

TeselaGen Biotechnology Releases New Protein Optimization Toolkit for Automated Biotherapeutic Drug Design and Development

New functionality accelerates the design and development process, reducing R&D costs of biotherapeutics and vaccines

SAN FRANCISCO, May 20 -- [TeselaGen Biotechnology](#) today announced the release of a new protein optimization toolkit for biotherapeutic drug design and development, introducing significant enhancements to the company's flagship TeselaGen® operating system to make designing and developing pharmaceuticals and biotherapeutics faster and less expensive. The new capabilities, easily accessible via the cloud-based platform, simplify the design of highly complex combinatorial protein libraries and support artificial intelligence models for optimizing new peptides and proteins. New application programming interfaces (APIs) and integration tools have also been extended to further enhance users' access to the new capabilities.

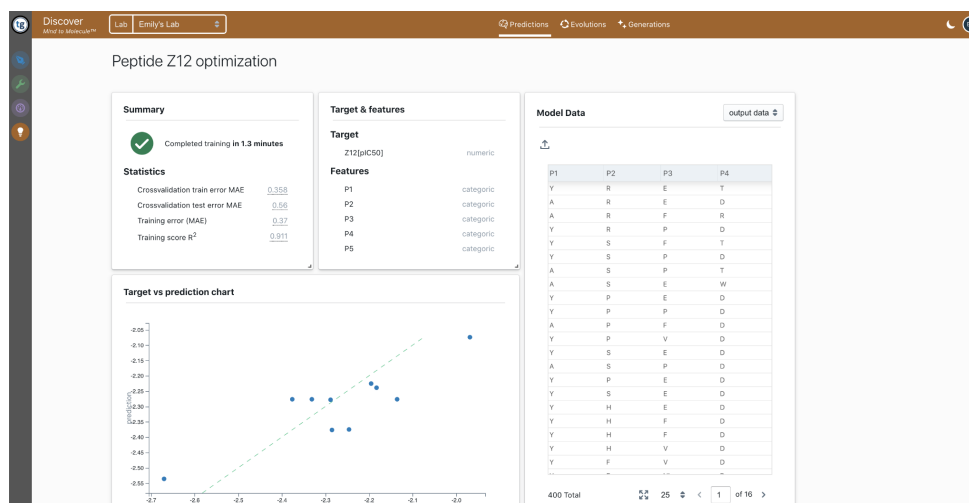
TeselaGen integrates the [power of AI](#) with a single end-to-end platform for design, construction, data gathering, and analysis of bioproduct performance, from pharmaceuticals to food and fabrics, significantly accelerating time to market and reducing costs. The platform's DESIGN, BUILD, TEST, and DISCOVER modules enable researchers to effectively collaborate across an organization's product development pipeline to design and build experiments, standardize and share data, and learn and preserve project results by embedding them in a machine learning model.

TeselaGen's DESIGN is an intuitive, user-interface driven module that allows scientists to design highly complex combinatorial libraries. With this new release, the DESIGN now supports amino acid parts that can be efficiently mapped to DNA. TeselaGen can then automatically generate molecular biology protocols for efficiently synthesizing and assembling the corresponding DNA libraries.

TeselaGen's DISCOVER now supports artificial intelligence models that can recommend new peptides and proteins based on the training of supervised and unsupervised learning models. The platform also supports the modeling of unnatural amino acids and multicriteria optimization of proteins. R&D groups can utilize the TeselaGen operating system to speed the discovery process. Datasets are uploaded and organized in the platform and immediately useful for model building within TeselaGen's DISCOVER module.

TeselaGen has demonstrated that it can increase the design and build speed of biological products and reduce the costs associated with research & development by an order of magnitude. Current partnering companies are using the new capabilities for designing antibodies and optimizing their binding affinity, titer, specific productivity, immunogenicity, or other phenotypic variables of interest. Researchers are also looking to TeselaGen for rapidly engineering new vaccines - using methods like virus-like particles (VLPs), DNA, and RNA vaccines - opening the door to attacking rapidly mutating RNA and retroviruses such as influenza, HCV, HIV, or coronaviruses.

“Biological Design Automation can speed the generation and optimization of leads and accelerate the development of biologics, from therapeutic proteins to vaccines and cell therapy,” said Eduardo Abeliuk, co-founder and CEO of TeselaGen. “With this major new release, we will help companies further reduce the time-to-market of these new biopharmaceuticals. Early results show that the ability to use our machine learning tools from both a protein and DNA-centric view while including [non-proteinogenic amino acids](#) and [SMILES representations](#) has been a big benefit to precision machine learning.”



About TeselaGen Biotechnology

TeselaGen Biotechnology has developed the first artificial intelligence-enabled operating system for biotechnology, enabling the development and commercialization of high-performance bioproducts – from pharmaceuticals to food to fabrics – faster and easier than ever. TeselaGen® connects biologists, lab technicians, and bioinformaticians so that they can collaboratively design and build experiments, organize and standardize data and then test and continually learn from the data. TeselaGen has been deployed by Fortune 50 companies and emerging innovators in biopharmaceuticals, agriculture, and specialty chemicals. The company is privately held and based in San Francisco, CA. For more information, visit <https://www.teselagen.com>.