

OVERCOMING THE RISKS IN SYNTHETIC BIOLOGY PRODUCT DEVELOPMENT THROUGH RAPID, GENOME SCALE METABOLIC ENGINEERING

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New genome engineering approaches for the efficient development and manufacturing of sustainable, cost-effective bioproducts are sorely needed. Long development timelines, massive investments and high risks of failure are holding the industry back. To address these acute challenges, Inscripta developed GenoScaler™, a first of its kind, rapid microbial genome engineering platform. GenoScaler™ is a scalable, cost-effective, high-throughput CRISPR-based genome engineering technology stack that can rapidly design, build, and test 10,000+ precision edits across *E. coli* and *S. cerevisiae* genomes to efficiently survey and optimize over many enzymes in parallel, effectively engineering at the pathway and genome scales. Along with integrated, state-of-the-art methods for high-throughput phenotyping, smart automation, scale-up, informatics, and artificial intelligence, the platform is broadly applicable and can accelerate the process of synthetic biology product development by orders of magnitude, resulting in unprecedented gains in scale-up performance compared to traditional methods for microbial strain development. Learn about the challenges facing genome scale engineering and how the platform enables Inscripta and its partners fuller access to the bioeconomy, from concept through to scale-up and commercial production and ingredient supply, using the newly developed principles of Lean Bioengineering™.