

Quine Biologics, StableBody Technologies, and 20/15 Visioneers Announce North American and European Strategic Go-to-Market Partnership for Holistic Rational Protein Design (AI/ML-Driven, Lab Validated)



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PENNSYLVANIA, NEW YORK, and WISCONSIN, May 21, 2024 /PRNewswire/ -- Today, **20/15 Visioneers**, a leading advanced science and technology management consulting and marketing services company along with **Quine Biologics Inc.**, and **StableBody Technologies LLC**, leaders in Structure-based de-novo antibody design and experts in Rational Protein Design, is pleased to announce the collaboration and partnership to produce Next Generation Rational Protein Design for the North American and European markets.

In the rapidly evolving field of immunotherapy, vaccine development, and diagnostics, the precision design of antibody sequences to target specific epitopes by using three-dimensional (3D) structures is at the forefront of scientific innovation. Harnessing intricate 3D structural insights enables research scientists to meticulously identify and modify key amino acid residues. Consequently, amino acids sequences can be rationally optimized for enhanced therapeutic efficacy and minimized off-target effects.

In addition, enhancing antibody thermal stability influences further antibody efficacy and applicability in manufacturing, distribution, and administration processes. Highly stable antibodies are paramount in targeted disease treatments, allowing for the development of antibody-based therapies that retain therapeutic efficacy over time. In diagnostic applications, antibody stability is essential for ensuring reliable and consistent test results, crucial for accurate disease detection, and ensuring such biologics effectively meet modern medicine and public health demands.

Quine Biologics is an expert in structure-based de-novo antibody design therapies that retain therapeutic efficacy over time. The Bespoke-A.B. design platform that focuses on protein structure, automates and identifies the selection of antibody CDR sequences and conformations. The technology uses a denoising diffusion deep learning model resulting in a modeled 3D structural representation of the novel antibody-antigen complex. The technology creates new levels of unmatched specificity and high affinity for the antibody-antigen interaction. This result heralds a new era of tailored therapeutic and diagnostic agents.

StableBody Technologies is an expert in antibody thermodynamic stabilization and affinity optimization. The AffiBio™ software application optimizes recombinant scFv characteristics such as stability, affinity, solubility, and aggregation through the identification of amino acid positions targeted for modifications is guided by the evolutionary responses observed in protein databases. The **StableBody Technologies** approach to protein stabilization improvements is heuristic in nature, meaning StableBody Technologies its data builds on itself and significantly reduces design work.

Protein primary sequences, their secondary structure information, and the numerous variants found within various protein databases serve as guides representing alternative protein folding solutions. Previous studies have shown that some amino acid sequence variations seen in these

domains destabilize the tertiary structure and other amino acid variations in the same sequence compensate by increasing stability. This sequence variation is used to rapidly search and identify the specific amino acid sites that may exert influence on tertiary structure stability.

The collaboration project will create Next Generation Stable Protein Reagents by:

(a) Improving the binding K_d by up to 300% for higher sensitivity and reduce reagent usage; and

(b) Improving stability properties, conferring longer shelf life, allowing for increased working temperatures by up to 25%, and eliminating cold chain issues for shipping and storage.

(c) Improving production efficiencies for reduced costs and time to market.

About 20/15 Visioneers

Based on over 30 years of experience, 20/15 Visioneers takes a holistic approach to scientific management consulting as we focus on Culture, Technology, Data, and Process. With our deep understanding of scientific informatics, we can "Visioneer" next-generation solutions and approaches that value scientific data-as-a-top asset and prepare the organizations for *insilico*-first (AI) approaches to R&D. Our client base includes early to late research and development, clinical, healthcare, materials science and agriscience. Please get in touch with **John F. Conway** from **www.20visioneers15.com** for more information.

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