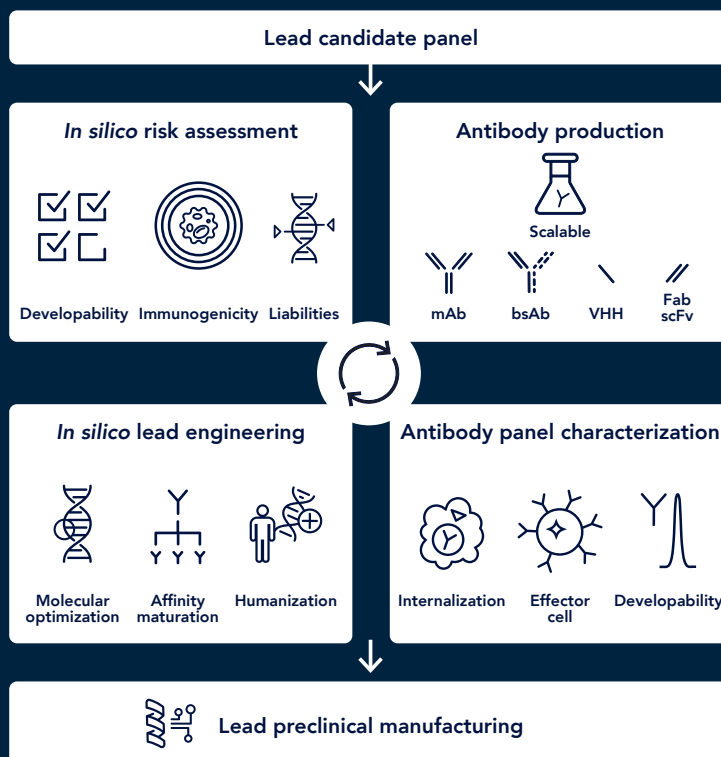# Antibody Development

IpA
IMMUNOPRECISE ANTIBODIES

Synergistic power: AI meets the wet lab

In vitro + *in silico* technologies

The IPA modern lab embodies the synergistic integration of wet lab and *in silico* methodologies, setting a benchmark for the drug development process. By harnessing the combined strengths of wet lab technologies and computational analysis, we're able to uncover lead candidates at an accelerated pace. This fusion not only facilitates high-throughput exploration but also instills cost and time efficiencies, ensuring a streamlined and de-risked path to the clinic. The evolution of this integrated approach is reshaping the landscape of drug development, prioritizing both precision and efficiency.

Discover how seamless data accelerates lead nomination

Lead candidate panel

In silico risk assessment
Developability   Immunogenicity   Liabilities

Antibody production
Scalable
mAb   bsAb   VHH   Fab scFv

In silico lead engineering
Molecular optimization   Affinity maturation   Humanization

Antibody panel characterization
Internalization   Effector cell   Developability

Lead preclinical manufacturing

Key benefits

- Accelerate lead selection

- More informed efficiencies every step-of-the-way

- Increase clinical suitability

- Time savings through high-throughput

- De-risk path to clinic

Critical insight every step-of-the-way in the complex path to the clinic.

The HUB of Biotherapeutic Intelligence™

1. ROOTS 2022, Antibody Discovery Services and Platforms Market (4th Edition), 2021-2035;pp.118

IPA Antibody Development

Key benefits: unmatched throughput, speed, scalability, and accuracy

Fully integrated

Transforming your therapeutic lead selection process
Early *in silico* risk profiling *and* optimization enables more informed triaging and seamlessly integrates with high quality wet lab for downstream validation.
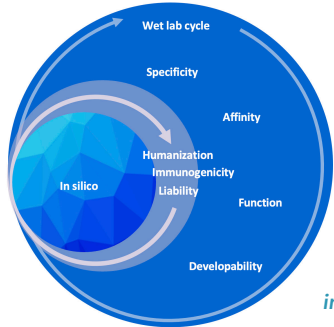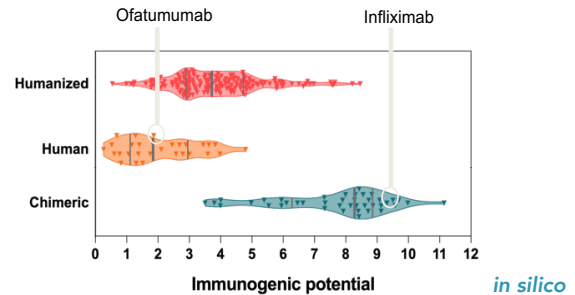

in silico | in vitro

Scalability

In-depth, *in silico*-driven risk assessment – relative ranking towards clinical benchmark mAb library
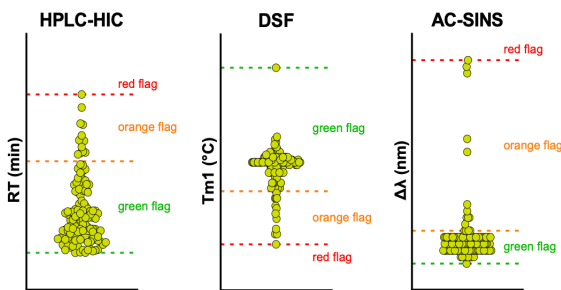• Developability profiling
• Immunogenicity analysis

in silico

High-throughput

Diverse wet lab methods to characterize broad panels of antibodies to prioritize best suitable candidates
• Various binding/functional characterizations
• Profiling of physicochemical properties

Example methods. Data is relatively ranked towards the red/orange/green flag areas of the clinical benchmark mAb library.

in vitro

Optimization

Optimize clinical success with our scalable, expert-designed workflows
• Humanization
  > 97% of campaigns yielded humanized antibodies with binding properties equal to parental mAb
• Affinity maturation
  100% success rate, including mAbs targeting multispanners
• Molecular optimization
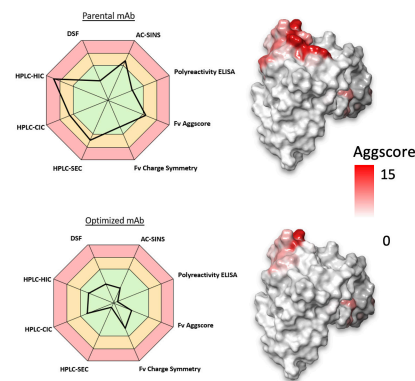
Developability profile radar charts summarizing relative ranking data of a parental mAb and an optimized variant.

in silico | in vitro

De-risking

IPA's in silico-driven de-risking platform accelerates your path to the clinic
Make more informed lead selection decisions, and increase the value of your therapeutic with in-depth risk mitigation

| Target Validation & Immunization | Function-First Discovery | Enhanced Biophysical Characterization | Optimization & Engineering | Immunogenicity & Developability Profiling |