



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

Camelid single domain antibody phage display library

Highly diverse camelid antibody phage library to screen for binders to nearly any molecular target

Technology No. 2020-220

Applications

- Drug discovery
- Direct evolution of proteins
- Epitope mapping
- Modulation of enzyme activity

Technology Overview

Highly diverse ($\sim 7^{10}$) camelid single domain antibody phage display library constructed from the blood, bone marrow and spleens of a dozen llamas and alpacas. This library has been validated in Professor LeBeau's lab, positively identifying 6-7 binders to specific proteins. This research tool can be used to isolate novel single domain antibody fragments against recombinant proteins and cell lines for various biotechnology applications in industry and academia. In fact, this library has yielded a possible drug called Nanosota-1C-Fc, which has demonstrated preventive and therapeutic efficacy against live SARS-CoV-2 infection in both hamster and mouse models (see <https://doi.org/10.7554/eLife.64815>)

Desired Partnerships

This phage library is fully developed and available for license. Please contact our office to learn more.

Researchers

- [Aaron LeBeau, PhD](#) Assistant Professor, Department of Pharmacology

References

The development of Nanosota-1 as anti-SARS-CoV-2 nanobody drug candidates(2021),
<https://doi.org/10.7554/eLife.64815>, Elife

<https://license.umn.edu/product/camelid-single-domain-antibody-phage-display-library>