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Cell-free selection of site-specific polypeptide binders via tethering

In vitro selection method for the engineering of protein-based high-affinity binders to targets of interest with potential pharmacological value

Technology No. 20170034

IP Status: US Patent Issued #10,724,076

Applications

- Protein based biologics
- Drug discovery screening

Technology Overview

A new method for isolating and identifying biomolecules that bind to a specific target epitope. This novel technology combines cell-free display, engineered protein scaffold libraries, and disulfide tethering methods into one optimized protocol that selectively enriches for polypeptides that are target-site specific. This technology can be used to identify polypeptide therapeutics for treating a broad range of diseases including cancer, where it is critical to ensure therapeutics target cancerous mutations without affecting normal proteins.

Phase of Development

TRL: 1-3
The research is at a conceptual stage with some supporting in vitro data. Proof of concept demonstrating the technique can be used to perform a bulk enrichment of the peptide library against a test protein has been obtained.

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

Please contact our office to share your business’ needs and learn more.

Researchers

- **Casim Sarkar, PhD** Associate Professor, Department of Biomedical Engineering

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