WHO WE ARE

Human Longevity, ™ Inc. (HLI) is the genomics-based, health intelligence company creating the world’s largest and most comprehensive database of whole genome, phenotype and clinical data. HLI is developing and applying large scale computing and machine learning to make novel discoveries from these data to generate personalized health insights. Our goal is to extend healthy human life by revolutionizing human health and transforming the practice of medicine.

HUMAN LONGEVITY IS YOUR HEALTH INTELLIGENCE PARTNER, FOCUSED ON EMPOWERING THE PROACTIVE FUTURE OF HEALTH AND A LIFE BETTER LIVED

WHY NOW?

Age is the single leading risk factor for virtually every disease. And, as people age, they want to maintain their productivity, their health and their independence. So, as people are living longer than ever, longer life spans will have a dramatic effect on the global economy. The global market for healthy human longevity is enormous with total healthcare expenditures in those 65 and older running well over $7 trillion.
We are at an inflection point in healthcare, where genomics and technology are converging to transform the practice of medicine. “Health Intelligence” is the elevation of genomic health information. It is the ability to identify correlations in population and personal data via technology, expertise, and machine learning that can determine genetic variations, lifestyle choices and environmental factors that contribute to aging and illness, so that healthcare decisions can be as proactive, preventative and personalized as possible. Human Longevity is fueling the disruption with health intelligence. We are evolving rapidly and will harness the power of our team, our science and our approach to achieve commercial success.

**HUMAN LONGEVITY IS FUELING THE DISRUPTION WITH HEALTH INTELLIGENCE**

**HOW WE WORK**

HLI is combining quantitative genomic and phenotype and clinical information and employing machine learning to address disease and improve health. We are working to enable pharmaceutical and insurance companies, governments, researchers, physicians and patients to use genomics data to advance and personalize care.

**SCIENTIFIC AND CLINICAL ADVISORS**

- **David Brenner, MD**: Vice Chancellor, Health Sciences, UC San Diego
- **James Brewer, MD, PhD**: Chief Medical Advisor and Board of Directors, CorTechs Labs, Inc., and Professor of Radiology and Neuroscience, UC San Diego
- **C. Thomas Caskey, MD, FACP, FRSC**: Professor of Molecular and Human Genetics at Baylor College of Medicine
- **Ezra Cohen, MD**: Professor of Medicine, UC San Diego
- **Anders Dale, PhD**: Professor of Radiology, Neuroscience, Psychiatry and Cognitive Science, UC San Diego, Director of UCSD Center for Translational Imaging and Personalized Medicine, and Founder of CorTechs Labs, Inc.
- **Mark Ellisman, PhD**: Professor of Neurosciences & Bioengineering, UC San Diego
- **Larry Goldstein, PhD**: Professor of Cellular and Molecular Medicine, UC San Diego
- **Danny Hillis, PhD**: Co-Founder of Applied Minds, Co-Founder of Applied Invention
- **Samuel Klein, MD**: Professor of Medicine & Nutrition, Washington Univ., St. Louis
- **Ray Kurzweil**: Inventor and Author, a Director of Engineering of Google
- **Scott Lippman, MD**: Senior Associate Dean and Associate Vice Chancellor for Cancer Research and Care, UC San Diego
- **Eugene “Gene” Myers, PhD**: Director, MPI of Molecular Cell Biology and Genetics, Dresden, Germany
- **George Poste, DVM, PhD**: Professor of Health Innovation, Arizona State University
- **Richard Scheuermann, PhD**: Professor, Director of Informatics, J. Craig Venter Institute and Adjunct Professor, Department of Pathology, UC San Diego
- **Mark H. Skolnick, PhD**: Co-founder and retired Chief Scientific Officer, Myriad Genetics, Inc.
HLI’S SOLUTIONS

HLI is creating a model to change the way medicine is practiced and to change health outcomes associated with aging and human biological decline—flipping from a symptom-driven reactive frame to a proactive and preventative model. Medicine has been a clinical science, supported by data. Medicine is about to become a data science supported by clinicians.

HEALTH NUCLEUS

The Health Nucleus is a first-of-its-kind clinical research center that integrates a patient’s health profile with recent advancements in DNA sequencing and digital imaging to deliver personal insights and advanced computational tools, including machine learning, to uncover patterns in health. The first Health Nucleus opened in 2015 in San Diego, CA.

HLIQ ONCOLOGY

Our program provides oncologists with in-depth analysis to guide decisions about personalized cancer therapy based on comprehensive genomic profiling, and a cutting-edge path to informed personalized therapy. HLIQ Oncology offers three products:

HLIQ CANCER EXOME

This test provides exome sequencing of the patient’s germline and tumor DNA plus mutational burden of the tumor to guide treatment options, including if a patient is a candidate for immunotherapy.

HLIQ INHERITED CANCER

For family members who want to understand if they may be predisposed to a higher risk of developing cancer, physicians can order this test which examines 144 genes associated with a spectrum of cancers, including common and rare cancer types.

HLIQ COMPREHENSIVE CANCER

Our Comprehensive Cancer research program combines the power of genomics and computing advances that we use in our Cancer Exome testing but includes more in-depth sequencing coverage and analysis on the full genome of both the patient and the tumor. We do Whole Genome sequencing of the germline DNA, tumor DNA, somatic exome, deep sequencing of cancer genes and RNA sequencing to help guide decisions toward cancer management.

HEALTH INSIGHTS

Our HL IQ Whole Genome product includes whole genome sequencing and analysis providing an integrated assessment of health status and potential risks for individuals. Our work supports both predictive, preventive and personalized care, including cancer analysis, Integrated Health analysis, Rare, undiagnosed diseases.

HEALTH INTELLIGENCE

Including our HL I Database and HL I Search data analysis services—HLI is building the world’s largest database of clinical, biological and behavioral information, including comprehensive genome and phenotype content curated with our proprietary computational tools by the leading experts in the field. HLI is making data from over 10,000 genomes available to researchers through our Open Search tool, generating more insight into individual genomes through their comparison with many. Our team is sequencing complete genomes to 30x coverage and is on track to have a database of 1 million integrated health records by 2020.

RAW DATA

Yielding Information Generation and Discovery—HLI has one of the largest human genome sequencing centers, enabling all HLI product offerings and allowing the company to sequence samples from collaborators across multiple industries. We are focused on high-quality samples with genomic and phenotypic data. Our discovery team generates insights that can streamline drug development, enable discovery of biomarker and companion diagnostics and rescue / repurpose drugs from failed clinical trials through whole genome and whole exome sequencing for pharmaceutical partners.