

INTERLEUKIN GENETICS INC
Form 10-Q
May 11, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND
X EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2017

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

For the transition period from _____ to _____

Commission File Number: 001-32715

INTERLEUKIN GENETICS, INC.

(Exact name of registrant in its charter)

Delaware	94-3123681
(State or other jurisdiction of	(I.R.S. Employer
incorporation or organization)	Identification No.)

135 Beaver Street, Waltham, MA	02452
(Address of principal executive offices)	(Zip Code)

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Registrant's Telephone Number: **(781) 398-0700**

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

Indicate by check mark whether each registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

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

Large accelerated filer ☐	Non-accelerated filer ☐	Accelerated filer ☐	(Do not check if a smaller reporting company)	Smaller reporting company ☒	Emerging growth company ☐
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If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act ☐

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

As of May 10, 2017, there were 229,471,392 shares of Common Stock, \$0.001 par value per share, outstanding.

INTERLEUKIN GENETICS, INC.

FORM 10-Q

FOR THE QUARTER ENDED March 31, 2017

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Smaller Reporting Company – Scaled Disclosure

Pursuant to Item 10(f) of Regulation S-K promulgated under the Securities Act of 1933, as amended, as indicated herein, we have elected to comply with the scaled disclosure requirements applicable to “smaller reporting companies”.

PART I —FINANCIAL INFORMATION**Item 1. Financial Statements****INTERLEUKIN GENETICS, INC.****CONDENSED BALANCE SHEETS**

	March 31, 2017 (Unaudited)	December 31, 2016
ASSETS		
Current assets:		
Cash	\$ 790,737	\$ 2,657,214
Accounts receivable from related party	57,141	74,535
Trade accounts receivable	2,943	31,354
Inventory	67,411	73,064
Prepaid expenses	481,559	434,983
Total current assets	1,399,791	3,271,150
Fixed assets, net	453,217	511,192
Intangible assets, net	20,650	25,429
Other assets	28,001	28,001
Total assets	\$ 1,901,659	\$ 3,835,772
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$ 608,742	\$ 505,630
Accrued expenses	525,579	238,087
Deferred revenue	2,648,539	2,502,966
Short term debt	2,304,545	2,304,545
Total current liabilities	6,087,405	5,551,228
Long term Debt	828,653	1,130,094
Total Liabilities	6,916,058	6,681,322
Commitments and contingencies (Note 6)		
Stockholders' deficit:		
Common stock, \$0.001 par value — 450,000,000 shares authorized; 229,435,726 and 229,381,059 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively	229,438	229,383
Additional paid-in capital	133,688,297	133,327,491

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Accumulated deficit	(138,932,134)	(136,402,424)
Total stockholders' deficit	(5,014,399)	(2,845,550)
Total liabilities and stockholders' deficit	\$ 1,901,659	\$ 3,835,772

The accompanying notes are an integral part of these financial statements.

INTERLEUKIN GENETICS, INC.**CONDENSED STATEMENTS OF OPERATIONS****(Unaudited)**

	Three Months Ended March 31,	
	2017	2016
Revenue:		
Genetic testing	\$ 140,638	\$ 262,469
Other	55,806	698,449
Total revenue	196,444	960,918
Cost of revenue	309,876	526,946
Gross (loss) profit	(113,432)	433,972
Operating expenses:		
Research and development	424,591	480,057
Selling, general and administrative	1,769,773	1,311,185
Amortization of intangibles	4,780	8,362
Total operating expenses	2,199,144	1,799,604
Loss from operations	(2,312,576)	(1,365,632)
Other expense:		
Interest expense	(108,373)	(113,750)
Interest expense non-cash	(108,761)	(38,354)
Total other expense	(217,134)	(152,104)
Loss before income taxes	(2,529,710)	(1,517,736)
Benefit from income taxes	-	-
Net loss	\$(2,529,710)	\$(1,517,736)
Basic and diluted net loss per common share	\$(0.01)	\$(0.01)
Weighted average common shares outstanding, basic and diluted	229,434,511	172,951,968

The accompanying notes are an integral part of these financial statements.

INTERLEUKIN GENETICS, INC.**CONDENSED STATEMENT OF STOCKHOLDERS' DEFICIT****(Unaudited)**

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2016	-	\$ -	229,381,059	\$ 229,383	\$ 133,327,491	\$(136,402,424)	\$(2,845,550)
Net loss	-	-	-	-	-	(2,529,710)	(2,529,710)
Employee stock purchase plan	-	-	54,667	55	4,865	-	4,920
Stock-based compensation expense	-	-	-	-	355,941	-	355,941
Balance as of March 31, 2017	-	\$ -	229,435,726	\$ 229,438	\$ 133,688,297	\$(138,932,134)	\$(5,014,399)

The accompanying notes are an integral part of these financial statements.

INTERLEUKIN GENETICS, INC.**CONDENSED STATEMENTS OF CASH FLOWS****(Unaudited)**

	For the Three Months Ended March 31,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$(2,529,710)	\$(1,517,736)
Adjustments to reconcile loss to net cash used in operating activities:		
Depreciation and amortization	62,755	62,346
Amortization of loan issuance costs and fair value of warrants	82,650	26,315
Stock-based compensation expense	355,941	214,270
Changes in operating assets and liabilities:		
Accounts receivable, net	28,411	(178,372)
Receivable from related party	17,394	(21,118)
Inventory	5,653	33,878
Prepaid expenses and other current assets	(46,576)	108,892
Accounts payable	103,112	(42,637)
Accrued expenses	262,464	(145,239)
Deferred revenue	145,573	(363,242)
Deferred liability	25,028	14,459
Net cash used in operating activities	(1,487,305)	(1,808,184)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital additions	-	(8,963)
Net cash used in investing activities	-	(8,963)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payment of notes payable	(384,092)	-
Proceeds from employee stock purchase plan	4,920	3,311
Net cash (used in) provided by financing activities	(379,172)	3,311
Net decrease in cash	(1,866,477)	(1,813,836)
Cash, beginning of period	2,657,214	4,706,018
Cash, end of period	\$790,737	\$2,892,182
Cash paid for interest	\$113,329	\$113,750

The accompanying notes are an integral part of these financial statements.

INTERLEUKIN GENETICS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS

March 31, 2017

(UNAUDITED)

Note 1—Basis of Presentation

Interleukin Genetics, Inc. (“the Company”) develops genetic tests for sale into the emerging personalized health market and performs testing services that can help individuals improve and maintain their health through preventive or therapeutic measures. The Company’s principal operations and markets are located in the United States. Through 2016, the Company’s focus was on commercializing its ILUSTRA™ Inflammation Management Program (the “ILUSTRA Program”) and its Inherent Health® brand of genetic tests. The Company is continuing to support the ILUSTRA Program deployments with customers and will advance new customer relationships that expand the evidence base of this program’s effectiveness. The Company will continue to refine its strategy for the ILUSTRA Program based on the Company’s financial resources and its commercial success. During late 2016 and early 2017, the Company redefined its strategy to add emphasis on a cardiovascular disease (CVD) program.

The accompanying condensed financial statements include the accounts of the Company as of March 31, 2017 and December 31, 2016.

The financial statements have been prepared by the Company in accordance with accounting principles generally accepted in the United States of America for interim financial reporting. Accordingly, they do not include all of the information and notes required by generally accepted accounting principles for complete financial statements. These unaudited condensed financial statements, which in the opinion of management reflect all adjustments (including normal recurring adjustments) necessary for a fair presentation, should be read in conjunction with the financial statements and notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016. Operating results are not necessarily indicative of the results that may be expected for any future interim period or for the entire 2017 fiscal year.

For information regarding the Company’s critical accounting policies and estimates, please refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies and Estimates” contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016 and Note 3 to the Company’s condensed financial statements contained herein.

Note 2—Operating Matters and Liquidity

The Company has experienced net operating losses since its inception through March 31, 2017. The Company had net losses of \$7.4 million and \$7.9 million for the years ended December 31, 2016 and 2015, respectively, and \$2.5 million for the three months ended March 31, 2017, contributing to an accumulated deficit of \$138.9 million as of March 31, 2017.

As of March 31, 2017, the Company has cash of approximately \$791,000, and has no access to credit. The Company has accounts payable and accrued expenses of \$1.1 million, and owes \$3.6 million in principal payments to Horizon Technology Finance Corporation (including its affiliates, the “Lender”). The Company estimates that \$5.5 million in additional capital would be required to maintain the Company’s operations for one year from March 31, 2017.

The Company’s financial statements have been prepared assuming that it will continue as a going concern which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The financial statements do not include any adjustments that might result from the outcome of this uncertain realization. The amount of cash the Company generates from operations is currently not sufficient to continue to fund operations and grow the business.

The Company continues to take steps to reduce genetic test processing costs. Cost savings are primarily achieved through test process improvements. Management believes that the current laboratory space is adequate to process high volumes of genetic tests.

As further discussed in Note 10 “Subsequent Events”, the Company issued and sold \$1,000,000 in aggregate principal Subordinated Convertible Promissory Notes and amended the Venture Loan and Security Agreement to defer principal amounts due in 2017. As discussed below, effective March 30, 2017, the Company implemented a work force reduction. The Company expects that, taking into account these transactions, current financial resources will be adequate to maintain the current and planned operations through the second quarter of 2017. The Company believes its success depends on its ability to consummate a material collaboration related to its CVD test and to generate significant revenues for the ILUSTRA Program through potential partners. The timing of any revenues that the Company may receive from either the CVD asset or the ILUSTRA Program is uncertain at this time, and is contingent upon a number of factors, including the Company’s ability to consummate arrangements with other partners for the CVD asset or to promote the ILUSTRA Program, the Company’s partners’ ability to develop reimbursed insurance plans and to develop a viable market for such plans, and the timing of utilization of the ILUSTRA Program pursuant to insured plans, or other possible arrangements. The Company does not expect to receive any material revenues from either the CVD asset or the ILUSTRA Program until mid to late 2017, at the earliest, and the timing of any such revenues may be substantially later. The Company may never receive significant revenues.

Until such time, if ever, that the Company generates revenues sufficient to fund operations, the Company may fund its operations by issuing common stock, debt or other securities in one or more public or private offerings, as market conditions permit, or through the incurrence of debt from commercial lenders. Debt financing, if available, may involve agreements that include covenants limiting or restricting the Company’s ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends. There can be no assurance that additional funds will be available when the Company needs them on terms that are acceptable to the Company, or at all. If adequate funds are not available to the Company on a timely basis, the Company may be required to delay, limit, reduce or cease activities or operations or enter into licenses or other arrangements with third parties on terms that may be unfavorable to the Company or sell, license or relinquish rights to develop or commercialize its products, technologies or intellectual property. However, no assurance can be given at this time as to whether the Company will be able to achieve these objectives.

These conditions, among others, considered in the aggregate raise substantial doubt about the Company’s ability to continue as a going concern within one year after the date that the financial statements are issued.

The ability of the Company to realize the carrying value of its fixed assets and intangible assets is especially dependent on management’s ability to successfully execute on its plan. The Company needs to generate additional funds in order to meet its financial obligations. If it is unsuccessful in doing so, the Company may not be able to realize the carrying value of its fixed assets and intangible assets.

On December 23, 2014, the Company entered into a Venture Loan and Security Agreement (the “Loan Agreement”) with the Lender under which the Company borrowed \$5.0 million. The loan originally bore interest at a floating rate equal to the One Month LIBOR Rate (with a floor of 0.50%) plus 8.50%. The loan was to be repaid in forty-five (45) monthly payments consisting of fifteen (15) monthly payments of only interest 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 would have been due and payable. The Company's obligations under the Loan Agreement were secured by a first priority security interest in substantially all of its assets other than its intellectual property. The Company had also agreed not to pledge or otherwise encumber its intellectual property assets, subject to certain exceptions. 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, which the Company refers to herein as the 2014 Lender Warrants. The 2014 Lender Warrants vested immediately, are all currently exercisable and have a term of ten (10) years.

On August 25, 2016, the Company and the Lender entered into the First Amendment of Venture Loan and Security Agreement and an Amended and Restated Secured Promissory Note (collectively referred to herein as the "2016 Debt Restructuring"), which was effective as of August 1, 2016, pursuant to which the principal payments due from August 2016 through December 2016 were reduced to 33% of the principal payments due for these periods under the Loan Agreement. Principal payments were also subject to reduction in future periods upon the achievement of certain milestones by the Company. These milestones were not achieved. In consideration of these changes, (i) the Company paid the Lender an amendment fee of \$25,000 and reimbursed the Lender's legal expenses in the amount of \$5,000, (ii) the Company granted the Lender a first priority security interest in substantially all of its assets, including its intellectual property, (iii) the interest rate of the loan has been increased to 11.00% plus the amount by which the one month LIBOR Rate exceeds 0.50%, and (iv) the final payment was increased from 4.5% of the loan, or \$225,000, to 6.5% of the loan, or \$325,000. At March 31, 2017, the interest rate was 11.48% per annum. In connection with the 2016 Debt Restructuring, the Company also issued to the Lender an additional warrant to purchase up to 5,169,577 shares of the Company's common stock at an exercise price of \$0.0994 per share (the "2016 Lender Warrant"). The 2016 Lender Warrant vested immediately, is currently exercisable and has a term of ten (10) years. If the milestones required to further reduce the principal payments are achieved, the Lender shall be entitled to additional warrants. See Note 10 "Subsequent Events" for additional information with respect to an amendment to the Venture Loan and Security Agreement entered into in April 2017.

On July 29, 2016, the Company entered into a Securities Purchase Agreement (the “2016 Purchase Agreement”) with various accredited investors (the “2016 Investors”), pursuant to which the Company sold to the 2016 Investors in a private placement transaction (the “2016 Private Placement”) an aggregate of 56,262,571 shares of common stock at a price of \$0.0994 per share for gross proceeds of approximately \$5.6 million. The 2016 Investors also received warrants to purchase up to an aggregate of 56,262,571 shares of common stock at an exercise price of \$0.0994 per share (the “2016 Warrants”). The 2016 Warrants vested immediately, are all currently exercisable and have a term of seven years.

On March 31, 2017, the Company announced that the Board of Directors had approved a work force restructuring, which became effective and was completed on March 30, 2017, to better utilize the Company’s resources, to align the Company’s organization to support its emerging cardiovascular testing program, for which it is seeking strategic interest, and to support a more targeted commercial strategy for its ILUSTRA Inflammation Management Program. As a consequence of the restructuring, the Company reduced its workforce in its commercial organization and administrative functions by eight persons. The Company continues to support the ILUSTRA Program deployments with customers and will advance new customer relationships that expand the evidence base of this program’s effectiveness.

Note 3—Summary of Significant Accounting Policies

Management Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reported periods. Actual results could differ from those estimates. The Company’s most critical accounting policies are more fully discussed in these notes to the financial statements.

Revenue Recognition

Revenue from genetic testing services is recognized when there is persuasive evidence of an arrangement, service has been rendered, the sales price is determinable and collectability is reasonably assured. Service is deemed to be rendered when the results have been reported to the individual who ordered the test. For the three months ended March 31, 2017, the Company recognized \$141,000 of revenue associated with genetic testing compared to \$262,000 for the three months ended March 31, 2016. To the extent that tests have been prepaid but results have not yet been

reported, recognition of all related revenue is deferred. As of March 31, 2017 and December 31, 2016, the Company had deferred revenue of \$2.6 million and \$2.5 million, respectively. Included in deferred revenue at March 31, 2017 is \$2.4 million for kits that are still outstanding one year or longer after initial kit sale, of which \$0.15 million was sold directly to consumers (credit card payments) and \$2.23 million was sold to distributors as a promotional bundle. In 2012 and 2013, Access Business Group LLC (“ABG”), an affiliate of Alticor, Inc., a related party (“Alticor”), placed purchase orders totaling approximately \$3.3 million for Weight Management test kits. The kits were included as part of a promotional bundle of products that ABG sold to their Individual Business Owners (IBOs).

For the three months ended March 31, 2017, the Company recognized \$56,000 in Other revenue, compared to \$698,000 for the three months ended March 31, 2016. The \$56,000 of Other revenue recognized for the three months ended March 31, 2017 was related to royalties received related to the Company’s license agreement with ABG. Of the \$698,000 of Other revenue recognized for the three months ended March 31, 2016, \$637,000 was related to contracted research revenue and \$61,000 was related to royalties received related to the Company’s license agreement with ABG. Revenue from contracted research projects is recognized when the deliverables for which the Company is obligated have been provided to the customer who contracted the project.

The Company recognizes breakage revenue related to genetic test kits utilizing the remote method. Under the remote method, breakage revenue should be recognized when the likelihood of the customer exercising rights of redemption becomes remote. The term remote requires statistical analysis of customer redemption patterns for all tests sold and returned. The Company analyzed redemption patterns from 2009 through 2016 and determined the period of time after which the likelihood of test redemption was remote was three years after the sale of a genetic test kit. Included in genetic test revenue in the three months ended March 31, 2017 and 2016 is \$12,000 and \$61,000, respectively, of breakage revenue related to unredeemed genetic test kits sold in the first quarter of 2014 and 2013, respectively. The Company expects to continue to recognize breakage revenue on a quarterly basis based on the historical analysis.

Sales Commission

On October 26, 2009, the Company entered into a Merchant Network and Channel Partner Agreement with Amway Corp., d/b/a/ Amway Global (“Amway Global”), a subsidiary of Alticor. Pursuant to this Agreement, Amway Global sells the Company’s Inherent Health® brand of genetic tests through its e-commerce website via a hyperlink to the Company’s e-commerce site. The Company accounts for sales commissions due to Amway Global under the Merchant Network and Channel Partner Agreement in accordance with SEC Staff Accounting Bulletin (“SAB”) 104. Commissions are recorded as an expense at the time they become due, which is at the point of sale. The cost of commissions was \$113,000 and \$67,000 for the three months ended March 31, 2017 and 2016, respectively.

Accounts Receivable

Accounts receivable is stated at estimated net realizable value, which is generally the invoiced amount less any estimated discount related to payment terms. The Company offers its commercial genetic test customers a 2% cash discount if payment is made by bank wire transfer within 10 days of the invoice date. No accounts receivable reserve is required at March 31, 2017 as all accounts receivable are expected to be collected.

Inventory

Kit inventory is carried at lower of cost (first-in, first-out method) or market and no inventory reserve was deemed necessary as of March 31, 2017. As the Company does not manufacture any products, no overhead costs are included in inventory. Inventory is stored at a fulfillment provider. Inventory consisted of the following at March 31, 2017 and December 31, 2016:

Inventory consisted of the following:

	March 31, 2017	December 31, 2016
Raw materials	\$ 63,164	\$ 68,447
Finished goods	4,247	4,617
Total inventory, net	\$ 67,411	\$ 73,064

Stock-Based Compensation

The Company accounts for stock-based compensation expense in accordance with FASB ASC 718, *Compensation – Stock Compensation*. The standard addresses all forms of share-based payment (SBP) awards, including shares issued under employee stock purchase plans, stock options, restricted stock and stock appreciation rights. The Company expenses SBP awards within compensation cost for SBP transactions measured at fair value. Compensation cost for the portion of awards for which the requisite service has not been rendered that are outstanding as of the effective date shall be recognized as the requisite service is rendered on or after the effective date. The compensation cost for that portion of awards shall be based on the grant-date fair value of those awards as calculated under the Black-Scholes option pricing model. Common stock purchased pursuant to the Company's employee stock purchase plan will be expensed based upon the fair market value in excess of purchase price.

Income Taxes

The Company accounts for income taxes in accordance with FASB ASC 740, *Income Taxes*, which requires the recognition of taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in the financial statements or tax returns. The measurement of current and deferred tax liabilities and assets is based on provisions of the enacted tax law; the effects of future changes in tax laws or rates are not anticipated. The Company records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized.

Significant management judgment is required in determining the Company's provision (benefit) for income taxes, its deferred tax assets and liabilities and any valuation allowance recorded against deferred tax assets. The Company has recorded a full valuation allowance against its deferred tax assets of approximately \$38.2 million as of March 31, 2017, due to uncertainties related to its ability to utilize these assets. The valuation allowance is based on management's estimates of taxable income by jurisdiction in which the Company operates and the period over which the deferred tax assets will be recoverable. In the event that actual results differ from these estimates or management adjusts these estimates in future periods, the Company may need to adjust its valuation allowance, which could materially impact its financial position and results of operations.

As a result of the Company's change in its capital structure during the quarters ended June 30, 2013, December 31, 2014 and September 30, 2016 the Company may have undergone IRC section 382 ownership changes which would limit its ability to realize the benefit of its tax attributes (i.e., federal/state net operating losses and research and development credits) during their respective carry forward periods. The Company has not performed an analysis to determine the extent of such limitations, if any.

The Company reviews its recognition threshold and measurement process for recording in the financial statements uncertain tax positions taken or expected to be taken in a tax return. The Company reviews all material tax positions for all years open to statute to determine whether it is more likely than not that the positions taken would be sustained based on the technical merits of those positions. The Company did not recognize any adjustments for uncertain tax positions as of and during the three months ended March 31, 2017.

Research and Development

Research and development costs are expensed as incurred.

Basic and Diluted Net Loss per Common Share

The Company applies the provisions of FASB ASC 260, *Earnings per Share*, which establishes standards for computing and presenting earnings per share. Basic and diluted net loss per share was determined by dividing net loss applicable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share is the same as basic net loss per share for all the periods presented, as the effect of the potential common stock equivalents is anti-dilutive due to the loss in each period. Potential common stock equivalents excluded from the calculation of diluted net loss per share are as follows:

	As of March 31,	
	2017	2016
Options outstanding	37,432,023	22,089,527
Warrants outstanding	149,733,227	88,301,079
Total	187,165,250	110,390,606

Fair Value of Financial Instruments

The Company, using available market information, has determined the estimated fair values of financial instruments. The stated values of cash, accounts receivable and accounts payable approximate fair value due to the short term nature of these instruments. The fair value of warrants is calculated using the Black-Scholes pricing model.

Cash

The Company maintains its cash with a domestic financial institution that the Company believes to be of high credit standing. The Company believes that, as of March 31, 2017, its concentration of credit risk related to cash was not significant. Cash is available on demand and amounts are generally in excess of FDIC insurance limits. As of March 31, 2017, the Company did not have any cash equivalents.

Fixed Assets

Fixed assets are stated at cost, less accumulated depreciation and amortization. Depreciation and amortization are provided using the straight-line method over estimated useful lives of three to five years. Leasehold improvements are amortized over the shorter of the estimated useful life of the asset or the remaining term of the lease.

Segment Reporting

As of March 31, 2017 and 2016, the Company has one segment, the genetic test business. The Company develops genetic tests for sale into the emerging personalized health market and performs testing services that can help individuals improve and maintain their health through preventive measures. The Company's principal operations and markets are located in the United States.

Recent Accounting Pronouncements

FASB ASC 606 ASU 2014-09 - Revenue from contracts with customers.

In May 2014, the FASB issued amended guidance on contracts with customers to transfer goods or services or contracts for the transfer of nonfinancial assets, unless those contracts are within the scope of other standards (e.g., insurance contracts or lease contracts). The guidance requires an entity to recognize revenue on contracts with customers to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance requires that an entity depict the consideration by applying the following five steps:

- Identify the contract(s) with a customer.
- Identify the performance obligations in the contract.
- Determine the transaction price.
- Allocate the transaction price to the performance obligations in the contract.
- Recognize revenue when (or as) the entity satisfies a performance obligation.

The amendments in this ASU are effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early application is not permitted. This amendment is to be either retrospectively adopted to each prior reporting period presented or retrospectively with the cumulative effect of initially applying this ASU recognized at the date of initial application.

In April 2015, the FASB voted to defer the required implementation date of ASU 2014-09 to annual reporting periods beginning after December 15, 2017. Public companies may elect to adopt the standard along the original timeline. Revenue from the Company's genetic testing services is recognized when there is persuasive evidence of an arrangement, service has been rendered, the sales price is determinable and collectability is reasonably assured. Service is deemed to be rendered when the results have been reported to the individual who ordered the test or the requesting physician. To the extent that tests have been prepaid but results have not yet been reported, recognition of all related revenue is deferred. The Company is not electing to adopt early and is evaluating the impact of ASU 2014-09 on the Company's accounting practices as well as its financial disclosures.

FASB ASU 2016-02 - Leases (Topic 842).

In February 2016, the FASB issued ASU No. 2016-02, “Leases” (Topic 842). The updated standard aims to increase transparency and comparability among organizations by requiring lessees to recognize lease assets and lease liabilities on the balance sheet and requiring disclosure of key information about leasing arrangements. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently evaluating the impact of ASU 2016-02 on its financial statements.

FASB ASU 2016-09, - Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting.

In March 2016, the FASB issued ASU No. 2016-09. The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. ASU 2016-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, and early adoption is permitted.

The Company accounts for stock options based on their grant date fair value and recognizes compensation expense on a straight-line basis over their vesting period. The Company estimates the fair value of stock options as of the grant date using the Black-Scholes option pricing model. The Company, in conjunction with the adoption of ASU 2016-09, has elected to estimate forfeitures as the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from its estimates. The Company uses historical data to estimate pre-vesting option forfeitures and records stock-based compensation expense only for those awards that are expected to vest. To the extent that actual forfeitures differ from the Company’s estimates, the difference is recorded as a cumulative adjustment in the period the estimates were revised. Stock-based compensation expense is classified as research and development or selling, general and administrative based on the grantee’s respective compensation classification.

Prior to January 1, 2017, the Company recognized the excess tax benefits of stock-based compensation expense as additional paid-in capital (“APIC”), and tax deficiencies of stock-based compensation expense in the income tax provision or as APIC to the extent that there were sufficient recognized excess tax benefits previously recognized. As a result of the prior guidance that excess tax benefits reduce taxes payable prior to being recognized as an increase in paid in capital, the Company had not recognized certain deferred tax assets (all tax attributes such as loss or credit carryforwards) that could be attributed to tax deductions related to equity compensation in excess of compensation recognized for financial reporting. As of January 1, 2017, the Company had generated federal net operating loss carryforwards due to excess tax benefits of \$2.5 million.

Effective as of January 1, 2017, the Company adopted a change in accounting policy in accordance with ASU 2016-09 to account for excess tax benefits and tax deficiencies as income tax expense or benefit, treated as discrete items in the reporting period in which they occur, and to recognize previously unrecognized deferred tax assets that arose directly from (or the use of which was postponed by) tax deductions related to equity compensation in excess of compensation recognized for financial reporting. No prior periods were restated as a result of this change in accounting policy as the Company previously maintained a valuation allowance against its deferred tax assets that could be attributed to equity compensation in excess of compensation recognized for financial reporting.

Note 4—Related Party Transactions

Since March 2003, the Company has maintained a broad strategic alliance with several affiliates of the Alticor Inc. family of companies, a related party. The alliance initially included an equity investment, a multi-year research and development agreement, a licensing agreement with royalties on marketed products, the deferment of outstanding loan repayment and the refinancing of bridge financing obligations.

On October 26, 2009, the Company entered into a Merchant Network and Channel Partner Agreement with Amway Global, a subsidiary of Alticor. Pursuant to this Agreement, Amway Global sells the Company's Inherent Health brand of genetic tests through its e-commerce website via a hyperlink to the Company's e-commerce site. The Company paid Amway Global \$113,000 in commissions for the three months ended March 31, 2017 and \$67,000 in commissions for the three months ended March 31, 2016, representing a percentage of net sales to their customers. The Company expenses commissions owed to Amway Global in the month of sale to the customer.

In 2012 and 2013, ABG, an affiliate of Alticor placed purchase orders totaling approximately \$3.3 million consisting of the Company's Weight Management test kits. The kits are included as part of a promotional bundle of products that Amway sells to their Individual Business Owners (IBOs). Of the \$3.3 million in orders, \$1.5 million was received for the 2013 program and \$1.8 million for the 2014 program. As a component of the 2013 promotional program, and not reflective of actual product expiry, the kits were required to be redeemed by December 31, 2013. In February 2014, the Company removed the redemption date requirement for the 2013 promotional program, for which ABG paid the Company \$519,000 as a retrospective increase in the product purchase price. All cash received related to the 2013 promotional program, including the \$519,000, will be treated as deferred revenue until specific kits are returned for processing or the breakage analysis determines the probability of eventual redemption is remote. In October 2014, the Company received \$250,000 as a retrospective increase in the product purchase price for unsold kits as consideration for extending the required redemption date of the 2014 promotional program to December 31, 2017. All cash received for these kits will be treated as deferred revenue until specific kits are returned for processing or on the final allowed redemption date of December 31, 2017.

On September 21, 2012, the Company entered into a License Agreement (the "License Agreement") with Access Business Group International LLC ("ABGI"), an affiliate of Alticor. Pursuant to the License Agreement, the Company has granted ABGI and its affiliates a non-exclusive license to use the technology related to the Company's Weight Management genetic test and to sell the Weight Management test in Europe, Russia and South Africa (the "Territories"). ABGI, or a laboratory designated by ABGI, will be responsible for processing the tests, and the Company will receive a royalty for each test sold, which royalty will increase if certain pending patent applications are issued. The License Agreement has an initial term of five years from the date of first commercial sale of the Weight Management test under the agreement which was in June 2013. Thereafter, the term will automatically renew for additional one-year periods unless at least 60 days prior notice is delivered by either party. During the three months ended March 31, 2017 and 2016, \$54,000 and \$59,000, respectively, related to license fees was earned.

For the three months ended March 31, 2017 and 2016, approximately 46% and 14%, respectively, of the Company's revenue came from sales through the Merchant Network and Channel Partner Agreement with Amway Global, and 8% and 3%, respectively, of the Company's revenue came from sales through ABG's promotional product bundle program.

On February 25, 2013, the Company entered into a Preferred Participation Agreement with Renaissance Health Services Corporation ("RHSC"), for itself and on behalf of certain of its affiliates and subsidiaries. This agreement was

amended and restated on November 1, 2013. RHSC is a related party through its affiliation with Delta Dental of Michigan, Inc. ("DDMI"), a stockholder of the Company. Pursuant to this agreement, as amended, affiliates of RHSC agreed to reimburse the Company a fixed price for each ILUSTRA Test that the Company processed for a customer of affiliates of RHSC. This amended agreement had a term of three years beginning February 25, 2013 and terminated on February 25, 2016. A revised agreement with substantially similar terms was executed in April 2016.

Note 5—Debt Instruments

Venture Loan and Security Agreement

On December 23, 2014, the Company entered into a Venture Loan and Security Agreement (the "Loan Agreement") with the Lender under which the Company borrowed \$5.0 million. The loan bore 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, exceeded 0.50%, the interest rate would have been adjusted by an amount equal to the difference between such rates at the end of that particular month. The loan was to be repaid in forty-five (45) monthly payments consisting of fifteen (15) monthly payments of only interest followed by thirty (30) equal monthly payments of principal and interest (the "Payment Terms"). 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 would have been due and payable. The Company's obligations under the Loan Agreement were secured by a first priority security interest in substantially all of its assets other than its intellectual property. The Company had also agreed not to pledge or otherwise encumber its intellectual property assets, subject to certain exceptions. 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, which the Company refers to herein as the 2014 Lender Warrants. The 2014 Lender Warrants vested immediately, are all currently exercisable and have a term of ten (10) years.

On August 25, 2016, the Company and the Lender entered into the First Amendment of Venture Loan and Security Agreement and an Amended and Restated Secured Promissory Note (collectively referred to herein as the “2016 Debt Restructuring”), which was effective as of August 1, 2016, pursuant to which the principal payments due from August 2016 through December 2016 was reduced to 33% of the principal payments due for these periods under the Loan Agreement. In consideration of these changes, (i) the Company paid the Lender an amendment fee of \$25,000 and reimbursed the Lender’s legal expenses in the amount of \$5,000, (ii) the Company granted the Lender a first priority security interest in substantially all of its assets, including its intellectual property, (iii) the interest rate of the loan was increased to 11.00% plus the amount by which the one month LIBOR Rate exceeds 0.50%, and (iv) the final payment was increased from 4.5% of the loan, or \$225,000, to 6.5% of the loan, or \$325,000. At March 31, 2017, the interest rate was 11.48% per annum. In connection with the 2016 Debt Restructuring, the Company also issued to the Lender a warrant to purchase up to 5,169,577 shares of the Company’s common stock at an exercise price of \$0.0994 per share (the “2016 Lender Warrant”). The 2016 Lender Warrant vested immediately, is currently exercisable and has a term of ten (10) years. See Note 10 “Subsequent Events” for additional information with respect to an amendment to the Venture Loan and Security Agreement entered into in April 2017.

The Company recorded a discount on the loan comprised of (i) \$89,000 in cash fees paid to the Lender related to the Loan Agreement, (ii) \$261,000 as the intrinsic value of the 2014 Lender Warrants, (iii) \$30,000 in cash fees paid to the Lender related to the 2016 Debt Restructuring and (iv) \$504,000 as the intrinsic value of the 2016 Lender Warrants. The discount on the loan is amortized over the term of the loan in the Company’s Statements of Operations. As of March 31, 2017, the unamortized discount associated with the loan was \$496,000. The amended final non-principal payment of \$325,000 will be accrued as additional interest expense, using the effective interest method, over the term of the loan. Cash interest expense for the three months ended March 31, 2017 and 2016 was \$106,000 and \$113,000, respectively. Non-cash interest expense was \$109,000 for the three months ended March 31, 2017 compared to \$38,000 for the three months ended March 31, 2016.

Note 6—Commitments and Contingencies

Operating Lease

The Company leases approximately 13,000 square feet of office and laboratory space in Waltham, Massachusetts under a non-cancelable operating lease. In September 2016, the Company entered into the Third Amendment to extend the lease through March 31, 2019. The Third Amendment includes an initial base rent beginning in April 2017 with an escalation of 2.88% of the base rent in year two.

Rent expense was \$85,000 and \$84,000 for the three months ended March 31, 2017 and 2016, respectively.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on its financial condition, results of operations or cash flows.

Employment Agreements

On May 19, 2016, the Company entered into an employment agreement with Stephan Toutain for the position of Chief Commercial Officer beginning on August 15, 2016 (the “Start Date”). The agreement provides for a minimum annual base salary of \$315,000 and he is eligible for a bonus of 30% of his base salary pursuant to the Company’s bonus plan. Pursuant to the agreement, Mr. Toutain was granted options to purchase 3,738,933 shares of the Company’s common stock, which was equal to 1% of the Company’s fully diluted shares of the Company as of his Start Date, at an exercise price equal to fair market value of the Company’s common stock on the grant date of the option. The option will vest as to 25% of the shares on the first anniversary of the Start Date, and as to an additional 2.083% of the shares monthly thereafter. Mr. Toutain’s agreement is terminable at will by the Company or Mr. Toutain. If the Company terminates Mr. Toutain without cause, the Company will pay Mr. Toutain, in addition to any accrued, but unpaid compensation prior to termination, an amount equal to six months of his base salary in effect at the time of the termination.

Note 7—Capital Stock*Authorized Preferred and Common Stock*

As of March 31, 2017, the Company has 6,000,000 shares of preferred stock, par value \$0.001 authorized and 450,000,000 shares of common stock, par value \$0.001 authorized. As of March 31, 2017 the Company has 229,435,726 shares of common stock outstanding and the following shares of common stock are reserved for issuance:

	Reserved for issuance	Strike Price	Expiry
Shares reserved under outstanding stock options and options available for grant	52,092,463		
Rights associated with Employee Stock Purchase Plan	15,455		
Warrants to purchase common stock associated with the 2016 Debt Restructuring	5,169,577	\$0.0994	Aug 1, 2026
Warrants to purchase common stock associated with July 2016 private placement	56,262,571	\$0.0994	Jul 29, 2023
Warrants to purchase common stock associated with December 2014 private placement	50,189,431	\$0.1003	Dec 23, 2021
Warrants to purchase common stock associated with December 2014 venture loan and security agreement	2,492,523	\$0.1003	Dec 23, 2024

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Warrants to purchase common stock associated with September 2014 consulting agreement with Danforth Advisors	100,000	\$0.2500	Sep 8, 2024
Outstanding warrants issued in May 2013, vesting August 2013	14,426,230	\$0.2745	Aug 9, 2020
Outstanding warrants issued in May 2013, vesting May 2013	20,655,737	\$0.2745	May 17, 2020
Outstanding warrants issued in June 2012	437,158	\$0.2745	Jun 29, 2017
Total common shares reserved for issuance at March 31, 2017	201,841,145		
Total common shares issued and outstanding at March 31, 2017	229,435,726		
Total common shares outstanding and reserved for issuance at March 31, 2017	431,276,871		

On May 17, 2013, the Company entered into a Common Stock Purchase Agreement (the “2013 Purchase Agreement”) with various accredited investors (the “2013 Investors”), pursuant to which the Company sold securities to the 2013 Investors in a private placement transaction (the “May 2013 Private Placement”). In the May 2013 Private Placement, the Company sold an aggregate of 43,715,847 shares of its common stock at a price of \$0.2745 per share for gross proceeds of \$12,000,000. The 2013 Investors also received warrants to purchase up to an aggregate of 32,786,885 shares of common stock at an exercise price of \$0.2745 per share (the “2013 Warrants”). The 2013 Warrants were immediately exercisable as to 63% of the shares issuable thereunder. The remaining 37% of the shares issuable under the 2013 Warrants were to become exercisable upon an increase in the number of authorized shares of common stock. On August 9, 2013, the Company’s shareholders’ approved an amendment to the Company’s Certificate of Incorporation to increase the number of authorized shares of common stock from 150,000,000 to 300,000,000 shares, which provided for adequate authorized shares for all potential common stock equivalents issued pursuant to the May 2013 Private Placement. The 2013 Warrants are all currently exercisable and have a term of seven years from the date they became exercisable.

For its services in this transaction, the placement agent received cash compensation in the amount of approximately \$780,000 and the placement agent and an affiliate received warrants to purchase an aggregate of 2,295,082 shares of common stock, at an exercise price of \$0.2745 per share (the “2013 Placement Agent Warrants”). The 2013 Placement Agent Warrants became exercisable on August 9, 2013, following shareholder approval of an increase in the Company’s authorized shares of common stock and expire August 9, 2020. The cash compensation and the fair value of the warrants were recorded as issuance costs resulting in a reduction to shareholders’ equity.

In connection with the May 2013 Private Placement, all preferred stockholders converted their shares of Preferred Stock to common stock resulting in the issuance of 39,089,161 shares of common stock (the “2013 Preferred Conversion”) and \$14,316,255 in principal amount of outstanding convertible debt held by a related party was converted into 2,521,222 shares of common stock (the “2013 Debt Conversion”).

In September 2014, the Company issued warrants to the Company’s financial consultant, Danforth Advisors, to purchase up to 100,000 shares of common stock at a price of \$0.25 per share. The warrants have a ten (10) year term and vested on a monthly basis over two years. These warrants have fully vested as of September 30, 2016. The fair value of the warrants at issuance was recorded as equity totaling \$24,000 and was fully amortized as of September 30, 2016. These warrants were fully exercisable as of March 31, 2017.

On December 23, 2014, the Company entered into the 2014 Purchase Agreement with the 2014 Investors, pursuant to which it sold to the 2014 Investors in the December 2014 Private Placement an aggregate of 50,099,700 shares of common stock at a price of \$0.1003 per share for gross proceeds of approximately \$5.025 million. The 2014 Investors also received 2014 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 2014 Warrants are all currently exercisable and have a term of seven years.

For services related to this transaction, the placement agent, its legal counsel and the Company's legal counsel received an aggregate of \$218,000 in cash fees and the placement agent and an affiliate received warrants to purchase an aggregate of 89,731 shares of common stock (the "2014 Placement Agent Warrants"). The cash fees and the fair value of the 2014 Placement Agent Warrants were recorded as equity issuance costs resulting in a reduction to shareholders' equity.

The 2014 Warrants and the 2014 Placement Agent Warrants were recorded as equity at fair value on the date of issuance. On the closing date of the December 2014 Private Placement, the fair value of the 2014 Warrants was \$5.2 million, and the fair value of the 2014 Placement Agent Warrants was \$9,000.

On July 29, 2016, the Company entered into the 2016 Purchase Agreement with the 2016 Investors, pursuant to which the Company sold to the 2016 Investors in the 2016 Private Placement an aggregate of 56,262,571 shares of common stock at a price of \$0.0994 per share for gross proceeds of approximately \$5.6 million. The 2016 Investors also received the 2016 Warrants to purchase up to an aggregate of 56,262,571 shares of common stock at an exercise price of \$0.0994 per share. The 2016 Warrants vested immediately, are all currently exercisable and have a term of seven years.

For services related to this transaction, legal counsel received \$63,000 in cash fees.

The fair value of the 2016 Warrants at issuance was \$6.5 million. Fair value of the 2016 Warrants was calculated using the following inputs in a Black-Scholes model:

	July 29, 2016	
Risk-free interest rate	1.52	%
Expected life	7 years	
Expected volatility	147.03	%
Dividend yield	0	%

Registration Rights Agreements

In connection with the December 2014 Private Placement, on December 23, 2014, the Company also entered into a Registration Rights Agreement with the 2014 Investors and the placement agent, pursuant to which the Company was required to file a registration statement on Form S-1 within 45 days of December 23, 2014 to cover the resale of (i) the shares of common stock sold to the 2014 Investors and the shares of common stock underlying the 2014 Warrants and (ii) the shares of common stock underlying the 2014 Placement Agent Warrants. The Company filed the registration statement on February 6, 2015, and it was declared effective on March 31, 2015.

In connection with the July 2016 Private Placement, on July 29, 2016, the Company also entered into a Registration Rights Agreement with the 2016 Investors, pursuant to which the Company was required to file a registration statement on Form S-1 within 45 days of July 29, 2016 to cover the resale of the shares of common stock sold to the 2016 Investors and the shares of common stock underlying the 2016 Warrants. The Company filed the registration statement on September 12, 2016, and it was declared effective on September 27, 2016.

Venture Loan and Security Agreement

On December 23, 2014, the Company entered into the Loan Agreement with the Lender under which the Company has borrowed \$5.0 million. In connection with the Loan Agreement, the Company issued to the Lender and its affiliates 2014 Lender Warrants to purchase a total of 2,492,523 shares of common stock at an exercise price of \$0.1003 per share. The 2014 Lender Warrants vested immediately, are all currently exercisable and have a term of ten (10) years. The fair value of the 2014 Lender Warrants at issuance was \$261,000

On August 25, 2016, the Company and the Lender agreed to the 2016 Debt Restructuring, which was effective as of August 1, 2016, pursuant to which the principal payments due from August 2016 through December 2016 were reduced to 33% of the principal payments due for these periods under the Loan Agreement. In connection with the 2016 Debt Restructuring, the Company issued to the Lender the 2016 Lender Warrant to purchase up to 5,169,577 shares of the Company's common stock at an exercise price of \$0.0994 per share. The 2016 Lender Warrant vested immediately, is currently exercisable and has a term of ten (10) years.

The 2014 Lender Warrants and 2016 Lender Warrants were recorded as equity at fair value on the date of issuance. Fair value of the 2014 Lender Warrants and 2016 Lender Warrants was calculated using the Black-Scholes model. Fair value of the 2016 Lender Warrants was calculated using the following inputs in a Black-Scholes model:

	August 1, 2016	
Risk-free interest rate	1.78	%
Expected life	10 years	
Expected volatility	138.81	%
Dividend yield	0	%

The fair value of the 2016 Lender Warrants at issuance was \$504,000. Cash interest paid during the three months ended March 31, 2017 and 2016 totaled \$106,000 and \$113,000, respectively. Non-cash interest related to debt discounts was \$109,000 for the three months ended March 31, 2017, compared to \$38,000 for the three months ended March 31, 2016. The debt discount balance was \$496,000 as of March 31, 2017.

Note 8—Stock-Based Compensation Arrangements

Total stock-based compensation is as follows:

	Three Months Ended March 31,	
	2017	2016
Stock option grants beginning of period	\$ 309,872	\$ 210,340
Stock-based arrangements during the period:		
Stock option grants	44,976	3,367
Restricted stock issued:		
Employee stock purchase plan	1,093	563
	\$ 355,941	\$ 214,270

Stock option and restricted stock grants

The following table details stock option activity:

	Three Months Ended March 31, 2017	
	Shares	Weighted Average Exercise Price
Outstanding, beginning of period	31,363,319	\$ 0.19
Stock options granted	6,979,994	0.12
Cancelled/Expired	(911,290)	0.15

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Outstanding, end of period	37,432,023	\$	0.18
Exercisable, end of period	12,282,593	\$	0.22

As of March 31, 2017 and 2016, there was approximately \$2.1 million and \$2.1 million, respectively, of total unrecognized compensation related to non-vested share-based compensation arrangements granted under the Company's stock plans.

Restricted Stock Awards

At March 31, 2017 and 2016, there were no outstanding restricted stock awards.

Stock Option Grants

On August 9, 2013, the Company's shareholders' approved the 2013 Employee, Director and Consultant Equity Incentive Plan (the "2013 Plan"). The 2013 Plan allows for the issuance of up to 8,860,000 additional shares of the Company's common stock pursuant to awards granted under the 2013 Plan. Additionally, the 2013 Plan allows for the issuance of up to a maximum of 2,435,500 additional shares of the Company's common stock, pursuant to the cancellation, forfeiture, or expiry, of awards granted under the 2004 Employee, Director and Consultant Stock Plan and terminated on or after the 2013 Plan approval on August 9, 2013. On July 21, 2015, the Company's stockholders approved an amendment to the 2013 Plan to increase the number of shares of common stock available for issuance thereunder by 30,000,000 shares. During the three months ended March 31, 2017, the Company granted 6,979,994 stock options under the 2013 Plan. At March 31, 2017, the Company had an aggregate of 14,660,440 shares of common stock available for grant under the 2013 Plan.

Per his employment agreement, Mark Carbeau was entitled to receive a grant of options to purchase shares of the Company's common stock equal to 5% of the number of shares of the Company's stock issued in the 2016 Private Placement, assuming the conversion of all convertible securities issued in the 2016 Private Placement, which equals 5,626,257 shares, at a per share exercise price equal to the fair market value of the Company's common stock on the date of the grant. Pursuant to the terms of the 2013 Plan, the Company cannot issue options or other grants for more than 5,000,000 shares to any one person in a calendar year. Consequently, on October 20, 2016, the Company granted Mr. Carbeau options to purchase 5,000,000 shares of the Company's common stock at an exercise price of \$0.17544 per share and expects to grant the remaining options to which Mr. Carbeau is entitled in 2017. These options will vest as to 25% of the shares on July 29, 2017 and as to an additional 2.083% of the shares on the last day of each successive month thereafter, provided that Mr. Carbeau remains employed by Company on the vesting date.

Per his employment agreement, Stephan Toutain was entitled to receive a grant of options to purchase shares of the Company's common stock equal to 1% of the Company's fully diluted shares as of his start date at an exercise price equal to fair market value of the Company's common stock on the grant date of the option. Consequently, on October 20, 2016, the Company granted Mr. Toutain options to purchase 3,738,933 shares of the Company's common stock at an exercise price of \$0.17544 per share. These options will vest as to 25% of the shares on August 15, 2017, and as to an additional 2.083% of the shares monthly thereafter.

In January 2017, Mark Carbeau was granted an option to purchase 1,278,653 shares of the Company's common stock related to the 2016 performance review process. This option has an exercise price of \$0.1237 per share. The option vests as to 1/4 of the shares on January 25, 2018, and as to 1/36 of the remaining unvested shares at the beginning of each calendar month thereafter beginning on February 1, 2018.

In January 2017, Kenneth Kornman was granted an option to purchase 3,625,746 shares of the Company's common stock related to the 2016 performance review process. This option has an exercise price of \$0.1237 per share. The option vests as to 1/4 of the shares on January 25, 2018, and as to 1/36 of the remaining unvested shares at the beginning of each calendar month thereafter beginning on February 1, 2018.

In January 2017, Stephan Toutain was granted an option to purchase 365,093 shares of the Company's common stock related to the 2016 performance review process. This option has an exercise price of \$0.1237 per share. The option vests as to 1/4 of the shares on January 25, 2018, and as to 1/36 of the remaining unvested shares at the beginning of each calendar month thereafter beginning on February 1, 2018.

It is the Company's policy to grant stock options with an exercise price equal to the fair market value of the Company's common stock at the grant date, and stock options to employees generally vest over four years based upon continuous service. Historically, the majority of the Company's stock options have been granted in connection with the employee's start date with the Company. In addition, the Company may grant stock options in recognition of promotion and/or performance.

Employee Stock Purchase Plan

Purchases made under the Company's Employee Stock Purchase Plan are deemed to be compensatory because employees may purchase stock at a price equal to 85% of the fair market value of the Company's common stock on either the first day or the last day of a calendar quarter, whichever is lower. During the three months ended March 31, 2017 and 2016, employees purchased 54,667 and 66,219 shares, respectively, of common stock at a weighted-average purchase price of \$0.05 and \$0.05, respectively, while the weighted-average market value was \$0.06 and \$0.06 per share, respectively, resulting in compensation expense of \$1,093 and \$563, respectively.

Note 9—Industry Risk and Concentration

The Company develops genetic risk assessment tests and performs research for its own benefit. As of March 31, 2017, the Company sells five genetic risk assessment tests. Commercial success of the Company's genetic risk assessment tests will depend on their success at being deemed to be scientifically credible and cost-effective by consumers and the marketing success of the Company and its collaborative partners.

Research in the field of disease predisposing genes and genetic markers is intense and highly competitive. The Company has many competitors in the United States and abroad that have considerably greater financial, technical, marketing, and other resources available. If the Company does not discover disease predisposing genes or genetic markers and develop risk assessment tests and launch such services or products before its competitors, then the potential for significant revenues may be reduced or eliminated.

During the three months ended March 31, 2017 and 2016, approximately 46% and 14%, respectively, of the Company's revenue came from sales through the Company's Merchant Network and Channel Partner Agreement with Amway Global, a subsidiary of Alticor, and 8% and 3%, respectively, of the Company's revenue came from sales through ABG's promotional product bundle program.

Note 10—Subsequent Events

On April 17, 2017, the Company sold \$500,000 of Convertible Notes (the "2017 Notes") to each of Bay City Capital and the Lender (the "Note Holders"), for a total of \$1,000,000 in aggregate principal. The 2017 Notes will convert into common stock if certain conditions are met. In connection with the issuance of the 2017 Notes, the Company also issued warrants to purchase common stock to the Note Holders. See Item 2 "Management's Discussion and Analysis of Financial Condition and Results of Operations – Recent Developments – Bridge Financing" for more details.

Also on April 17, 2017, the Company entered into a series of agreements, including the Second Amendment of Venture Loan and Security Agreement and a warrant to purchase common stock, to restructure its existing debt under the Loan Agreement with the Lender, which resulted in the deferral of the principal amount due to the Lender on April 1, May 1, and June 1, 2017, and the potential deferral of the principal amount due to the Lender on July 1, August 1 and September 1, 2017, such potential deferral of principal is dependent upon whether, as of June 15, 2017, the Company provides evidence reasonably satisfactory to the Lender that the Company is actively negotiating a clinical services or similar agreement, the terms of which are satisfactory to the Lender, which the Company believes, in good faith, it will enter into no later than September 1, 2017. In exchange for agreeing to defer principal payments, the Lender was granted a warrant to purchase common stock. The number of shares of common stock issuable upon

exercise of the warrant is determined by dividing the amount of principal payments deferred by the exercise price of the warrant, which could result in the warrant being exercisable for between approximately 5,519,604 and 11,039,209 shares. The warrant has an exercise price of \$0.10438 per share, is exercisable on a net issuance basis and has a 10-year term. See Item 2 “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Recent Developments – Amendment to Venture Loan and Security Agreement” for more details.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with the unaudited condensed financial statements and the notes thereto included elsewhere in this document.

General Overview and Trends

Interleukin Genetics, Inc. develops and markets proprietary genetic tests for chronic diseases and health-related conditions. Our products provide information that is not otherwise available to empower individuals and their healthcare providers to manage their health and wellness through genetics-based insights and actionable guidance. We leverage our research, intellectual property, and genetic test development expertise in inflammation and metabolism to identify an individual’s risk for severe and progressive chronic inflammatory diseases, thereby enabling personalized healthcare. We market our tests through healthcare professionals, partnerships with health and wellness companies, and other distribution channels. We have patents covering the use of specific patterns of gene variations for a number of common chronic diseases. Our lead products are our proprietary cardiovascular risk test and the ILUSTRA Test that identifies individuals with a life-long predisposition to over-produce inflammation, and our Inherent Health line of genetic tests.

Through 2016, our focus was on commercializing the ILUSTRA™ Inflammation Management Program (the “ILUSTRA Program”) and our Inherent Health® brand of genetic tests. We are continuing to support the ILUSTRA Program deployments with customers and will advance new customer relationships that expand the evidence base of this program’s effectiveness. We will continue to refine our strategy for the ILUSTRA Program based on our financial resources and our commercial success. During late 2016 and early 2017, we redefined our strategy to add emphasis on a cardiovascular disease (CVD) program. We are also currently reviewing other strategic alternatives.

Recent Developments

Bridge Financing

On April 17, 2017, we entered into a Subscription Agreement (the “Subscription Agreement”), with funds affiliated with Bay City Capital (“Bay City Capital”) and Horizon Technology Finance Corporation (with its affiliates, the “Lender”) under which we issued and sold \$500,000 of Subordinated Convertible Promissory Notes (the “2017 Notes”) to each of Bay City Capital and the Lender (the “Note Holders”), for a total of \$1,000,000 in aggregate principal amount. The 2017 Notes will convert in common shares:

Upon the closing of a Qualified Financing (defined as our next common stock financing, whether in a single transaction or series of related transactions, whether a public or private financing, yielding aggregate cash proceeds to us (inclusive of amounts converted under the 2017 Notes or other outstanding indebtedness) of at least \$5.0 million on or before January 1, 2022), the unpaid principal amount and accrued interest outstanding under the 2017

(a) Notes shall automatically convert in whole into fully paid and nonassessable shares of our common stock. The total number of shares of common stock issuable upon conversion of the 2017 Notes in this circumstance shall be determined by dividing (i) the then outstanding principal amount and accrued interest under the 2017 Notes by (ii) a conversion price equal to (A) eighty percent (80%) multiplied by (B) the lowest price per share of the common stock paid by investors in such Qualified Financing;

In the event that a change of control occurs before the closing of a Qualified Financing and on or before January 1, 2022, then upon the written election of the holders of 2017 Notes representing at least fifty percent (50%) of the aggregate principal amount of all 2017 Notes, the unpaid principal amount and accrued interest outstanding under the 2017 Notes shall convert in whole into fully paid and nonassessable shares of common stock immediately

(b) before the closing of the change of control. The total number of shares of common stock issuable upon conversion of the 2017 Notes in this circumstance shall be determined by dividing (i) the then outstanding principal amount and accrued interest under the 2017 Notes by (ii) a conversion price equal to (A) eighty percent (80%) multiplied by (B) the price per share of our common stock in such change of control; or

At the option of the individual Note Holder at any time before the Maturity Date, the unpaid principal amount and accrued interest outstanding under the 2017 Note may be converted in whole or in part into fully paid and

(c) nonassessable shares of common stock. The total number of shares of common stock issuable upon conversion of the particular 2017 Note in this circumstance shall be determined by dividing (i) the then outstanding principal amount and accrued interest under the 2017 Note by (ii) a conversion price equal to \$0.125256.

The 2017 Notes are secured by a security interest in all of our assets and are subordinated to our existing venture loan with the Lender.

In addition, under the Subscription Agreement, each Note Holder received a Warrant to purchase our common stock (the “2017 Note Warrants”). The 2017 Note Warrants have an exercise price per share of \$0.10438 and are exercisable for that number of shares of common stock equal to the original principal amount of the corresponding 2017 Note divided by such exercise price, or an aggregate of approximately 9,580,379 shares. The 2017 Note Warrants are exercisable on a net issuance basis and have a 5-year term.

Amendment to Venture Loan and Security Agreement

Also on April 17, 2017, we entered into a series of agreements, including the Second Amendment of Venture Loan and Security Agreement and a warrant to purchase common stock, to restructure our existing debt with the Lender, which resulted in the deferral of the principal amount due to the Lender on April 1, May 1, and June 1, 2017, and the potential deferral of the principal amount due to the Lender on July 1, August 1 and September 1, 2017, such potential deferral of principal is dependent upon whether, as of June 15, 2017, we provide evidence reasonably satisfactory to the Lender that we are actively negotiating a clinical services or similar agreement, the terms of which are satisfactory to the Lender, which we believe, in good faith, we will enter into no later than September 1, 2017. In exchange for agreeing to defer principal payments, the Lender was granted a warrant to purchase our common stock. The number of shares of common stock issuable upon exercise of the warrant is determined by dividing the amount of principal payments deferred by the exercise price of the warrant, which could result in the warrant being exercisable for between approximately 5,519,604 and 11,039,209 shares. The warrant has an exercise prices of \$0.10438 per share, is exercisable on a net basis and has a 10-year term.

Work Force Restructuring and Redefined Strategic Focus

In March 2017, we implemented a work force restructuring to better utilize our resources, to align our organization to support our emerging cardiovascular testing program, for which we are seeking strategic interest, and to support a more targeted commercial strategy for the ILUSTRA Program. As a consequence of the restructuring, we reduced our workforce in our commercial organization and administrative functions by eight persons. We continue to support the ILUSTRA Program deployments with customers and will advance new customer relationships that expand the evidence base of this program's effectiveness. We expect that the restructuring will result in approximately \$948,000 in reduced annualized operating expenses when fully implemented.

During late 2016 and early 2017 we redefined our strategy to add emphasis to our CVD program based on confirming evidence from a second clinical study and increased interest from potential collaborators working on next-generation CVD drugs. In 2015, we announced a collaboration with Ionis Pharmaceuticals to use our IL-1 genetic test in a Phase 2 study of their anti-sense drug that has been shown in Phase 1 trials to reduce Lp(a) levels as well as to use our genetic test in a new Phase 1 study. Additional companies are testing other drug candidates for treatment of high risk CVD patients by potentially lowering bad cholesterol such as LDL and Lp(a) or by blocking IL-1 production. Amgen, Sanofi, Novartis and the Medicines Company have active development programs in this area. We believe that our proprietary IL-1 genetic patterns that identify patients who over-produce IL-1 may have value in guiding development and use of drugs that directly or indirectly target IL-1 effects on CVD events. We are currently seeking strategic interest in this program.

Our ILUSTRA Program and Other Information

During the early part of the year ended December 31, 2016, our principal focus was on commercializing our ILUSTRA Program, with less emphasis on the sales of our Inherent Health brand of genetic tests and related programs. As part of our work force restructuring in March 2017, we developed a more targeted commercial strategy for the ILUSTRA Program. We continue to support the ILUSTRA Program deployments with customers and will advance new customer relationships that expand the evidence base of this program's effectiveness. We will continue to refine our strategy for this program based on our financial resources and its commercial success.

The ILUSTRA Program serves as a central component to an enhanced benefit design or wellness initiative directed to lower medical costs through disease avoidance and reduced disease progression and complications. We position the ILUSTRA Program as a tool to drive medical value; empowering individuals and healthcare professionals with actionable genetics data. The test identifies individuals at high risk for elevated systemic inflammation, enabling a risk stratification framework to personalize care interventions and patient outreach. The program creates value through early identification of risk, elevated professional surveillance for disease detection, and enhanced patient engagement and compliance

We market the ILUSTRA Program to large employers, who are typically self-insured, and to insurance carriers. Our employer customers see value in the potential reduction of medical costs associated with the highly prevalent inflammatory diseases that our program can provide. Within this customer segment, initial targets tend to be progressive, wellness-minded companies that are engaged in other programs aimed at improving the overall health of their employees.

Within the insurance carrier segment, we place particular emphasis on carriers with dental-medical integration (DMI) products, either in place or in development, and integrated delivery networks (IDNs), as these customers are best positioned to realize value from the potential reduction of medical costs associated with the highly prevalent inflammatory diseases that our program can provide. This insurance carrier segment represents a large market, as an estimated 170 million Americans have dental coverage through an insurance program. These customers are increasingly focused on DMI products, as the correlation between oral health and general health has become better understood. We believe the potential of our ILUSTRA Program to facilitate the realization of cost savings through reduced medical claims is well-aligned with this powerful trend in the insurance industry.

The timing of any revenues that we may receive from our marketing efforts is very uncertain at this time and is dependent on a number of variables, many of which we may have a limited ability to influence. We may never receive significant revenues for the ILUSTRA Program.

Our Inherent Health brand of genetic tests includes the first-of-its-kind test for weight management that identifies an individual's genetic tendencies for weight gain related to either fat or carbohydrates in the diet. The Inherent Health brand also offers customers a full suite of affordable, easy-to-use and meaningful genetic tests in heart health, bone health and nutritional needs. In addition, we launched additional products under the name Wellness Select that allows our e-commerce customers to purchase any combination of our Inherent Health genetic tests at a discounted price.

We market our Inherent Health brand of genetic assessment tests primarily through our commercial relationships with Alticor Inc. affiliated companies. Alticor is a related party. On October 26, 2009, we entered into a Merchant Network and Channel Partner Agreement with Amway Corp., d/b/a/ Amway Global (Amway Global), a subsidiary of Alticor. Pursuant to this agreement, Amway Global sells our Inherent Health brand of genetic tests through its e-commerce website via a hyperlink to our e-commerce site. In the three months ended March 31, 2017 and 2016 revenues from this agreement accounted for approximately 46% and 14% of our revenues, respectively.

In 2012 and 2013, Access Business Group LLC ("ABG"), an affiliate of Alticor, placed purchase orders totaling approximately \$3.3 million consisting of Weight Management kits. Of the \$3.3 million in orders received in 2013, \$1.8 million was related to the 2014 program and \$1.5 million was related to the 2013 program. Cash for the kits purchased for the 2013 program was received in the first quarter of 2013 and cash for the kits purchased for the 2014 program was received by December 31, 2013. As a component of the 2013 promotional program, and not reflective of actual product expiry, the kits were required to be redeemed before December 31, 2013. In February 2014, we removed the redemption date requirement for the 2013 promotional program, for which ABG paid us \$519,000 as a retrospective increase in the product purchase price. Cash related to the 2013 promotional program, including the \$519,000, will be treated as deferred revenue until kits are redeemed or the breakage analysis determines the probability of eventual redemption is remote. In October 2014, we received \$250,000 as a retrospective increase in the product purchase price for unsold kits as consideration for extending the required redemption date of the 2014 promotional program to December 31, 2017. Cash received for these kits will be treated as deferred revenue until kits are redeemed for processing or on the final allowed redemption date of December 31, 2017. For the three months ended March 31, 2017 and 2016, approximately 8% and 3%, respectively, of our revenue came from sales through ABG's promotional product bundle program.

On September 21, 2012, we entered into a License Agreement (the "License Agreement") with Access Business Group International LLC ("ABGI"), an affiliate of Alticor. Pursuant to this License Agreement, we granted ABGI and its affiliates (the Licensees) a non-exclusive license to use the technology related to our Weight Management genetic test and to sell the Weight Management test in Europe, Russia and South Africa. ABGI, or a laboratory designated by ABGI, is responsible for processing the tests, and we receive a royalty for each test sold. The License Agreement has an initial term of five years from the date of first commercial sale of the Weight Management test under the

agreement. During the three months ended March 31, 2017 \$54,000 related to license fees was earned, compared to \$59,000 for the same period in 2016.

Our research and development expenses are focused on our own development efforts related primarily to our ILUSTRA and cardiovascular disease genetic tests. We are also focusing on seeking potential commercial partners to validate our technology within their specific business model as a collaboration with little or no cost to us. This is different than in prior years when our development focus was concentrated in research and development to bring new test configurations to market.

We recognize revenue from genetic testing services when there is persuasive evidence of an arrangement, service has been rendered, the sales price is determinable and collectability is reasonably assured. Service is deemed to be rendered when the results have been reported to the individual who ordered the test. To the extent that tests have been prepaid but results have not yet been reported, recognition of all related revenue is deferred. During the fourth quarter of 2013, we concluded that sufficient historical customer genetic test redemption patterns existed to determine the period of time after which the likelihood of test redemption was remote for Inherent Health tests purchased. Based on our analysis of the redemption data, we estimate that period of time to be three years after the sale of a genetic test kit. Prior to making this determination, revenue was recognized only on test kits returned and processed. Beginning in the fourth quarter of 2013, we began to recognize breakage revenue based on the likelihood of test redemption becoming remote. The term remote requires statistical analysis of customer redemption patterns for all tests sold and returned. We analyzed redemption patterns from 2009 through 2016. Included in genetic test revenue in the three months ended March 31, 2017 is \$12,000 of breakage revenue related to unredeemed genetic test kits from the three months ended March 31, 2014, compared to \$61,000 of breakage revenue in the same period in 2016 related to unredeemed genetic test kits from the three months ended March 31, 2013. We expect to continue to recognize breakage revenue and the corresponding deferred cost of goods as well as analyze the data on a quarterly basis based on the historical analysis.

In the genetic test business, competition is in flux and the markets and customer base are not well established. Adoption of new technologies by customers requires substantial market development and customer education. Historically, we have focused on our relationship with our primary customer, Alticor, a significant direct marketing company, in order to assist us in developing the market for our products and educating our potential customers. Our challenge in 2017 and beyond will be to develop the market for our personalized health products, in particular our ILUSTRA Program, and we will allocate considerable resources to commercialization of our ILUSTRA Program. Due to the early stage of this initiative, we cannot predict with certainty fluctuations we may experience in our genetic test revenues or whether such revenues will ever be material, or if material, will be sustained in future periods.

Financing Transactions

On May 17, 2013, we entered into a Common Stock Purchase Agreement (the “2013 Purchase Agreement”) with various accredited investors (the “2013 Investors”), pursuant to which we sold securities to the 2013 Investors in a private placement transaction (the “May 2013 Private Placement”). In the May 2013 Private Placement, we sold an aggregate of 43,715,847 shares of our common stock at a price of \$0.2745 per share for gross proceeds of \$12,000,000. The 2013 Investors also received warrants to purchase up to an aggregate of 32,786,885 shares of common stock at an exercise price of \$0.2745 per share (the “2013 Warrants”). The 2013 Warrants are all currently exercisable and have a term of seven years from the date they became exercisable.

On December 23, 2014, we entered into a Securities Purchase Agreement (the “2014 Purchase Agreement”) with various accredited investors (the “2014 Investors”), pursuant to which we sold to the 2014 Investors in a private placement transaction (the “December 2014 Private Placement”) an aggregate of 50,099,700 shares of our common stock at a price of \$0.1003 per share for gross proceeds of approximately \$5.025 million. The 2014 Investors 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 “2014 Warrants”). The 2014 Warrants are all currently exercisable and have a term of seven years.

On December 23, 2014, we entered into a Venture Loan and Security Agreement (the “Loan Agreement”) with the Lender under which we borrowed \$5.0 million. The loan originally bore interest at a floating rate equal to the One Month LIBOR Rate (with a floor of 0.50%) plus 8.50%. The loan was to be repaid in forty-five (45) monthly payments consisting of fifteen (15) monthly payments of only interest 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 would have been due and payable. Our obligations under the Loan Agreement were secured by a first priority security interest in substantially all of our assets other than its intellectual property. We had also agreed not to pledge or otherwise encumber our intellectual property assets, subject to certain exceptions. In connection with the Loan Agreement, we 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, which we refer to herein as the 2014 Lender Warrants. The 2014 Lender Warrants are all currently exercisable and have a term of ten (10) years.

On August 25, 2016, we and the Lender entered into the First Amendment of Venture Loan and Security Agreement and an Amended and Restated Secured Promissory Note (collectively referred to herein as the “2016 Debt Restructuring”), which was effective as of August 1, 2016, pursuant to which the principal payments due from August 2016 through December 2016 were reduced to 33% of the principal payments due for these periods under the Loan Agreement. In consideration of these changes, (i) we paid the Lender an amendment fee of \$25,000 and reimbursed the Lender’s legal expenses in the amount of \$5,000, (ii) we granted the Lender a first priority security interest in substantially all of our assets, including our intellectual property, (iii) the interest rate of the loan has been increased to 11.00% plus the amount by which the one month LIBOR Rate exceeds 0.50%, and (iv) the final payment was increased from 4.5% of the loan, or \$225,000, to 6.5% of the loan, or \$325,000. At March 31, 2017, the interest rate was 11.48% per annum. In connection with the 2016 Debt Restructuring, we also issued to the Lender an additional warrant to purchase up to 5,169,577 shares of our common stock at an exercise price of \$0.0994 per share (the “2016 Lender Warrant”). The 2016 Lender Warrant is currently exercisable and has a term of ten (10) years.

On April 17, 2017, we entered into a series of agreements, including the Second Amendment of Venture Loan and Security Agreement and a warrant to purchase common stock, to restructure our existing debt under the Loan Agreement, which resulted in the deferral of the principal amount due to the Lender on April 1, May 1, and June 1, 2017, and the potential deferral of the principal amount due to the Lender on July 1, August 1 and September 1, 2017, such potential deferral of principal is dependent upon whether, as of June 15, 2017, we provide evidence reasonably satisfactory to the Lender that we are actively negotiating a clinical services or similar agreement, the terms of which are satisfactory to the Lender, which we believe, in good faith, we will enter into no later than September 1, 2017. In exchange for agreeing to defer principal payments, the Lender was granted a warrant to purchase our common stock. The number of shares of common stock issuable upon exercise of the warrant is determined by dividing the amount of principal payments deferred by the exercise price of the warrant, which could result in the warrant being exercisable for between approximately 5,519,604 and 11,039,209 shares. The warrant has an exercise price of \$0.10438, is exercisable on a net issuance basis and has a 10-year term.

On July 29, 2016, we entered into a Securities Purchase Agreement (the “2016 Purchase Agreement”) with various accredited investors (the “2016 Investors”), pursuant to which we sold to the 2016 Investors in a private placement transaction (the “2016 Private Placement”) an aggregate of 56,262,571 shares of common stock at a price of \$0.0994 per share for gross proceeds of approximately \$5.6 million. The 2016 Investors also received warrants to purchase up to an aggregate of 56,262,571 shares of common stock at an exercise price of \$0.0994 per share (the “2016 Warrants”). The 2016 Warrants are all currently exercisable and have a term of seven years.

On April 17, 2017, we sold \$500,000 of Convertible Notes (the “2017 Notes”) to the Note Holders for a total of \$1,000,000 in aggregate principal. The 2017 Notes will convert into common stock if certain conditions are met. In connection with the issuance of the 2017 Notes, we also issued warrants to purchase common stock to the Note Holders. See “Recent Developments” above for more details of this bridge financing.

Results of Operations

Three Months Ended March 31, 2017 and 2016

Total revenue was \$196,000 for the three months ended March 31, 2017 compared to \$961,000 for the three months ended March 31, 2016. The decrease in total revenue is primarily attributable to the absence of contracted research projects recognized in Other revenue for the three months ended March 31, 2017 compared to the same period in 2016. Genetic testing revenue also declined in the three months ended March 31, 2017 compared to the same period in 2016.

During the three months ended March 31, 2017, 46% of our sales revenue came through our Merchant Network and Channel Partner Agreement with Amway Global, compared to 14% during the three months ended March 31, 2016. During the same periods, 8% and 3%, respectively, of our revenue came from sales through ABG's promotional product bundle program.

Cost of revenue for the three months ended March 31, 2017, was \$310,000, or 158% of total revenue, compared to \$527,000, or 55% of total revenue, for the three months ended March 31, 2016. The increase in the cost of revenue as a percentage of revenue in the three months ended March 31, 2017 is primarily attributable to the fixed laboratory costs being applied to lower revenue in the period, which was due to less genetic tests processed and no contracted research projects.

Research and development expenses were \$425,000 for the three months ended March 31, 2017 compared to \$480,000 for the three months ended March 31, 2016. The decrease in research and development expenses was mainly due to decreased compensation expense and consulting costs.

Selling, general and administrative expenses were \$1.8 million for the three months ended March 31, 2017, compared to \$1.3 million for the three months ended March 31, 2016. The 35% increase is primarily attributable to increased compensation expense related to new staff in sales and marketing and higher consulting costs.

Interest expense was \$217,000 for the three months ended March 31, 2017, compared to \$152,000 for the three months ended March 31, 2016. The interest expense is entirely related to the Loan Agreement with the Lender entered into on December 23, 2014, as restructured in August 2016.

Liquidity and Capital Resources

As of March 31, 2017, we had cash of \$791,000.

As discussed above under “Recent Developments”, in April 2017, we issued an aggregate of \$1,000,000 in 2017 Notes to the Note Holders and entered into the Second Amendment of Venture Loan and Security Agreement with the Lender which restructured our existing debt with the Lender.

Cash used in operations was \$1.5 million for the three months ended March 31, 2017 and \$1.8 million for the three months ended March 31, 2016. Cash used in operations is primarily impacted by operating results and changes in working capital, particularly the timing of the collection of related party receivables, inventory levels, receipt of orders and the timing of payments to suppliers.

Cash used in investing activities was \$0 for the three months March 31, 2017, compared to \$9,000 for the three months ended March 31, 2016. The \$9,000 in 2016 relates to the purchase of new lab equipment.

Cash used related to financing activities was \$379,000 for the three months ended March 31, 2017, compared to cash provided by financing activities of \$3,000 for the three months ended March 31, 2016. We received \$5,000 from stock purchases through the employee stock purchase plan during the three months ended March 31, 2017 compared to

\$3,000 for the three months ended March 31, 2016. Included in the \$379,000 was \$384,000 in principal payments related to our venture loan and security agreement with the Lender entered into on December 23, 2014, as restructured in August 2016.

The amount of cash we generate from operations is currently not sufficient to continue to fund operations and grow our business. We expect that, taking into account the transactions described in Recent Developments above, our current financial resources will be adequate to maintain our current and planned operations through the second quarter of 2017. We believe our success depends on our ability to consummate a material collaboration related to our CVD test and to generate significant revenues for the ILUSTRA Program through potential partners. The timing of any revenues that we may receive from either the CVD asset or the ILUSTRA Program is uncertain at this time, and is contingent upon a number of factors, including our ability to consummate arrangements with other partners for the CVD asset or to promote the ILUSTRA Program, our partners' ability to develop reimbursed insurance plans and to develop a viable market for such plans, and the timing of utilization of the ILUSTRA Program pursuant to insured plans, or other possible arrangements. We do not expect to receive any material revenues from either the CVD asset or the ILUSTRA Program until mid to late 2017, at the earliest, and the timing of any such revenues may be substantially later. We may never receive significant revenues.

Until such time, if ever, that we generate revenues sufficient to fund operations, we may fund our operations by issuing common stock, debt or other securities in one or more public or private offerings, as market conditions permit, or through the incurrence of debt from commercial lenders. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends. There can be no assurance that additional funds will be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to delay, limit, reduce or cease activities or operations or enter into licenses or other arrangements with third parties on terms that may be unfavorable to us or sell, license or relinquish rights to develop or commercialize our products, technologies or intellectual property. However, no assurance can be given at this time as to whether we will be able to achieve these objectives. The financial statements do not include any adjustment relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our financial statements. The preparation of these financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires us to (i) make judgments, assumptions and estimates that affect the reported amounts of assets, liabilities, revenue and expenses; and (ii) disclose contingent assets and liabilities. A critical accounting estimate is an assumption that could have a material effect on our financial statements if another, also reasonable, amount were used or a change in the estimates is reasonably likely from period to period. We base our accounting estimates on historical experience and other factors that we consider reasonable under the circumstances. However, actual results may differ from these estimates. To the extent there are material differences between our estimates and the actual results, our future financial condition and results of operations will be affected. Our most critical accounting policies and estimates upon which our financial condition depends, and which involve the most complex or subjective decisions or assessments are set forth in Note 3 to our financial

statements included in our Annual Report on Form 10-K for the year ended December 31, 2016. There have been no significant changes in our accounting policies or changes from the methodology applied by management for critical accounting estimates previously disclosed in such Annual Report on Form 10-K.

Recent Accounting Pronouncements

Please see the discussion of “Recent Accounting Pronouncements” in Note 3, “Summary of Significant Accounting Policies” contained in the Notes to Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2016 and Note 3, “Summary of Significant Accounting Policies” contained in the Notes to unaudited Condensed Financial Statements included in this Quarterly Report on Form 10-Q.

Item 3. *Quantitative and Qualitative Disclosures about Market Risk*

As a smaller reporting company, we have elected scaled disclosure reporting obligations and therefore are not required to provide the information required by this Item 3.

Item 4. *Controls and Procedures*

(a) *Evaluation of Disclosure Controls and Procedures.* Our principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15(d)-15(e)) as of the end of the period covered by this Quarterly Report on Form 10-Q, have concluded that, based on such evaluation, our disclosure controls and procedures were adequate and effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Control Over Financial Reporting.* No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f)) occurred during the quarter ended March 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings

Not applicable.

Item 1A. Risk Factors

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q and, in particular, our Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Part I – Item 2, contains or incorporates a number of forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act. Any or all of our forward-looking statements in this Quarterly Report on Form 10-Q may turn out to be wrong. They can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. Many factors mentioned in our discussion in this Quarterly Report on Form 10-Q will be important in determining future results. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially.

Without limiting the foregoing, the words “believes,” “anticipates,” “plans,” “expects” and similar expressions are intended to identify forward-looking statements. There are a number of factors that could cause actual events or results to differ materially from those indicated by such forward-looking statements, many of which are beyond our control, including the factors set forth under “Item 1A. Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2016. In addition, the forward-looking statements contained herein represent our estimates and expectations only as of the date of this filing and should not be relied upon as representing our estimates and expectations as of any subsequent date. While we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Not applicable.

Item 3. Defaults Upon Senior Securities.

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information.

Not applicable.

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Item 6. Exhibits.

Exhibit Number	Exhibit
31.1*	Certification by Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification by Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
	The following materials from Interleukin Genetics Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, formatted in XBRL (eXtensible Business Reporting Language): (i) the Condensed
101*	Balance Sheets, (ii) the Condensed Statement of Operations, (iii) the Condensed Statements of Stockholders' Deficit, (iv) the Condensed Statements of Cash Flows, and (v) Notes to Condensed Financial Statements.

*Filed herewith.

SIGNATURES

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 thereunto duly authorized.

Interleukin Genetics, Inc.

Date: May 11, 2017 By: /s/ Mark B. Carbeau
Mark B. Carbeau

Chief Executive Officer

(Principal Executive Officer)

Date: May 11, 2017 By: /s/ Stephen DiPalma
Stephen DiPalma

Interim Chief Financial Officer

(Principal Financial Officer)

