# GBB Great Bay Bio
Ai Advance Bioprocessing

# AlfaDAX
## AI-enabled Developability Assessment and Optimization Platform

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## AlfaDAX — Platform Introduction

Humanized (>90% human)

Humanization

Sequence recommendation

Murine sequence

Optimize in sync

Affinity testing

Murine (0% human)

Affinity

Developability

Drug efficacy assessment in vivo/in vitro

AlfaCell cell line construction
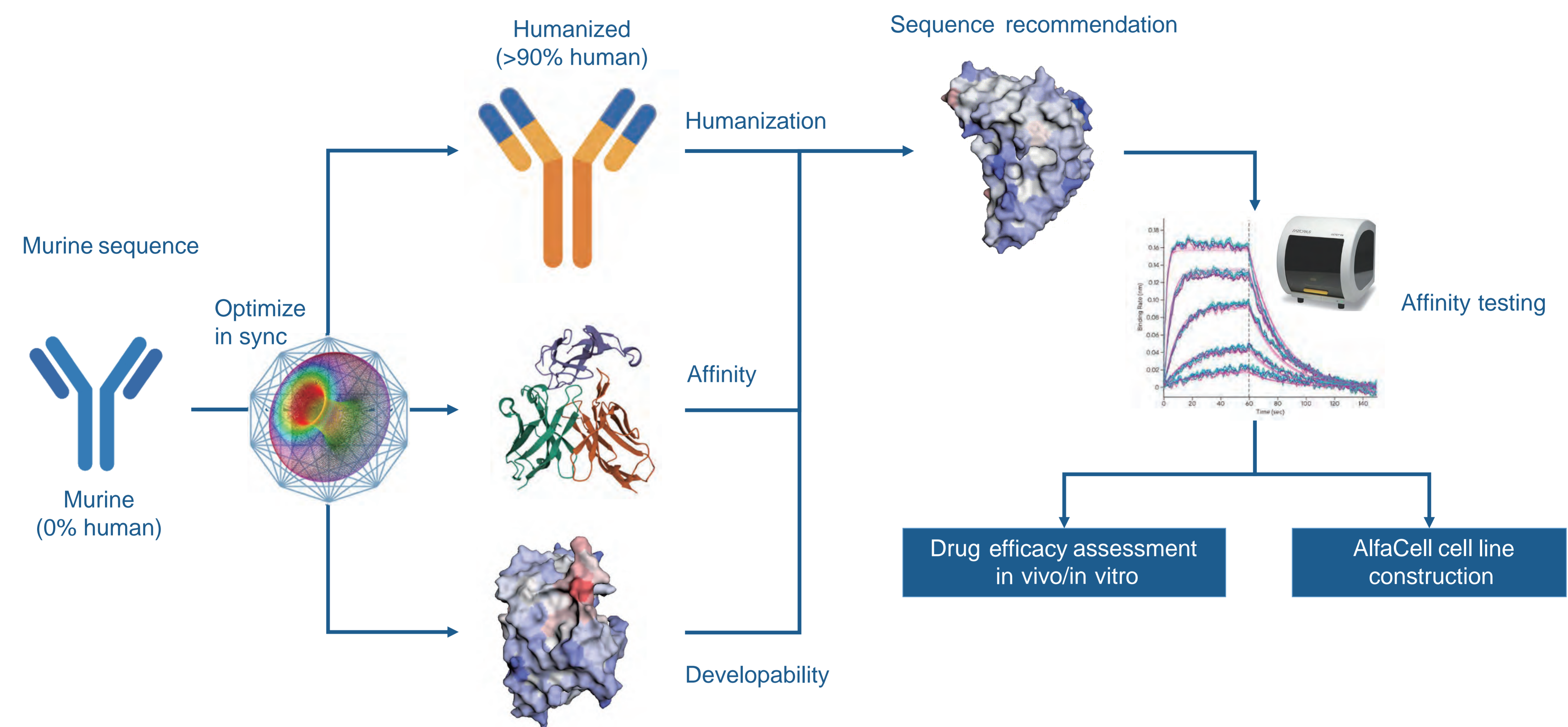
**Structure simulation and assessment** using in-house AI algorithm

**Humanization, affinity and developability** be optimized simultaneously

Based on **>1000 antibodies** reliable cut-off value verification

**PCC to stable cell line** Ensure the antibody development

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## Accurate — Provide Verified Cut-off Value for Antibody Developability

Accuracy (based on >1000 antibodies)

| | |
|---|---|
| 120.00% | |
| 100.00% | |
| 80.00% | |
| 60.00% | |
| 40.00% | |
| 20.00% | |
| 0.00% | |

Positive charge patch (PCP) · Negative charge patch (NCP) · Hydrophobic score (HS) · Hydrophobic patch (HP) · Asymmetric charge score (ACS) · Stability score (Stab.) · Aggregation and insolubility (AggInsol) · Non-specific binding (NSB)
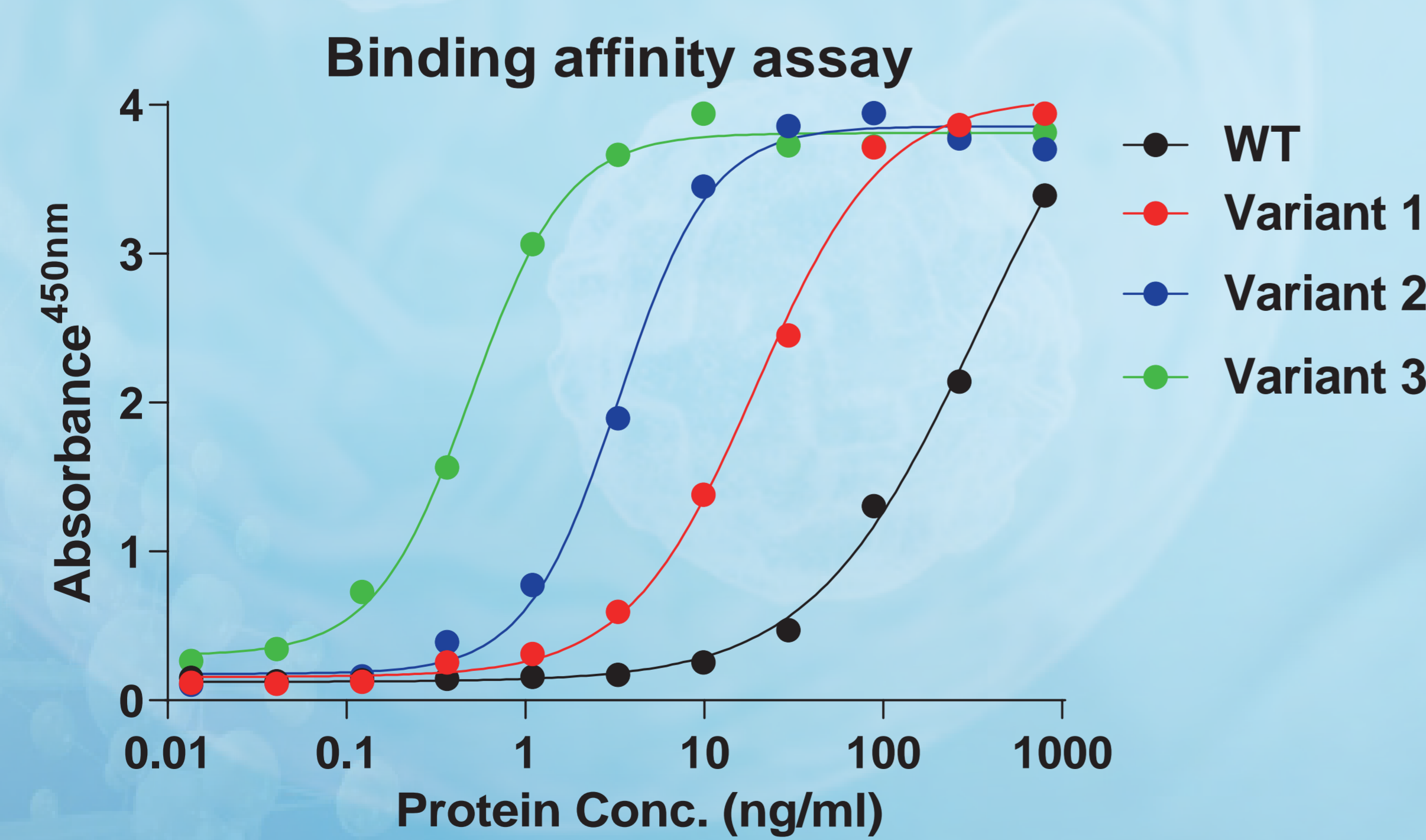
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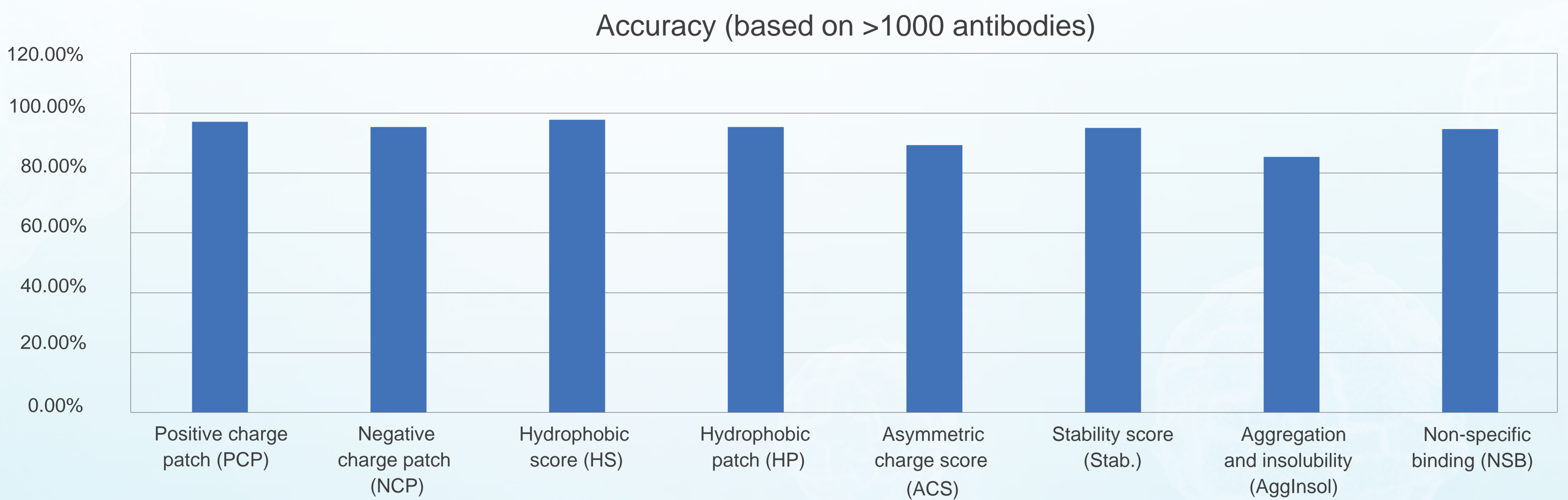
## More Candidates — Generated > 50 Optimized Candidates with Different Characteristics

*In silico* screening

Wet lab test

Benchmark2
Benchmark1
Acceptable

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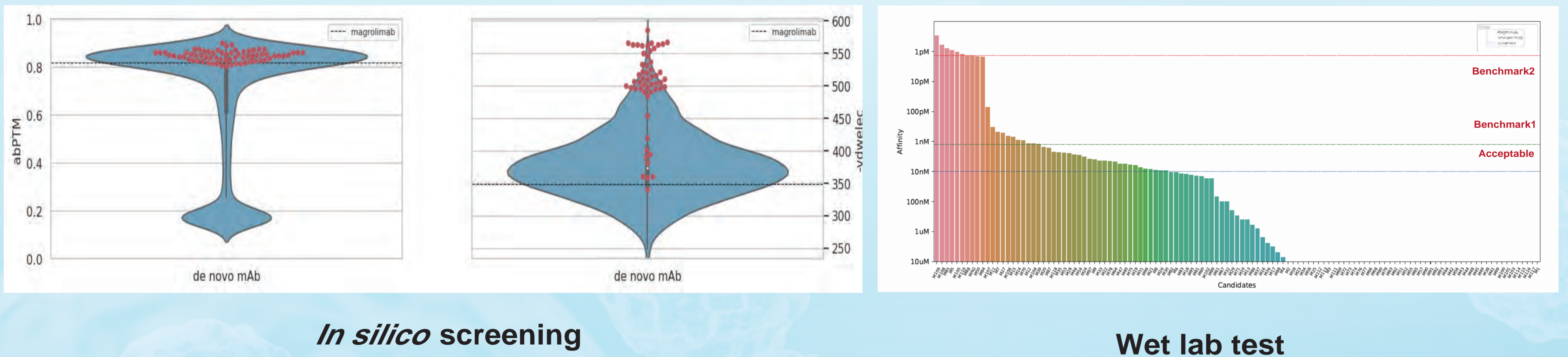
## "3-in-1" — Simultaneously Optimize the Affinity, Humanization and Developability

**Binding affinity assay**

- WT
- Variant 1
- Variant 2
- Variant 3

Absorbance$^{450nm}$

Protein Conc. (ng/ml)

| Sample ID | EC50(ng/ml) | Ratio |
|---|---|---|
| WT | 338.4 | 1.0 |
| Variant-1 | 19.4 | 17.4 |
| Variant-2 | 3.3 | 102.2 |
| Variant-3 | 0.5 | 676.8 |