

THEMATIC CATALYSTS

Life Sciences Innovations

Rapid and game-changing advances in science and computing have propelled revolutionary and innovative developments in diagnostic tools, disease-modifying therapies, and robotic surgeries across the healthcare services industry.

This healthcare evolution can potentially transform the medical outcomes and prognosis for patients worldwide. It may also provide a dynamic healthcare environment within which many innovative businesses enjoy a long runway for growth.

At the Marsico Funds, we seek to capitalize on this global Life Sciences Innovations theme and consider it a compelling catalyst for long-term investment opportunity across a spectrum of healthcare disciplines.



Genetic Targeting: An Innovative Frontier

Twenty years ago, the completion of the human genome project opened up a myriad of possibilities for life sciences innovation. The project identified, mapped, and sequenced nearly all human genes—an estimated 20,500—from a physical and functional standpoint.

Notably, this information became publicly available for scientists worldwide. This scale of shared data was unprecedented in a scientific community intent on building high walls around any intellectual property.

Game-Changing Therapies

This genetic mapping led to a greater, much more in-depth understanding of a wide range of diseases. With this better understanding of the genome and genetic manifestations of diseases, scientists and medical professionals are now able to take a much more targeted approach to diagnostics and treatments.

We see significant impacts today in a variety of exciting, innovative life sciences developments including:

- » Gene therapy innovation: Inserting genetic material to either turn off a gene that is negatively expressing itself in the manifestation of a chronic disease or condition or to turn on one that may mitigate that condition. As a result, for instance, meaningful gene therapies for the visually impaired or those suffering from spinal muscular atrophy are being developed.
- » Monoclonal antibody-based immunotherapy: The innovative medical treatment of a wide range of diseases, including viral infections such as COVID-19, and diseases such as cancer, using synthetic proteins to trigger a targeted immune system response.

Technology-Driven Progress

Advancements in computing power are also radically increasing the opportunities for life sciences innovations including:

- » Data aggregation: The ability to aggregate and analyze data from millions of patients to more effectively predict, manage, and treat a wide range of health conditions is leading to better outcomes, changing the trajectory of diseases.
- » Robotics is rapidly changing the face of surgery: Robotic-assisted surgery is providing surgeons with better visualization—the surgeon sees a highlymagnified, high-resolution image of the surgical site leading to more precise surgery, potentially fewer complications, and less recovery time.

A Compelling Tailwind For Growth

At the Marsico Funds, we view life sciences innovations such as these as thematic secular catalysts and compelling tailwinds for long-term growth and investment opportunity. The following are examples within the Marsico Funds' portfolios of some innovative companies that we believe are leading this life sciences charge and their pioneering initiatives.

Groundbreaking Pharmaceutical Solutions

We continue to see opportunities in high-quality pharmaceutical companies such as Eli Lilly and Company¹ ("Eli Lilly"). The FDA recently approved the company's new drug Mounjaro for the treatment of type 2 diabetes. Mounjaro's prescription trends have exceeded expectations as the drug mechanism is more effective and convenient in dosing than older-line diabetes therapies.

Eli Lilly is also studying Mounjaro's efficacy for the treatment of obesity. Mounjaro activates both the GLP-1 and GIP receptors that impact glucose production and the response to food in the body, which is how it controls diabetes and suppresses appetites. By slowing the gastric emptying, patients feel fuller sooner, which reduces consumption of excess calories.

In clinical studies, Mounjaro usage resulted in an approximately 22.5% average body weight reduction compared to a placebo. As obesity treatment is a highly unmet medical need, the drug prospects appear favorable. Eli Lilly anticipates filing for approval of Mounjaro for the treatment of obesity by mid-2023.

Data Mining For Better Health

Another holding, UnitedHealth Group, Inc., is revolutionizing the use of patient data and using artificial intelligence ("AI") to enhance patient outcomes. The company has accumulated a "data lake"—a centralized repository designed to store, process, and secure large amounts of structured and unstructured data—and uses predictive analytics based on this data lake, to proactively anticipate and manage a wide variety of patient healthcare issues.

As a result, the company may be able to improve patient well-being, lower long-term healthcare costs, and drive engagement in clinical intervention programs. This Aldriven preventive medicine, with its focus on early-stage diagnostics, can be life-changing.

Science & Technology Innovator

We characterize Danaher Corp. ("Danaher") as an innovative and diversified life sciences leader. Focused in the areas of biotech, life sciences, and diagnostics, the company provides the analytical instruments, materials, and services for the research, development, and manufacturing of various products for the design and production of antibodies, cellular, and gene therapies.

We believe Danaher is at the forefront of the life sciences industry, developing and producing new therapies, testing new drugs, and providing critical diagnostic tools and software for clinicians to safeguard patient health. With roughly 80% of the company's revenues generated in the life sciences and diagnostics space, Danaher's overall business is approximately 75% recurring with high incremental margins and ample free cash flow.



Industry Drivers, Dynamics & Outlook

We believe that the life sciences industry benefits from global research and development spending, coupled with robust pharmaceutical and biotech research funding. With scientists' deeper understanding of genetics, proteins, DNA, and personalized therapies, therapeutics and processing of information have become more complex, thus driving industry growth and global outsourcing.

With this in mind, we expect the outlook for life sciences to continue to be bright, and the persistence of advancements going forward. Over the next several years, the following dynamics should also be growth drivers in this uniquely innovative area.

It's All About The IP. An industry-wide race for intellectual property and the ownership of leading life sciences innovations may lead larger companies to acquire promising start-ups with compelling solutions.

Al Is In Its Infancy. We are in the early stages of understanding the potential of Al for augmenting and automating many healthcare practices and analyzing data to be used in driving better outcomes. We are excited about the many breakthroughs that have surfaced so far and the many more likely to come.

U.S. is likely to be an increasing challenge.

Many of the advances made by the companies we invest in are helping to extend human lifespans and improve the overall quality of life. We expect to see many more life sciences innovations in the field of human longevity.

Envisioning A Healthy Future

At the Marsico Funds, we seek to invest in life sciences companies that demonstrate visionary leadership and an appreciation for the growth opportunities and advances that life sciences afford—for patients, providers, and the innovative companies leading the charge.

About The Adviser

Founded in 1997, Marsico Capital Management, LLC, the investment advisor to the Marsico Funds, employs a high-conviction approach to the management of a select suite of growth-oriented domestic and international equity portfolios. Headquartered in Denver, Colorado, the firm managed approximately \$2.5 billion in assets as of January 31, 2023. The firm's founder, Tom Marsico, has over 40 years of experience in the investment management industry and is one of the industry's first managers to successfully implement high-conviction, concentrated portfolios.

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