Full integration of advanced lab research with AI-driven *in silico* workflows

MindWalk's comprehensive solutions to today's biologics challenges

Andra Li, Sander van Duijnhoven, Cynthia de Bont, Ellen van Geffen, Simon Cuppens, Sebastien Lemal, Arthur Kuipers, Felix Nicolaus, Shuji Sato, Arnout Van Hyfte, Ilse Roodink
MindWalk, mindwalkAI.com. Contact: ssato@ipatherapeutics.com

In vivo discovery of antibodies (Abs) harnesses the depth and diversity of natural B cell repertoires of each host species. Rabbits in particular provide unique advantages such as the ability to generate Abs with high affinity and exquisite specificity to challenging targets like small antigens or motifs with minute molecular differences. Despite these desirable properties, rabbit monoclonal Abs (mAbs) have been mostly developed for diagnostic and research purposes and have seen limited commercial success in drug development compared with their rodent counterpart. Recently, numerous rabbit-derived antibodies have entered the clinic, and two such molecules have been approved by the FDA for commercialization. MindWalk has seen its share of success in rabbit antibody discovery, exemplified by the successful phase 1 completion of a rabbit-derived humanized antibody discovered by MindWalk for OncoResponse. As the world leader in antibody services, our decades of research experience converge with advanced AI to identify, engineer, and de-risk molecules for clinical readiness. With our expertise in rabbit antibody discovery, we harness cutting-edge technologies to generate superior antibodies with deep characterization with a phenotypically rich output. Our AI-enabled *in silico* workflows such as highly scalable epitope binning and accurate epitope mapping accelerate discovery while multiparametric engineering and optimization processes like conditional selectivity, humanization and immunogenicity assessment enable finetuning of the antibody leads to maximize the natural immune repertoire's benefits.

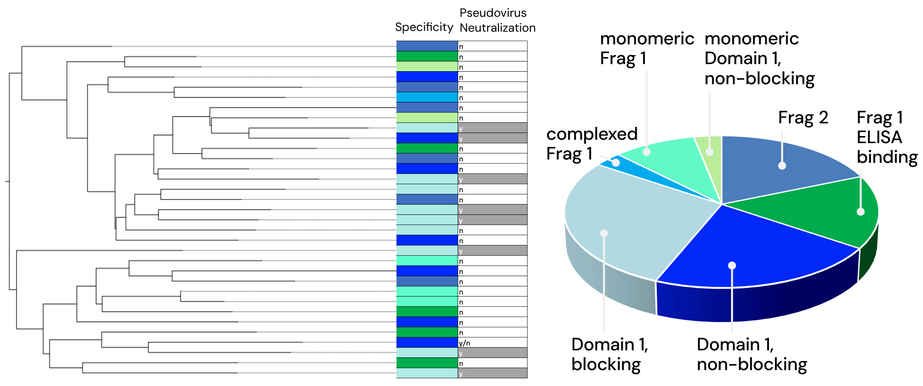
Rabbit B cell Select®—diversity-driven discovery

Robust *in vivo* discovery based on experience and expertise

Industry leading, high efficiency *in vivo* discovery engine elicits and identifies endogenous mAbs with rich layer of superior phenotypes.

Diversity by design delivers expansive clonal variety

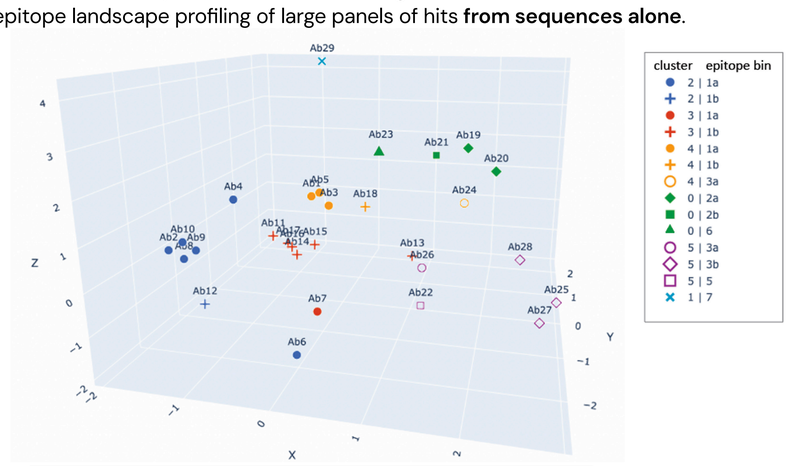
Decisive program design from robust immunization strategies to high efficiency B cell discovery identifies breadth of Ab clones with desirable functionality.



LensAI™ discovery—infinitely scalable and accurate profiling to accelerate selection

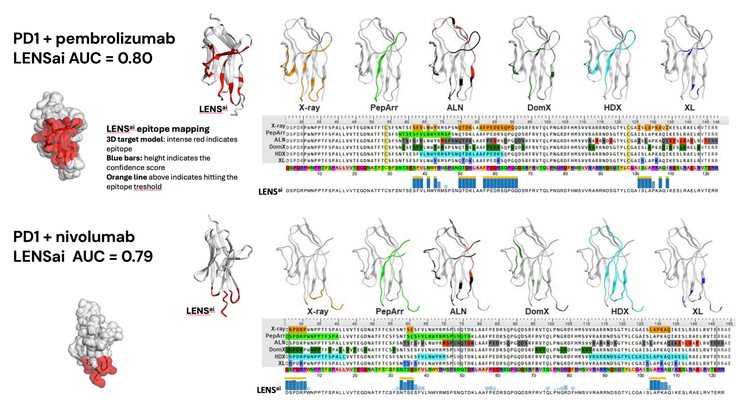
Epitope binning through paratope clustering

Rapid and infinitely scalable for determining clusters of mAb clones for accelerated epitope landscape profiling of large panels of hits **from sequences alone**.



Epitope mapping with accuracy to match x-ray crystallography

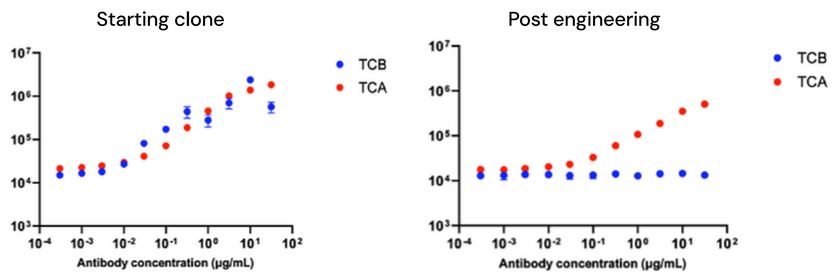
Highly accurate epitope definition without the need for physical material enables to accelerate selection with confidence.



LensAI lead optimization—engineering and multiparametric de-risking

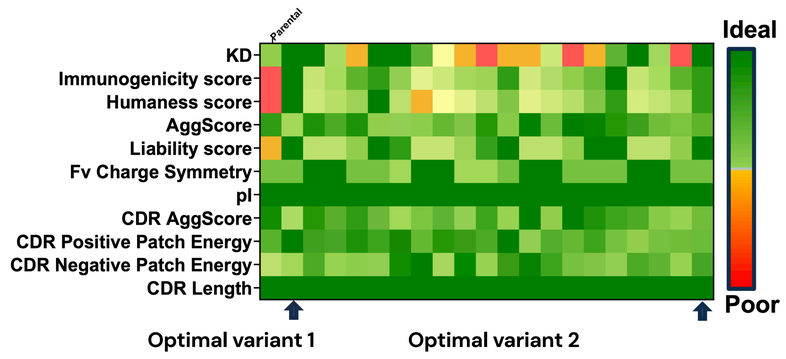
Engineering conditional selectivity through molecular modeling

Accurate and state-of-the-art molecular modeling enables engineering novel phenotypes and functionalities to suit needed modalities.



Comprehensive de-risking by multiparametric optimization crystallography

Non-iterative, data-driven selection provides insight and clinic-ready assurance.



MindWalk offers a comprehensive end-to-end solution for streamlined Ab discovery and development backed by experience, expertise and innovation. Today's Ab drug development efforts demand the ability to interrogate large panels of functionally diverse, genetically distinct antibodies. Robust and innovative experimental methods combined with cutting-edge *in silico* technologies that are integrated from design to finish provide full versatility and adaptability to suit the needs for each unique project and accelerated therapeutic lead generation while minimizing risks for downstream clinical development.