INTERLEUKIN GENETICS INC
Form FWP
June 07, 2016

I N T E R L E U K I N G E N E T I C S Page 1 Transforming Inflammation Management Making Genetic Insights Actionable Interleukin Genetics Investor Overview June 2016 Issuer Free Writing Prospectus Filed Pursuant to Rule 433 Registration Statement No. 333 - 211361 Dated June 7, 2016

I N T E R L E U K I N G E N E T I C S Page 2 Safe Harbor This presentation may contain forward - looking statements. These statements reflect our current views with respect to future events and actual results could differ materially from those projected in the forward - looking statements. Factors that could cause actual results to differ are discussed in Interleukin's Annual Report on Form 10 - K for the year ended December 31, 2015 and in our subsequent reports on Form 10 - Q and Form 8 - K. These reports are available on our website at www.ilgenetics.com in the "Investors - SEC Filings" section. Interleukin undertakes no obligation to publicly update forward - looking statements, whether because of new information, future events or otherwise, except as required by law . We have filed a Registration Statement on Form S - 1 with the SEC, as amended on June 7, 2016, including a preliminary prospectus dated June 7, 2016 (the "Preliminary Prospectus"), with respect to the offering of our securities to which this communication relates. Before you invest, you should read the Preliminary Prospectus (including the risk factors described therein) and, when available, the final prospectus relating to the offering, and the other documents filed with the SEC and incorporated by documents, including the Preliminary Prospectus, for free by visiting EDGAR on the SEC website at http://sec.gov . Alternatively, we or any underwriter participating in the offering will arrange to send you the prospectus if you request it by calling (212) 356 - 0500 or by e - mailing placements@hcwco.com .

I N T E R L E U K I N G E N E T I C S Page 3 About This Free Writing Prospectus • This presentation highlights basic information about us and the offering. Because it is a summary that has been prepared solely for informational purposes, it does not contain all of the information that you should consider before investing in our company. Except as otherwise indicated, this presentation speaks only as of the date hereof. • This presentation does not constitute an offer to sell, nor a solicitation of an offer to buy, any securities by any person in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. • Neither the Securities and Exchange Commission (the “SEC”) nor any other regulatory body has approved or disapproved of our securities or passed upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense. • This presentation includes industry and market data that we obtained from industry publications and journals, third - party studies and surveys, internal company studies and surveys, and other publicly available information. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this presentation, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions that were used in preparing the forecasts from the sources relied upon or cited herein.

I N T E R L E U K I N G E N E T I C S Page 4 Offering Summary • Expected to fund Interleukin into the future Historical (2015 - Q1 2016) burn rate ~ $550 - 600k per month Expect to move toward profitability as revenue ramps up • Use of Proceeds Expand commercial capabilities; Sales team, Marketing, Digital Health platform Further evidence building; e.g. patient engagement study General corporate purposes • Current capitalization • Uplisting to NASDAQ ; intended to occur in parallel with financing Funding Goal of $15 Million Common Stock 173,029,840 Common Stock Warrants 88,301,079 Common Stock Options 22,089,527 Total Fully Diluted Shares 283,420,446

I N T E R L E U K I N G E N E T I C S Page 5 Corporate Snapshot • Digital health platform to drive actionable insights • State - of - the art capabilities, with a CLIA - certified laboratory • Boston metro area headquarters • Founded in 1999; 17 employees • OTCQB: ILIU • Market Capitalization: $25.9MM (1) • Cash: $2.9MM (2) • New management team with track record of success • Leading institutional investors: Bay City, NEA (1) at 5/31/2016 (2) at 3/31/2016 Molecular diagnostics company developing and commercializing novel genetic tests to enhance prevention and to guide treatment of inflammatory mediated diseases.

I N T E R L E U K I N G E N E T I C S Page 6 Interleukin Genetics Value Drivers Making Genetic Insights Actionable Focused Strategy Actionable Solutions Leaders in IL - 1 Biology Compelling Value Important Clinical Need • Turnkey program to manage inflammation through targeted dental care • Leveraging digital health platform into diabetes disease management • Test portfolio for CVD, osteoarthritis, other inflammatory diseases • Proprietary assays and algorithms • Broad IP • World class Scientific Advisory Board • Potential savings up to 8% of medical spending • 20 peer reviewed studies, 5 meta analyses • Selling focused on large employers and payers who can monetize savings from medical costs • New business momentum validates business model • Systemic inflammation drives serious chronic diseases like CVD, diabetes and periodontitis • IL - 1 genetics key component SYSTEMIC INFLAMMATION GENETIC ASSESSMENT SAVINGS POTENTIAL 8 % Up to Annual Savings on Corporate Medical Plan DRIVE DEMAND UNIQUE GENETIC TESTS

I N T E R L E U K I N G E N E T I C S Page 7 Accomplished Leadership Team Mark Carbeau Chief Executive Officer Ken Kornman , DDS, PhD President and Chief Scientific Officer Steve DiPalma Chief Financial Officer Joe Zack Chief Commercial Officer Lynn Doucette, PhD Vice President Development and Clinical Operations

I N T E R L E U K I N G E N E T I C S Page 8 Inflammation: A Driving Force in Chronic Diseases Accounts for ~83% of Healthcare Costs in U.S. INFLAMMATION Cardiovascular Disease Adverse Pregnancy Outcomes Metabolic Syndrome Diabetes Rheumatoid Arthritis Chronic Kidney Disease Obesity Chronic Periodontitis IL - 1 pathway involved in all these conditions Source: Gerteis J et al. Multiple Chronic Conditions Chartbook . http://www.ahrq.gov/professionals/prevention - chronic - care/decision/ mcc/mccchartbook.pdf. AHRQ Publications No. Q14 - 0038, Rockville, MD: Agency for Healthcare Research and Quality; 2014. Accessed November 18, 2014.

I N T E R L E U K I N G E N E T I C S Page 9 Interleukin - 1 Regulates Inflammatory Cascades Bacterial pathogens or injury challenges to any tissue Immediate response genes Activation of preformed mediators: Lipids, complement, histamine, kinins , etc 2nd wave cytokines IL - 6 IL - 10 IL - 8 Inflammation Bone and soft tissue remodeling Insulin resistance IL - 1 TNF Acute Phase Proteins: C - reactive protein (CRP) Fibrinogen, IL - 1Ra Pancreas Mesenchymal Cells Recruit & activate white blood cells Prostaglandin & Leukotriene release Epithelial Cells Bone resorption Connective tissue remodeling Muscle catabolism Decreased Beta cell function Loss of Beta cells

I N T E R L E U K I N G E N E T I C S Page 10 Managing Inflammation Makes a Difference Impacts Onset Impacts Severity Impacts Progression Increased systemic inflammatory burden contributes to the prevalence of multiple chronic diseases: +40% Diabetes +40% Stroke +30% Coronary artery disease for Cardiovascular disease. More than twice the incidence of severe periodontitis in CVD highest risk cohort. (CRP >3 mg/L) Reduction in inflammation prevents first and second cardiovascular events. Effect was demonstrated to be independent of cholesterol lowering. Reduction in inflammation improves glycemic control in Type 2 diabetes. Source: Dregan et al. 2014 (N=27,358) Source: Noack , Genco et al. 2001 Source: Ridker et al. 2009 (P <0.0001) Sources: Larsen et al. 2009a,b; Cavelti - Weder et al. 2012; Sloan - Lancaster et al 2013; Ramos - Zavala et al. 2011 + 2x Risk

I N T E R L E U K I N G E N E T I C S Page 11 Ticking Time Bombs Under - diagnosed and Under - managed Inflammatory - Mediated Diseases Inflammatory Disease US Prevalence (millions) Sources: JAMA (2014), CDC (2010 & 2013), National Statistical Report (2014) ` 0 20 40 60 80 100 120 140 Prevalance Underdiagnosed Obesity Periodontis Diabetes - Type 2 Pre - diabetes Chronic Kidney Disease Coronary Artery Disease Stroke 78.6m 64.7m 49.9m 115.4m 33.3m 18m 6.5m

I N T E R L E U K I N G E N E T I C S Page 12 Identify high - risk patients via simple cheek swab Communicate results to patients through healthcare professional (HCP) Provide tools to educate high - risk patients and HCPs who manage their care Educating Your Patients: Genetic Risk for Chronic Periodontitis Assess Genetic Risk Individualize Care Plans Drive Engagement Turnkey Program Targets Chronic Inflammation and Drives Behavioral Change

I N T E R L E U K I N G E N E T I C S Page 13 • Dental cleanings of patients with gingivitis reduce blood CRP 1 level by 69% • Intensive dental treatment of moderate to severe periodontitis reduces CRP by 20% to 39% in three independent studies • In patients with Type 2 diabetes, treatment of periodontitis reduces: - CRP by a mean of 1.28 mg/L - HbA1c 2 levels by 0.36% . Effect equivalent to adding second drug treatment 1 C - Reactive Protein (CRP) is an important marker of inflammation 2 Hemoglobin (Hb) A1c is an important marker of blood sugar control Unexpected Connection, Surprising Impact Dental Intervention Provides Practical Access To Reduce Inflammation Sources: Paraskevas 2008; P <0.001. Artese et al. 2015; P <0.0001, meta - analysis. Jayaprakash et al. 2014; small study, P <0.001. Engebretson and Kocher 2013; meta - analysis.

I N T E R L E U K I N G E N E T I C S Page 14 Targeted Dental Care Decreases Costs A Powerful Leverage Point Potential Health Plan Savings of up to 8%* Investment (per person) $200 $80 - $160 Identify Inflammation Risk (one time) Dental Cleanings (annually) *Mean savings over 4 years comparing appropriately treated and untreated periodontitis patients; does not include reductions in dental care cost. (Source: Jeffcoat et al. AJPM . 2014). Reduction in medical costs established in study of 338,000 patients $2,840 $1,090 $5,681 $2,433 Diabetes Coronary Artery Stroke Savings in Medical Costs * (per patient annually) Pregnancy Complications

I N T E R L E U K I N G E N E T I C S Page 15 Digital Health Engagement Tools To Ensure Impact Build awareness and drive test adoption Objective: Deliver Health Info & Appointment Reminders Tools: At - risk Employees Employer Dental Office Audience Communication Objectives and Tools Impact • Implemented genetic testing for employees and family • Identified high - risk employees and family members Inform, educate, and empower dental staff • Improved detection, surveillance, management of inflammatory disease • Optimized number of dental visits Deliver health info, appointment reminders • Heightened awareness of inflammatory risks • Increased engagement and adherence, leading to improved lifestyle behaviors

I N T E R L E U K I N G E N E T I C S Page 16 Large Market Potential with Attractive Margins Executing on Base Business Significant market potential… 170MM Adults with Dental Coverage 45MM Employed by Large Companies Addressable Market Target Market …with attractive returns Robust gross margins: 80 - 85% at scale Low cost to serve: Low variable costs with digital health tools Efficient sales process: Demand generated through points of aggregation • Employers, carriers Testing Engagement Subscription $1B $9B

I N T E R L E U K I N G E N E T I C S Page 17 Large Employers Offer Immediate Access Executing Sales Strategy To Provide Early Traction Potential Revenue Yield Illustration 30,000 Eligible 25,000 employees x 1.2 factor (adult dependents) 9,000 Tested 30% potential conversion to testing $200 Revenue per test $1,800,000 Potential revenue realization from 25,000 employees Target early adopters with self - insured and “Captive” plans Early traction with regional partners will be leveraged with larger partners Focus on companies of 500 or more employees Market Landscape Channel Partner Examples Sales Process Size # Firms # EEs 2500+ 1,400 8M 500 - 2499 14,600 32M 100 - 499 141,000 35M <100 6.8M 67M Indian Health 5M Marsh & McLennan Aon Willis Group USI Holdings William Gallagher Regional / local Active Target Qualify Close

I N T E R L E U K I N G E N E T I C S Page 18 Carriers Accelerate Adoption Longer Sales Cycle; Larger Opportunity Potential Revenue Yield Illustration 10,000,000 Total Covered Lives 25% Carrier targets sales efforts to one quarter of accounts 30% Penetration into Targeted accounts 30% Potential testing level for eligible employees and dependents $200 Revenue per test $45,000,000 Potential revenue realization from 10 million Covered Lives Market Landscape Sales Process (Single Carrier) • Pilot involves 4 - 5 small employers from Carrier's book of business • Limited Market Test is a regional roll - out after a successful Pilot • Full Rollout assumes 25% of the Carrier's total book of business is targeted (1) Dental - Medical Integration (2) Integrated Delivery Networks United Healthcare Anthem Aetna Humana Cigna 70 60 20 16 14 Kaiser Intermountain Health Veterans Administration 9 1 8 Carriers with DMI (1) Covered Lives (MM) IDN Examples (2) Full Rollout Year 1 Year 2 Year 3 1 - 5 k 10 - 50 k 100 - 250k tests Pilot Limited Market Test

I N T E R L E U K I N G E N E T I C S Page 19 Leveraging Data Assets and Patient Relationships Diabetes Disease Management a Smart Starting Point • Patient relationship and access • Patient behavioral insights • Genetic risk stratification • Oral health status • Dental care team access Diabetes a strong fit • Substantial role of IL - 1 in onset and management of Type 2 diabetes • Patients have complicated lifestyle • Well established potential partners Potential Sources of Value in Disease Management Potential Partnerships: • Diabetes therapeutics companies • Diabetes disease management companies

I N T E R L E U K I N G E N E T I C S Page 20 Leveraging Our IL - 1 Genetics Platform Potential To Facilitate Precision Medicine in Inflammation Opportunities to expand IG impact on clinical management of inflammation in the long term IL - 1 Platform Multiple Clinical Indications Cardiovascular Disease Osteoarthritis Rheumatoid Arthritis Chronic Kidney Disease Clinical Testing • Exploring partnerships with other Diagnostics companies in relevant clinical areas Companion Diagnostics • 28 IL - 1 blocking compounds in development • In discussions with sponsor companies

I N T E R L E U K I N G E N E T I C S Page 21 Multiple indications demonstrating large unmet need • Many in late stage development • Several address large diseases with high unmet need Cross section of large and small size companies Firms Actively Developing IL - 1 Blocking Drugs Expensive Treatments - Prospects for Companion Dx 1 Currently licensed to Swedish Orphan Biovitrum AB for all current indications Company Indication Development Phase Amgen 1 Rheumatoid Arthritis/Juvenile Arthritis Approved Regeneron Autoinflammatory Rash/Fever(FCAS)/Fever Approved Tsumura Nephritis Approved Novartis Autoimmune Disease/Cardiovascular Approved/Phase 3 Eleven Biotherapeutics Dry Eye Disease/AllergicConjunctivitis Phase 3/Phase 2 XBiotech Colorectal Cancer/Acne Phase 3/Phase 2 Xoma Opthalmic Inflammation/Diabetes Phase 3/Phase 2 Array BioPharma Cancer Phase 3/Phase 2/Phase 1 AbbVie Osteoarthritis/ Rheumatoid Arthritis Phase 2/Preclinical AB2 Bio Adult - Onset Inflammatory Disease Phase 2 Italfarmaco Juvenile Arthritis/Muscular Dystrophy Phase 2/Phase 2 TWi Pharmaceuticals Type 2 Diabetes/Gout/Epidermolysis Bullosa Phase 2/Phase 2/Preclinical Biomas HPV/Macular Degeneration/Fertility Phase 2/Phase 2/Preclinical TWi Pharmaceuticals Rosacea/Cancer Therapy - Induced Skin Rash Phase 2/Preclinical Ionis Pharmaecuticals Cardiovascular Disease Phase 2/Phase 1 Delenex Therapeutics Acne/Gout Arthritis/Skin Inflammation Preclinical Cantargia Cancer/Leukaemia Preclinical Apexigen Inflammatory Disease/Diabetes Preclinical Affibody Autoimmune Disease Preclinical AnaptysBio Psoriasis Preclinical XL - protein Rheumatoid Arthritis Preclinical Serodus Type 2 Diabetes Preclinical Opsona Rheumatoid Arthritis/Asthma/Diabetes Preclinical Paras Biopharmaceuticals Rheumatoid Arthritis Preclinical Rogne Bioscience Psoriasis Preclinical

I N T E R L E U K I N G E N E T I C S Page 22 ` ` ` Possible Expansion of Base Business Vision for Future Growth Leveraging Genetic and Digital Health Platforms Key Genetics Platform Digital Health Platform Both Platforms Engagement Subscriptions Disease Management Partnering Clinical Testing/Companion Dx Time Revenue PerioPredict Base Business

I N T E R L E U K I N G E N E T I C S Page 23 Broad IP Protects Tests and IL - 1 Pathway Patent Family Patents Applications US Outside US US Outside US IL - 1 4 Protected through 2027 8 Protected through 2023 1 1 Periodontitis 1 Protected through 2033 3 1 9 Cardiovascular 2 2 Osteoarthritis 2 4 2 4 Weight Management 9 1 11

I N T E R L E U K I N G E N E T I C S Page 24 Goals and Milestones for 2016 x Initial contracts with employers • First pilot with insurance carrier • Population health initiative with government entity (ex - US) x Add key commercial staff - Chief Commercial Officer, National Account Directors, Marketing • Launch relationship management platform • Data/publication from ongoing study supporting utility in CVD & T2D x Clinical Advisory Board advocacy • Patient engagement study • Clinical trial testing deals that could lead to CDx products • Partnership with cardiac specialty testing labs • In - license of additional inflammation - testing technologies PerioPredict Commercial Traction Commercial Capabilities Evidence Building Other

I N T E R L E U K I N G E N E T I C S Page 25 Interleukin Genetics Value Drivers Making Genetic Insights Actionable Focused Strategy Actionable Solutions Leaders in IL - 1 Biology Compelling Value Important Clinical Need • Turnkey program to manage inflammation through targeted dental care • Leveraging digital health platform into diabetes disease management • Test portfolio for CVD, osteoarthritis, other inflammatory diseases • Proprietary assays and algorithms • Broad IP • World class Scientific Advisory Board • Potential savings up to 8% of medical spending • 20 peer reviewed studies, 5 meta analyses • Selling focused on large employers and payers who can monetize savings from medical costs • New business momentum validates business model • Systemic inflammation drives serious chronic diseases like CVD, diabetes and periodontitis • IL - 1 genetics key component SYSTEMIC INFLAMMATION GENETIC ASSESSMENT SAVINGS POTENTIAL 8 % Up to Annual Savings on Corporate Medical Plan DRIVE DEMAND UNIQUE GENETIC TESTS

I N T E R L E U K I N G E N E T I C S Page 26 Appendix

I N T E R L E U K I N G E N E T I C S Page 27 Scientific Advisory Board • Former Chairman (through Dec 2014) of the Medicines and Healthcare Products Regulatory Agency --- UK equivalent of U.S. FDA • Principal, St Hilda's College, Oxford University UK • Former Florey Professor of Molecular Medicine, University of Sheffield • More than 300 publications in the fields of inflammation, cytokine biology, and genetics • Knighted in 2007 for contributions to medicine • Mallinckrod Professor of Medicine; Chief, Cardiovascular Medicine; Brigham & Women's Hospital Harvard Medical School • More than 550 publications in the fields of inflammation and atherosclerotic cardiovascular diseases • Numerous awards and recognitions for research accomplishments including the Distinguished Scientist Award, American College of Cardiology in 2006 • Professor of Genetics, Tufts University Sackler School of Graduate Biomedical Sciences • Director of the Nutrition & Genomics Lab, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University • More than 650 publications in the field of genomics, nutrition, and cardiovascular disease • Founding Director, Center for Applied Genomics & Precision Medicine, Duke University • Professor of Medicine, Pathology and Biomedical Engineering, Duke University. • Board of Directors, Alere , Inc. • More than 250 publications in the fields of genomics and personalized medicine • Leader in clinical translation of genomic information Sir Gordon Duff MD, BM, BCh , FRCP, PhD, Fmed Sci Peter Libby MD Jose Ordovas PhD Geoffrey S. Ginsburg MD, PhD Steven Offenbacher DDS, PHD, MMSC • WR Kenan Jr Distinguished Professor; Director, Center for Oral and Systemic Diseases; Chairman, Department of Periodontology, University of North Carolina • More than 300 publications which helped establish the role of periodontal disease in adverse pregnancy outcomes and other systemic diseases • Numerous awards and recognitions for research accomplishments including the Norton Ross Award for clinical research

I N T E R L E U K I N G E N E T I C S Page 28 Clinical Advisory Board • Principal, St Hilda’s College, Oxford University UK and Former Florey Professor of Molecular Medicine, University of Sheffield • 300+ publications Sir Gordon Duff MD, BM, BCh , FRCP, PhD, Fmed Sci Iain Chapple, PhD. BDS. FDSRCPS, FDSRCS Panos N. Papapanou DDS, PhD Professor Gary Armitage , DDS os • WR Kenan Jr Distinguished Professor; Director, Center for Oral and Systemic Diseases; Chairman, Department of Periodontology, University of North Carolina • 300+ publications • Professor of Periodontology and Head of the School of Dentistry at the University of Birmingham UK. • 150+ publications William Giannobile , D.D.S., D. Med. Sc. • Najjar Endowed Professor & Chair, Department Periodontics and Oral Medicine,University of Michigan School of Dentistry and Professor of Biomedical Engineering • 120+ publications • R. Earl Robinson Distinguished Professor of Periodontology at University of California San Francisco. • 100+ publications • Professor and Director of the Division of Periodontics, and Chairman of the Section of Oral, Diagnostic and Rehabilitation Sciences, at the College of Dental Medicine, Columbia University, New York, USA. • 125 + publications Mariano Sanz , MD, DDs, Dr Med, DrHC • Professor of Periodontology and Director of the Postgraduate Program: at the Faculty of Odontology University Complutense of Madrid, Spain • 250 + publications Steven Offenbacher DDS, PHD, MMSC