



Envisioning a Better Tomorrow

FIVE CREATIVE THINKERS WHO ARE CHANGING OUR WORLD

BY JIM GULLO

Discovering ways that individual DNA impacts our health. Devising a new kind of company that is equally proficient at business and philanthropy. Solving the mysteries of cystic fibrosis. Developing new ways to grow enough food with fewer resources to feed the world's burgeoning population. And figuring out a possible method for scouring the world's atmosphere of carbon dioxide.

The five people we profile in the following pages are working on ways to solve these varied and complex challenges. They are creative thinkers who are leaders in their respective fields of genomic science, business, biology, botany and chemistry. They all have been lauded by their peers and, on occasion, credited with changing our understanding of their fields and of the world around us.

Such people prove that creative thinking can inspire us and make profound impacts on our lives.

DR. LEROY HOOD, WELLNESS & DNA RESEARCH

As a high school math and science whiz in Shelby, Montana, Leroy (Lee) Hood first read about how James Watson and Francis Crick solved the mystery of DNA's double helix in the mid-1950s. His life would never quite be the same.

Hood would go on to play a pivotal role in the development of genomic science, helping to create various instruments that would

Lee Hood is using systems biology to help personalize health care treatments and prevent disease.

unveil the secrets of DNA sequencing, as well as synthesizing proteins. In fact it is daunting to try to summarize the influence that Hood has had



INSTITUTE FOR SYSTEMS BIOLOGY



in the field of genomics during the past 50 years. He has founded or cofounded 15 different biotechnology companies, and his work has not only transformed the science of studying individual biology, but led to applications for disease intervention—and maintaining wellness—that had never before existed.

Hood and his research team at California Institute of Technology, where he chaired the Biology Department in the 1970s and 1980s, invented tools that allow for the rapid sequencing of individual genomes. The result is that a detailed analysis of a person's DNA can now be accomplished from a blood test in a matter of days, allowing for much greater understanding of an individual's genomic propensity for certain diseases.

However, Hood's greatest contribution to health care may be his plan to use this information in the future. By studying an individual's genomic makeup, Hood says it is possible to prevent that person from becoming sick or suffering from a major disease.

Now based in Seattle, Hood is using his breakthroughs in the field of systems biology, or the study of how multiple systems in the body interrelate, to create whole new ways to evaluate an individual's health, both from their genetic background and from other biomarkers that are now available to researchers.

Hood is putting his theories about "scientific wellness" into practice by founding Arivale (arivale.com). The Seattle-based health maintenance company offers intensive individual diagnostics derived from blood, bodily fluids, genetic, microbiome and lifestyle tests. The company analyzes billions of data points on each patient and then develops personalized wellness and coaching plans to help the individual remain healthy.

The program is still in the beta stage. However, Hood hopes to eventually roll out such therapies nationwide and possibly even internationally.

"There is no question that we can now identify [personalized] actionable steps to improve wellness and avoid illness," Hood says. "We can foresee [an individual's] potential physical problems well before diseases begin."

BLAKE MYCOSKIE, PHILANTHROPY & ENTREPRENEURSHIP

On a vacation to Argentina in 2006, Blake Mycoskie was shocked to see so many barefoot children living just outside the bustling capital of Buenos Aires. The young entrepreneur from Texas was told that their families couldn't afford shoes, making life and health very difficult.

Mycoskie, who had built four successful companies in various

Blake Mycoskie began Toms Shoes with the idea of giving away one pair of shoes to a child in need for every pair he sold. The idea was so successful that Mycoskie has built a philanthropic empire that offers numerous products to support a variety of causes.



TOMS

fields by then, returned to the United States and conceived the idea for a new company called Shoes For Better Tomorrows that was aimed at helping supply shoes for poor children around the world. However, everyone called the company Tomorrow's Shoes, and eventually the company's nickname morphed to simply "Toms." As Mycoskie points out, the nickname is not only easier to say, but it fits much better on the heel of a casual shoe.

The revelation that Mycoskie had on the trip was twofold: He would create a for-profit shoe company in the Los Angeles beach neighborhood of Venice that produced a version of the *alpargata*, a soft, casual canvas shoe that was popular in Argentina. He would also donate one pair of shoes to a child in need for every pair of shoes that the company sold. A noble idea, many thought, but what business could afford to give away half of its inventory? The answer is Toms, a company that sells a variety of shoes and then runs the company on a proverbial shoestring.

Mycoskie continues to be hailed as a visionary business leader, being an early believer in such practices as paid maternity and paternity leave for his own employees. Toms has also turned into an ever-expanding enterprise, but it has always kept its core values