreement with respect to the composition of the Board following the Closing shall have been taken;

(vi) all consents, approvals and waivers required for the consummation of the transactions contemplated hereby shall have been obtained;

the Company shall have delivered to the Purchasers a Compliance Certificate, executed by the Chief Executive Officer of the Company, dated as of the Closing Date, to the effect that the conditions specified in subsections (vi), (ix), and (x) of this Section 2(c) have been satisfied;

the Company shall have delivered to the Purchasers a certificate of its Secretary certifying as to (A) the resolutions of the Board approving this Agreement and the transactions contemplated hereby, including the (viii) actions required by the Company pursuant to this Section 2(c); and (B) good standing certificates (including tax good standing) with respect to the Company from the applicable authority(ies) in Delaware and any other jurisdiction in which the Company is qualified to do business dated a recent date before the Closing;



the representations and warranties of the Company in this Agreement shall be true, correct and complete as of the Closing Date (except for representations and warranties that speak as of a specific date, which shall be true, (ix) correct and complete as of such date) and the Company shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the Company at or prior to the Closing;

no temporary restraining order, preliminary or permanent injunction or other order or decree, and no other legal restraint or prohibition, shall exist which questions the validity of this Agreement or the right of the Company or (x) any Purchaser, as the case may be, to enter into this Agreement or prevents or could reasonably be expected to prevent the consummation of the transactions contemplated by this Agreement, nor shall any litigation or court or administrative proceeding have been commenced or threatened with respect to the foregoing;

(xi) the Company shall have executed and delivered the Registration Rights Agreement in substantially the form attached as Exhibit B (the “**Registration Rights Agreement**”);

(xii) delivery of a legal opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, Company counsel, in form and substance reasonably satisfactory to the Purchasers; and

(xiii) receipt of such other information, certificates and documents as the Purchasers may reasonably request.

(d) Conditions to the Company’s Obligation to Issue and Sell on the Closing Date. The Company’s obligation to issue and sell the Shares and the Warrant at the Closing shall be subject to the satisfaction, on or before the Closing Date, of each of the following conditions, provided that these conditions are for the Company’s sole benefit and may be waived by the Company at any time in its sole discretion:

(i) receipt of a copy of this Agreement executed by each Purchaser;

(ii) receipt of the Purchase Price from each Purchaser;

the representations and warranties of each Purchaser in this Agreement shall be true, correct and complete as of the date of this Agreement and as of the Closing Date (except for representations and warranties that speak as of a (iii) specific date, which shall be true, correct and complete as of such date) and each Purchaser shall have performed, satisfied and complied with in all material respects the covenants, agreements and conditions of such Purchaser to be performed, satisfied or complied with by it under this Agreement at or prior to the Closing Date; and



no temporary restraining order, preliminary or permanent injunction or other order or decree, and no other legal restraint or prohibition shall exist which questions the validity of this Agreement or the right of the Company or (iv) any Purchaser, as the case may be, to enter into this Agreement or prevents or could reasonably be expected to prevent the consummation of the transactions contemplated by this Agreement, nor shall any litigation or court or administrative proceeding have been commenced or threatened with respect to the foregoing.

### 3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to each Purchaser, subject to such exceptions as are set forth in the SEC Documents (as defined below) (other than (x) those sections of the SEC Documents entitled or captioned “Risk Factors,” (y) any disclosure of risks included in any forward-looking statements disclaimer or other statements that are similarly non-specific and are predictive or forward looking in nature and (z) specific disclosures contained in those documents which are filed as exhibits to the SEC Documents), provided that the relevance of such exceptions to the representations and warranties is reasonably apparent, as follows:

(a) Organization and Qualification. The Company is a corporation, duly organized, validly existing and in good standing under the laws of the State of Delaware, and has the requisite corporate power and authority to own its properties and to carry on its business as now being conducted and as described in the SEC Documents. Copies of the Company’s Restated Certificate of Incorporation (the “**Charter**”) and Amended and Restated Bylaws of the Company, as amended (the “**Bylaws**”), and in each case, all amendments thereto, have been filed as exhibits to the Company’s SEC Documents and have not been further modified, and except as otherwise may be required by the transactions contemplated hereby, the Company has no present intention to modify the Charter and Bylaws. The Company is duly qualified as a foreign corporation to do business, and is in good standing, in every jurisdiction in which its ownership of property or the nature of the business conducted and proposed to be conducted by it makes such qualification necessary, except where the failure to be so qualified or in good standing would not, individually or in the aggregate, have or reasonably be expected to result in a material adverse effect on (i) the condition (financial or otherwise), prospects, earnings, assets, results of operations, business or properties of the Company, whether or not arising from transactions in the ordinary course of business or (ii) the ability of the Company to consummate the transactions contemplated by this Agreement (“**Material Adverse Effect**”).

(b) Subsidiaries. The Company has no subsidiaries.

(c) Authorization; Enforcement; Validity. The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the Registration Rights Agreement, the Venture Loan Agreement and each of the other agreements entered into by the parties hereto in connection with transactions contemplated by this Agreement (collectively, the “**Transaction Documents**”) and to issue the Shares and the Warrants in accordance with the terms hereof and thereof. The execution and delivery of the Transaction Documents by the Company and the consummation and performance by the Company of the transactions contemplated hereby and thereby, including, without limitation, the issuance of the Shares, Warrants and the Warrant Shares (collectively, the

“**Securities**”), have been duly authorized by all requisite corporate action. The Transaction Documents have been duly executed and delivered by the Company. The Transaction Documents constitute the valid and binding obligations of the Company enforceable against the Company in accordance with their terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of creditors’ rights and remedies.

(d) Capitalization. As of the date of this Agreement, the authorized capital stock of the Company consists of (i) 300,000,000 shares of Common Stock and (ii) 6,000,000 shares of undesignated preferred stock, \$0.001 par value per share. As of the date of this Agreement and prior to the issuance of the Shares and Warrants under this Agreement, (i) 122,583,642 shares of Common Stock are issued and outstanding; (ii) 4,523,900 shares of Common Stock are duly reserved for future issuance pursuant to outstanding stock options; (iii) 37,269,126 shares of Common Stock are duly reserved for future issuance pursuant to outstanding warrants; (iv) 5,954,825 shares of Common Stock are duly reserved for future issuance pursuant to the Company's stock plans; and (v) 503,952 shares of Common Stock are duly reserved for future issuance pursuant to the Company's employee stock purchase plan. All of the issued shares of capital stock of the Company have been duly and validly authorized and issued, are fully paid and non-assessable, and have been issued in compliance with federal and state securities laws. Except as set forth above, (i) no shares of the Company's capital stock are subject to preemptive rights or any other similar rights or any liens or encumbrances; (ii) there are no outstanding options, warrants, rights to subscribe to, calls or commitments relating to, or securities or rights convertible into, any shares of capital stock of the Company, or contracts, commitments, understandings or arrangements by which the Company is or may become bound to issue additional shares of capital stock of the Company or options, warrants, rights to subscribe to, calls or commitments relating to, or securities or rights convertible into, any shares of capital stock of the Company. The Company has no knowledge of any voting agreements, buy-sell agreements, option or right of first purchase agreements or other agreements of any kind among any of the security holders of the Company relating to the securities of the Company held by them. Other than (i) pursuant to the Registration Rights Agreement, (ii) with respect to the shares of Common Stock issuable upon exercise of the warrant to be issued pursuant to the Venture Loan Agreement, and (iii) except as set forth in that certain Registration Rights Agreement, dated May 17, 2013, between the Company and the purchasers signatory thereto, the Company has not granted any person the right to require the Company to register any securities of the Company under the Securities Act, whether on a demand basis or in connection with the registration of securities of the Company for its own account or for the account of any other person.

(e) Issuance of Shares. The Shares and the Warrant Shares have been duly and validly reserved for issuance. The Shares and the Warrant Shares are duly authorized and, upon issuance in accordance with the terms hereof and the Warrants, will be (A) validly issued, fully paid and non-assessable and (B) free from all taxes, liens and charges in the United States of America with respect to the issuance thereof, other than any liens or encumbrances created by or imposed by the Purchaser, and not subject to preemptive, registration, right of first refusal or other similar rights of stockholders of the Company. Except for the filing of any notice prior or subsequent to the Closing that may be required under applicable state and/or federal securities laws (or comparable laws of any other jurisdiction), no authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission, board, bureau, agency, instrumentality or other third party, is or will be necessary for, or in connection with, the execution and delivery by the Company of this Agreement, for the offer, issue, sale, execution or delivery of the Shares and Warrants, or for the performance by the Company of its obligations under this Agreement. The Company has reserved from its duly authorized capital stock the Shares and the Warrant Shares.

(f) No Conflicts. The execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby do not and will not (i) result in a breach or violation of the Company's Charter or Bylaws; (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or incremental, additional or varied rights under, any agreement, indenture, or other instrument, obligation or understanding to which the Company is a party; (iii) result in a violation of any statute, law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to the Company; or (iv) result in the imposition of a mortgage, pledge, security interest, encumbrance, charge or other lien on any asset of the Company.

(g) No Violation or Default. The Company is not (i) in violation of its Charter or Bylaws; (ii) in default (or subject to an event which with notice or lapse of time or both would become a default) under any agreement, indenture or instrument to which the Company is a party; or (iii) in violation of any law, rule, regulation, order, judgment or decree applicable to the Company; except for such violations or defaults, as described in clauses (ii) or (iii) of this sentence as would not, individually or in the aggregate, have or result in a Material Adverse Effect.

(h) SEC Documents. The Company has filed all reports, schedules, forms, statements, exhibits (including certifications of the Company's principal executive and financial officers pursuant to Section 302 and 906 of Sarbanes-Oxley (as defined below)) and other documents required to be filed by it with the U.S. Securities and Exchange Commission ("**SEC**") pursuant to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), since January 1, 2013 (all of the foregoing filed prior to or on the date hereof, or prior to the Closing Date, and all exhibits included therein and financial statements and schedules thereto and documents incorporated by reference therein being referred to in this Agreement as the "**SEC Documents**"). As of the date of filing of each such SEC Document, such SEC Document, as it may have been subsequently amended by filings made by the Company with the SEC prior to the date hereof, complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the SEC promulgated thereunder applicable to such SEC Document. None of the SEC Documents, as of the date filed and as they may have been subsequently amended by filings made by the Company with the SEC prior to the date hereof, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of

the circumstances under which they were made, not misleading.

-6-

(i) Financial Statements. The financial statements and the related notes thereto of the Company included or incorporated by reference in the SEC Documents comply in all material respects with the applicable requirements of the Exchange Act and present fairly and accurately in all material respects the financial position of the Company as of the dates indicated and the results of operations and the changes in cash flows for the periods specified. Such financial statements have been prepared in conformity with United States generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods covered thereby, except as specifically stated therein, and the supporting schedules included or incorporated by reference in the SEC Documents present fairly the information required to be stated therein. The Company does not have any material liability or obligation of any nature, whether or not accrued, contingent or otherwise that would be required by GAAP to be disclosed on a balance sheet of the Company or in the notes thereto. The Company has not created any entities or entered into any transactions or created any liabilities or obligations of any nature, whether or not accrued, contingent or otherwise, for the purpose of avoiding disclosure required by GAAP.

(j) No Material Adverse Change. Since the date of the most recent financial statements of the Company included or incorporated by reference in the SEC Documents, except as disclosed in the SEC Documents and as contemplated by this Agreement and the Venture Loan Agreement, (i) there has not been any change in the capital stock (other than pursuant to the Company's stock plans pursuant to the Company's existing employee stock purchase plan (any such issuances, whenever issued or granted, being collectively “**Employee Equity Transactions**”), pursuant to the conversion or exercise of outstanding securities that are convertible into or exercisable for Common Stock, or pursuant to publicly disclosed equity or debt financings) or long-term debt of the Company, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock; (ii) the Company has not entered into any transaction or agreement that is material to the Company taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and, except as contemplated by this agreement, has not made any material change or amendment to a material contract or arrangement by which the Company or any of its assets or properties is bound or subject; (iii) the Company has not sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority; and (iv) there has not been the occurrence of any Material Adverse Effect.

(k) Independent Accountants. Grant Thornton LLP, who have certified certain financial statements of the Company, have advised the Company that they are, and to the Company's knowledge they are, independent registered public accountants with respect to the Company as required by the Securities Act. Except as pre-approved in accordance with the requirements set forth in Section 10A of the Exchange Act, to the Company's knowledge, Grant Thornton LLP has not engaged in any “prohibited activities” (as defined in Section 10A of the Exchange Act) on behalf of the Company.

(l) Title to Intellectual Property. The Company owns or possesses adequate rights to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, know-how and all other intellectual property rights (including trade secrets and other unpatented or unpatentable proprietary or confidential compounds, genes, information, systems or procedures) (collectively, the “**Intellectual Property**”), used in or necessary for the conduct of the Company’s business as now, or as contemplated to be, conducted. Except as set forth in the SEC Documents, (i) there are no rights of third parties to any such Intellectual Property except through licensing or cross-licensing agreements; (ii) to the Company’s knowledge, there is no infringement by third parties of any Intellectual Property to which the Company can assert a claim of infringement; (iii) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the Company’s ownership of or licensing rights in or to any such Intellectual Property; (iv) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, other than ordinary patent, trademark, service mark and copyright prosecution disclosed in the SEC Documents; (v) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others that the Company infringes or otherwise violates any Intellectual Property of others, and the Company is unaware of any reasonable basis for any such claim; (vi) the Company has not been and will not be required to utilize any inventions, trade secrets or proprietary information of any of its employees made prior to their employment by the Company; (vii) the Company has taken all steps required to perfect its ownership of and interest in its Intellectual Property; and (viii) the Company has taken reasonable security measures to protect the secrecy, confidentiality and value of all of its Intellectual Property.

(m) Licenses and Permits; Compliance with Law. The Company possesses all licenses, certificates, permits and other authorizations issued by, and has made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities, that are necessary for the ownership or lease of its properties and assets or the conduct of its business as conducted or as contemplated to be conducted. The Company has not received notice of any revocation or modification of any such license, certificate, permit or authorization, or of any proceeding relating to any such revocation or modification, or has any reason to believe that any such license, certificate, permit or authorization will not be renewed in the ordinary course. The Company has complied in all material respects with and is not in default or violation in any material respect of, and is not, to the Company’s knowledge, under investigation with respect to or has not been, to the knowledge of the Company, threatened to be charged with or given notice of any violation of, any applicable federal, state, local or foreign law, statute, ordinance, license, rule, regulation, policy or guideline, order, demand, writ, injunction, decree or judgment of any federal, state, local or foreign governmental or regulatory authority. Except for statutory or regulatory restrictions of general application, no federal, state, local or foreign governmental or regulatory authority has placed any material restriction on the business or properties of the Company.

(n) Insurance. The Company maintains insurance of the types and in the amounts that the Company reasonably believes are adequate for its businesses and consistent with insurance coverage maintained by similar companies in similar businesses, including, but not limited to, insurance covering real and personal property owned or leased by the Company against theft, damage, destruction, acts of vandalism, insurance covering the acts and omissions of directors and officers, and insurance covering all other risks customarily insured against by similarly situated companies, all of which insurance is in full force and effect. The Company has not received any written notice that the Company will not be able to renew its existing insurance coverage as and when such coverage expires.





(o) Related Party Transactions. Except as contemplated by this Agreement, none of the officers or directors of the Company and, to the knowledge of the Company, none of the employees of the Company is presently a party to any transaction with the Company (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner, in each case in excess of \$120,000 other than (i) for payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) for other employee benefits, including stock option agreements under any stock option plan of the Company.

(p) Environmental Matters. The Company is in compliance with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to their businesses. To the Company's knowledge, there has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company (or, to the Company's knowledge, any other entity for whose acts or omissions the Company is or may be liable) upon any of the property now or previously owned or leased by the Company, or upon any other property, in violation of any statute or any ordinance, rule, regulation, order, judgment, decree or permit or which would, under any statute or any ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability. There has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances with respect to which the Company has knowledge.

(q) Tax Matters. The Company (i) has timely filed all necessary federal, state, local and foreign income and franchise tax returns or has requested extensions thereof, (ii) has paid all federal state, local and foreign taxes due and payable for which it is liable, except for any such taxes currently being contested in good faith, and (iii) does not have any tax deficiency or claims outstanding or assessed or, to the best of the Company's knowledge, proposed against it. All material taxes and other assessments and levies that the Company is required to withhold or to collect for payment have been duly withheld and collected and paid to the proper government entity or third party when due. There are no tax liens or claims pending or, to the Company's knowledge, threatened against the Company or any of its respective assets or property. Except as set forth in the SEC Documents, there are no outstanding tax sharing agreements or other such arrangements between the Company and any other Person.

(r) Employees. All current and former employees of the Company have executed and delivered a confidential information and inventions assignment agreement (a “**CIIA**”) to the Company. All current and former consultants of the Company that had access to confidential or proprietary information of the Company have executed and delivered a CIIA to the Company or other form of written contract or agreement with the Company that requires such consultants to maintain the confidentiality of such information and assigns to the Company all rights to any inventions, improvements, discoveries or information relating to the business of the Company. The Company is not aware that any executive officer of the Company has plans to terminate his or her employment relationship with the Company. The Company has complied in all material respects with all applicable laws relating to wages, hours, equal opportunity, collective bargaining, workers’ compensation insurance and the payment of social security and other taxes. None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending or, to the Company’s knowledge, threatened with respect to the Company. To the Company’s knowledge, no employee of the Company is obligated under any contract or subject to any judgment, decree or administrative order that would conflict or interfere with (i) the performance of the employee’s duties as an employee, director or officer of the Company, or (ii) the Company’s business as conducted or proposed to be conducted.

(s) Internal Control over Financial Reporting. The Company maintains a system of internal control over financial reporting (as such is defined in Rule 13a-15(f) of the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by the Company’s principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company does not have any material weaknesses in its internal control over financial reporting. Since the date of the latest audited financial statements included in the SEC Documents, there has been no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

(t) Disclosure Controls and Procedures. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) of the Exchange Act) that comply with the requirements of the Exchange Act. Such disclosure controls and procedures have been designed to ensure that material information relating to the Company is accumulated and communicated to the Company’s management, including the Company’s principal executive officer and principal financial officer, by others within those entities.

(u) Sarbanes-Oxley Compliance. The Company and the Company’s directors and officers, in their capacities as such, are in compliance with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (“**Sarbanes-Oxley**”), including Section 402 related to loans and Sections 302 and 906 related to certifications, and neither the Company nor any of its officers has received notice from any governmental entity questioning or challenging the accuracy, completeness, content, form or manner of filing or submission of such certifications. The Company has no reasonable basis to believe that it will not continue to be in compliance with Sarbanes-Oxley as in effect on the Closing Date (including, without limitation, the requirements of Section 404 thereof).

(v) Absence of Litigation. There is no action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body pending or, to the knowledge of the Company, threatened in writing against the Company which (i) adversely affects or challenges the legality, validity or enforceability of this Agreement or the Securities or (ii) would reasonably be expected to result in a Material Adverse Effect.

-10-

(w) Investment Company Act. The Company is not, nor, after giving effect to the sale of the Shares and the Warrants and the application of the proceeds therefrom, will it become, an “investment company” within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the SEC thereunder.

(x) No Market Manipulation. Neither the Company nor, to the knowledge of the Company, any of the Company’s directors, officers, employees, agents or controlling persons have taken, directly or indirectly, any action designed, or that might reasonably be expected, to cause or result in, under the Securities Act or otherwise, or that has constituted, stabilization or manipulation of the price of the Common Stock.

(y) Foreign Corrupt Practices. Neither the Company nor, to the Company’s knowledge, any director, officer, agent, employee or other person acting on behalf of the Company has, in the course of its actions for, or on behalf of, the Company, (i) directly or indirectly, used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of in any material respect any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee.

(z) Brokers. Except pursuant to the agreement with BTIG, LLC (the “**Placement Agent**”), neither the Company nor any of the Company’s officers, directors, employees or stockholders has employed or engaged any broker or finder in connection with the transactions contemplated by this Agreement and no other fee or other compensation is or will be due and owing to any broker, finder, underwriter, placement agent or similar person in connection with the transactions contemplated by this Agreement.

(aa) Regulation. Assuming the accuracy of the representations and warranties made by the Purchasers in Section 4 of this Agreement, the offer, issuance, sale and delivery of the Securities are or will be exempt from the registration requirements of the Securities Act and the qualification or registration provisions of applicable state securities laws. Neither the Company nor its authorized agents have taken or will take any action that would cause the loss of such exemption. Neither the Company nor any person acting on its behalf has conducted any general solicitation or general advertising (as those terms are used in Regulation D) in connection with the offer or sale of any of the Securities. Neither the Company nor any of its affiliates, nor any person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would adversely affect reliance by the Company on Section 4(2) of the Securities Act for the exemption from registration for the contemplated transactions under this Agreement or would require registration of the Shares or the Common Shares under the Securities Act.

4. PURCHASERS' REPRESENTATIONS AND WARRANTIES

Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants to the Company as follows:

(a) Transfer or Resale. The Purchaser understands that the Securities have not been registered under the Securities Act or any state securities laws, and may not be offered for sale, sold, assigned or transferred without registration under the Securities Act or an exemption therefrom and that, in the absence of an effective registration statement under the Securities Act, such Securities may only be sold under certain circumstances as set forth in the Securities Act.

(b) Investment Purpose. The Purchaser is acquiring the Securities for its own account for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof. The Purchaser does not have any agreement or understanding, directly or indirectly, with any person to distribute any of the Securities.

(c) General Solicitation. The Purchaser was contacted regarding the sale of the Securities by an authorized representative of the Company or the Placement Agent with whom the Purchaser has a prior substantial pre-existing relationship and the Purchaser is not purchasing the Securities as a result of any advertisement, article, notice or other communication regarding the Securities published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general solicitation or general advertisement.

(d) Information. The Purchaser (directly or through its advisors, if any) (i) has been furnished with or has had full access to all of the publicly available information that it considers necessary or appropriate for deciding whether to purchase the Securities, (ii) has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of the Securities, (iii) can bear the economic risk of a total loss of its investment in the Securities and (iv) has such knowledge and experience in business and financial matters so as to enable it to understand the risks of and form an investment decision with respect to its investment in the Securities. The Purchaser has received no representation or warranties from the Company, its employees, agents (including the Placement Agent), or attorneys in making this investment decision other than as set forth in the Transaction Documents.

(e) Reliance on Exemptions. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants, it will be either: (i) an "accredited investor" as defined in Rule 501(a) under the Securities Act or (ii) a "qualified institutional buyer" as defined in Rule 144A(a) under the Securities Act. The Purchaser understands that the Securities are being offered and sold to it in reliance on specific exemptions from the registration requirements of the Securities Act and that the Company is relying upon the truth and accuracy of, and the Purchaser's compliance with, the representations, warranties, agreements, acknowledgments and

understandings of the Purchaser set forth in this Agreement in order to determine the availability of such exemptions and the eligibility of the Purchaser to acquire the Securities.

(f) No Governmental Review. The Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(g) Authorization; Enforcement; Validity. The Purchaser is an entity duly organized and validly existing under the laws of the jurisdiction of its organization with full right, corporate or limited partnership power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder. The execution, delivery and performance by the Purchaser of the transactions contemplated by this Agreement has been duly authorized by all necessary corporate or limited partnership action on the part of the Purchaser and any other governmental action with respect to the Purchaser. This Agreement has been duly executed by the Purchaser, and when delivered by the Purchaser in accordance with terms hereof, will constitute the valid and legally binding obligation of the Purchaser, enforceable against it in accordance with its terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of creditors' rights and remedies.

(h) No Conflicts. The execution, delivery and performance of this Agreement by the Purchaser and the consummation by the Purchaser of the transactions contemplated hereby do not and will not (i) result in a violation of the Purchaser's charter, bylaws, or other similar organizational documents; (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under any agreement, indenture or other instrument, obligation or understanding to which the Purchaser is a party; or (iii) result in a violation of any law, rule, regulation, order, judgment or decree applicable to the Purchaser, except for such conflicts, defaults and violations as described in clauses (ii) or (iii) of this sentence as would not, individually or in the aggregate, have or result in a material adverse effect on the Purchaser.

## 5. RESTRICTIONS ON TRANSFER

(a) Resales. Each Purchaser agrees that the Securities may only be sold or transferred (i) pursuant to an effective registration statement under the Securities Act (including the Registration Statement (as defined in the Registration Rights Agreement)), or (ii) pursuant to an exemption from registration under the Securities Act.

(b) Rule 144. Each Purchaser is aware of Rule 144 promulgated by the SEC pursuant to the Securities Act (as such rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such rule, "**Rule 144**") and the restrictions imposed thereby and further understands and agrees that so long as such Purchaser beneficially owns 10% or more of the Company's then outstanding securities or has a designee selected by the Purchaser serving on the Board, the Company will deem the Purchaser to be an "affiliate" as defined in Rule 144(a)(1) and any transfers of the Securities by the Purchaser shall be

subject to the limitations applicable to affiliates set forth in the Securities Act and the rules promulgated thereunder, including without limitation Rule 144.

-13-



(c) Legends. Each Purchaser agrees to the imprinting, so long as is required by this Section 5, of a legend on any of the Securities in substantially the following form:

“THIS SECURITY HAS NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT WITH A REGISTERED BROKER-DEALER OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN “ACCREDITED INVESTOR” AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT OR OTHER LOAN SECURED BY SUCH SECURITIES.”

The Company acknowledges and agrees that a Purchaser may from time to time pledge pursuant to a bona fide margin agreement with a registered broker-dealer or grant a security interest in some or all of the Securities to a financial institution that is an “accredited investor” as defined in Rule 501(a) under the Securities Act and who agrees to be bound by the provisions of this Agreement and the Registration Rights Agreement and, if required under the terms of such arrangement, such Purchaser may transfer pledged or secured Securities to the pledgees or secured parties. Such a pledge or transfer would not be subject to approval of the Company and no legal opinion of legal counsel of the pledgee, secured party or pledgor shall be required in connection therewith. Further, no notice shall be required of such pledge. At the appropriate Purchaser’s expense, the Company will execute and deliver such reasonable documentation as a pledgee or secured party of Securities may reasonably request in connection with a pledge or transfer of the Securities, including, if the Securities are subject to registration pursuant to the Registration Rights Agreement, the preparation and filing of any required prospectus supplement under Rule 424(b)(3) under the Securities Act or other applicable provision of the Securities Act to appropriately amend the list of Selling Stockholders (as defined in the Registration Rights Agreement) thereunder.

(d) Legend Removal. The Company shall cause its counsel to promptly issue a legal opinion to the transfer agent for the Common Stock with respect to removal of the legend set forth in Section 5(c) above, (i) following any sale of such Shares or Warrant Shares pursuant to an effective registration statement, (ii) following any sale of such Shares or Warrant Shares pursuant to Rule 144, or (iii) when such Shares or Warrant Shares may be sold under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and Warrant Shares and without volume or manner-of-sale restrictions.

## 6. BOARD COMPOSITION

(a) Board Composition; Appointment of Director Designees. The Board shall take all actions necessary such that the Board shall consist of seven (7) members and shall be composed as follows:

(i) the Class I directors with a term ending at the 2016 annual meeting of stockholders shall consist of one independent director (currently William C. Mills III) and one director designated by Pyxis Innovations Inc. (currently Joseph M. Landstra) (a “**Pyxis Designee**”);

(ii) the Class II directors with a term ending at the 2017 annual meeting of stockholders shall consist of the Company’s Chief Executive Officer and one director designated by Bay City Capital Fund V, L.P. (currently Dayton Misfeldt) (a “**BCC Designee**”); and

(iii) the Class III directors with a term ending at the 2015 annual meeting of stockholders shall consist of one director designated by Pyxis Innovations Inc. (currently Roger C. Colman) (a “**Pyxis Designee**”), one independent director (currently James Weaver), and one director designated by Bay City Capital Fund V, L.P. (currently Lionel Carnot) (a “**BCC Designee**”).

The Pyxis Designees and the BCC Designees, shall be collectively referred to herein as the “**Director Designees**.” Each of the shareholders entitled to designate a director hereunder is referred to herein as a “**Designor**.” The rights provided under this Section 6 are the exclusive rights of each such Designor and are not transferable.

(b) Nominations of Director Designees. For so long as a Designor’s ownership of the outstanding Common Stock of the Company is at least five percent (5%), any Director Designee (including any successor pursuant to Subsection 6(c) below) designated by such Designor shall be nominated by the Board of Directors (or a committee thereof) for election at the annual meeting of stockholders at which such Director Designee’s term will expire. At least ninety (90) days prior to any such annual meeting at or by which directors are to be elected, such Designor shall notify the

Company in writing of the Director Designee to be nominated for election as a director. The Company shall disclose in its proxy the nominated Director Designee(s). In the absence of any such notification, it shall be presumed that the Designor's then incumbent Director Designee(s) has been designated.

(c) Successor Director Designees. If a Director Designee shall cease to serve as a director for any reason, the Designor of such Director Designee shall notify the Company in writing of the individual to replace such Director Designee, and the Company's Board of Directors shall appoint and elect such replacement director to serve out the remaining term of the existing director.

(d) Indemnification Agreements. The Company shall enter into an Indemnification Agreement with each successor Director Designee prior to the commencement of his or her service on the Board.

(e) Committees of the Board of Directors. For so long as the Designor of the BCC Designees has the right to designate Director Designees and provided that such individuals meet the requirements imposed by the SEC or any exchange upon which the Common Stock may be traded for membership on such committees, the Board shall appoint a BCC Designee to the Audit Committee, the Compensation Committee and the Nominating and Governance Committee. For so long as the Designor of the Pyxis Designees has the right to designate Director Designees and provided that such individual meets the requirements imposed by the SEC or any exchange upon which the Common Stock may be traded for membership on such committee, the Board shall appoint a Pyxis Designee to the Audit Committee.

(f) Amendment of this Section 6. For so long as Pyxis Innovations Inc. has the right to designate a Pyxis Designee, no provision of this Section 6 may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company, the Purchasers holding at least a majority in interest of the Shares then outstanding (which amendment shall be binding on all Purchasers) and Pyxis Innovations Inc. or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought. For so long as Bay City Capital Fund V, L.P. has the right to designate a BCC Designee, no provision of this Section 6 may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company, the Purchasers holding at least a majority in interest of the Shares then outstanding (which amendment shall be binding on all Purchasers) and Bay City Capital Fund V, L.P. or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought.

(g) Board Observer Rights. For so long as a Growth Equity Opportunities Fund III, LLC's ("GEOF") ownership of the outstanding Common Stock of the Company is at least five percent (5%), GEOF shall have the right to have a representative (the "Observer") attend each meeting of the Board. The Company shall deliver to the Observer notice of such meetings in accordance with the Company's Bylaws. Copies of any materials distributed to members of the Board shall likewise be provided to the Observer in a timely fashion. The Company shall not be required to deliver to the Observer specific information, and may preclude the Observer from specific discussions of the Board of Directors concerning specific information, that (i) is determined by the Board of Directors of the Company to be competitively sensitive, (ii) the Board of Directors of the Company determines is attorney-client privileged and should not, therefore, be disclosed or (iii) the Board of Directors of the Company determines is reasonably necessary to preserve or protect the exercise of the Board of Directors' fiduciary duty or to avoid a possible conflict of interest. GEOF agrees, and any representative of GEOF, including the Observer, will agree, to hold in confidence and trust and not disclose (other than to GEOF or its affiliates) or use any confidential information provided to or learned by it in connection with its rights under this letter, provided, that GEOF may give access to such confidential information to its officers, directors, employees, accountants, counsel and other representatives (collectively, "Representatives") if each such Representative is informed of the confidential nature of the information and that the information is subject to a confidentiality agreement and each such Representative is otherwise under an obligation to keep such confidential information confidential. Each Observer shall execute a non-disclosure agreement with the Company in form and substance reasonably satisfactory to the Company prior to commencing his or her role as an Observer. The rights set forth in this Section 6(g) may not be assigned by GEOF without the prior written consent of the Company.



7. OTHER AGREEMENTS AND COVENANTS

(a) National Market Listing. Following the Closing, the Company will work with the Purchasers and advisors to qualify for and obtain a full national market listing of its Common Stock on either the NASDAQ Capital Market or the NYSE MKT. The Company will use commercially reasonable efforts to qualify and apply for such listing, including effecting a reverse split of its common stock, subject to shareholder approval, if deemed advisable by a majority of the Board.

(b) Use of Proceeds. The proceeds from the sale of the Shares and Warrants under this Agreement shall be used for working capital and general corporate purposes.

(c) Form D: Blue Sky Filings. The Company agrees to timely file a Form D with respect to the Securities as required under Regulation D and, promptly upon request of any Purchaser, to provide a copy thereof. The Company shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for, or to qualify the Securities for, sale to the Purchasers at each Closing under applicable securities or “Blue Sky” laws of the states of the United States, and shall provide evidence of such actions promptly upon request of any Purchaser. The Company shall make all filings and reports relating to the offer and sale of the Securities to the Purchasers required under applicable securities or “Blue Sky” laws of the states of the United States following each Closing Date.

(d) Reservation of Shares. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue Shares pursuant to this Agreement and Warrant Shares pursuant to any exercise of the Warrants, in each case issued as of the Closing.

(e) Exchange Act Filings. Until such time that all of the Securities may be sold without the requirement for the Company to be in compliance with Rule 144(c)(1) and otherwise without restriction or limitation pursuant to Rule 144, the Company covenants to use commercially reasonable efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act.

(f) Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities in a manner that would require the registration under the Securities Act of the sale of the Securities or that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any trading market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.



(g) Expenses. The Company shall pay the reasonable legal and other fees and expenses of the Purchasers incurred in connection with the transactions contemplated by this Agreement, up to a maximum of \$25,000 in the aggregate, whether or not the Closing occurs. In the event the Closing occurs, the Company shall pay the reasonable legal fees and expenses of the Purchasers incurred in connection with the transactions contemplated by this Agreement, up to a maximum of \$50,000 in the aggregate. Each party shall otherwise bear all costs and expenses incurred by such party in connection with the transactions contemplated by this Agreement.

(h) Purchaser/Director Designee Exchange Act Filings. Each Purchaser and each Director Designee shall be responsible for the filing (and for all expenses in connection therewith) of required filings under the Exchange Act and all required amendments thereto relating to ownership of the Securities and appointment as a member of the Board, including any required Forms 3, 4 and 5 and Schedules 13D or 13G (as applicable). Each Purchaser and each Director Designee shall use commercially reasonable efforts to file such forms within the time period allowed for such forms under the rules and regulations promulgated by the SEC.

## 8. PUBLIC STATEMENTS

The Company shall, by 9:00 a.m. (New York City time) on the trading day immediately following the date of this Agreement, issue a press release disclosing the material terms of the transactions contemplated hereby. The Company shall file a Current Report on Form 8-K within the time required by Form 8-K disclosing the material terms of the transactions contemplated hereby, which Form 8-K shall include this Agreement (including conformed signature pages thereto), the Registration Rights Agreement (including conformed signature pages thereto) and the form of Warrant as exhibits thereto. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law.

## 9. MISCELLANEOUS

(a) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of Delaware, United States of America, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Delaware. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.





(b) Entire Agreement. This Agreement and the documents referenced herein and therein constitute the entire agreement among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein and therein. This Agreement and the documents referenced herein and therein supersede all prior agreements and understandings among the parties hereto with respect to the subject matter hereof and thereof. Without limiting the foregoing, it is acknowledged and agreed that (i) Section 6 of this Agreement shall supersede and replace Section 6 of the Common Stock Purchase Agreement, dated May 17, 2013, by and among the Company and the purchasers signatory thereto, as amended on March 31, 2014 and May 30, 2014 (the “**2013 Purchase Agreement**”) and (ii) the entry into this Agreement and the consummation of the transactions contemplated hereby are in lieu of any Subsequent Closings (as defined in the 2013 Purchase Agreement) and Section 2(b) of the 2013 Purchase Agreement shall have no further effect. Notwithstanding the foregoing, the terms of any confidentiality agreement entered into between the Company and any Purchaser shall remain in full force and effect.

(c) Amendments and Waivers. Except as otherwise set forth herein, no provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchasers holding at least a majority in interest of the Shares then outstanding (which amendment shall be binding on all Purchasers) or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

(d) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); (iii) upon receipt when delivered by email delivery of a “.pdf” format data file or (iv) upon receipt, when sent via a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses, facsimile numbers and email addresses for such communications shall be:

If to the Company: Interleukin Genetics, Inc.

135 Beaver Street  
Waltham, MA 02452  
Telephone: (781) 398-0700  
Facsimile: (781) 398-0720  
email: [kkornman@ilgenetics.com](mailto:kkornman@ilgenetics.com)  
Attention: Kenneth S. Kornman  
Chief Executive Officer



with a copy to: Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

One Financial Center

Boston, MA 02111

Tel: (617) 542-6000

Fax: (617) 542-2241

email: bkeane@mintz.com

Attn: Brian P. Keane, Esq.

If to a Purchaser: To the address set forth on the signature page to this Agreement.

(e) No Strict Construction. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

(f) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(g) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(h) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger, consolidation or sale of all or substantially all of the Company's assets). Except as specifically set forth herein, any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of this Agreement

and the documents referenced herein that apply to the Purchasers.

(i) Survival. Subject to applicable statute of limitations, the representations and warranties contained herein shall survive the Closing and the delivery of the Securities hereunder. No investigation by or knowledge of a party or its representatives, before or after the date of this Agreement, will affect in any manner the representations, warranties, covenants or agreements of another party set forth in this Agreement (or in any document to be delivered in connection with the consummation of the transactions contemplated by this Agreement) or the rights to rely thereon, and such representations, warranties, covenants and agreements will survive any such investigation.

-20-

(j) No Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other person or entity.

(k) Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity or bond) associated with the issuance of such replacement Securities.

(l) Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under this Agreement are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under this Agreement. Nothing contained herein or in any other document referred to herein, and no action taken by any Purchaser pursuant hereof or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by this Agreement. Each Purchaser shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of this Agreement and the other documents referred to herein.

(m) Business Day. “**Business Day**” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein or in the Registration Rights Agreement shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

(n) Headings. The headings of this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(o) Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.

[Remainder of page intentionally left blank. Signature pages follow.]

-21-

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

COMPANY:

INTERLEUKIN GENETICS, Inc.

By: /s/ Kenneth S. Kornman

Name: Kenneth S. Kornman

Title: Chief Executive Officer

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.

SIGNATURE PAGES FOR PURCHASERS FOLLOW.]



[PURCHASER SIGNATURE PAGES TO INTERLEUKIN GENETICS, INC.  
SECURITIES PURCHASE AGREEMENT]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: See Schedule I hereto.

*Signature of Authorized Signatory of Purchaser:* \_\_\_\_\_

Name of Authorized Signatory: \_\_\_\_\_

Title of Authorized Signatory: \_\_\_\_\_

Email Address for Notice to Purchaser: \_\_\_\_\_

Facsimile Number for Notice to Purchaser: \_\_\_\_\_

Address for Notice to Purchaser:

Address for Delivery of Securities to Purchaser (if not same as address for notice):

Purchase Price: \$ \_\_\_\_\_

Shares of Common Stock: \_\_\_\_\_

Warrant Shares: \_\_\_\_\_

EIN Number: \_\_\_\_\_

[SIGNATURE PAGES CONTINUE]

**SCHEDULE I****The Purchasers**

Purchaser	Shares	Warrants	Purchase Price
Bay City Capital Fund V, L.P.	25,996,552	25,996,552	\$2,607,454.17
Bay City Capital Fund V Co-Investment Fund, L.P.	495,400	495,400	\$49,688.62
Growth Equity Opportunities Fund III, LLC	19,868,965	19,868,965	\$1,992,857.17
Keith C. Stone	249,252	249,252	\$24,999.98
Charles D. Bryceland	1,994,018	1,994,018	\$200,000.01
Stephen DiPalma	249,252	249,252	\$24,999.98
William Alan Jolly	747,757	747,757	\$75,000.03
Michael Jeffrey Reid Charles UAD 4/30/09	249,252	249,252	\$24,999.98
Daniel Geffken	249,252	249,252	\$24,999.98
Total	50,099,700	50,099,700	\$5,024,999.92

**EXHIBIT A**

See Exhibit 4.1 to the Form 8-K filed on December 23, 2014 (File No. 001-32715)

**EXHIBIT B**

See Exhibit 10.2 to the Form 8-K filed on December 23, 2014 (File No. 001-32715)

## EXHIBIT 10.2

### REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this “Agreement”) is made and entered into as of December 23, 2014, between Interleukin Genetics, Inc., a Delaware corporation (the “**Company**”), each of the several purchasers signatory hereto (each such purchaser, a “**Purchaser**” and, collectively, the “**Purchasers**”), and BTIG, LLC, a broker-dealer registered with the Financial Industry Regulatory Authority, Inc. (the “**Placement Agent**”).

This Agreement is made pursuant to the Securities Purchase Agreement, dated as of the date hereof, between the Company and the Purchasers (the “**Purchase Agreement**”).

The Company, each Purchaser and the Placement Agent hereby agree as follows:

#### 1. Definitions.

**Capitalized terms used and not otherwise defined herein that are defined in the Purchase Agreement shall have the meanings given such terms in the Purchase Agreement.** As used in this Agreement, the following terms shall have the following meanings:

“**Advice**” shall have the meaning set forth in Section 6(d).

“**Effectiveness Date**” means, with respect to any Registration Statement required to be filed hereunder, the fifth Trading Day following the date on which the Company is notified by the SEC that such Registration Statement will not be reviewed or is no longer subject to further review and comments.

“**Effectiveness Period**” shall have the meaning set forth in Section 2(a).

“**Event**” shall have the meaning set forth in Section 2(b).

“**Event Date**” shall have the meaning set forth in Section 2(b).

“**Filing Date**” means, (i) with respect to the Initial Registration Statement required hereunder, the 45<sup>th</sup> calendar day following the Closing Date, and (ii) with respect to any additional Registration Statements which may be required pursuant to Section 3(c), the earliest practical date on which the Company is permitted by SEC Guidance to file such additional Registration Statement related to the Registrable Securities.

“**Holder**” or “**Holders**” means the holder or holders, as the case may be, from time to time of Registrable Securities.

“**Indemnified Party**” shall have the meaning set forth in Section 5(c).

“**Indemnifying Party**” shall have the meaning set forth in Section 5(c).

“**Initial Registration Statement**” means the initial Registration Statement filed pursuant to this Agreement.

“**Losses**” shall have the meaning set forth in Section 5(a).

“**Plan of Distribution**” shall have the meaning set forth in Section 2(a).

“**Proceeding**” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“**Prospectus**” means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated by the SEC pursuant to the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

“**Registrable Securities**” means, as of any date of determination, (a) all Shares sold under the Purchase Agreement, (b) all Warrant Shares then issuable upon exercise of the Warrants sold under the Purchase Agreement, (c) all shares of Common Stock then issuable upon exercise of the warrants issued to the Placement Agent in connection with the transactions under the Purchase Agreement and (d) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing; provided, however, that any such Registrable Securities shall cease to be Registrable Securities (and the Company shall not be required to maintain the effectiveness of any, or file another, Registration Statement hereunder with respect thereto) for so long as (a) a Registration Statement with respect to the sale of such Registrable Securities is declared effective by the SEC under the Securities Act and such Registrable Securities have been disposed of by the Holder in accordance with such effective Registration Statement, (b) such Registrable Securities have been previously sold in accordance with Rule 144, or (c) such securities become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 (assuming that all Warrants are exercised by “cashless exercise” as provided in Section 2(c) of each of the Warrants), as reasonably determined by the Company, upon the advice of



counsel to the Company.

2

**“Registration Deadline”** means, with respect to any Registration Statement required hereunder, the 90<sup>th</sup> calendar day following the Filing Date.

**“Registration Statement”** means any registration statement required to be filed hereunder pursuant to Section 2(a) and any additional registration statements contemplated by Section 3(c), including (in each case) the Prospectus, amendments and supplements to any such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in any such registration statement.

**“Rule 415”** means Rule 415 promulgated by the SEC pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Rule.

**“Rule 424”** means Rule 424 promulgated by the SEC pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Rule.

**“Selling Stockholder Questionnaire”** shall have the meaning set forth in Section 3(a).

**“SEC Guidance”** means (i) any publicly-available written or oral guidance of the SEC staff, or any comments, requirements or requests of the SEC staff and (ii) the Securities Act.

**“Trading Day”** means a day on which the principal Trading Market is open for trading.

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

## 2. Shelf Registration.

On or prior to each Filing Date, the Company shall prepare and file with the SEC a Registration Statement covering the resale of all or such maximum portion of the Registrable Securities as permitted by SEC Guidance (provided that, the Company shall use its reasonable best efforts to obtain the registration of all of the Registrable Securities in accordance with the SEC Guidance, including without limitation, Compliance and Disclosure Interpretation 612.09) that are not then registered on an effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415. Each Registration Statement filed hereunder shall be on the appropriate form under the Securities Act and shall contain (unless otherwise directed by at least a majority in interest of the Holders) substantially the “Plan of Distribution” attached hereto as Annex A. Subject to the terms of this Agreement, the Company shall use its reasonable best efforts to cause a Registration Statement filed hereunder to be declared effective under the Securities Act as promptly as reasonably practicable after the filing thereof, but in any event prior to the applicable Effectiveness Date, and shall use its reasonable best efforts to keep such Registration Statement current and continuously effective under the Securities Act until such date as all Registrable Securities covered by such Registration Statement (i) have been sold, thereunder or pursuant to Rule 144, or (ii) in the opinion of counsel to the Holders, (A) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and (B) (I) may be sold without the requirement for the Company to be in compliance with the current public information requirement under Rule 144 or (II) the Company is in compliance with the current public information requirement under Rule 144 (the “**Effectiveness Period**”). Such Registration Statement (including any amendments (a) or supplements thereto and prospectuses contained therein), except for information provided by a Holder or any transferee of a Holder, shall not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company shall telephonically request effectiveness of a Registration Statement as of 5:00 p.m. New York City time on a Trading Day. The Company shall immediately notify the Holders via facsimile or by e-mail of the effectiveness of a Registration Statement on the same Trading Day that the Company telephonically confirms effectiveness with the SEC, which shall be the date requested for effectiveness of such Registration Statement. The Company shall, by 9:30 a.m. New York City time on the Trading Day after the effective date of such Registration Statement, file a final Prospectus with the SEC as required by Rule 424. Notwithstanding any other provision of this Agreement, if any SEC Guidance sets forth a limitation on the number of Registrable Securities permitted to be registered on a particular Registration Statement (and notwithstanding that the Company used its reasonable best efforts to obtain the registration of all or a greater portion of Registrable Securities), unless otherwise directed in writing by a Holder as to its Registrable Securities, the number of Registrable Securities to be registered on such Registration Statement will first be reduced by Registrable Securities represented by Warrant Shares (applied, in the case that some Warrant Shares may be registered, to the Holders on a pro rata basis based on the total number of unregistered Warrant Shares held by such Holders). In the event of a cutback hereunder, the Company shall give the Holder at least five (5) Trading Days prior written notice along with the calculations as to such Holder’s allotment.

(b) If: (i) a Registration Statement is not filed on or prior to its Filing Date, (ii) the Company fails to use its reasonable best efforts to obtain effectiveness with the SEC prior to the Registration Deadline of a Registration Statement, (iii) the Company fails to file with the SEC a request for acceleration of a Registration Statement in accordance with Rule 461 promulgated by the SEC pursuant to the Securities Act, within five Trading Days of the date that the Company is notified (orally or in writing, whichever is earlier) by the SEC that such Registration Statement will not be “reviewed” or will not be subject to further review, or (iv) prior to the effective date of a Registration Statement, the Company fails to file a pre-effective amendment and otherwise respond in writing to comments made by the SEC in respect of such Registration Statement within twenty (20) calendar days after the receipt of comments by or notice from the SEC that such amendment is required in order for such Registration Statement to be declared effective, (any such failure or breach being referred to as an “**Event**”, and for purposes of clauses (i) and (ii) the date on which such Event occurs, and for purpose of clause (iii) the date on which such five (5) Trading Day period is exceeded, and for purpose of clause (iv) the date on which such twenty (20) calendar day period is exceeded, being referred to as “**Event Date**”), then, in addition to any other rights the Holders may have hereunder or under applicable law, on each such Event Date and on each monthly anniversary of each such Event Date (if the applicable Event shall not have been cured by such date) until the applicable Event is cured, the Company shall pay to each Holder an amount in cash, as partial liquidated damages and not as a penalty, equal to 2% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement, for any unregistered Registrable Securities then held by such Holder; provided, however, that the Company shall not be required to pay partial liquidated damages to such Holder under this Section 2(b) in an aggregate amount (excluding any interest paid thereon) in excess of 5% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement. The parties agree that the Company shall not be liable for liquidated damages under this Agreement with respect to any unexercised Warrants or Warrant Shares. If the Company fails to pay any partial liquidated damages pursuant to this Section in full within seven (7) days after the date payable, the Company will pay interest thereon at a rate of 18% per annum (or such lesser maximum amount that is permitted to be paid by applicable law) to the Holder, accruing daily from the date such partial liquidated damages are due until such amounts, plus all such interest thereon, are paid in full. The partial liquidated damages pursuant to the terms hereof shall apply on a daily pro rata basis for any portion of a month prior to the cure of an Event.

3. Registration Procedures.

In connection with the Company’s registration obligations hereunder, the Company shall:

(a) Not less than five (5) Trading Days prior to the filing of each Registration Statement and not less than one (1) Trading Day prior to the filing of any related Prospectus or any amendment or supplement thereto (including any document that would be incorporated or deemed to be incorporated therein by reference, but not including (i) any Exchange Act filing (including any post-effective amendment filed solely to update the Registration Statement for an Exchange Act filing) or (ii) any supplement or post-effective amendment to a registration statement that is not related to such Holder's Registrable Securities), the Company shall (i) furnish to each Holder copies of all such documents proposed to be filed and any comments made by the staff of the SEC with respect to such Registration Statement and the Company's responses thereto, which documents (other than those incorporated or deemed to be incorporated by reference) will be subject to the review of such Holders, and (ii) cause its officers and directors, counsel and independent registered public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of respective counsel to each Holder, to conduct a reasonable investigation within the meaning of the Securities Act. The Company shall not file a Registration Statement or any such Prospectus or any amendments or supplements thereto to which the Holders of a majority of the Registrable Securities shall reasonably object in good faith, provided that, the Company is notified of such objection in writing no later than five (5) Trading Days after the Holders have been so furnished copies of a Registration Statement or one (1) Trading Day after the Holders have been so furnished copies of any related Prospectus or amendments or supplements thereto. In the event that the Company is prevented from making such filing on account of the objections described in the previous sentence (provided that the Company uses reasonable best efforts to address the objections described in the previous sentence and to promptly file thereafter), the failure of the Company to make such filing shall not be deemed a breach or default hereunder or otherwise with respect to the Securities. Each Holder agrees to furnish to the Company a completed questionnaire in the form attached to this Agreement as Annex B (a "**Selling Stockholder Questionnaire**") on a date that is not less than two (2) Trading Days prior to the Filing Date or by the end of the fourth (4<sup>th</sup>) Trading Day following the date on which such Holder receives draft materials in accordance with this Section.

(b) (i) Prepare and file with the SEC such amendments, including post-effective amendments, and supplements to a Registration Statement and the Prospectus used in connection therewith as may be necessary to keep a Registration Statement current and continuously effective (subject to any requirement that a post-effective amendment be declared effective by the SEC) as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the SEC such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities subject to any SEC Guidance that sets forth a limitation on the number of Registrable Securities permitted to be registered on a particular Registration Statement, (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement (subject to the terms of this Agreement), and, as so supplemented or amended, to be filed pursuant to Rule 424, (iii) respond as promptly as reasonably possible to any comments received from the SEC with respect to a Registration Statement or any amendment thereto, and (iv) comply in all material respects with the applicable provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by a Registration Statement during the applicable period in accordance (subject to the terms of this Agreement) with the intended methods of disposition by the Holders thereof set forth in such Registration Statement as so amended or in such Prospectus as so supplemented.

(c) If during the Effectiveness Period, the number of Registrable Securities at any time exceeds 100% of the number of shares of Common Stock then registered in a Registration Statement, then the Company shall file as soon as reasonably practicable, but in any case prior to the applicable Filing Date, an additional Registration Statement covering the resale by the Holders of not less than the number of such Registrable Securities. The Company shall use its best efforts to cause such new Registration Statement to become effective as soon as practicable following the filing thereof. For all purposes of this Agreement, such additional Registration Statement shall be deemed to be the Registration Statement required to be filed by the Company pursuant to Section 2(a), and the Company and the Investors shall have the same rights and obligations with respect to such additional Registration Statement as they shall have with respect to the initial Registration Statement required to be filed by the Company pursuant to Section 2(a).

(d) Notify the Holders of Registrable Securities to be sold (which notice shall, pursuant to clauses (iii) through (vi) hereof, be accompanied by an instruction to suspend the use of the Prospectus until the requisite changes have been made) as promptly as reasonably possible (and, in the case of (i)(A) below, not less than one (1) Trading Day prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one (1) Trading Day following the day (i)(A), when a Prospectus or any Prospectus supplement or post-effective amendment to a Registration Statement is proposed to be filed (but not including (1) any Exchange Act filing (including any post-effective amendment filed solely to update the Registration Statement for an Exchange Act filing) or (2) any supplement or post-effective amendment to a registration statement that is not related to such Holder's Registrable Securities), (B) when the SEC notifies the Company whether there will be a "review" of such Registration Statement and whenever the SEC comments in writing on such Registration Statement, and (C) with respect to a Registration Statement or any post-effective amendment, when the same has become effective, (ii) of any request by the SEC or any other federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information, (iii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose, (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose, (v) of the occurrence of any event or passage of time that makes the financial statements included in a Registration Statement ineligible for inclusion therein or any statement made in a Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to a Registration Statement, Prospectus or other documents so that, in the case of a Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and (vi) of the occurrence or existence of any pending corporate development with respect to the Company that the Company believes may be material and that, in the determination of the Company, makes it not in the best interest of the Company to allow continued availability of a Registration Statement or Prospectus, provided that, any and all of such information shall remain confidential to each Holder until such information otherwise becomes public, unless disclosure by a Holder is required by law.

(e) Use its reasonable best efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order stopping or suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(f) Furnish to each Holder, upon request, without charge, at least one conformed copy of each such Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference to the extent requested by such Person, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the SEC; provided, that any such item which is available on the EDGAR system (or successor thereto) need not be furnished in physical form.

(g) Subject to the terms of this Agreement, the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto, except after the giving of any notice pursuant to Section 3(d).

(h) The Company shall cooperate with any broker-dealer through which a Holder proposes to resell its Registrable Securities in effecting a filing with the FINRA Corporate Financing Department pursuant to FINRA Rule 5110, as requested by any such Holder.

(i) Prior to any resale of Registrable Securities by a Holder, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from the Registration or qualification) of such Registrable Securities for the resale by the Holder under the securities or Blue Sky laws of such jurisdictions within the United States as any Holder reasonably requests in writing, to keep each registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things reasonably necessary to enable the disposition in such jurisdictions of the Registrable Securities covered by each Registration Statement; provided, that, the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified, subject the Company to any material tax in any such jurisdiction where it is not then so subject or file a general consent to service of process in any such jurisdiction.

(j) If requested by a Holder, cooperate with such Holder to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be delivered to a transferee pursuant to a Registration Statement, which certificates shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holder may request.

(k) Upon the occurrence of any event contemplated by Section 3(d), as promptly as reasonably possible under the circumstances taking into account the Company's good faith assessment of any adverse consequences to the Company and its stockholders of the premature disclosure of such event, prepare a supplement or amendment, including a post-effective amendment, to a Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither a Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Company notifies the Holders in accordance with clauses (iii) through (vi) of Section 3(d) above to suspend the use of any Prospectus until the requisite changes to such Prospectus have been made, then the Holders shall suspend use of such Prospectus. The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable. The Company shall be entitled to exercise its right under this Section 3(k) to suspend the availability of a Registration Statement and Prospectus for a period not to exceed 60 calendar days (which need not be consecutive days) in any 12-month period.



(l) Comply with all applicable rules and regulations of the SEC in connection with obtaining and maintaining the effectiveness of any Registration Statement required to be filed and maintained with the SEC hereunder.

(m) To the extent reasonably required, request that each selling Holder shall furnish to the Company a certified statement as to the number of shares of Common Stock beneficially owned by such Holder, if required by the SEC, the natural persons thereof that have voting and dispositive control over such shares. During any periods that the Company is unable to meet its obligations hereunder with respect to the registration of the Registrable Securities solely because any Holder fails to furnish such information within five (5) Trading Days of the Company's request, any liquidated damages that are accruing at such time as to such Holder only shall be tolled and any Event that may otherwise occur solely because of such delay shall be suspended as to such Holder only, until such information is delivered to the Company.

(n) At the reasonable request of a Holder and at such Holder's expense, prepare and file with the SEC such amendments (including post-effective amendments) and supplements to a Registration Statement and any Prospectus used in connection with the registration statement as may be necessary in order to change the plan of distribution set forth in such Registration Statement.

(o) Hold in confidence and not make any disclosure of information concerning a Holder provided to the Company (excluding any information provided on the Selling Stockholder Questionnaire) unless (i) disclosure of such information is necessary to comply with federal or state securities laws or the rules of any securities exchange or trading market on which the Company's securities are then listed or traded, (ii) the disclosure of such information is necessary to avoid or correct a misstatement or omission in any Registration Statement, (iii) the release of such information is ordered pursuant to a subpoena or other order from a court or governmental body of competent jurisdiction, or (iv) such information has been made generally available to the public other than by disclosure in violation of this or any other agreement. The Company agrees that it shall, upon learning that disclosure of such information concerning a Holder is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt notice to such Holder prior to making such disclosure, and allow such Holder, at its expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, such information

4. Registration Expenses. All fees and expenses incident to the performance of or compliance with, this Agreement by the Company shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses of the Company's counsel and independent registered public accountants) (A) with respect to filings made with the SEC, (B) with respect to filings required to be made with any Trading Market on which the Common Stock is then listed for trading and (C) in compliance with applicable state securities or Blue Sky laws reasonably agreed to by the Company in writing (including, without limitation, fees and disbursements of counsel for the Company in connection with Blue Sky qualifications or exemptions of the Registrable Securities), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities), (iii) messenger, telephone and delivery expenses, (iv) fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, (vi) fees and disbursements of one counsel for the Holders selected by Holders of at least a majority of the Registrable Securities included in the applicable Registration Statement, not to exceed \$10,000 for each such Registration Statement, and (vii) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Holder or, except as set forth under (vi) above and to the extent provided for in the Purchase Agreement, any legal fees or other costs of the Holders.

5. Indemnification.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify, hold harmless and defend each Holder, the officers, directors, members, managers, partners, agents, brokers (including brokers who offer and sell Registrable Securities as principal as a result of a pledge or any failure to perform under a margin call of shares of Common Stock), investment advisors and employees (and any other persons with a functionally equivalent role of a person holding such titles, notwithstanding a lack of such title or any other title) of each of them, each person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, members, stockholders, partners, agents and employees (and any other persons with a functionally equivalent role of a person holding such titles, notwithstanding a lack of such title or any other title) of each such controlling person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable attorneys' fees) and expenses (collectively, "**Losses**"), as incurred, arising out of or relating to (1) any untrue or alleged untrue statement of a material fact contained in a Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading or (2) any violation or alleged violation by the Company of the Securities Act, the Exchange Act or any other law, including any state securities law, or any rule or regulation promulgated thereunder, in connection with the performance of its obligations under this Agreement, except to the extent, but only to the extent, that (i) such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such

Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement, such Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (ii) in the case of an occurrence of an event of the type specified in Section 3(d)(iii)-(vi), the use by such Holder of an outdated, defective or otherwise unavailable Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated, defective or otherwise unavailable for use by such Holder and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding arising from or in connection with the transactions contemplated by this Agreement of which the Company is aware.

(b) Indemnification by Holders. Each Holder shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, to the extent arising out of or based solely upon (x) such Holder's failure to comply with the prospectus delivery requirements of the Securities Act or (y) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus, or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein (in the case of any Prospectus or supplement thereto, in light of the circumstances under which they were made) or necessary to make the statements therein not misleading (i) to the extent, but only to the extent, that such untrue statement or omission is contained in any information so furnished in writing by such Holder to the Company in such Holder's capacity as a selling Holder specifically and expressly for inclusion in such Registration Statement or such Prospectus or (ii) to the extent that such information relates to such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement (it being understood that the Holder has approved Annex A hereto for this purpose), such Prospectus or in any amendment or supplement thereto or (ii) in the case of an occurrence of an event of the type specified in Section 3(d)(iii)-(vi), the use by such Holder of an outdated, defective or otherwise unavailable Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated, defective or otherwise unavailable for use by such Holder and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). In no event shall the liability of any selling Holder under this Section 5(b) be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any person entitled to indemnity hereunder (an “**Indemnified Party**”), such Indemnified Party shall promptly notify the person from whom indemnity is sought (the “**Indemnifying Party**”) in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses reasonably incurred in connection with defense thereof; provided that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have materially prejudiced the Indemnifying Party’s ability to defend such action.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses, (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding, or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and counsel to the Indemnified Party shall reasonably believe that a material conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and the reasonable fees and expenses of no more than one separate counsel shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld or delayed. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

Subject to the terms of this Agreement, all reasonable fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten Trading Days of written notice thereof to the Indemnifying Party; provided, that, the Indemnified Party shall promptly reimburse the Indemnifying Party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party is judicially determined not to be entitled to indemnification hereunder.

(d) Contribution. If the indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless for any Losses, then each Indemnifying Party shall contribute to the amount paid or payable by such Indemnified Party, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 5(d), no Holder shall be required to contribute pursuant to this Section 5(d), in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties, provided that no amount shall be reimbursed twice in any event.

6. Miscellaneous.

(a) Remedies. In the event of a breach by the Company or by a Holder of any of their respective obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, shall be entitled to specific performance of its rights under this Agreement. Each of the Company and each Holder agrees that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall not assert or shall waive the defense that a remedy at law would be adequate.

(b) No Piggyback on Registrations. Except for the shares of Common Stock issuable upon exercise of the warrant to be issued pursuant to the Venture Loan Agreement, neither the Company nor any of its security holders (other than the Holders in such capacity pursuant hereto) may include securities of the Company in any Registration Statements other than the Registrable Securities.

(c) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to a Registration Statement.

(d) Discontinued Disposition. By its acquisition of Registrable Securities, each Holder agrees that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(d)(iii) through (vi), such Holder will forthwith discontinue disposition of such Registrable Securities under a Registration Statement until it is advised in writing (the “**Advice**”) by the Company that the use of the applicable Prospectus (as it may have been supplemented or amended) may be resumed. The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable.

(e) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and the Holders of a majority of the then outstanding Registrable Securities (including, for this purpose any Registrable Securities issuable upon exercise or conversion of any security) originally issued to the Purchasers. If a Registration Statement does not register all of the Registrable Securities pursuant to a waiver or amendment done in compliance with the previous sentence, then the number of Registrable Securities to be registered for each Holder shall be reduced pro rata among all Holders and each Holder shall have the right to designate which of its Registrable Securities shall be omitted from such Registration Statement. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of a Holder or some Holders and that does not directly or indirectly affect the rights of other Holders may be given by such Holder or Holders of all of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be

amended, modified, or supplemented except in accordance with the provisions of the first sentence of this Section 6(e).



- (f) Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be delivered as set forth in the Purchase Agreement.
- (g) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. The Company may not assign (except by merger) its rights or obligations hereunder without the prior written consent of all of the Holders of the then outstanding Registrable Securities. Each Holder may assign their respective rights hereunder in the manner and as permitted under Section 9(h) of the Purchase Agreement.
- (h) No Inconsistent Agreements. Neither the Company nor any of its subsidiaries has entered, as of the date hereof, nor shall the Company or any of its subsidiaries, on or after the date of this Agreement, enter into any agreement with respect to its securities, that would have the effect of impairing the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof. Neither the Company nor any of its subsidiaries has previously entered into any agreement granting any registration rights with respect to any of its securities to any person or entity that have not been satisfied in full or waived with respect to any Registration Statement filed under this Agreement.
- (i) Execution and Counterparts. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or “.pdf” signature page were an original thereof.
- (j) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be determined in accordance with the provisions of the Purchase Agreement.
- (k) Cumulative Remedies. The remedies provided herein are cumulative and not exclusive of any other remedies provided by law.

(l) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(m) Headings. The headings in this Agreement are for convenience only, do not constitute a part of the Agreement and shall not be deemed to limit or affect any of the provisions hereof.

(n) Independent Nature of Holders' Obligations and Rights. The obligations of each Holder hereunder are several and not joint with the obligations of any other Holder hereunder, and no Holder shall be responsible in any way for the performance of the obligations of any other Holder hereunder. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Holder pursuant hereto or thereto, shall be deemed to constitute the Holders as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Holders are in any way acting in concert with respect to such obligations or the transactions contemplated by this Agreement. Each Holder shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Holder to be joined as an additional party in any proceeding for such purpose.

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*(Signature Pages Follow)*

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

**INTERLEUKIN GENETICS,  
INC.**

By: /s/ Kenneth S. Kornman  
Name: Kenneth S. Kornman  
Title: Chief Executive Officer

**BTIG, LLC**

By: /s/ K.C. Stone  
Name: K.C. Stone  
Title: Managing Director

[SIGNATURE PAGES OF PURCHASERS FOLLOWS]

[SIGNATURE PAGE OF HOLDERS TO INTERLEUKIN GENETICS RRA]

Name of Holder: See Schedule I to the Securities Purchase Agreement, dated December 23, 2014, filed as Exhibit 10.1 to the Current Report on Form 8-K filed by Interleukin Genetics, Inc. on December 23, 2014 (File No. 001-32715).

*Signature of Authorized Signatory of Holder:* \_\_\_\_\_

Name of Authorized Signatory: \_\_\_\_\_

Title of Authorized Signatory: \_\_\_\_\_

[SIGNATURE PAGES CONTINUE]

**Annex A**

**Plan of Distribution**

Each Selling Stockholder (the "**Selling Stockholders**") of the shares of common stock and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock covered hereby on the OTCQB or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

- an exchange distribution in accordance with the rules of the applicable exchange;

- privately negotiated transactions;

settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;

in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per share;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

- a combination of any such methods of sale; or

- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended (the "Securities Act"), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of shares of Common Stock or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of shares of common stock in the course of hedging the positions they assume. The Selling Stockholders may also sell shares of common stock short and deliver these securities to close out their short positions, or loan or pledge the shares of common stock to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the shares of common stock. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the shares. The Company has agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because Selling Stockholders may be deemed to be “underwriters” within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. The Selling Stockholders have advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the Selling Stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the shares may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the shares have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale of shares of common stock covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).



**Annex B**

INTERLEUKIN GENETICS, INC..

Selling Stockholder Notice and Questionnaire

The undersigned beneficial owner of shares of common stock (the “**Registrable Securities**”) of Interleukin Genetics, Inc., a company organized under the laws of the State of Delaware (the “**Company**”), understands that the Company has filed or intends to file with the Securities and Exchange Commission (the “**Commission**”) a registration statement (the “**Registration Statement**”) for the registration and resale under Rule 415 of the Securities Act of 1933, as amended (the “**Securities Act**”), of the Registrable Securities, in accordance with the terms of the Registration Rights Agreement (the “**Registration Rights Agreement**”) to which this document is annexed. A copy of the Registration Rights Agreement is available from the Company upon request at the address set forth below. All capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Registration Rights Agreement.

Certain legal consequences arise from being named as a selling stockholder in the Registration Statement and the related prospectus. Accordingly, holders and beneficial owners of Registrable Securities are advised to consult their own securities law counsel regarding the consequences of being named or not being named as a selling stockholder in the Registration Statement and the related prospectus.

NOTICE

The undersigned beneficial owner (the “**Selling Stockholder**”) of Registrable Securities hereby elects to include the Registrable Securities owned by it in the Registration Statement.

The undersigned hereby provides the following information to the Company and represents and warrants that such information is accurate:

QUESTIONNAIRE

**1. Name.**

- (a) Full Legal Name of Selling Stockholder
  
- (b) Full Legal Name of Registered Holder (if not the same as (a) above) through which Registrable Securities are held:
  
- (c) Full Legal Name of Natural Control Person (which means a natural person who directly or indirectly alone or with others has power to vote or dispose of the securities covered by this Questionnaire):

**2. Address for Notices to Selling Stockholder:**

Telephone:

Fax:

email:

Contact Person:

**3. Broker-Dealer Status:**

(a) Are you a broker-dealer?

Yes "

No "

(b) If “yes” to Section 3(a), did you receive your Registrable Securities as compensation for investment banking services to the Company?

Yes “                  No “

2

Note: If “no” to Section 3(b), the Commission’s staff has indicated that you should be identified as an underwriter in the Registration Statement.

(c) Are you an affiliate of a broker-dealer?

Yes “                  No “

If you are an affiliate of a broker-dealer, do you certify that you purchased the Registrable Securities in the (d) ordinary course of business, and at the time of the purchase of the Registrable Securities to be resold, you had no agreements or understandings, directly or indirectly, with any person to distribute the Registrable Securities?

Yes “                  No “

Note: If “no” to Section 3(d), the Commission’s staff has indicated that you should be identified as an underwriter in the Registration Statement.

**4. Beneficial Ownership of Securities of the Company Owned by the Selling Stockholder.**

*Except as set forth below in this Item 4, the undersigned is not the beneficial or registered owner of any securities of the Company other than the securities issuable pursuant to the Purchase Agreement.*

(a) Type and Amount of other securities beneficially owned by the Selling Stockholder:

**5. Relationships with the Company:**

*Except as set forth below, neither the undersigned nor any of its affiliates, officers, directors or principal equity holders (owners of 5% of more of the equity securities of the undersigned) has held any position or office or has had any other material relationship with the Company (or its predecessors or affiliates) during the past three years.*

State any exceptions here:

The undersigned agrees to promptly notify the Company of any inaccuracies or changes in the information provided herein that may occur subsequent to the date hereof at any time while the Registration Statement remains effective.

By signing below, the undersigned consents to the disclosure of the information contained herein in its answers to Items 1 through 5 and the inclusion of such information in the Registration Statement and the related prospectus and any amendments or supplements thereto. The undersigned understands that such information will be relied upon by the Company in connection with the preparation or amendment of the Registration Statement and the related prospectus and any amendments or supplements thereto.

IN WITNESS WHEREOF the undersigned, by authority duly given, has caused this Notice and Questionnaire to be executed and delivered either in person or by its duly authorized agent.

Date: Beneficial Owner:

By:

Name:

Title:

**PLEASE FAX A COPY (OR EMAIL A .PDF COPY) OF THE COMPLETED AND EXECUTED NOTICE AND QUESTIONNAIRE, AND RETURN THE ORIGINAL BY OVERNIGHT MAIL, TO:**

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

One Financial Center

Boston, MA 02111

Tel: (617) 542-6000

Fax: (617) 542-2241

email: [bkeane@mintz.com](mailto:bkeane@mintz.com)

Attn: Brian P. Keane, Esq.

**EXHIBIT 10.3**

VENTURE LOAN AND SECURITY AGREEMENT

Dated as of December 23, 2014

by and among

HORIZON TECHNOLOGY FINANCE CORPORATION,

a Delaware corporation

312 Farmington Avenue

Farmington, CT 06032

as Lender

And

INTERLEUKIN GENETICS, INC.,

a Delaware corporation

135 Beaver Street

Lexington, MA 02452

as Borrower

Loan A Commitment Amount: \$5,000,000

Loan A Commitment Termination Date: December 23, 2014





The Lender and Borrower hereby agree as follows:

## AGREEMENT

### 1. Definitions and Construction.

1.1 Definitions. As used in this Agreement, the following capitalized terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

“Account Control Agreement” means an agreement acceptable to Lender which perfects via control Lender’s security interest in Borrower’s deposit accounts and/or securities accounts.

“Affiliate” means, with respect to any Person, any other Person that owns or controls directly or indirectly ten percent (10%) or more of the stock of such Person, any other Person that controls or is controlled by or is under common control with such Person and each of such Person’s executive officers, directors, managers, joint venturers or partners. For purposes of this definition, the term “control” of a Person means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting Equity Securities, by contract or otherwise and the terms “controlled by” and “under common control with” shall have correlative meanings.

“Agreement” means this certain Venture Loan and Security Agreement by and between Borrower and Lender dated as of the date on the cover page hereto (as it may from time to time be amended, modified or supplemented in a writing signed by Borrower and Lender).

“Anti-Terrorism Laws” means any laws relating to terrorism or money laundering, including Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

“Blocked Person” means any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or

is otherwise subject to the provisions of, Executive Order No. 13224, (c) with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) that commits, threatens or conspires to commit or supports “terrorism” as defined in Executive Order No. 13224, or (e) that is named a “specially designated national” or “blocked person” on the most current list published by OFAC or other similar list.

“Borrower” means Borrower as set forth on the cover page of this Agreement.

“Business Day” means any day that is not a Saturday, Sunday, or other day on which banking institutions are authorized or required to close in Connecticut or Massachusetts.

“Claim” has the meaning given such term in Section 10.3 of this Agreement.

“Code” means the Uniform Commercial Code as adopted and in effect in the State of Connecticut, as amended from time to time; *provided* that if by reason of mandatory provisions of law, the creation and/or perfection or the effect of perfection or non-perfection of the security interest in any Collateral is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the State of Connecticut, the term “Code” shall also mean the Uniform Commercial Code as in effect from time to time in such jurisdiction for purposes of the provisions hereof relating to such creation, perfection or effect of perfection or non-perfection.

“Collateral” has the meaning given such term in Section 4.1 of this Agreement.

“Commitment Amount” means the Loan A Commitment Amount.

“Commitment Fee” has the meaning given such term in Section 2.6(c) of this Agreement.

“Consolidated” means the consolidation of accounts in accordance with GAAP.

“Default” means any Event of Default or any event which with the passing of time or the giving of notice or both would become an Event of Default hereunder.

“Default Rate” means the per annum rate of interest equal to five percent (5%) over the Loan Rate, but such rate shall in no event be more than the highest rate permitted by applicable law to be charged on commercial loans in a default situation.

“Disclosure Schedule” means Exhibit A attached hereto.

“Environmental Laws” means all foreign, federal, state or local laws, statutes, common law duties, rules, regulations, ordinances and codes, together with all administrative orders, directed duties, requests, licenses, authorizations and permits of, and agreements with, any Governmental Authorities, in each case relating to environmental, health, safety and land use matters, including the Comprehensive Environmental Response, Compensation and Liability Act of

1980, the Clean Air Act, the Federal Water Pollution Control Act of 1972, the Solid Waste Disposal Act, the Federal Resource Conservation and Recovery Act, the Toxic Substances Control Act and the Emergency Planning and Community Right-to-Know Act.

“Equity Securities” of any Person means (a) all common stock, preferred stock, participations, shares, partnership interests, membership interests or other equity interests in and of such Person (regardless of how designated and whether or not voting or non-voting) and (b) all warrants, options and other rights to acquire any of the foregoing.

“ERISA” has the meaning given to such term in Section 7.12 of this Agreement.

“Event of Default” has the meaning given to such term in Section 8 of this Agreement.

“Funding Certificate” means a certificate executed by a duly authorized Responsible Officer of Borrower substantially in the form of Exhibit B or such other form as Lender may agree to accept.

“Funding Date” means any date on which a Loan is made to or on account of Borrower under this Agreement.

“GAAP” means generally accepted accounting principles as in effect in the United States of America from time to time, consistently applied.

“Good Faith Deposit” has the meaning given such term in Section 2.6(a) of this Agreement.

“Governmental Authority” means (a) any federal, state, county, municipal or foreign government, or political subdivision thereof, (b) any governmental or quasi-governmental agency, authority, board, bureau, commission, department, instrumentality or public body, (c) any court or administrative tribunal, or (d) with respect to any Person, any arbitration tribunal or other non-governmental authority to whose jurisdiction that Person has consented.

“Hazardous Materials” means all those substances which are regulated by, or which may form the basis of liability under, any Environmental Law, including all substances identified under any Environmental Law as a pollutant, contaminant, hazardous waste, hazardous constituent, special waste, hazardous substance, hazardous material, or toxic substance, or petroleum or petroleum derived substance or waste.

“Horizon” means Horizon Technology Finance Corporation.

“Indebtedness” means, with respect to any Person, the aggregate amount of, without duplication, (a) all obligations of such Person for borrowed money, (b) all obligations of such Person evidenced by bonds, debentures, notes or other similar instruments, (c) all obligations of such Person to pay the deferred purchase price of property or services (excluding trade payables aged less than one hundred eighty (180) days), (d) all capital lease obligations of such Person, (e) all obligations or liabilities of others secured by a Lien on any asset of such Person, whether or not such obligation or liability is assumed, (f) all obligations or liabilities of others guaranteed by such Person, and (g) any other obligations or liabilities which are required by GAAP to be shown as debt on the balance sheet of such Person.

“Indemnified Person” has the meaning given such term in Section 10.3 of this Agreement.

“Intellectual Property” means, with respect to any Person, all of such Person’s right, title and interest in and to patents, patent rights (and applications and registrations therefor and divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same), trademarks and service marks (and applications and registrations therefor and

the goodwill associated therewith), whether registered or not, inventions, copyrights (including applications and registrations therefor and like protections in each work or authorship and derivative work thereof), whether published or unpublished, mask works (and applications and registrations therefor), trade names, trade styles, software and computer programs, source code, object code, trade secrets, licenses, methods, processes, know how, drawings, specifications, descriptions, and all memoranda, notes, and records with respect to any research and development, all whether now owned or subsequently acquired or developed by such Person and whether in tangible or intangible form or contained on magnetic media readable by machine together with all such magnetic media (but not including embedded computer programs and supporting information included within the definition of “goods” under the Code).

“Internal Revenue Code” has the meaning given such term in Section 5.18 of this Agreement.

“Investment” means the purchase or acquisition of any capital stock, equity interest, or any obligations or other securities of, or any interest in, any Person, or the extension of any advance, loan, extension of credit or capital contribution to, or any other investment in, or deposit with, any Person.

“Landlord Agreement” means an agreement substantially in the form provided by Lender to Borrower or such other form as Lender may agree to accept.

“Lender” means the Lender as set forth on the cover page of this Agreement.

“Lender’s Expenses” means all reasonable costs or expenses (including reasonable attorneys’ fees and expenses) incurred in connection with the preparation, negotiation, documentation, drafting, amendment, modification, administration, perfection and funding of the Loan Documents; and all of Lender’s attorneys’ fees, costs and expenses incurred in enforcing or defending the Loan Documents (including fees and expenses of appeal or review), including the exercise of any rights or remedies afforded hereunder or under applicable law, whether or not suit is brought, whether before or after bankruptcy or insolvency, including all fees and costs incurred by Lender in connection with such Lender’s enforcement of its rights in a bankruptcy or insolvency proceeding filed by or against Borrower, any Subsidiary or their respective Property.

“Lien” means any voluntary or involuntary security interest, pledge, bailment, lease, mortgage, hypothecation, conditional sales and title retention agreement, encumbrance or other lien with respect to any Property in favor of any Person.

“Loan” means each advance of credit by Lender to Borrower under this Agreement.

“Loan A” means the advance of credit by Lender to Borrower under this Agreement in the Loan A Commitment Amount.

“Loan A Commitment Amount” has the meaning set forth on the cover page of this Agreement.

“Loan A Commitment Termination Date” has the meaning set forth on the cover page of this Agreement.

“Loan A Final Payment” has the meaning given such term in Section 2.2(g) of this Agreement.



“Loan Amortization Date” means the Payment Date on which Borrower is required, pursuant to Section 2.2(a) below, to commence making equal payments of principal plus accrued interest on the outstanding principal amount of the Loan.

“Loan Documents” means, collectively, this Agreement, the Note, the Warrant, any Landlord Agreement, any Account Control Agreement and all other documents, instruments and agreements entered into in connection with this Agreement.

“Loan Rate” means, with respect to each Loan, the per annum rate of interest equal to 9.00% plus the amount by which the one month LIBOR Rate (rounded to the nearest one hundredth percent), as reported in the Wall Street Journal exceeds 0.50%. Notwithstanding the foregoing, in no event shall the Loan Rate be less than 9.00%.

“Material Adverse Effect” means a material adverse effect on (a) the condition (financial or otherwise), business or operations of Borrower, (b) the ability of Borrower to perform its Obligations under the Loan Documents or (c) the value of the Collateral or Lender’s security interest in the Collateral.

“Maturity Date” means, with respect to each Loan, forty-five (45) months from the first day of the month next following the month in which the Funding Date for such Loan occurs, or if earlier, the date of acceleration of such Loan following an Event of Default or the date of prepayment, whichever is applicable.

“Note” means each promissory note executed in connection with the Loan in substantially the form of Exhibit C attached hereto.

“Obligations” means all debt, principal, interest, fees, charges, and other amounts, obligations, covenants, and duties owing by Borrower to Lender of any kind and description arising under by the Loan Documents (other than the Warrant) and whether or not for the payment of money), whether direct or indirect, absolute or contingent, due or to become due, now existing or hereafter arising, including all Lender’s Expenses.

“OFAC” means the Office of Foreign Assets Control of the United States Department of the Treasury.

“Officer’s Certificate” means a certificate executed by a Responsible Officer substantially in the form of Exhibit E or such other form as Lender may agree to accept.

“Payment Date” has the meaning given such term in Section 2.2(a) of this Agreement.

“Permitted Indebtedness” means and includes:

- (a) Indebtedness of Borrower to Lender under this Agreement;
  
- (b) Indebtedness arising from the endorsement of instruments in the ordinary course of business;

(c) Indebtedness of Borrower existing on the date hereof and set forth on the Disclosure Schedule;

(d) intercompany Indebtedness owed by any Subsidiary to Borrower or any wholly-owned Subsidiary, as applicable; *provided* that, if applicable, such Indebtedness is also permitted as a Permitted Investment and, in the case of such Indebtedness owed to Borrower, such Indebtedness shall be evidenced by one or more promissory notes;

(e) Indebtedness secured by Permitted Liens pursuant to subsection (f) of such definition; and

(f) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness under subsections (c), (d) and (e) above; *provided* that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower.

“Permitted Investments” means and includes any of the following Investments as to which Lender has a perfected security interest:

(a) Deposits and deposit accounts with commercial banks organized under the laws of the United States or a state thereof to the extent: (i) the deposit accounts of each such institution are insured by the Federal Deposit Insurance Corporation up to the legal limit; and (ii) each such institution has an aggregate capital and surplus of not less than One Hundred Million Dollars (\$100,000,000);

(b) Investments in marketable obligations issued or fully guaranteed by the United States and maturing not more than one (1) year from the date of issuance;

(c) Investments in open market commercial paper rated at least “A1” or “P1” or higher by a national credit rating agency and maturing not more than one (1) year from the creation thereof;

(d) Investments pursuant to or arising under currency agreements or interest rate agreements entered into in the ordinary course of business;

(e) Investments by Borrower and Subsidiaries in their Subsidiaries outstanding on the date hereof or Investments by Borrower in new Subsidiaries, subject to the terms of this Agreement;

(f) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business;

(g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(h) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's board of directors, not to exceed (in the aggregate for all such Investments set forth in clauses (i) and (ii) together) One Hundred Thousand Dollars (\$100,000.00); and

(i) other Investments aggregating not in excess of One Hundred Thousand Dollars (\$100,000) at any time.

“Permitted Licenses” means and includes (i) non-exclusive licenses of Intellectual Property entered into in the ordinary course of business and (ii) exclusive licenses of Intellectual Property entered into in the ordinary course of business, provided that such exclusive licenses could not result in a legal transfer of title of the licensed Intellectual Property, but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States.

“Permitted Liens” means and includes:

(a) the Liens created by this Agreement;

(b) Liens for fees, taxes, levies, imposts, duties or other governmental charges of any kind which are not yet delinquent or which are being contested in good faith by appropriate proceedings which suspend the collection thereof (*provided* that such appropriate proceedings do not involve any substantial danger of the sale, forfeiture or loss of any material item of Collateral which in the aggregate is material to Borrower and that Borrower has adequately bonded such Lien or reserves sufficient to discharge such Lien have been provided on the books of Borrower);

(c) Liens identified on the Disclosure Schedule;

(d) carriers', warehousemen's, mechanics', materialmen's, repairmen's or other similar Liens arising in the ordinary course of business and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings (*provided* that such appropriate proceedings do not involve any substantial danger of the sale, forfeiture or loss of any material item of Collateral or Collateral which in the aggregate is material to Borrower and that Borrower has adequately bonded such Lien or reserves sufficient to discharge such Lien have been provided on the books of Borrower);

(e) Permitted Licenses;

(f) purchase money Liens (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than Seven Hundred Fifty Thousand Dollars (\$750,000.00) in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;

7

(g) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (c), (e) and (g) above, but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(h) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(i) leases or subleases of real property granted in the ordinary course of Borrower's business, and leases, subleases, licenses or sublicenses of personal property granted in the ordinary course of Borrower's business;

(j) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 8.7 and 8.9;

(k) banker's liens, rights of setoff and Liens in favor of financial institutions incurred made in the ordinary course of business arising in connection with Borrower's deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with Section 7.13 hereof; and

(l) precautionary Liens filed in connection with operating leases so long as such Liens are limited to applicable leased Equipment.

"Person" means and includes any individual, any partnership, any corporation, any business trust, any joint stock company, any limited liability company, any unincorporated association or any other entity and any domestic or foreign national, state or local government, any political subdivision thereof, and any department, agency, authority or bureau of any of the foregoing.

"Property" means any interest in any kind of property or asset, whether real, personal or mixed, whether tangible or intangible.

"Responsible Officer" has the meaning given such term in Section 6.3 of this Agreement.

“Restricted License” means any license or other agreement with respect to which Borrower is the licensee and such license or agreement is material to Borrower’s business and (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower’s interest in such license or agreement or any other property or (b) for which a default under or termination of could interfere with Lender’s right to sell any Collateral.

“Right to Payment” has the meaning given such term in Section 4.1 of this Agreement.

“Scheduled Payments” has the meaning given such term in Section 2.2(a) of this Agreement.



“Solvent” has the meaning given such term in Section 5.12 of this Agreement.

“Subsidiary” means any corporation or other entity of which a majority of the outstanding Equity Securities entitled to vote for the election of directors or other governing body (otherwise than as the result of a default) is owned by Borrower directly or indirectly through Subsidiaries.

“Transfer” has the meaning given such term in Section 7.4 of this Agreement.

“Warrant” means the separate warrant or warrants dated on or about the date hereof in favor of each Lender or its designees to purchase securities of Borrower.

1.2 Construction. References in this Agreement to “Articles,” “Sections,” “Exhibits,” “Schedules” and “Annexes” are to recite articles, sections, exhibits, schedules and annexes herein and hereto unless otherwise indicated. References in this Agreement and each of the other Loan Documents to any document, instrument or agreement shall include (a) all exhibits, schedules, annexes and other attachments thereto, (b) all documents, instruments or agreements issued or executed in replacement thereof, and (c) such document, instrument or agreement, or replacement or predecessor thereto, as amended, modified and supplemented from time to time and in effect at any given time (subject, in the case of clauses (b) and (c), to any restrictions on such replacement, amendment, modification or supplement set forth in the Loan Documents). The words “hereof,” “herein” and “hereunder” and words of similar import when used in this Agreement or any other Loan Document shall refer to this Agreement or such other Loan Document, as the case may be, as a whole and not to any particular provision of this Agreement or such other Loan Document, as the case may be. The words “include” and “including” and words of similar import when used in this Agreement or any other Loan Document shall not be construed to be limiting or exclusive. Unless the context requires otherwise, any reference in this Agreement or any other Loan Document to any Person shall be construed to include such Person’s successors and assigns. Unless otherwise indicated in this Agreement or any other Loan Document, all accounting terms used in this Agreement or any other Loan Document shall be construed, and all accounting and financial computations hereunder or thereunder shall be computed, in accordance with GAAP, and all terms describing Collateral shall be construed in accordance with the Code; provided that if at any time any change in GAAP would affect the computation of any requirement set forth in any Loan Document, and either Borrower or Lender shall so request, Borrower and Lender shall negotiate in good faith to amend such requirement to preserve the original intent thereof in light of such change in GAAP; provided, further, that, until so amended, (a) such requirement shall continue to be computed in accordance with GAAP prior to such change therein and (b) Borrower shall provide Lender financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such requirement made before and after giving effect to such change in GAAP. Notwithstanding any provision of this Agreement to the contrary, all leases and obligations under any leases of any Person that are or would be characterized as operating leases and/or operating lease obligations in accordance with GAAP on January 1, 2014 (whether or not such operating leases and/or operating lease obligations were in effect on such date) shall continue to be accounted for as operating leases (and not as capitalized leases) for purposes of this Agreement regardless of any change in GAAP following the date that would otherwise require such obligations to be recharacterized as capitalized leases. The terms and information set forth on the cover page of this Agreement are incorporated into this Agreement.



2. Loan; Repayment.

2.1 Commitments.

(a) The Commitment Amounts. Subject to the terms and conditions of this Agreement and relying upon the representations and warranties herein set forth as and when made or deemed to be made, Horizon agrees to lend to Borrower prior to the Loan A Commitment Termination Date, Loan A.

(b) The Loan and the Note. The obligation of Borrower to repay the unpaid principal amount of and interest on the Loan shall be evidenced by a Note issued to the relevant Lender.

(c) Use of Proceeds. The proceeds of the Loan shall be used solely for working capital or general corporate purposes of Borrower.

(d) Termination of Commitment to Lend. Notwithstanding anything in the Loan Documents, the Lender's obligation to lend the undisbursed portion of the Commitment Amount to Borrower hereunder shall terminate on the earlier of (i) at Lender's election exercised in good faith and in a commercially reasonable manner, the occurrence of any Event of Default hereunder, and (ii) with respect to Loan A, the Loan A Commitment Termination Date. Notwithstanding the foregoing, Lender's obligation to lend the undisbursed portion of the Commitment Amount to Borrower shall terminate if, in Lender's discretion exercised in good faith and in a commercially reasonable manner, there has been a material adverse change in the general affairs, management, results of operations or financial condition of Borrower, whether or not arising from transactions in the ordinary course of business, or there has been any material adverse deviation by Borrower from the business plan of Borrower presented to Lender on or before the date of this Agreement.

2.2 Payments.

(a) Scheduled Payments. Borrower shall make (i) a payment of accrued interest only to Lender on the outstanding principal amount of the Loan on the first fifteen (15) Payment Dates specified in the Note applicable to the Loan and (ii) an equal payment of principal plus accrued interest to Lender on the outstanding principal amount of the Loan on the next thirty (30) Payment Dates as set forth in the Note (collectively, the "Scheduled Payments"). Borrower shall make such Scheduled Payments commencing on the date set forth in the Note Loan and continuing thereafter on the first Business Day of each calendar month (each a "Payment Date") through the Maturity Date. In any event, all unpaid principal and accrued interest shall be due and payable in full on the Maturity Date.



(b) Interim Payment. Unless the Funding Date for the Loan is the first day of a calendar month, Borrower shall pay the per diem interest (accruing at the Loan Rate from the Funding Date through the last day of that month) payable with respect to the Loan on the first Business Day of the next calendar month.

(c) Payment of Interest. Borrower shall pay interest on each Loan at a per annum rate of interest equal to the Loan Rate. The Loan Rate shall initially be calculated using the LIBOR Rate reported in the Wall Street Journal on the date which is five (5) Business Days prior to the proposed date of disbursement of the Loan, but shall thereafter be calculated for each calendar month using the LIBOR Rate reported in the Wall Street Journal on the first calendar day of such month, provided, however, that if the first calendar day of any month is not a Business Day, the Loan Rate shall be calculated using the LIBOR Rate reported in the Wall Street Journal on the Business Day immediately preceding the first calendar day of such month. Interest (including interest at the Default Rate, if applicable) shall be computed on the basis of a 360-day year for the actual number of days elapsed. Notwithstanding any other provision hereof, the amount of interest payable hereunder shall not in any event exceed the maximum amount permitted by the law applicable to interest charged on commercial loans.

(d) Application of Payments. All payments received by Lender prior to an Event of Default shall be applied as follows: (i) first, to Lender's Expenses then due and owing; and (ii) second, ratably, to all Scheduled Payments then due and owing (*provided*, however, if such payments are not sufficient to pay the whole amount then due, such payments shall be applied first to unpaid interest at the Loan Rate, then to the remaining amounts then due). After an Event of Default, all payments and application of proceeds shall be made as set forth in Section 9.7.

(e) Late Payment Fee. Borrower shall pay to Lender a late payment fee equal to six percent (6%) of any Scheduled Payment not paid when due to such Lender.

(f) Default Rate. Borrower shall pay interest at a per annum rate equal to the Default Rate on any amounts required to be paid by Borrower to Lender under this Agreement or the other Loan Documents (including Scheduled Payments), payable with respect to the Loan, accrued and unpaid interest, and any fees or other amounts which remain unpaid after such amounts are due. If an Event of Default has occurred and the Obligations have been accelerated (whether automatically or by Lender's election), Borrower shall pay interest on the aggregate, outstanding accelerated balance hereunder from the date of the Event of Default until all Events of Default are cured, at a per annum rate equal to the Default Rate.

(g) Final Payment. Borrower shall pay to Horizon a payment in the amount of Two Hundred Twenty-Five Thousand Dollars (\$225,000) (the "Loan A Final Payment") upon the earlier of (A) payment in full of the principal balance of Loan A, (B) an Event of Default and demand by any Lender of payment in full of Loan A or (C) the Maturity Date, as applicable.



### 2.3 Prepayments.

(a) Mandatory Prepayment Upon an Acceleration. If the Loan is accelerated following the occurrence of an Event of Default pursuant to Section 9.1(a) hereof, then Borrower, in addition to any other amounts which may be due and owing hereunder, shall immediately pay to Lender the amount set forth in Section 2.3(b) below, as if Borrower had opted to prepay on the date of such acceleration.

(b) Optional Prepayment. Upon ten (10) Business Days' prior written notice to Lender, Borrower may, at its option, at any time, prepay all (and not less than all) of the outstanding Loan by simultaneously paying to Lender an amount equal to (i) any accrued and unpaid interest on the outstanding principal balance of the Loan being prepaid; *plus* (ii) an amount equal to (A) if such Loan is prepaid on or before the date that is fifteen (15) months from the Funding Date thereof, four percent (4%) of the then outstanding principal balance of such Loan, (B) if such Loan is prepaid more than fifteen (15) months from the Funding Date thereof but on or before the date that is twenty-seven (27) months from such Funding Date, two percent (2%) of the then outstanding principal balance of such Loan, or (C) if such Loan is prepaid more than twenty-seven (27) months from the Funding Date thereof, one percent (1%) of the then outstanding principal balance of such Loan; *plus* (iii) the outstanding principal balance of such Loan; *plus* (iv) all other sums, if any, that shall have become due and payable hereunder.

### 2.4 Other Payment Terms.

(a) Place and Manner. Borrower shall make all payments due to Lender in lawful money of the United States. All payments of principal, interest, fees and other amounts payable by Borrower hereunder shall be made, in immediately available funds, not later than 10:00 a.m. Connecticut time, on the date on which such payment is due. Borrower shall make such payments to Lender via wire transfer or ACH as instructed by Lender from time to time.

(b) Date. Whenever any payment is due hereunder on a day other than a Business Day, such payment shall be made on the next succeeding Business Day, and such extension of time shall be included in the computation of interest or fees, as the case may be.

(c) Taxes.

(i) Unless otherwise required under applicable law, any and all payments made hereunder or under the Notes shall be made free and clear of and without deduction for any taxes; *provided* that if Borrower shall be required to deduct any taxes from such payments, then (A) the sum payable shall be increased as necessary so that after making all

required deductions (including deductions applicable to additional sums payable under this Section 2.4(c)) the Lender receives an amount equal to the sum it would have received had no such deductions been made, (B) Borrower shall make such deductions and (C) Borrower shall pay the full amount deducted to the relevant Governmental Authority in accordance with applicable law.



(ii) Borrower shall indemnify Lender, within 10 days after written demand therefor, for the full amount of any taxes imposed or asserted directly on Lender by any Governmental Authority on or attributable to amounts payable under this Agreement solely as a result of Lender entering into this Agreement to the extent such taxes are paid by Lender, and any penalties, interest and reasonable expenses arising therefrom or with respect thereto, whether or not such taxes were correctly or legally imposed or asserted by the relevant Governmental Authority; *provided*, however, that such indemnified taxes shall not include income or franchise taxes imposed on (or measured by) Lender's net income by the jurisdiction, or any political subdivision thereof or taxing authority therein, under the laws of which such recipient is organized or in which its principal office is located or in which its applicable lending office is located. A certificate as to the amount of such payment or liability delivered to Borrower by Lender shall be conclusive absent manifest error.

(iii) Promptly after any payment of taxes by Borrower hereunder to a Governmental Authority, Borrower shall deliver to Lender the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Lender.

(iv) If Lender is entitled to an exemption from or reduction of withholding tax under the law of the jurisdiction in which Borrower is located, or any treaty to which such jurisdiction is a party, with respect to payments under this Agreement, Lender shall deliver to Borrower, as reasonably requested by Borrower, such properly completed and executed documentation prescribed by applicable law as will permit such payments to be made without withholding or at a reduced rate.

(v) If Lender receives a refund in respect of taxes paid by Borrower pursuant to this Section 2.4(c), which in the discretion of Lender exercised in good faith and a commercially reasonable manner is allocable to such payment, it shall promptly pay such refund, together with any other amounts paid by Borrower in connection with such refunded taxes, to Borrower, net of all reasonable out-of-pocket expenses (including any taxes to which Lender has become subject as a result of its receipt of such refund) of Lender incurred in obtaining such refund and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund); *provided* that Borrower, upon the request of the Lender, shall repay to Lender amounts paid over pursuant to the preceding clause (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that Lender is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (v), in no event will Lender be required to pay any amount to Borrower pursuant to this paragraph (v) the payment of which would place Lender in a less favorable net after-tax position than Lender would have been in if the indemnification payments or additional amounts giving rise to such refund had never been paid. This paragraph shall not be construed to require Lender to make available its tax returns (or any other information relating to its taxes that it deems confidential) to Borrower or any other Person.

2.5 Procedure for Making the Loan.

(a) Notice. Borrower shall notify Lender of the date on which Borrower desires Lender to make any Loan at least five (5) Business Days in advance of the desired Funding Date, unless the Lender elects at its discretion acting in good faith and a commercially reasonable manner to allow the Funding Date for a Loan to be made by Lender to be within five (5) Business Days of Borrower's notice. Borrower's execution and delivery to Lender of one or more Notes in respect of a Loan shall be Borrower's agreement to the terms and calculations thereunder with respect to such Loan. Lender's obligation to make any Loan shall be expressly subject to the satisfaction of the conditions set forth in Section 3.

(b) Loan Rate Calculation. Prior to each Funding Date for any Loan, Lender shall establish the Loan Rate with respect to such Loan, which shall be set forth in the Note to be executed by Borrower with respect to such Loan and shall be conclusive in the absence of a manifest error.

(c) Disbursement. Lender shall disburse the proceeds of the Loan by wire transfer to Borrower at the account specified in the Funding Certificate for such Loan.

2.6 Good Faith Deposit; Legal and Closing Expenses; and Commitment Fee.

(a) Good Faith Deposit. Borrower has delivered to Horizon a good faith deposit in the amount of Forty Thousand Dollars (\$40,000) (the "Good Faith Deposit"). The Good Faith Deposit paid to Horizon will be credited to the Commitment Fee payable to the Lender. If the Funding Date does not occur for any reason other than Lender's election not to proceed with the funding of the Loan, Lender shall retain the Good Faith Deposit as compensation for its time, expenses and opportunity cost. If Lender elects not to proceed with the funding of the Loan, the Lender shall deduct the Lender's Expenses incurred by Lender from the Good Faith Deposit and return the balance of the Good Faith Deposit to Borrower.

(b) Legal, Due Diligence and Documentation Expenses. Concurrently with its execution and delivery of this Agreement, Borrower shall reimburse Lender for Lender's reasonable legal, due diligence and documentation expenses incurred in connection with the negotiation and documentation of this Agreement and the Loan Documents.

(c) Commitment Fee. Borrower shall pay concurrently with its execution and delivery of this Agreement a commitment fee to Horizon in the amount of Fifty Thousand Dollars (\$50,000) minus the amount of the Good Faith Deposit credited thereto pursuant to Section 2.6(a) above (the "Commitment Fee"). The Commitment Fee shall be

retained by the Lender and be deemed fully earned upon receipt.

3. Conditions of Loan.

3.1 Conditions Precedent to Closing. At the time of the execution and delivery of this Agreement, Lender shall have received, in form and substance reasonably satisfactory to Lender, all of the following (unless Lender has agreed to waive such condition or document, in which case such condition or document shall be a condition precedent to the making of any Loan and shall be deemed added to Section 3.2):

(a) Loan Agreement. This Agreement duly executed by Borrower and Lender.

(b) Warrant. The Warrant duly executed by Borrower.

(c) Secretary's Certificate. A certificate of the secretary or assistant secretary of Borrower, dated as of the date hereof, with copies of the following documents attached: (i) the certificate of incorporation and bylaws (or equivalent documents) of Borrower certified by Borrower as being complete and in full force and effect on the date thereof, (ii) incumbency and representative signatures, and (iii) resolutions authorizing the execution and delivery of this Agreement and each of the other Loan Documents.

(d) Good Standing Certificates. A good standing certificate from Borrower's state of organization and the state in which Borrower's principal place of business is located, each dated as of a date no earlier than thirty (30) days prior to the date hereof.

(e) Certificate of Insurance. Evidence of the insurance coverage required by Section 6.8 of this Agreement.

(f) Consents. All necessary consents of shareholders and other third parties with respect to the execution, delivery and performance of this Agreement, the Warrant and the other Loan Documents.

(g) Legal Opinion. A legal opinion of Borrower's counsel, dated as of the date hereof, covering the matters set forth in Exhibit D hereto.

(h) Account Control Agreements. Account Control Agreements for all of Borrower's deposit accounts and securities accounts duly executed by all of the parties thereto, in the forms provided by or reasonably acceptable to Lender.

(i) Fees and Expenses. Payment of all fees and expenses then due hereunder or under any other Loan Document.

(j) Other Documents. Such other documents and completion of such other matters, as Lender may reasonably deem necessary or appropriate.

3.2 Conditions Precedent to Making Loan A. The obligation of Lender to make Loan A is further subject to satisfaction of the following conditions as of the applicable Funding Date:

- (a) No Default. No Default or Event of Default shall have occurred and be continuing.
  
- (b) Landlord Agreements. Borrower shall have provided Lender with a Landlord Agreement for each location where Borrower's books and records and the Collateral is located (unless Borrower is the fee owner thereof).
  
- (c) Note. Borrower shall have duly executed and delivered a Note in the amount of the Loan A to Horizon.
  
- (d) UCC Financing Statements. Lender shall have received such documents, instruments and agreements, including UCC financing statements or amendments to UCC financing statements and UCC financing statement searches, as Lender shall reasonably request to evidence the perfection and priority of the security interests granted to Lender pursuant to Section 4. Borrower authorizes Lender to file any UCC financing statements, continuations of or amendments to UCC financing statements Lender deems necessary to perfect its security interest in the Collateral.
  
- (e) Funding Certificate. Borrower shall have duly executed and delivered to Lender a Funding Certificate for such Loan.
  
- (f) Sale of Equity Securities. Borrower shall have provided Lender with evidence reasonably satisfactory to Lender that Borrower has received gross cash proceeds of not less than Five Million Dollars (\$5,000,000) from the sale of Equity Securities.
  
- (g) Representations and Warranties. The representations and warranties made by Borrower in Section 5 and in the other Loan Documents shall be true and correct in all material respects as of such Funding Date, except for such statements which speak as of a specific date.
  
- (h) Other Documents. Borrower shall have provided Lender with such other documents and completion of such other matters, as Lender may reasonably deem necessary or appropriate.

3.3 Covenant to Deliver. Borrower agrees (not as a condition but as a covenant) to deliver to Lender each item required to be delivered to Lender as a condition to Loan, if such Loan is advanced. Borrower expressly agrees that the extension of any Loan prior to the receipt by Lender of any such item shall not constitute a waiver by Lender of Borrower's obligation to deliver such item (unless Lender has waived such item in writing), and any such extension in the absence of a required item shall be in each Lender's sole discretion.

4. Creation of Security Interest.

4.1 Grant of Security Interests. Borrower grants to Lender a valid, continuing security interest in all presently existing and hereafter acquired or arising Collateral in order to secure prompt, full and complete payment of any and all Obligations and in order to secure prompt, full and complete performance by Borrower of each of its covenants and duties under each of the Loan Documents (other than the Warrants). The “Collateral” shall mean and include all right, title, interest, claims and demands of Borrower in the following:

(a) All goods (and embedded computer programs and supporting information included within the definition of “goods” under the Code) and equipment now owned or hereafter acquired, including all laboratory equipment, computer equipment, office equipment, machinery, fixtures, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing, and all attachments, accessories, accessions, replacements, substitutions, additions, and improvements to any of the foregoing, wherever located;

(b) All inventory now owned or hereafter acquired, including all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products including such inventory as is temporarily out of Borrower’s custody or possession or in transit and including any returns upon any accounts or other proceeds, including insurance proceeds, resulting from the sale or disposition of any of the foregoing and any documents of title representing any of the above, and Borrower’s books relating to any of the foregoing;

(c) All contract rights and general intangibles (except to the extent included within the definition of Intellectual Property), now owned or hereafter acquired, including goodwill, license agreements, franchise agreements, blueprints, drawings, purchase orders, customer lists, route lists, infringements, claims, software, computer programs, computer disks, computer tapes, literature, reports, catalogs, design rights, income tax refunds, payment intangibles, commercial tort claims, payments of insurance and rights to payment of any kind;

(d) All now existing and hereafter arising accounts, contract rights, royalties, license rights, license fees and all other forms of obligations owing to Borrower arising out of the sale or lease of goods, the licensing of technology or the rendering of services by Borrower (subject, in each case, to the contractual rights of third parties to require funds received by Borrower to be expended in a particular manner), whether or not earned by performance, and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower’s books relating to any of the foregoing;

(e) All documents, cash, deposit accounts, letters of credit and letters of credit rights (whether or not the letter of credit is evidenced by a writing) and other supporting obligations, certificates of deposit, instruments, promissory notes, chattel paper (whether tangible or electronic) and investment property, including all securities, whether certificated or



uncertificated, security entitlements, securities accounts, commodity contracts and commodity accounts, and all financial assets held in any securities account or otherwise, wherever located, now owned or hereafter acquired and Borrower's books relating to the foregoing; and

(f) To the extent not covered by clauses (a) through (e), all other personal property of the Borrower, whether tangible or intangible, and any and all rights and interests in any of the above and the foregoing and, any and all claims, rights and interests in any of the above and all substitutions for, additions and accessions to and proceeds thereof, including insurance, condemnation, requisition or similar payments and proceeds of the sale or licensing of Intellectual Property to the extent such proceeds no longer constitute Intellectual Property.

Notwithstanding the foregoing, the Collateral shall not include (i) any equipment that now or hereafter is subject to a Lien permitted by clause (f) of the definition of “Permitted Liens” or (ii) any Intellectual Property; *provided*, however, that the Collateral shall include all accounts receivables, accounts, and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the “Rights to Payment”). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of the date hereof, include the Intellectual Property to the extent necessary to permit perfection of Lender’s security interest in the Rights to Payment.

4.2 After-Acquired Property. If Borrower shall at any time acquire a commercial tort claim having a value in excess of Fifty Thousand Dollars (\$50,000), as defined in the Code, Borrower shall immediately notify Lender in writing signed by Borrower of the brief details thereof and grant to Lender in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance satisfactory to Lender.

4.3 Duration of Security Interest. Lender’s security interest in the Collateral shall continue until the payment in full and the satisfaction of all Obligations (other than inchoate indemnification and similar obligations), and termination of Lender’s commitment to fund the Loan, whereupon such security interest shall automatically terminate. Lender shall, at Borrower’s sole cost and expense, execute such further documents and take such further actions as may be reasonably necessary to make effective the release contemplated by this Section 4.3, including duly authorizing and delivering termination statements for filing in all relevant jurisdictions under the Code.

4.4 Location and Possession of Collateral. The Collateral is and shall remain in the possession of Borrower at its location listed on the cover page hereof or as set forth in the Disclosure Schedule. Borrower shall remain in full possession, enjoyment and control of the Collateral (except only as may be otherwise required by Lender for perfection of the security interests therein created hereunder) and so long as no Event of Default has occurred and is continuing, shall be entitled to manage, operate and use the same and each part thereof with the rights and franchises appertaining thereto; *provided* that the possession, enjoyment, control and use of the Collateral shall at all time be subject to the Borrower’s observance and performance of the terms of this Agreement.

4.5 Delivery of Additional Documentation Required. Borrower shall from time to time execute and deliver to Lender, at the request of Lender, all financing statements and other documents Lender may reasonably request, in form satisfactory to Lender, to perfect and continue Lender's perfected security interests in the Collateral and in order to consummate fully all of the transactions contemplated under the Loan Documents.

4.6 Right to Inspect. Lender (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours, to inspect the books and records of Borrower and Subsidiaries and to make copies thereof and to inspect, test, and appraise the Collateral in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral. Notwithstanding the foregoing, so long as no Event of Default shall be continuing, the inspection rights shall be exercised no more frequently than one (1) per year.

4.7 Protection of Intellectual Property. Borrower shall:

(a) protect, defend and maintain the validity and enforceability of its Intellectual Property and promptly advise Lender in writing of material infringements;

(b) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Lender's written consent;

(c) provide written notice to Lender within ten (10) days of entering or becoming bound by any Restricted License (other than over-the-counter software that is commercially available to the public); and

(d) take such commercially reasonable steps as Lender reasonably requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (i) any Restricted License to be deemed "Collateral" and for Lender to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, whether now existing or entered into in the future, and (ii) Lender to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with or Lender's rights and remedies under this Agreement and the other Loan Documents.

5. Representations and Warranties. Except as set forth in the Disclosure Schedule, Borrower represents and warrants as follows:

5.1 Organization and Qualification. Each of Borrower and its Subsidiaries is a corporation duly organized and validly existing under the laws of its state of incorporation and qualified and licensed to do business in, and is in good standing in, any jurisdiction in which the conduct of its business or its ownership of Property requires that it be so qualified and licensed, except for such states as to which any failure to so qualify would not have a Material Adverse Effect.

5.2 Authority. Borrower has all necessary power and authority to execute, deliver, and perform in accordance with the terms thereof, the Loan Documents to which it is a party. Borrower and Subsidiaries have all requisite power and authority to own and operate their Property and to carry on their businesses as now conducted. Borrower and Subsidiaries have obtained all licenses, permits, approvals and other authorizations necessary for the operation of their business.

5.3 Conflict with Other Instruments, etc. Neither the execution and delivery of any Loan Document to which Borrower is a party nor the consummation of the transactions therein contemplated nor compliance with the terms, conditions and provisions thereof will conflict with or result in a breach of any of the terms, conditions or provisions of the certificate of incorporation, the by-laws, or any other organizational documents of Borrower or any law or any regulation, order, writ, injunction or decree of any court or Governmental Authority by which Borrower or any Subsidiary or any of their respective property or assets may be bound or affected, the conflict or breach of which would have a Material Adverse Effect, or any material agreement or instrument to which Borrower is a party or by which it or any of its Property is bound or to which it or any of its Property is subject, or constitute a default thereunder or result in the creation or imposition of any Lien, other than Permitted Liens.

5.4 Authorization; Enforceability. The execution and delivery of this Agreement, the granting of the security interest in the Collateral, the incurring of the Loan, the execution and delivery of the other Loan Documents to which Borrower is a party and the consummation of the transactions herein and therein contemplated have each been duly authorized by all necessary action on the part of Borrower. No authorization, consent, approval, license or exemption of, and no registration, qualification, designation, declaration or filing with, or notice to, any Person is, was or will be necessary to (a) the valid execution and delivery of any Loan Document to which Borrower is a party, (b) the performance of Borrower's obligations under any Loan Document or (c) the granting of the security interest in the Collateral, except for filings in connection with the perfection of the security interest in any of the Collateral or the issuance of the Warrants. The Loan Documents have been duly executed and delivered and constitute legal, valid and binding obligations of Borrower, enforceable in accordance with their respective terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws of general application relating to or affecting the enforcement of creditors' rights or by general principles of equity.



5.5 No Prior Encumbrances. Borrower has good and marketable title to the Collateral, free and clear of Liens except for Permitted Liens. Borrower has good title and ownership of, or is licensed under, all of Borrower's current Intellectual Property. Borrower is the sole owner or licensee of the Intellectual Property which it owns or purports to own except for (a) Permitted Licenses, (b) over-the-counter software that is commercially available to the public and (c) material Intellectual Property licensed to Borrower and noted on the Disclosure Schedule. Each patent which it owns or purports to own and which is material to Borrower's business is valid and enforceable, and no part of the Intellectual Property which Borrower owns or purports to own and which is material to Borrower's business has been judged invalid or unenforceable, in whole or in part. Except as noted on the Disclosure Schedule, Borrower is not a party to, nor is it bound by, any Restricted License. Borrower has not received any written communications alleging that Borrower has violated, or by conducting its business as proposed, would violate any proprietary rights of any other Person. Borrower has no knowledge of any infringement or violation by it of the intellectual property rights of any third party and has no knowledge of any violation or infringement by a third party of any of its Intellectual Property that would result in a Material Adverse Effect. The Collateral constitutes substantially all of the assets and property of Borrower (excluding the Intellectual Property), and Borrower owns or licenses all Intellectual Property associated with the business of Borrower and Subsidiaries, free and clear of any liens other than Permitted Liens.

5.6 Security Interest. Assuming the proper filing of one or more financing statement(s) identifying the Collateral with the proper state and/or local authorities, the security interests in the Collateral granted to Lender pursuant to this Agreement (a) constitute and will continue to constitute first priority security interests and (b) are and will continue to be superior and prior to the rights of all other creditors of Borrower (except to the extent of such Permitted Liens).

5.7 Name; Location of Chief Executive Office, Principal Place of Business and Collateral. Borrower has not done business under any name other than that specified on the signature page hereof. Borrower's jurisdiction of incorporation, chief executive office, principal place of business, and the place where Borrower maintains its records concerning the Collateral are presently located in the state and at the address set forth on the cover page of this Agreement. The tangible Collateral is presently located at the address set forth on the cover page hereof or as set forth in the Disclosure Schedule.

5.8 Litigation. There are no actions or proceedings pending by or against Borrower or any Subsidiary before any court, arbitral tribunal, regulatory organization, administrative agency or similar body in which an adverse decision could reasonably be expected to have a Material Adverse Effect. Borrower does not have knowledge of any such pending or threatened in writing, actions or proceedings.

5.9 Financial Statements. All financial statements (excluding all projections or forecasts) relating to Borrower or any Subsidiary that have been or may hereafter be delivered by Borrower to Lender present fairly in all material respects Borrower's Consolidated financial condition as of the date thereof and Borrower's Consolidated results of operations for the period then ended.

5.10 No Material Adverse Effect. No event has occurred and no condition exists which could reasonably be expected to have a Material Adverse Effect since December 31, 2013.

5.11 Full Disclosure. No representation, warranty or other statement made by Borrower in any Loan Document (including the Disclosure Schedule), certificate or written statement furnished to Lender contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading. There is no fact known to Borrower which materially adversely affects, or which could in the future be reasonably expected to materially adversely affect, its ability to perform its obligations under this Agreement (it being recognized by Lender that any projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results and such differences may be material).

5.12 Solvency, Etc. Borrower is Solvent (as defined below) and, after the execution and delivery of the Loan Documents and the consummation of the transactions contemplated thereby, Borrower will be Solvent. "Solvent" means, with respect to any Person on any date, that on such date (a) the fair value of the property of such Person is greater than the fair value of the liabilities (including contingent liabilities) of such Person, (b) the present fair saleable value of the assets of such Person is not less than the amount that will be required to pay the probable liability of such Person on its debts as they become absolute and matured, (c) such Person does not intend to, and does not believe that it will, incur debts or liabilities beyond such Person's ability to pay as such debts and liabilities mature and (d) such Person is not engaged in business or a transaction, and is not about to engage in business or a transaction, for which such Person's property would constitute an unreasonably small capital.

5.13 Subsidiaries. Borrower has no Subsidiaries.

5.14 Catastrophic Events; Labor Disputes. None of Borrower, any Subsidiary or any of their respective Property is or has been affected by any fire, explosion, accident, strike, lockout or other labor dispute, drought, storm, hail, earthquake, embargo, act of God or other casualty that could reasonably be expected to have a Material Adverse Effect. There are no disputes presently subject to grievance procedure, arbitration or litigation under any of the collective bargaining agreements, employment contracts or employee welfare or incentive plans to which Borrower or any Subsidiary is a party, and there are no strikes, lockouts, work stoppages or slowdowns, or, to the knowledge of Borrower, jurisdictional disputes or organizing activity occurring or threatened which could reasonably be expected to have a Material Adverse Effect.

5.15 Certain Agreements of Officers, Employees and Consultants.

(a) No Violation. To the knowledge of Borrower, no officer, employee or consultant of Borrower is, or is now expected to be, in violation of any term of any employment contract, proprietary information agreement, nondisclosure agreement, noncompetition agreement or any other material contract or agreement or any restrictive covenant relating to the right of any such officer, employee or consultant to be employed by Borrower because of the nature of the business conducted or to be conducted by Borrower or relating to the use of trade secrets or proprietary information of others, in each case that would result in a Material Adverse Effect, and to Borrower's knowledge, the continued employment of Borrower's officers, employees and consultants does not subject Borrower to any material liability for any claim or claims arising out of or in connection with any such contract, agreement, or covenant that would result in a Material Adverse Effect.

(b) No Present Intention to Terminate. To the knowledge of Borrower, no officer of Borrower, and no employee or consultant of Borrower whose termination, either individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect, has any present intention of terminating his or her employment or consulting relationship with Borrower.

5.16 No Plan Assets. Neither Borrower nor any Subsidiary is an "employee benefit plan," as defined in Section 3(3) of ERISA, subject to Title I of ERISA, and none of the assets of Borrower or any Subsidiary constitutes or will constitute "plan assets" of one or more such plans within the meaning of 29 C.F.R. Section 2510.3-101. In addition, (a) neither Borrower nor any Subsidiary is a "governmental plan" within the meaning of Section 3(32) of ERISA and (b) transactions by or with Borrower or any Subsidiary are not subject to state statutes regulating investment of, and fiduciary obligations with respect to, governmental plans similar to the provisions of Section 406 of ERISA or Section 4975 of the Internal Revenue Code currently in effect, which prohibit or otherwise restrict the transactions contemplated by this Loan Agreement.



5.17 Blocked Person. To the best of Borrower's knowledge, as of the date hereof and at all times throughout the term of this Agreement, including after giving effect to any transfers of interests permitted pursuant to the Loan Documents, (a) none of the funds or other assets of Borrower, any Subsidiary or any of their Affiliates constitute (or will constitute) property of, or are (or will be) beneficially owned, directly or indirectly, by any Blocked Person; (b) no Blocked Person has (or will have) any interest of any nature whatsoever in Borrower, any Subsidiary or in their Affiliates, with the result that the investment in the respective party (whether directly or indirectly), is prohibited by applicable law or the Loan are in violation of applicable law; and (c) none of the funds of Borrower, any Subsidiary or of their Affiliates have been (or will be) derived from any unlawful activity with the result that the investment in the respective party (whether directly or indirectly), is prohibited by applicable law or the Loan are in violation of applicable law.

5.18 Regulatory Compliance. Borrower is not a "bank holding company" or a direct or indirect subsidiary of a "bank holding company" as defined in the Bank Holding Company Act of 1956, as amended, and Regulation Y thereunder of the Board of Governors of the Federal Reserve System. Neither Borrower nor any Subsidiary is an "investment company" or a company controlled by an "investment company" under the Investment Company Act of 1940. Borrower is not engaged in the business of extending credit for the purpose of purchasing or carrying margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System) and no proceeds of any Loan will be used to purchase or carry margin stock or to extend credit to others for the purpose of purchasing or carrying any margin stock.

5.19 Payment of Taxes. All federal and other material tax returns, reports and statements (including any attachments thereto or amendments thereof) of Borrower and its Subsidiaries filed or required to be filed by any of them have been timely filed (or extensions have been obtained and such extensions have not expired) and all taxes shown on such tax returns or otherwise due and payable and all assessments, fees and other governmental charges upon Borrower, its Subsidiaries and their respective properties, assets, income, businesses and franchises which are due and payable have been paid when due and payable, except for the payment of any such taxes, assessments, fees and other governmental charges which are being diligently contested by Borrower in good faith by appropriate proceedings and for which adequate reserves have been made under GAAP. To the knowledge of Borrower, no tax return of Borrower or any Subsidiary is currently under an audit or examination, and Borrower has not received written notice of any proposed audit or examination, in each case, where a material amount of tax is at issue. Borrower is not an "S corporation" within the meaning of Section 1361(a)(1) of the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code").

6. Affirmative Covenants. Borrower, until the full and complete payment of the Obligations (other than inchoate indemnification and similar obligations), covenants and agrees that:

6.1 Good Standing. Borrower shall maintain, and cause each of its Subsidiaries to maintain, its corporate existence and its good standing in its jurisdiction of incorporation and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Effect. Borrower shall maintain, and cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which could reasonably be expected to have a Material Adverse Effect.

6.2 Government Compliance. Borrower shall comply, and cause each of its Subsidiaries to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, noncompliance with which could reasonably be expected to have a Material Adverse Effect.

6.3 Financial Statements, Reports, Certificates. Borrower shall deliver to each Lender: (a) Borrower will provide quarterly financials in the form provided in its 10-Q, a Borrower prepared Consolidated balance sheet, Consolidated income statement and Consolidated cash flow statement covering Borrower's operations during such period, certified by Borrower's president, treasurer or chief financial officer (each, a "Responsible Officer"); (b) as soon as available, but in any event within one hundred twenty (120) days after the end of Borrower's fiscal year, audited Consolidated financial statements of Borrower prepared in accordance with GAAP, together with an unqualified opinion on such financial statements of a nationally recognized or other independent public accounting firm reasonably acceptable to Lender (Lender acknowledges that Grant Thornton LLP is reasonably acceptable); and (c) as soon as available, but in any event within sixty (60) days after the earlier of (i) the end of Borrower's fiscal year or (ii) the date of Borrower's board of directors' adoption, Borrower's operating budget and plan for the next fiscal year; and (d) such other financial information as Lender may reasonably request from time to time. From and after such time as Borrower becomes a publicly reporting company, promptly as they are available and in any event: (i) at the time of filing of Borrower's Form 10-K with the Securities and Exchange Commission after the end of each fiscal year of Borrower, the financial statements of Borrower filed with such Form 10-K; and (ii) at the time of filing of Borrower's Form 10-Q with the Securities and Exchange Commission after the end of each of the first three fiscal quarters of Borrower, the Consolidated financial statements of Borrower filed with such Form 10-Q. Borrower shall be deemed to deliver its 10-K and 10-Q to Lender when such materials are posted on the website of the Securities and Exchange Commission. In addition, Borrower shall deliver to Lender (A) promptly upon becoming available, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders, which items shall be deemed to have been delivered when posted on the website of the Securities and Exchange Commission and (B) promptly upon receipt of notice thereof, a report of any material legal actions pending or threatened in writing against Borrower or any Subsidiary or the commencement of any legal action, proceeding or governmental investigation involving Borrower or any Subsidiary that is reasonably expected to result in damages or costs to Borrower of Two Hundred Fifty Thousand Dollars (\$250,000).

6.4 Certificates of Compliance. Each time financial statements are furnished pursuant to Section 6.3 above, Borrower shall deliver to Lender an Officer's Certificate signed by a Responsible Officer in the form of, and certifying to the matters set forth in Exhibit E hereto.

6.5 Notice of Defaults. As soon as possible, and in any event within five (5) days after the discovery of a Default or an Event of Default, Borrower shall provide Lender with an Officer's Certificate setting forth the facts relating to or giving rise to such Default or Event of Default and the action which Borrower proposes to take with respect thereto.

6.6 Taxes. Borrower shall make, and cause each Subsidiary to make, due and timely payment or deposit of all federal, state, and local taxes, assessments, or contributions required of it by law or imposed upon any Property belonging to it, and will execute and deliver to Lender, on demand, appropriate certificates attesting to the payment or deposit thereof; and Borrower will make, and cause each Subsidiary to make, timely payment or deposit of all tax payments and withholding taxes required of it by applicable laws, including those laws concerning F.I.C.A., F.U.T.A., state disability, and local, state, and federal income taxes, and will, upon request, furnish Lender with proof satisfactory to Lender indicating that Borrower and each Subsidiary has made such payments or deposits; *provided* that Borrower need not make any payment if the amount or validity of such payment is being contested in good faith by appropriate proceedings which suspend the collection thereof (provided that such proceedings do not involve any substantial danger of the sale, forfeiture or loss of any material item of Collateral or Collateral which in the aggregate is material to Borrower and that Borrower has adequately bonded such amounts or reserves sufficient to discharge such amounts have been provided on the books of Borrower). In addition, Borrower shall not change, and shall not permit any Subsidiary to change, its respective jurisdiction of residence for taxation purposes.

6.7 Use; Maintenance. Borrower shall keep and maintain all items of equipment and other similar types of personal property that form any significant portion or portions of the Collateral in good operating condition and repair (reasonable wear and tear excepted) and shall make all necessary replacements thereof and renewals thereto so that the value and operating efficiency thereof shall at all times be maintained and preserved. Borrower shall not permit any such material item of Collateral to become a fixture to real estate or an accession to other personal property, without the prior written consent of Lender. Borrower shall not permit any such material item of Collateral to be operated or maintained in violation of any applicable law, statute, rule or regulation. With respect to items of leased equipment (to the extent Lender has any security interest in any residual Borrower's interest in such equipment under the lease), Borrower shall keep, maintain, repair, replace and operate such leased equipment in accordance with the terms of the applicable lease.

6.8 Insurance. Borrower shall keep its business and the Collateral insured for risks and in amounts standard for companies in Borrower's industry and location, and as Lender may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Lender. All property policies shall have a lender's loss payable endorsement showing Lender as an additional loss payee and all liability policies shall show Lender as an additional insured and all policies shall provide that the insurer must give Lender at least thirty (30) days notice before canceling its policy. At Lender's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any property policy shall, at Lender's option, be payable to Lender on account of the Obligations. Notwithstanding the foregoing, so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any property policy, toward the replacement or repair of destroyed or damaged property; *provided* that (a) any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Lender has been granted a first priority security interest and (b) after the occurrence and during the continuation of an Event of Default all proceeds payable under such property policy shall, at the option of Lender, be payable to Lender on account of the Obligations. If Borrower fails to obtain insurance as required under Section 6.8 or to pay any amount or furnish any required proof of payment to third persons and Lender, Lender may make all or part of such payment or obtain such insurance policies required in Section 6.8, and take any action under the policies Lender deems prudent. On or prior to the first Funding Date and prior to each policy renewal, Borrower shall furnish to Lender certificates of insurance or other evidence satisfactory to Lender that insurance complying with all of the above requirements is in effect.

6.9 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Lender to make effective the purposes of this Agreement, including the continued perfection and priority of Lender's security interest in the Collateral.

6.10 Subsidiaries. Borrower, upon Lender's request, shall cause any Subsidiary to provide Lender with a guaranty of the Obligations and a security interest in such Subsidiary's assets to secure such guaranty.

7. Negative Covenants. Borrower, until the full and complete payment of the Obligations, covenants and agrees that Borrower shall not:

7.1 Chief Executive Office. Change its name, jurisdiction of incorporation, chief executive office, principal place of business or any of the items set forth in Section 1 of the Disclosure Schedule without thirty (30) days prior written notice to Lender.

7.2 Collateral Control. Subject to its rights under Sections 4.4 and 7.4, remove any items of Collateral from Borrower's facility located at the address set forth on the cover page hereof or as set forth on the Disclosure Schedule.

7.3 Liens. Create, incur, allow or suffer, or permit any Subsidiary to create, incur, allow or suffer, any Lien on any of its property, or assign or convey any right to receive income, including the sale of any accounts except for Permitted Liens, or permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Lender) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's Intellectual Property, except (a) as otherwise permitted in Section 7.4 hereof and (b) as permitted in the definition of "Permitted Liens" herein.

7.4 Other Dispositions of Collateral. Convey, sell, lease or otherwise dispose, or permit any Subsidiary to convey, sell, lease or otherwise dispose, of all or any part of the Collateral to any Person (collectively, a "Transfer"), except for: (a) Transfers of inventory in the ordinary course of business; (b) Transfers of worn-out or obsolete equipment made in the ordinary course of business; (c) Transfers permitted under subclause (g) of the definition of Permitted Liens with respect to Collateral and (d) Permitted Licenses.

7.5 Distributions. (a) Pay any dividends or make any distributions, or permit any Subsidiary to pay any dividends or make any distributions, on their respective Equity Securities; (b) purchase, redeem, retire, defease or otherwise acquire, or permit any Subsidiary to purchase, redeem, retire, defease or otherwise acquire, for value any of their respective Equity Securities (other than repurchases pursuant to the terms of employee stock purchase plans, employee restricted stock agreements or similar arrangements in an aggregate amount not to exceed One Hundred Thousand Dollars (\$100,000) in any fiscal year); (c) return, or permit any Subsidiary to return, any capital to any holder of its Equity Securities as such; (iv) make, or permit any Subsidiary to make, any distribution of assets, Equity Securities, obligations or securities to any holder of its Equity Securities as such; or (v) set apart any sum for any such purpose; *provided*, however, Borrower may pay dividends payable solely in Borrower's common stock.

7.6 Mergers or Acquisitions. Merge or consolidate, or permit any Subsidiary to merge or consolidate, with or into any other Person or acquire, or permit any Subsidiary to acquire, all or substantially all of the capital stock or assets of another Person; *provided* that (a) any Subsidiary may merge into another Subsidiary and (b) any Subsidiary may merge into Borrower so long as Borrower is the surviving entity.

7.7 Change in Business or Ownership. (i) Engage, or permit any Subsidiary to engage, in any business other than the businesses currently engaged in by Borrower or such Subsidiary, as applicable, or reasonably related thereto or (ii) enter into any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty percent (40.0%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's Equity Securities (y) in a public offering or (z) to venture capital or other institutional investors so long as Borrower identifies to Lender such investors prior to the closing of the transaction and provides to Lender a description of the material terms of the transaction).

7.8 Transactions With Affiliates: Creation of Subsidiaries. (a) Enter, or permit any Subsidiary to enter, into any contractual obligation with any Affiliate or engage in any other transaction with any Affiliate except upon terms at least as favorable to Borrower or such Subsidiary, as applicable, as an arms-length transaction with Persons who are not Affiliates of Borrower or (b) create a Subsidiary without providing at least 10 Business Days advance notice thereof to Lender and, if requested by Lender, such Subsidiary guarantees the Obligations and grants a security interest in its assets to secure such guaranty.

7.9 Indebtedness Payments. (a) Prepay, redeem, purchase, defease or otherwise satisfy in any manner prior to the scheduled repayment thereof any Indebtedness for borrowed money (other than amounts due or permitted to be prepaid under this Agreement) or lease obligations, (b) amend, modify or otherwise change the terms of any Indebtedness for borrowed money or lease obligations so as to accelerate the scheduled repayment thereof or (c) repay any notes to officers, directors or shareholders.

7.10 Indebtedness. Create, incur, assume or permit, or permit any Subsidiary to create, incur or permit, to exist any Indebtedness except Permitted Indebtedness.

7.11 Investments. Make, or permit any Subsidiary to make, any Investment except for Permitted Investments.

7.12 Compliance.

(a) (i) Become, or permit any Subsidiary to become, an “investment company” or a company controlled by an “investment company” under the Investment Company Act of 1940 or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Loan for that purpose; (ii) become, or permit any Subsidiary to become, subject to any other federal or state law or regulation which purports to restrict or regulate its ability to borrow money; or (iii) fail, or permit any Subsidiary to fail, to meet the minimum funding requirements of the Employment Retirement Income Security Act of 1974, and its regulations, as amended from time to time (“ERISA”), permit, or permit any Subsidiary to permit, a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; (iv) fail, or permit any Subsidiary to fail, to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have Material Adverse Effect.

(b) Lender hereby notifies Borrower that pursuant to the requirements of Anti-Terrorism Laws, and Lender’s policies and practices, Lender is required to obtain, verify and record certain information and documentation that identifies Borrower and its principals, which information includes the name and address of Borrower and its principals and such other information that will allow Lender to identify such party in accordance with Anti-Terrorism Laws. Borrower will not, nor will Borrower permit any Subsidiary to, directly or indirectly, enter into any documents, instruments, agreements or contracts with any Blocked Person. Borrower shall immediately notify Lender if Borrower has knowledge that Borrower or any Affiliate is listed on the most current list published by OFAC or (i) is convicted on, (ii) pleads nolo contendere to, (iii) is indicted on or (iv) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. Borrower will not, nor will Borrower permit any Subsidiary or Affiliate to, directly or indirectly, (A) conduct any business or engage in any transaction or dealing with any Person Borrower or such Subsidiary knows to be a Blocked Person, including the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (B) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law or (C) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

7.13 Maintenance of Accounts. (a) Maintain any deposit account or securities account except accounts with respect to which Lender is able to take such actions as Lender deems necessary to obtain a perfected security interest in such accounts through one or more Account Control Agreements or (b) grant or allow any other Person (other than Lender) to perfect a security interest in, or enter into any agreements with any Persons (other than Lender) accomplishing perfection via control as to, any of its deposit accounts or securities accounts.

7.14 Negative Pledge Regarding Intellectual Property. Create, incur, assume or suffer to exist, or permit any Subsidiary to create, incur, assume or suffer to exist, any Lien of any kind upon any Intellectual Property or Transfer any Intellectual Property, whether now owned or hereafter acquired, other than Permitted Licenses.





8. Events of Default. Any one or more of the following events shall constitute an “Event of Default” by Borrower under this Agreement:

8.1 Failure to Pay. If Borrower fails to pay when due and payable or when declared due and payable in accordance with the Loan Documents: (a) any Scheduled Payment on the relevant Payment Date or on the relevant Maturity Date; or (b) any other portion of the Obligations within five (5) days after receipt of written notice from Lender that such payment is due.

8.2 Certain Covenant Defaults. If Borrower fails to perform any obligation arising under Sections 6.5 or 6.8 or violates any of the covenants contained in Section 7 of this Agreement.

8.3 Other Covenant Defaults. If Borrower fails or neglects to perform, keep, or observe any other material term, provision, condition, covenant, or agreement contained in this Agreement (other than as set forth in Sections 8.1, 8.2 or 8.4 through 8.14), in any of the other Loan Documents and Borrower has failed to cure such default within fifteen (15) days of the occurrence of such default. During this fifteen (15) day period, the failure to cure the default is not an Event of Default.

8.4 Material Adverse Change. If there occurs a material adverse effect on (a) the condition (financial or otherwise), business or operations of Borrower, (b) the ability of Borrower to perform its Obligations under the Loan Documents or (c) the value of the Collateral or Lender’s security interest in the Collateral.

8.5 Intentionally Omitted.

8.6 Seizure of Assets, Etc. (a) If any material portion of Borrower’s or any Subsidiary’s assets (i) is attached, seized, subjected to a writ or distress warrant, or is levied upon or (ii) comes into the possession of any trustee, receiver or Person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within ten (10) days, (b) if Borrower or any Subsidiary is enjoined, restrained or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, (c) if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower’s or any Subsidiary’s assets or (d) if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower’s or any Subsidiary’s assets by the United States Government, or any department agency or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within ten (10) days after Borrower receives notice thereof; provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower.

8.7 Service of Process. (a) The service of process upon Lender seeking to attach by a trustee or other process any funds of Borrower on deposit or otherwise held by Lender, (b) the delivery upon Lender of a notice of foreclosure by any Person seeking to attach or foreclose on any funds of Borrower on deposit or otherwise held by Lender or (c) the delivery of a notice of foreclosure or exclusive control to any entity holding or maintaining Borrower's deposit accounts or accounts holding securities by any Person (other than Lender) seeking to foreclose or attach any such accounts or securities.

8.8 Default on Indebtedness. One or more defaults shall exist under any agreement with any third party or parties which consists of the failure to pay any Indebtedness of Borrower or any Subsidiary at maturity or which results in a right by such third party or parties, whether or not exercised, to accelerate the maturity of Indebtedness in an aggregate amount in excess of Two Hundred Fifty Thousand Dollars (\$250,000).

8.9 Judgments. If a judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least Two Hundred Fifty Thousand Dollars (\$250,000) shall be rendered against Borrower or any Subsidiary and shall remain unsatisfied and unstayed for a period of ten (10) days or more.

8.10 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty, representation, statement, certification, or report made to Lender by of Borrower.

8.11 Breach of Warrant. If Borrower shall breach any material term of the Warrant.

8.12 Unenforceable Loan Document. If any Loan Document shall in any material respect cease to be, or Borrower shall assert that any Loan Document is not, a legal, valid and binding obligation of Borrower enforceable in accordance with its terms.

8.13 Involuntary Insolvency Proceeding. (a) If a proceeding shall have been instituted in a court having jurisdiction in the premises (i) seeking a decree or order for relief in respect of Borrower or any Subsidiary in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, (ii) for the appointment of a receiver, liquidator, administrator, assignee, custodian, trustee (or similar official) of Borrower or any Subsidiary or for any substantial part of its Property or (iii) for the winding-up or liquidation of its affairs, and such proceeding shall remain undismissed or unstayed and in effect for a period of sixty (60) consecutive days or (b) such court shall enter a decree or order granting the relief sought in any such proceeding.

8.14 Voluntary Insolvency Proceeding. If Borrower or any Subsidiary shall (a) commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, (b) consent to the entry of an order for relief in an involuntary case under any such law, (c) consent to the appointment of or taking possession by a receiver, liquidator, assignee, trustee, custodian (or other similar official) of Borrower or any Subsidiary or for any substantial part of its Property, (d) shall make a general assignment for the benefit of creditors, (e) shall fail generally to pay its debts as they become due or (f) take any corporate action in furtherance of any of the foregoing.

9. Lender's Rights and Remedies.

9.1 Rights and Remedies. Upon the occurrence of any Default or Event of Default that remains continuing, Lender shall not have any further obligation to advance money or extend credit to or for the benefit of Borrower. In addition, upon the occurrence of an Event of Default that remains continuing, Lender shall have the rights, options, duties and remedies of a secured party as permitted by law and, in addition to and without limitation of the foregoing, Lender may, at its election, without notice of election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Acceleration of Obligations. Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, including (i) any accrued and unpaid interest, (ii) the amounts which would have otherwise come due under Section 2.3(b)(ii) if the Loan had been voluntarily prepaid, (iii) the unpaid principal balance of the Loan and (iv) all other sums, if any, that shall have become due and payable hereunder, immediately due and payable (*provided* that upon the occurrence of an Event of Default described in Section 8.13 or 8.14 all Obligations shall become immediately due and payable without any action by Lender);

(b) Protection of Collateral. Make such payments and do such acts as Lender considers necessary or reasonable to protect Lender's security interest in the Collateral. Borrower agrees to assemble the Collateral if Lender so requires and to make the Collateral available to Lender as Lender may designate. Borrower authorizes Lender and its designees and agents to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any Lien which in Lender's determination appears or is claimed to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Lender a license to enter into possession of such premises and to occupy the same, without charge, for up to one hundred twenty (120) days in order to exercise any of Lender's rights or remedies provided herein, at law, in equity, or otherwise;

(c) Preparation of Collateral for Sale. Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Lender and its agents and any purchasers at or after foreclosure are hereby granted a non-exclusive, irrevocable, perpetual, fully paid, royalty-free license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's Intellectual Property, including labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any Property of a similar nature, now or at any time hereafter owned or acquired by Borrower or in which Borrower now or at any time hereafter has any rights; *provided* that such license shall only be exercisable in connection with the disposition of Collateral upon Lender's exercise of its remedies hereunder;

(d) Sale of Collateral. Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Lender determines are commercially reasonable; and



(e) Purchase of Collateral. Credit bid and purchase all or any portion of the Collateral at any public sale.

Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

9.2 Set Off Right. Following the occurrence of an Event of Default that remains continuing, Lender may set off and apply to the Obligations any and all Indebtedness at any time owing to or for the credit or the account of Borrower or any other assets of Borrower in Lender's possession or control.

9.3 Effect of Sale. Upon the occurrence of an Event of Default, to the extent permitted by law, Borrower covenants that it will not at any time insist upon or plead, or in any manner whatsoever claim or take any benefit or advantage of, any stay or extension law now or at any time hereafter in force, nor claim, take nor insist upon any benefit or advantage of or from any law now or hereafter in force providing for the valuation or appraisal of the Collateral or any part thereof prior to any sale or sales thereof to be made pursuant to any provision herein contained, or to the decree, judgment or order of any court of competent jurisdiction; nor, after such sale or sales, claim or exercise any right under any statute now or hereafter made or enacted by any state or otherwise to redeem the property so sold or any part thereof, and, to the full extent legally permitted, except as to rights expressly provided herein, hereby expressly waives for itself and on behalf of each and every Person, except decree or judgment creditors of Borrower, acquiring any interest in or title to the Collateral or any part thereof subsequent to the date of this Agreement, all benefit and advantage of any such law or laws, and covenants that it will not invoke or utilize any such law or laws or otherwise hinder, delay or impede the execution of any power herein granted and delegated to Lender, but will suffer and permit the execution of every such power as though no such power, law or laws had been made or enacted. Any sale, whether under any power of sale hereby given or by virtue of judicial proceedings, shall operate to divest all right, title, interest, claim and demand whatsoever, either at law or in equity, of Borrower in and to the Property sold, and shall be a perpetual bar, both at law and in equity, against Borrower, its successors and assigns, and against any and all Persons claiming the Property sold or any part thereof under, by or through Borrower, its successors or assigns.

9.4 Power of Attorney in Respect of the Collateral. Borrower does hereby irrevocably appoint Lender (which appointment is coupled with an interest) the true and lawful attorney in fact of Borrower, with full power of substitution and in its name to file any notices of security interests, financing statements and continuations and amendments thereof pursuant to the Code or federal law, as may be necessary to perfect or to continue the perfection of Lender's security interests in the Collateral. Borrower does hereby irrevocably appoint Lender (which appointment is coupled with an interest) on the occurrence of an Event of Default that remains continuing, the true and lawful attorney in fact of Borrower, with full power of substitution and in its name: (a) to ask, demand, collect, receive, receipt for, sue for, compound and give acquittance for any and all rents, issues, profits, avails, distributions, income, payment draws and other sums in which a security interest is granted under Section 4 with full power to settle, adjust or compromise any claim thereunder as fully as if Lender were Borrower itself; (b) to receive payment of and to endorse the name of Borrower to any items of Collateral (including checks, drafts and other orders for the payment of money) that come into Lender's possession or under Lender's control; (c) to make all demands, consents and waivers, or take any other action with respect to, the Collateral; (d) in Lender's discretion to file any claim or take any other action or proceedings, either in its own name or in the name of Borrower or otherwise, which Lender may reasonably deem necessary or appropriate to protect and preserve the right, title and interest of Lender in and to the Collateral; (e) endorse Borrower's name on any checks or other forms of payment or security; (f) sign Borrower's name on any invoice or bill of lading for any account or drafts against account debtors; (g) make, settle, and adjust all claims under Borrower's insurance policies; (h) settle and adjust disputes and claims about the accounts directly with account debtors, for amounts and on terms Lender determines reasonable; (i) transfer the Collateral into the name of Lender or a third party as the Code permits; and (j) to otherwise act with respect thereto as though Lender were the outright owner of the Collateral.

9.5 Lender's Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Lender may do any or all of the following: (a) make payment of the same or any part thereof; or (b) obtain and maintain insurance policies of the type discussed in Section 6.8 of this Agreement, and take any action with respect to such policies as Lender deems prudent. Any amounts paid or deposited by Lender shall constitute Lender's Expenses, shall be immediately due and payable, shall bear interest at the Default Rate and shall be secured by the Collateral. Any payments made by Lender shall not constitute an agreement by Lender to make similar payments in the future or a waiver by Lender of any Event of Default under this Agreement. Borrower shall pay all reasonable fees and expenses, including Lender's Expenses, incurred by Lender in the enforcement or attempt to enforce any of the Obligations hereunder not performed when due.

9.6 Remedies Cumulative; Independent Nature of Lender's Rights. Lender's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Lender shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Lender of one right or remedy shall be deemed an election, and no waiver by Lender of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Lender shall constitute a waiver, election, or acquiescence by it. The Obligations of Borrower to Lender may be enforced by Lender against Borrower in accordance with the terms of this Agreement and the other Loan Documents and, to the fullest extent permitted by applicable law, it shall not be necessary for Lender to be joined as an additional party in any proceeding to enforce such Obligations.

9.7 Application of Collateral Proceeds. The proceeds and/or avails of the Collateral, or any part thereof, and the proceeds and the avails of any remedy hereunder (as well as any other amounts of any kind held by Lender, at the time of or received by Lender after the occurrence of an Event of Default hereunder) shall be paid to and applied as follows:



(a) First, to the payment of reasonable out-of-pocket costs and expenses, including all amounts expended to preserve the value of the Collateral, of foreclosure or suit, if any, and of such sale and the exercise of any other rights or remedies, and of all proper fees, expenses, liability and advances, including reasonable legal expenses and attorneys' fees, incurred or made hereunder by Lender, including Lender's Expenses;

(b) Second, to the payment to Lender of the amount then owing or unpaid on the Loan for any accrued and unpaid interest, the amounts which would have otherwise come due under Section 2.3(b)(ii), if the Loan had been voluntarily prepaid, the principal balance of the Loan, and all other Obligations with respect to the Loan (*provided*, however, if such proceeds shall be insufficient to pay in full the whole amount so due, owing or unpaid upon the Loan, then *first*, to the unpaid interest thereon ratably, *second*, to the amounts which would have otherwise come due under Section 2.3(b)(ii) ratably, if the Loan had been voluntarily prepaid, *third*, to the principal balance of the Loan ratably, and *fourth*, to the ratable payment of other amounts then payable to Lender under any of the Loan Documents); and

(c) Third, to the payment of the surplus, if any, to Borrower, its successors and assigns or to the Person lawfully entitled to receive the same.

9.8 Reinstatement of Rights. To the extent that any payment by or on behalf of the Borrower is made to the Lender, or the Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by the Lender in its sole discretion) to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any bankruptcy or insolvency law or otherwise, then to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred.

#### 10. Waivers: Indemnification.

10.1 Demand; Protest. Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees at any time held by Lender on which Borrower may in any way be liable.

10.2 Lender's Liability for Collateral. So long as Lender complies with its obligations, if any, under the Code, and with reasonable practices regarding the safekeeping of the Collateral in the possession or under the control of Lender, Lender shall not in any way or manner be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage thereto occurring or arising in any manner or fashion from any cause other than Lender's gross negligence or willful misconduct; (c) any diminution in the value thereof; or (d) any act or default of any carrier, warehouseman, bailee, forwarding agency, or other Person whomsoever. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

10.3 Indemnification and Waiver. Whether or not the transactions contemplated hereby shall be consummated:

(a) General Indemnity. Borrower agrees upon demand to pay or reimburse Lender for all liabilities, obligations and reasonable out-of-pocket expenses, including Lender's Expenses and reasonable fees and expenses of counsel for Lender from time to time arising in connection with the enforcement or collection of sums due under the Loan Documents, and in connection with any amendment or modification of the Loan Documents or any "work-out" in connection with the Loan Documents. Borrower shall indemnify, reimburse and hold Lender, and each of its respective successors, assigns, agents, attorneys, officers, directors, equity holders, servants, agents and employees (each an "Indemnified Person") harmless from and against all liabilities, losses, damages, actions, suits, demands, claims of any kind and nature (including claims relating to environmental discharge, cleanup or compliance), all costs and expenses whatsoever to the extent they may be incurred or suffered by such Indemnified Person in connection therewith (including reasonable attorneys' fees and expenses), fines, penalties (and other charges of any applicable Governmental Authority), licensing fees relating to any item of Collateral, damage to or loss of use of property (including consequential or special damages to third parties or damages to Borrower's property), or bodily injury to or death of any person (including any agent or employee of Borrower) (each, a "Claim"), directly or indirectly relating to or arising out of the use of the proceeds of the Loan or otherwise, the falsity of any representation or warranty of Borrower or Borrower's failure to comply with the terms of this Agreement or any other Loan Document. The foregoing indemnity shall cover, without limitation, (i) any Claim in connection with a design or other defect (latent or patent) in any item of equipment or product included in the Collateral, (ii) any Claim for infringement of any patent, copyright, trademark or other intellectual property right, (iii) any Claim resulting from the presence on or under or the escape, seepage, leakage, spillage, discharge, emission or release of any Hazardous Materials on the premises owned, occupied or leased by Borrower, including any Claims asserted or arising under any Environmental Law, (iv) any Claim for negligence or strict or absolute liability in tort or (v) any Claim asserted as to or arising under any Account Control Agreement or any Landlord Agreement; *provided*, however, Borrower shall not indemnify any Indemnified Person for any liability incurred by such Indemnified Person as a direct and sole result of such Indemnified Person's gross negligence or willful misconduct. Such indemnities shall continue in full force and effect, notwithstanding the expiration or termination of this Agreement. Upon Lender's written demand, Borrower shall assume and diligently conduct, at its sole cost and expense, the entire defense of Lender, each of its members, partners, and each of their respective, agents, employees, directors, officers, equity holders, successors and assigns against any indemnified Claim described in this Section 10.3(a). Borrower shall not settle or compromise any Claim against or involving Lender without first obtaining Lender's written consent thereto, which consent shall not be unreasonably withheld.

(b) Waiver. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT OR ANYWHERE ELSE, BORROWER AGREES THAT IT SHALL NOT SEEK FROM LENDER UNDER ANY THEORY OF LIABILITY (INCLUDING ANY THEORY IN TORTS), ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES.

(c) Survival; Defense. The obligations in this Section 10.3 shall survive payment of all other Obligations pursuant to Section 12.8. At the election of any Indemnified Person, Borrower shall defend such Indemnified Person using legal counsel satisfactory to such Indemnified Person in such Person's reasonable discretion, at the sole cost and expense of Borrower. All amounts owing under this Section 10.3 shall be paid within thirty (30) days after written demand.

11. Notices. Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid) shall be personally delivered or sent by certified mail, postage prepaid, return receipt requested, by prepaid nationally recognized overnight courier, or by prepaid facsimile to Borrower or to Lender, as the case may be, at their respective addresses set forth below:

Interleukin Genetics, Inc.

135 Beaver Street

Lexington, MA 02452

If to Borrower:

Attention: Chief Financial Officer

Fax: (781) 398-0720

Ph: (781) 398-0700

Horizon Technology Finance Corporation

312 Farmington Avenue

If to Horizon:

Farmington, CT 06032

Attention: Legal Department

Fax: (860) 676-8655

Ph: (860) 676-8654

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.



12. General Provisions.

12.1 Successors and Assigns. This Agreement and the Loan Documents shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties; *provided*, however, neither this Agreement nor any rights hereunder may be assigned by Borrower without Lender's prior written consent, which consent may be granted or withheld in Lender's sole discretion. Lender shall have the right without the consent of or notice to Borrower to sell, transfer, assign, negotiate, or grant participations in all or any part of, or any interest in Lender's rights and benefits hereunder. Lender may disclose the Loan Documents and any other financial or other information relating to Borrower to any potential participant or assignee of any of the Loan; *provided* that such participant or assignee agrees to protect the confidentiality of such documents and information using the same measures that it uses to protect its own confidential information.

12.2 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.3 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.4 Entire Agreement; Construction; Amendments and Waivers.

(a) Entire Agreement. This Agreement and each of the other Loan Documents dated as of the date hereof, taken together, constitute and contain the entire agreement between Borrower Lender and supersede any and all prior agreements, negotiations, correspondence, understandings and communications between the parties, whether written or oral, respecting the subject matter hereof. Borrower acknowledges that it is not relying on any representation or agreement made by Lender or any employee, attorney or agent thereof, other than the specific agreements set forth in this Agreement and the Loan Documents.

(b) Construction. This Agreement is the result of negotiations between and has been reviewed by each of Borrower and Lender as of the date hereof and their respective counsel; accordingly, this Agreement shall be deemed to be the product of the parties hereto, and no ambiguity shall be construed in favor of or against Borrower or Lender. Borrower and Lender agree that they intend the literal words of this Agreement and the other Loan Documents and that no parol evidence shall be necessary or appropriate to establish Borrower's or Lender's actual intentions.

(c) Amendments and Waivers. Any and all discharges or waivers of, or consents to any departures from any provision of this Agreement or of any of the other Loan Documents shall not be effective without the written consent of Lender.

Any and all amendments and modifications of this Agreement or of any of the other Loan Documents shall not be effective without the written consent of Lender and Borrower. Any waiver or consent with respect to any provision of the Loan Documents shall be effective only in the specific instance and for the specific purpose for which it was given. No notice to or demand on Borrower in any case shall entitle Borrower to any other or further notice or demand in similar or other circumstances. Any amendment, modification, waiver or consent affected in accordance with this Section 12.4 shall be binding upon Lender and on Borrower.

12.5 Reliance by Lender. All covenants, agreements, representations and warranties made herein by Borrower shall be deemed to be material to and to have been relied upon by Lender, notwithstanding any investigation by Lender.

12.6 No Set-Offs by Borrower. All sums payable by Borrower pursuant to this Agreement or any of the other Loan Documents shall be payable without notice or demand and shall be payable in United States Dollars without set-off or reduction of any manner whatsoever.

12.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts (including signatures delivered by facsimile or other electronic means), each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

12.8 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations or commitment to fund remain outstanding. The obligations of Borrower to indemnify Lender with respect to the expenses, damages, losses, costs and liabilities described in Section 10.3 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Lender have run.

13. Relationship of Parties. Borrower and Lender acknowledge, understand and agree that the relationship between Borrower, on the one hand, and Lender, on the other, is, and at all times shall remain solely that of a borrower and lender. Lender shall not, under any circumstances, be construed to be a partner or a joint venturer of Borrower or any of its Affiliates; nor shall Lender, under any circumstances, be deemed to be in a relationship of confidence or trust or a fiduciary relationship with Borrower or any of its Affiliates, or to owe any fiduciary duty or any other duty to Borrower or any of its Affiliates. Lender does not undertake or assume any responsibility or duty to Borrower or any of its Affiliates to select, review, inspect, supervise, pass judgment upon or otherwise inform Borrower or any of its Affiliates of any matter in connection with its or their Property, any Collateral held by Lender or the operations of Borrower or any of its Affiliates. Borrower and each of its Affiliates shall rely entirely on their own judgment with respect to such matters, and any review, inspection, supervision, exercise of judgment or supply of information undertaken or assumed by Lender in connection with such matters is solely for the protection of Lender and neither Borrower nor any Affiliate is entitled to rely thereon.

14. Confidentiality. All information (other than periodic reports filed by Borrower with the Securities and Exchange Commission) disclosed by Borrower to Lender in writing, orally, electronically, through inspection, or by any other means pursuant to this Agreement shall be considered confidential. Lender agrees to use the same degree of care to safeguard and prevent disclosure of such confidential information as Lender uses with its own confidential information, but in any event no less than a reasonable degree of care. Lender shall disclose such information to any third party (other than (a) to another party hereto, (b) to Lender's members, partners, attorneys, governmental regulators (including any self-regulatory authority) or auditors, (c) to Lender's subsidiaries and affiliates, (d) on a confidential basis, to any rating agency, (e) to prospective transferees and purchasers of the Loan or any actual or prospective party (or its Affiliates) to any swap, derivative or other transaction under which payments are to be made by reference to the Obligations, Borrower, any Loan Document or any payment thereunder, all subject to the same confidentiality obligation set forth herein or (f) as required by law, regulation, subpoena or other order to be disclosed) and shall use such information only for purposes of evaluation of its investment in Borrower and the exercise of Lender's rights and the enforcement of its remedies under this Agreement and the other Loan Documents. The obligations of confidentiality shall not apply to any information that (i) was known to the public prior to disclosure by Borrower under this Agreement, (ii) becomes known to the public through no fault of Lender, (iii) is disclosed to Lender on a non-confidential basis by a third party or (iv) is independently developed by Lender. Notwithstanding the foregoing, Lender's agreement of confidentiality shall not apply if and solely to the extent that Lender has acquired indefeasible title to any Collateral or to the extent reasonably required in connection with any enforcement or exercise of Lender's rights and remedies under this Agreement following an Event of Default, including the enforcement of Lender's security interest in the Collateral.

15. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF CONNECTICUT. EACH OF BORROWER AND LENDER HEREBY SUBMITS TO THE NON-EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS LOCATED IN THE STATE OF CONNECTICUT. BORROWER, AND LENDER HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS.

[Remainder of page intentionally left blank.]



IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

BORROWER:  
INTERLEUKIN GENETICS,  
INC.

By: /s/ Kenneth S. Kornman

Name: Kenneth S. Kornman

Title: CEO

LENDER:  
HORIZON TECHNOLOGY  
FINANCE CORPORATION

By: /s/ Robert D. Pomeroy, Jr.

Name: Robert D. Pomeroy, Jr.

Title: Chief Executive Officer

[SIGNATURE PAGE TO VENTURE LOAN AND SECURITY AGREEMENT]

LIST OF EXHIBITS AND SCHEDULES

- Exhibit A Disclosure Schedule
- Exhibit B Funding Certificate
- Exhibit C Form of Note
- Exhibit D Form of Legal Opinion
- Exhibit E Form of Officer's Certificate

EXHIBIT A

DISCLOSURE SCHEDULE

Borrower hereby certifies the following information to Lender:

Section 1. Information For UCC Financing Statements and Searches and Deposit Accounts and Accounts Holding Securities.

(a) The exact corporate name of Borrower as it appears in its Certificate of Incorporation, as amended to date is:

(b) Borrower's state of incorporation is:

(c) The organizational ID number of Borrower from its jurisdiction of incorporation is:

(d) Borrower's taxpayer identification number is:

(e) The following is a list of all corporate names, dba or trade names used by Borrower in the past five years:

(f) The address of Borrower's headquarters and chief executive office is:

(g) The following is a list of all States where Borrower's headquarters and chief executive office has been located in the past five years:

(h) The following is a list of all States where Borrower's property and assets have been located in the past five years:

(i) The following is a list of all of Borrower's accounts (bank name, address and account names and numbers):

Depository Bank Bank Address Type of Account Acct. No.

(j) The following is a list of all of Borrower's accounts holding securities (broker/bank name, address and account names and numbers):

EXHIBIT B

**FUNDING CERTIFICATE**

The undersigned, being the duly elected and acting \_\_\_\_\_ of INTERLEUKIN GENETICS, INC., a Delaware corporation (“Borrower”), does hereby certify to HORIZON TECHNOLOGY FINANCE CORPORATION (the “Lender”) in connection with that certain Venture Loan and Security Agreement dated as of December \_\_, 2014 by and between Borrower, and Lender (the “Loan Agreement”; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement) that:

1. The representations and warranties made by Borrower in Section 5 of the Loan Agreement and in the other Loan Documents are true and correct as of the date hereof.
  
2. No event or condition has occurred that would constitute a Default or an Event of Default under the Loan Agreement or any other Loan Document.
  
3. Borrower is in compliance with the covenants and requirements contained in Sections 4, 6 and 7 of the Loan Agreement.
  
4. All conditions referred to in Section 3 of the Loan Agreement to the making of the Loan to be made on or about the date hereof have been satisfied.
  
5. No material adverse change in the general affairs, management, results of operations, condition (financial or otherwise) or prospects of Borrower, whether or not arising from transactions in the ordinary course of business, has occurred.
  
6. The proceeds for Loan A shall be disbursed as follows:

Disbursement from Horizon:

Loan Amount \$

Less:

Legal Fees \$

Balance of Commitment Fee \$

Net Proceeds due from Horizon: \$

7. The aggregate net proceeds of Loan A in the amount of \$\_\_\_\_\_ shall be transferred by Horizon to Borrower's account as follows:

Account Name:

Bank Name:

Bank Address:

Attention:

Telephone:

Account Number:

ABA Number:

Dated: December \_\_, 2014

**BORROWER:**

INTERLEUKIN  
GENETICS,  
INC.

By:

Name:

Title:

[Signature page to Funding Certificate]

EXHIBIT C

**SECURED PROMISSORY NOTE**

\$5,000,000 Dated: December \_\_, 2014

FOR VALUE RECEIVED, the undersigned, INTERLEUKIN GENETICS, INC., a Delaware corporation ("Borrower"), HEREBY PROMISES TO PAY to HORIZON TECHNOLOGY FINANCE CORPORATION, a Delaware corporation ("Lender") the principal amount of Five Million Dollars (\$5,000,000) or such lesser amount as shall equal the outstanding principal balance of Loan A (the "Loan") made to Borrower by Lender pursuant to the Loan Agreement (as defined below), and to pay all other amounts due with respect to the Loan on the dates and in the amounts set forth in the Loan Agreement.

Interest on the principal amount of this Note from the date of this Note shall accrue at the Loan Rate or, if applicable, the Default Rate, each as established in accordance with the Loan Agreement (as defined below). Interest shall be computed on the basis of a 360-day year for the actual number of days elapsed. If the Funding Date is not the first day of the month, interim interest accruing from the Funding Date through the last day of that month shall be paid on the first calendar day of the next calendar month. Commencing February 1, 2015 through and including April 1, 2016, on the first day of each month (each an "Interest Payment Date") Borrower shall make payments of accrued interest only on the outstanding principal amount of the Loan. Commencing on May 1, 2016, and continuing on the first day of each month thereafter (each a "Principal and Interest Payment Date" and, collectively with each Interest Payment Date, each a "Payment Date"), Borrower shall make to Lender thirty (30) equal payments of principal in the amount of One Hundred Sixty-Six Thousand Six Hundred Sixty-Six and 67/100 (\$166,666.67) plus accrued interest on the then outstanding principal amount due hereunder. On October 1, 2018, or the earlier repayment in full of the Loan, Borrower shall make a payment of Two Hundred Twenty-Five Thousand and 00/100 Dollars (\$225,000) to Lender (the "Final Payment"). If not sooner paid, all outstanding amounts hereunder and under the Loan Agreement shall become due and payable on October 1, 2018.

Principal, interest and all other amounts due with respect to the Loan, are payable in lawful money of the United States of America to Lender as set forth in the Loan Agreement. The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

This Note is referred to in, and is entitled to the benefits of, the Venture Loan and Security Agreement dated as of the date hereof (the "Loan Agreement"), among Borrower and Lender. The Loan Agreement, among other things, (a) provides for the making of a secured Loan to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.



This Note may not be prepaid, except as set forth in Section 2.3 of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of the Loan, interest on the Loan and all other amounts due Lender under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including reasonable attorneys' fees and costs, incurred by Lender in the enforcement or attempt to enforce any of Borrower's obligations hereunder not performed when due.

Any reference herein to Lender shall be deemed to include and apply to every subsequent holder of this Note. Reference is made to the Loan Agreement for provisions concerning optional and mandatory prepayments, Collateral, acceleration and other material terms affecting this Note.

**This Note shall be governed by and construed under the laws of the State of Connecticut. Borrower agrees that any action or proceeding brought to enforce or arising out of this Note may be commenced in the state or federal courts located within the State of Connecticut.**

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

INTERLEUKIN  
GENETICS,  
INC.

By:

Name:

Title:

[SIGNATURE PAGE TO SECURED PROMISSORY NOTE (LOAN A/B)]



EXHIBIT D

ITEMS TO BE COVERED BY OPINION OF BORROWER'S COUNSEL

1. Borrower is a corporation, duly organized, validly existing and in good standing under the laws of the State of Delaware, and is duly qualified and authorized to do business in the State of Massachusetts.
2. Borrower has the full corporate power, authority and legal right, and has obtained all necessary approvals, consents and given all notices to execute and deliver the Loan Documents and perform the terms thereof.
3. The Loan Documents have been duly authorized, executed and delivered by Borrower and constitute valid, legal and binding agreements, and are enforceable in accordance with their terms.
4. To our knowledge, there is no action, suit, audit, investigation, proceeding or patent claim pending or threatened against Borrower in any court or before any governmental commission, agency, board or authority which might have a Material Adverse Effect.
5. The Shares (as defined in the Warrant) issuable pursuant to exercise or conversion of the Warrant have been duly authorized and reserved for issuance by Borrower and, when issued in accordance with the terms thereof, will be validly issued, fully paid and nonassessable.
6. The shares of Common Stock issuable upon conversion of the Shares have been duly authorized and reserved and, when issued in accordance with the terms of Borrower's Certificate of Incorporation, as amended, will be validly issued, fully paid and nonassessable.
7. The execution and delivery of the Loan Documents are not, and the issuance of the Shares upon exercise of the Warrant in accordance with the terms thereof will not be, inconsistent with Borrower's Certificate of Incorporation, as amended, or Bylaws, do not and will not contravene any law, governmental rule or regulation, judgment or order applicable to Borrower, and do not and will not conflict with or contravene any provision of, or constitute a default under, any indenture, mortgage, contract or other agreement or instrument of which Borrower is a party or by which it is bound or require the consent or approval of, the giving of notice to, the registration or filing with or the taking of any action in respect of or by, any federal, state or local government authority or agency or other person, except for

the filing of notices pursuant to federal and state securities laws, which filings will be effected by the time required thereby.

EXHIBIT E

**FORM OF OFFICER'S CERTIFICATE**

TO: HORIZON TECHNOLOGY FINANCE CORPORATION

Reference is made to the Venture Loan and Security Agreement dated as of December \_\_, 2014 (as it may be amended from time to time, the "Loan Agreement") by and among INTERLEUKIN GENETICS, INC. ("Borrower"), HORIZON TECHNOLOGY FINANCE CORPORATION ("Lender"). Unless otherwise defined herein, capitalized terms have the meanings given such terms in the Loan Agreement. The undersigned Responsible Officer of Borrower hereby certifies to Lender that:

1. No Event of Default or Default has occurred under the Loan Agreement, including, without limitation, any Event of Default or Default caused by a cross-default under any agreement evidencing Permitted Indebtedness of Borrower to lenders other than Lender. (If a Default or Event of Default has occurred, specify the nature and extent thereof and the action Borrower proposes to take with respect thereto.)
2. The information provided in the Disclosure Schedules is currently true and accurate, except as noted below.
3. Borrower is in compliance with the provisions of Section 4, 6 and 7 of the Loan Agreement, except as noted below.

4. Attached herewith are the [monthly financial statements pursuant to Section 6.3(a) of the Loan Agreement/annual audited financial statements pursuant to Section 6.3(b) of the Loan Agreement]. These have been prepared in accordance with GAAP (subject to the absence of footnotes and normal year-end audit adjustments, in the case of quarterly financial statements) and are consistent from one period to the next except as noted below.

NOTES TO ABOVE CERTIFICATIONS:

BORROWER:  
INTERLEUKIN  
GENETICS,  
INC.

By:  
Name:  
Title:  
Date:

**EXHIBIT 99.1**

**Contacts:**

*Media:*

David Pitts

Argot Partners

212-600-1902

david@argotpartners.com

*Investors:*

Susan Kim

Argot Partners

212-600-1902

susan@argotpartners.com

**INTERLEUKIN GENETICS RAISES \$10 MILLION IN FINANCINGS**

*\$5.0 million equity private placement and \$5.0 million debt financing*

**WALTHAM, MA – December 23, 2014 – Interleukin Genetics, Inc. (OTCQB: ILIU)** announced today that it has entered into a Securities Purchase Agreement with various accredited investors to raise gross proceeds of \$5.0 million in a private placement financing. The syndicate is comprised of new and existing investors including two leading life sciences investment firms, New Enterprise Associates (NEA) and Bay City Capital.

Pursuant to the purchase agreement, the Company has agreed to issue an aggregate of 50,099,700 shares of the Company's common stock at a price per share of \$0.1003, as well as warrants to purchase up to an aggregate of 50,099,700 shares of common stock. The warrants have a term of seven years and an exercise price of \$0.1003 per share. BTIG, LLC served as the placement agent for the private placement.

Separately, Interleukin also entered into a venture loan and security agreement with Horizon Technology Finance Corporation (NASDAQ: HRZN) under which the Company has borrowed \$5.0 million. In connection with the loan agreement, the Company has issued to Horizon warrants to purchase a total of 2,492,523 shares of common stock at a per share exercise price of \$0.1003. The lender warrants have a term of 10 years. The Company has agreed to repay the loan in 45 monthly payments, including an initial 15-month period of interest-only payments.

Net proceeds from the private placement and loan will be used primarily to accelerate commercialization of the Company's proprietary genetic tests, including PerioPredict™, which identifies genetic variations that increase the risk for severe periodontal disease, and for general corporate and working capital purposes.



The securities offered in this private placement transaction have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or applicable state securities laws. Accordingly, the securities may not be offered or sold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and such applicable state securities laws. Pursuant to the terms of a registration rights agreement entered into with the investors, Interleukin Genetics has agreed to file a registration statement with the Securities and Exchange Commission registering the resale of the shares of common stock sold in the offering and issuable upon exercise of the warrants.

This press release does not constitute an offer to sell or the solicitation of an offer to buy the securities, nor shall there be any sale of the securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of such jurisdiction.

### **About Interleukin Genetics**

Interleukin Genetics, Inc. (OTCQB: ILIU) develops and markets proprietary genetic tests for chronic diseases and health related conditions. The products empower individuals to prevent certain chronic conditions and manage their existing health and wellness through genetic-based insights with actionable guidance. Interleukin Genetics leverages its research, intellectual property and genetic panel development expertise in metabolism and inflammation to facilitate the emerging personalized healthcare market. The Company markets its tests through partnerships with health and wellness companies, healthcare professionals and other distribution channels. Interleukin Genetics' flagship products include its proprietary PerioPredict™ genetic risk panel for periodontal disease and tooth loss susceptibility sold through dentists, and the Inherent Health Weight Management Genetic Test that identifies the most effective diet and exercise program for an individual based on genetics. Interleukin Genetics is headquartered in Waltham, MA, and operates an on-site, state-of-the-art DNA testing laboratory certified under the Clinical Laboratories Improvements Act (CLIA).

### ***About Horizon Technology Finance***

Horizon Technology Finance Corporation is a leading specialty finance company that provides capital in the form of secured loans to venture capital backed companies in the technology, life science, healthcare information and services, and cleantech industries. The investment objective of Horizon is to maximize total returns by generating current income from a portfolio of directly originated secured loans as well as capital appreciation from warrants that it receives when making such loans. Headquartered in Farmington, Connecticut, Horizon has regional offices in Walnut Creek, California and Reston, Virginia. Horizon's common stock trades on the NASDAQ Global Select Market under the ticker symbol "HRZN". To learn more, please visit [www.horizontechnologyfinancecorp.com](http://www.horizontechnologyfinancecorp.com).

### ***Horizon Technology Finance Contact:***

The IGB Group

Matt Steinberg

212-477-8261

[msteinberg@igbir.com](mailto:msteinberg@igbir.com)



***Forward-Looking Statements***

*Certain statements contained herein are “forward-looking” statements. Because such statements include risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements include, but are not limited to, those risks and uncertainties described in the Company’s annual report on Form 10-K for the year ended December 31, 2013 and other filings with the Securities and Exchange Commission. The Company disclaims any obligation or intention to update these forward-looking statements.*