GERBER | TAYLOR

"I think the biggest innovations of the 21st century will be at the intersection of biology and technology. A new era is beginning." -Steve Jobs

Biotechnology has many of the investing hallmarks we seek: a large, addressable market; an alpha-rich environment; and independent drivers of return. Gerber Taylor has actively invested in the biotech space since the mid-1990s. Today, we are more constructive than ever about the opportunity set and believe biotechnology is poised to enter a long period of growth and innovation, rivaling what we have seen in information technology over the past thirty years. In April 2020, we launched a dedicated biotechnology strategy. Here, we revisit the thesis and share some exciting developments.

Q: What makes biotechnology so interesting right now?

First of all, the need is great: the world's population is about 7.8 billion people and is predicted to reach 9.0 billion by 2050; 25% of the U.S. population is expected to be over 65 by 2050; over half of adult Americans suffer from at least one chronic illness; and the treatment of chronic illnesses accounts for over 85% (or $2.7 trillion) of annual healthcare spend. We expect demand to grow in the emerging markets with the continued rise in the middle class and increased access to insurance. Despite years and vast amounts of money spent on medical research, only about 20% of the ~30,000 identified diseases currently have treatments.

While definitions vary and the line between pharmaceutical companies has blurred, biotechnology firms essentially focus on solving health care problems using new science, new technologies or new approaches. Today, the sector is set to benefit from a convergence of increased demand for new medical therapies and growing supply fueled by unprecedented innovation. In addition to biological discoveries, large scale health data and emerging technologies are leading to breakthroughs. A dramatic improvement in the cost and speed of sequencing the human genome (all of the genetic material of a person) is just one example: in 2001, it cost $100 million and three to four years to analyze a human genome vs. $600 and less than a day for the same process in 2020.

Q: That's interesting from a health care perspective, but what's the investment case?

Most importantly, it's an inefficient space. While there are some larger biotech companies, there is a large and growing opportunity set in small and microcap names (~700 in the universe) with little to no analyst coverage. Importantly, the trend in recent years has been for smaller companies in the biotech ecosystem to drive innovation, with some estimates that over 60% of new drug applications are derived from therapies originated in small and mid-cap companies. Drug development risk is high with an approval rate of less than 15% for those just entering the clinical phase. Furthermore, many of these smaller companies have a high cash burn rate and rely on external capital raises dependent on reported progress.

Mispricings arise from this uncertainty and can be exacerbated by "tourist investors," retail trading and index flows. In our opinion, a combination of medical expertise and investment acumen provides a distinct edge, along with significant risk mitigation.

Second, there are numerous value creation/destruction events which are idiosyncratic and independent of the overall macro environment or market direction. These include major clinical and regulatory events (more than 250 per year) that drive price movements of 15% or more. In addition, capital market transactions (IPOs and mergers and acquisitions) are very active in this segment. One data point is that large pharma spends more than $80 billion per year acquiring biotech firms, often at premiums of 40% or more.

Q: Can you describe an investment that exemplifies biotech investing?

Prothena truly encapsulates the vast potential, technical advancements, market inefficiencies, and role of manager skill in biotech investing. After a high-flying IPO in 2012, Prothena was largely discarded by investors in the wake of some disappointing news. One of our managers was able to acquire a large block of its stock in the summer of 2019 <u>at a valuation less than the cash on its balance sheet</u> from a firm under redemption pressure. In their 2020 year-end letter, our manager highlighted this investment, saying:

> *Imagine a biotech company with a top-tier management team, a rich pipeline of assets, lucrative collaborations with premier pharmaceutical partners, and proof of concept clinical data in some of medicine's biggest unmet needs. Prothena matches this profile, and yet, has an enterprise value of just over $100 million. We believe Prothena is one of the most undervalued companies in the biotech sector today. It is also an example of how we continue to find mispriced opportunities despite the overall market. … Prothena remains a classic Margin of Safety investment with a number of embedded call options any one of which can be worth 5-10x upside from current levels.*

Recently, our manager revisited this investment in light of the FDA's controversial granting of accelerated approval for Biogen's aducanumab (ADUHELM is the trade name) for the treatment of Alzheimer's disease. This was the first new drug approved for Alzheimer's since 2003 and was made against the recommendation of the FDA's own advisory panel.

> *The ADUHELM approval changed Prothena's margin of safety and risk profile overnight. The approval — based on a biomarker that can be measured quickly and cheaply rather than functional outcomes that require thousands of patients, hundreds of millions of dollars, and many years to measure — was a best-case scenario for Prothena. Prothena has a 10x more potent version of Biogen's drug that will be in the clinic next year and can be administered subcutaneously at home rather than at infusion centers. Prothena will be able to demonstrate in human patients that they have a better version of aducanumab within eighteen months.*
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> *A meaningful treatment for Alzheimer's will be able to address a patient population that is large by any measure. There are six million Alzheimer's patients in the United States, with that number expected to double by mid-century. … Although Prothena's value has increased to $2.5 billion this year, that is still just a small fraction of what a wholly-owned,*

best-in-class Alzheimer's drug will be worth. We couldn't be more excited about the company's future.

Q: Why do you favor a hedged approach to biotech?

The inherent risk of developing new therapies, coupled with a relatively common high cash burn rate, provides a catalyst which can quickly sort the winners from the losers. This creates robust opportunities on both the long and short sides. Having said that, a high cash burn rate is not as direct a signal as it might be in other industries as the economic structure of these firms is often reliant on serial capital raises. A positive trial can quickly turn a company that appears to be on the verge of bankruptcy to one flush with cash. Again, it really comes down to that combination of deeply understanding the underlying medical science, the potential size of the market, and a fundamental analysis of the financial position. We have found this to be a rare commodity and invest with a relatively small number of high conviction managers in this space.

Q: What about the risks?

Investors considering the biotech space should definitely be cognizant of the inherent risks and volatility associated with this strategy. Even the most talented managers are expected to experience material drawdowns (20-30% or more), despite investing in hedged portfolios. Volatility can be triggered by numerous factors, including general capital market selloffs, FDA actions, and political/regulatory announcements related to the healthcare sector, among others. By definition, biotech exposure is concentrated in one sector. Given these facts, investors should view this as a long-term investment allocation and be prepared for bouts of short-term volatility. Although our approach to this strategy bears little resemblance to any index, recent performance of the S&P Biotechnology Index illuminate both the volatile and uncorrelated nature of the returns. This index is down -12.2% year-to-date through July 31, 2021 during a period when the S&P 500 was up 17.7%. In sharp contrast, the Biotechnology Index was up 48.0% in calendar year 2020 when the S&P 500 was 18.4%.

Q: What else would you want potential biotech investors to know?

We believe we are in the early stages of a transformation in health care which will focus on more tailored and personalized care, incorporate new forms of treatment like gene therapies, quickly develop responses to new illnesses like COVID-19, and cost-effectively address diseases affecting smaller populations. These advances will have a significant positive impact on the quality of lives, including those in the emerging markets. We believe biotech meets the premise of impact investing which is defined by the Global Impact Investing Network as "investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return."

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Tara Elliott

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