

Elysium Health CEO, Eric Marcotulli, Wants to Solve the Biggest Challenges in Health - And He's Got a Plan to Do It



Eric Marcotulli
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Interview conducted by:
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CEOCFO: What is the concept behind Elysium Health?

Eric Marcotulli: Before I get into the specific concept, I think it's true for me and for your readers that what most impacts our quality of life is our ability to do good work, the time we spend with our community of family and friends, and our happiness. All of these depend on our health. In the US, the healthcare industry has made incredible inroads in disease treatment, but little has changed in terms of how we ensure healthy people stay healthy. Our approach to health is changing, though, as consensus builds among scientists that there is a clear link between aging and today's most prevalent health issues. In the past 20 years, there have been landmark scientific discoveries in this field — from genes that control the aging process to substantive data showing how we might be able to proactively intervene. We founded Elysium because we believe that everyone should benefit directly from this compelling research. We work in partnership with the world's leading scientists and research universities to translate advances in the science of aging into effective products that are easily incorporated into everyday life. We believe this is a fundamentally new approach to healthcare.

CEOCFO: How has the idea grown into Basis?

Eric Marcotulli: Basis is the culmination of more than 25 years of aging research. One of the key contributors to the research that forms the foundation for Basis is our co-founder and chief scientist, Leonard Guarente, director of the [Glenn Center for Biology of Aging Research](#) at MIT. He made key discoveries related to a family of proteins called sirtuins, which control longevity in lower organisms, and he demonstrated that sirtuins function only in the presence of [the coenzyme nicotinamide adenine dinucleotide \(NAD+\)](#), a compound at the heart of metabolism in all living cells. NAD+ plays an essential role in many important biological processes. [Basis](#) increases NAD+ levels. So that's one component, which is having the expertise to identify the right compounds to develop based on the scientific literature — but there's more to the Basis story than that. We also needed to develop the supply chain so that we have the highest quality material possible and in the purest form possible. This is important because if you want to deliver a positive health benefit to customers, you need to deliver a reliable product to them each and every month. Finally, we assembled a scientific team capable of running the appropriate clinical trials to

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demonstrate that Basis is safe and works in humans, which we've done. (In fact, our trial was recently published in a peer-reviewed journal, [Nature Partner Journals: Aging and Mechanisms of Disease](#).) Creating Basis was contingent on all of these factors, and now that they're in place we can continue to study the health benefits of Basis and to develop new products.

CEOCFO: Would you walk us through the science?

Eric Marcotulli: As I mentioned, we just published the results of our human clinical trial, which demonstrates that Basis increases levels of a molecule called [NAD+ \(nicotinamide adenine dinucleotide\)](#) by an average of 40 percent. NAD+ is known to decline in humans as we age. Why do we care about NAD+? NAD+ is a [coenzyme](#) found in all living cells. It was first discovered by in 1906, and in 1929 scientists working on NAD+ were awarded the Nobel Prize in Chemistry. The main role NAD+ is in turning nutrients into energy, but it also plays a key role in other essential biological processes like maintaining the health of DNA, regulating circadian rhythms, making sure proteins are constructed correctly, and so on. As I mentioned before, our chief scientist Lenny — among scientists and academics he's probably better known as Dr. Leonard Guarente — made a very important discovery about NAD+ which contributed to state of the science today. His discovery about the relationship between sirtuins and NAD+ established a connection between aging and metabolism. At this point there's also a wide body of data from animal studies showing that increasing NAD+ has a wide variety of incredible health benefits. The key now is to do more studies in humans, which is what we've been working on, for example, with the study we published in npj: Aging and Mechanisms of Disease. We're working on other human studies related to NAD+, as are other scientists. Our team also attended the 2017 NAD+ Metabolism and Signaling Conference in New Orleans, where Lenny served as one of the organizers. We spoke with five scientists in the field about why NAD+ is so important to human health. Readers who are interested and don't mind some technical language can read those interviews [here](#).

CEOCFO: How has your stellar advisory board contributed throughout the development?

Eric Marcotulli: The Scientific Advisory Board, a network of more than 20 world-renowned researchers and clinicians, including seven Nobel Prize-winning scientists, is the backbone of Elysium. The SAB guides the direction of our company. They are experts in a broad range of subject matter, including biochemistry, neuroscience, and aging. The SAB does not endorse products. They advise the Elysium team on product identification and development, clinical studies, and ongoing research, accelerating the pace of discovery and ensuring a high level of scientific rigor in the development of Elysium's products. To give you an idea of the type of experts we look for on our board, consider the two most recent additions, Carolyn Bertozzi and Vera Gorbunova. Bertozzi is the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Chemical & Systems Biology and Radiology at Stanford University, and an Investigator at the Howard Hughes Medical Institute. Her research lab, the Bertozzi Group, focuses on the correlation between changes in cell surface sugars and cancer, inflammatory disorders, and infectious diseases. Gorbunova is a professor of biology and an associate professor of oncology at the University of Rochester. She also serves as the principal investigator of the Gorbunova Lab, which is focused on aging, DNA repair, and cancer.

CEOCFO: What did you learn at Harvard Business School that has helped in this venture?

Eric Marcotulli: When I was at Harvard Business School we read a case study that provided some of the inspiration for Elysium. It was about a company called [Sirtris Pharmaceuticals](#). Sirtris was focused on developing drugs that treat diseases of aging by activating a family of proteins called sirtuins. The compounds that Sirtris was studying were based on resveratrol, which showed very promising results in animal studies, but ended up not translating well to humans because the molecule isn't very bioavailable. The company was acquired in 2008, and they continue to study compounds that activate sirtuins, but the case study had a big impact on me. I did a great deal of research and discovered that scientists are very interested in sirtuins today because of their role in maintaining health and homeostasis in cells. This led me to Leonard Guarente, the co-founder of Elysium, who as I mentioned is one of the leading researchers on sirtuins.

CEOCFO: How are you reaching out to spread the word about Elysium and Basis?

Eric Marcotulli: We reach out in many ways, but we have strong communication with our customer base, and in fact their feedback directly informs our scientific direction as well. We have also found our customers to be strong advocates for Basis and Elysium, so [word of mouth](#) is definitely a big factor in spreading the word. We've also received some favorable stories in the media, including [Fast Company](#), [New York Magazine](#), and the [Observer](#), which helped spread the word about Basis and about Elysium's mission. Beyond that we focus on creating a high quality product. This is critical because, on the manufacturing side, we comply with FDA Current Good Manufacturing Practices. And when it comes to doing clinical trials and selling a product to customers that's meant to do something — in the case of Basis, to raise NAD+ levels — the product needs to be very pure, and reliably so. So focusing on the quality of the product is the core of our marketing strategy and everything else stems from that, including how we communicate, what channels we use, and so on.

CEOCFO: With so many questionable claims about health items, how does the science at Elysium shine through?

Eric Marcotulli: There are an estimated 77,000 dietary supplements on the market, with more than 5,000 new products introduced each year. Needless to say, not all of these are well-studied. In our view there's an existing framework for letting the science shine through, which is to follow the process for conducting research in a rigorous way and publishing it in peer-reviewed journals, which is what we did recently with our trial that studied the safety and efficacy of Basis. Beyond that, we don't make extravagant health claims. We focus on sharing our research, and the growing body of research about NAD+, with customers — and we trust that they'll be empowered to make the best decision for their health.

CEOCFO: Who is using Basis today? Demographics?

Eric Marcotulli: Our customers are adults from all over the U.S., but generally speaking they are people who care about being proactive about their health. This includes many retired people from the baby boomer generation who maintain active lifestyles, younger people who consider themselves biohackers, scientists who are familiar with the

research on NAD+, and so on. One interesting fact is that 10 percent of our customers are doctors.

CEO CFO: What is involved in manufacturing?

Eric Marcotulli: Basis is manufactured in CGMP (Current Good Manufacturing Practices) certified facilities that adhere to all regulatory compliance set forth. Each lot of Basis produced undergoes thorough testing to ensure purity and safety and we work with independent, third parties agencies who regularly audit all touch points along our supply chain to ensure we are meeting industry standards.

CEO CFO: What is the strategy for the next year or so for Elysium Health?

Eric Marcotulli: We have multiple clinical trials in the works studying Basis and other compounds that we'll potentially develop into products. Our current product-related research includes preclinical or clinical trials for skin, microbiome, muscle, cognition, circadian rhythm, and kidney health. So you can definitely expect a second product in 2018. We'll also be expanding our footprint in research — currently we have partnerships with Harvard, Oxford, and Cambridge — by partnering with other universities and health institutions. And, we'll continue to welcome new members to our SAB, whose expertise is invaluable, and to grow our team in all areas of the business at our headquarters in New York City.

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