Scott Skellenger
Vice President, Technology Product Engineering
Mack Institute Spring Conference
June 9, 2016

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Human Longevity – 260 Employees in Three Sites

La Jolla, CA
Mountain View, CA
Singapore

Sequencing Facility
Machine Learning, Data Mining and Algorithms
Informatics
Human Longevity Inc. Advances Leadership Role in Newborn Genome Sequencing with Strategic Acquisition of Stem Cell Banking from Celgene Cellular Therapeutics

HLI to Offer Newborn Genome Sequencing Product in Combination with Stem Cell Banking

(SAN DIEGO, CA)—January 28, 2016—Human Longevity, Inc. (HLI), the genomics-based, technology-driven company, announced today that the company has agreed to purchase LifebankUSA, a leader in placental and cord blood banking, along with its proprietary and high-yield method for extracting placental stem cells and related therapeutic programs, and the biomaterials program which includes the marketed product Biovance®, a cell matrix critical to wound healing applications.
Aging is among the most significant risk factor for human disease. The Health Nucleus is dedicated to investigating this universal condition.

**MALE**

30%

MORTALITY RATE FOR AGES 50-74

**FEMALE**

20%

MORTALITY RATE FOR AGES 50-74

**MALE**

- Neurologic 3%
- Cirrhosis 3%
- Diabetes 6%
- Respiratory 7%
- Other 13%
- Cardiovascular 32%
- Cancer 36%

**FEMALE**

- Other 5%
- Neurologic 5%
- Cirrhosis 5%
- Diabetes 10%
- Respiratory 10%
- Cardiovascular 25%
- Cancer 40%
Life Sciences and Healthcare Industries in Transition

- REACTIVE
- DISEASE MANAGEMENT
- GENERALIZED
- COSTLY
- PROACTIVE
- PREVENTATIVE
- PERSONALIZED
- PREDICTIVE
Genomics – A Continuum of Care Strategy

Longevity Begins At Birth and Is a Lifetime Clinical Strategy

- Newborn & Childhood Screening (0-5 years)
- Pediatric Genetic Diagnostics (Rare Disease)
- Adult Genetic Screening
- Tumor Profiling
- PGX Utilization w/ Integrated Clinical Decision Support
- Genomic Research of the Highest Quality via Knowledgebase™ & HLI Search
**GENOMIC-INFORMED MEDICAL RECORD**

**1 WHOLE BODY**
- MRI (musculoskeletal/lipid analysis)
- MRI (organ specific RSI/diffusion for early cancer detection)
- DEXA Scan
- InBody Biometrics
- Over 70 Laboratory Diagnostic Tests (Blood)
- 3D Forensic Imaging (Avatar)

**2 GENETIC SEQUENCING**
- Whole Genome
- Metabolome
- Microbiome

**3 BRAIN**
- NeuroQuant® Brain MRI
- 3D T2 Brain MRI
- Diffusion MRI
- Neurocognitive Testing
- Quantitative Gait Analysis

**4 PULMONOLOGY**
- Pulmonary Function Testing

**5 CARDIOVASCULAR**
- Echocardiography (2D, 3D, 4D)
- ECG
- 2 week Ambulatory Rhythm Testing

**HEALTH DATA COLLECTED BY THE HEALTH NUCLEUS**

150 GB OVER AN 8 HOUR DAY

GENOMIC-INFORMED MEDICAL RECORD
Digital Engagement in Healthcare
From Knowledge to Personalized Health Exploration

*HLI Knowledgebase™ Patent Pending – All Rights Reserved

*Avatar Patent Pending – All Rights Reserved
The Center of Engagement with the Genomic Informed Health Record
Exploration Centered Around You!

*Navigate from your place in the world down to your genomic variation*

- Integration of genomic and phenotype data
- Inclusion of microbiome and metabolomics
- Leveraging self-reported data including family history
- Provided in a format that allows you to explore you
Multi-tier Innovation Library Feeds Iterative PD on a Spectrum

Science Driven Research Discovery

Playing Field

Functional Assets

Idea

IP#2

Blank

Blank

IP#1

Blank

Platform - Sequencing, Computation, Machine Learning, Data Assets/Analytics

Invention

Derivative

Function

Algorithm

Statistical Model

UX

Data

Visualization

App

Innovation Spectrum

Market Opportunity
OUR MISSION

CHANGING THE PRACTICE OF MEDICINE, MAKING IT PREDICTIVE, PREVENTATIVE AND GENOMICS-BASED. ULTIMATELY, OUR GOAL IS TO EXTEND THE HEALTHY, HIGH PERFORMANCE AND PRODUCTIVE LIFE SPAN.

HUMAN LONGEVITY, INC.
Thank You!

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