

# GENOSCALER™: A NEXT-GENERATION HIGH THROUGHPUT ENZYME, PATHWAY, AND GENOME ENGINEERING PLATFORM

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Genome engineering approaches that enable rapid, cost-effective strain optimization are essential to modernize biotechnology and usher in new and more sustainable biomanufacturing processes that can address the world's growing needs for valuable, environmentally friendly solutions. Infinome Biosciences is developing its GenoScaler™ platform to deliver on a broad portfolio of product opportunities across diverse markets. GenoScaler™ is enabled by CREATE<sup>1</sup>, a scalable, efficient, ultra-high-throughput CRISPR-based genome engineering technology that can rapidly introduce 10,000+ precision edits across *E. coli* and *S. cerevisiae* genomes in both single and multiplexed (combinatorial) formats. We demonstrate highly scalable, efficient editing with insertions, deletions, and substitutions that have been challenging to make using traditional CRISPR methods. We further demonstrate the use of these edited populations in forward engineering campaigns to rapidly identify beneficial mutations. Along with integrated, state-of-the-art technologies and strategies for HTP phenotyping, smart automation, scale-up, informatics, and machine learning, the platform is broadly applicable and can accelerate the speed and efficiency of engineering strains by orders of magnitude compared to traditional methods, allowing Infinome and its partners unprecedented access to the bioeconomy through Lean Bioengineering™.

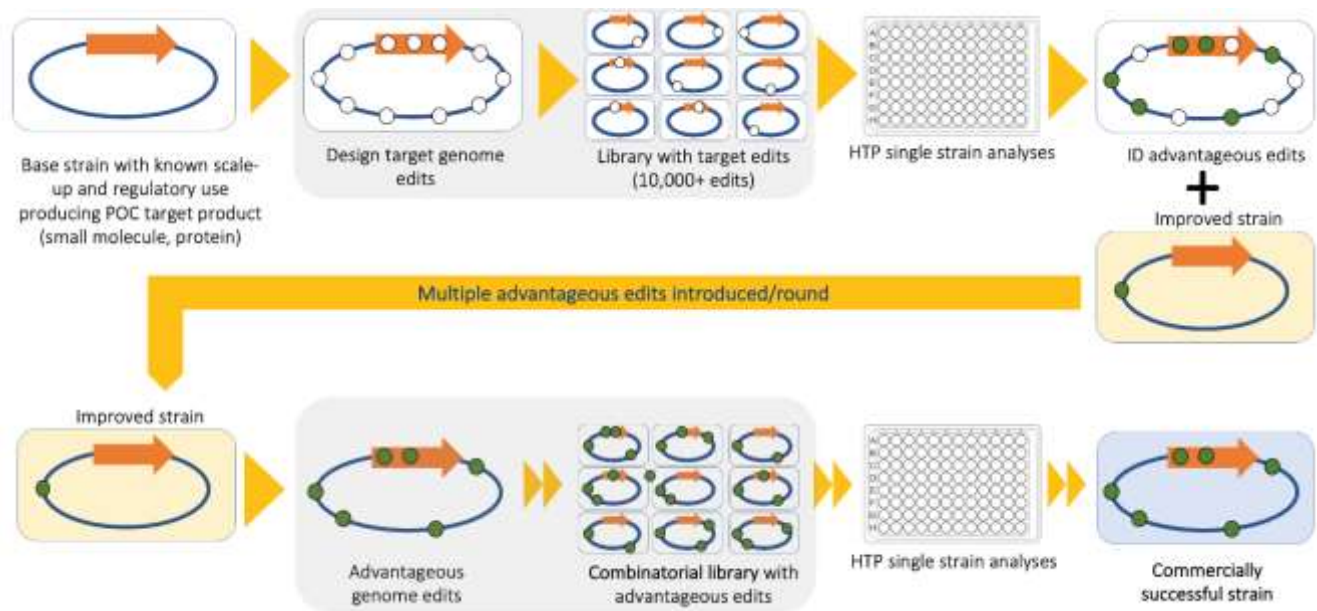


Figure 1 – GenoScaler™: A Next-Generation, Full Stack Strain Engineering Platform

<sup>1</sup>A. D. Garst *et al.*, *Nature Biotechnology* **35**, 48–55 (2016).