



EditGenetics—3 Ways of Improving Lives

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Harnessing technology to solve known problems in healthcare and food is something we've been exploring in depth. In the first installment of our Convergence series, which examines five growth themes that are shaping the future of investing, Hugo Scott-Gall spoke with Global Research Analysts Tommy Sternberg, CFA, and Ben Loss, CFA, to discuss aspects of what we call "EditGenetics."

Watch the video or read the recap below.

Gene Therapy

Harnessing our understanding of genetics and advancements in related technologies to solve known problems both in healthcare and agriculture is a topic we've been focusing on in some depth.

About 40 million people in the United States and Europe have a rare genetic disease, and finding cures for these patients has created an enormous investment opportunity.

Gene therapies modify or replace existing genes that are either missing or defective in some way. In this way a gene therapy approach does more than just treat the symptoms of disease; you're curing the illness.

The market opportunity for gene therapies is huge. Assuming a price of \$100,000 per patient, the total addressable

market could theoretically be as big as \$4 trillion.

Biologics

Sustainable agriculture is an interesting growth area, particularly biologic solutions, given food production will need to rise materially over the coming decades to meet expected population growth.

The products and techniques that have enabled yield improvement have come at a cost, both from a human and environmental perspective. This highlights the need for new solutions to drive incremental yield improvement while at the same time minimizing health and environmental risks.

Given the global food market is roughly \$5 trillion, we see a rich opportunity set for growth, particularly in biologic solutions.

Liquid Biopsy

Liquid biopsy—another technology made available through advancements in the field of genetics—is a simple blood-based test that detects whether you may have early-stage cancer.

Early cancer detection can increase survival rates significantly, but the gold standard of detection—tissue-based biopsy—isn't practical for an otherwise healthy patient.

We've sized the total addressable market for liquid biopsy at \$50 billion, and some estimates value it up to \$75 billion. Either way, the market is only about 1% penetrated, leaving plenty of runway for future growth and attractive investment opportunities.

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