Affimer®

Affimer binders:
Affinity Purification Tools

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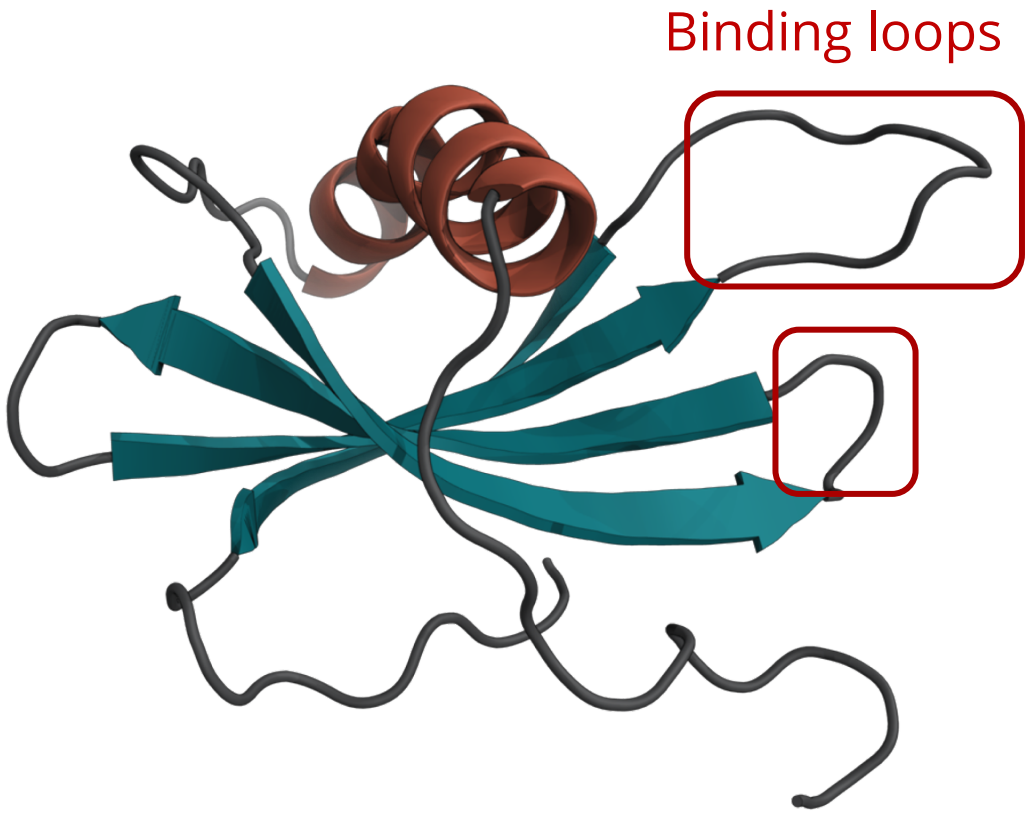
What are Affimer binders?



Alternative to antibodies as affinity reagents

- Small single domain proteins
  98 aa, 10 kDa (without inserts)
- Derived from the Cystatin family protein fold
- No cysteines or PTMs
- Interactions generated through insertion of random sequences in loops 2 & 4

- Multiple display libraries with diversity >10^{10}

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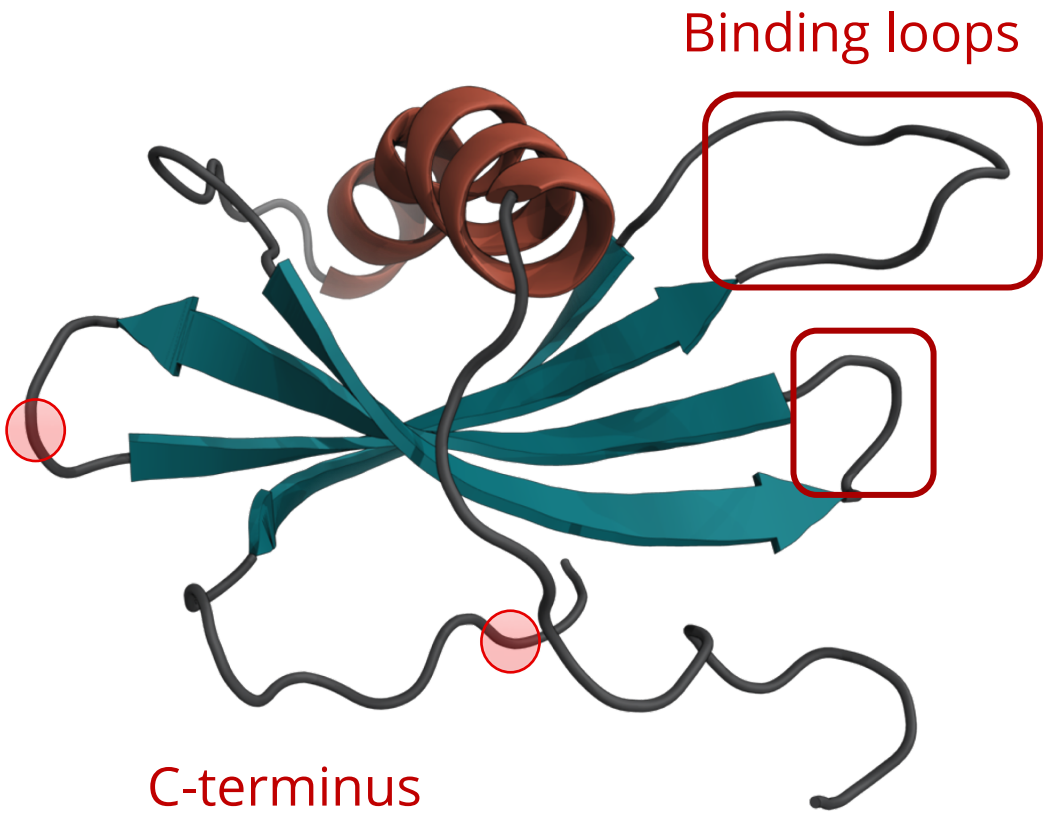
The Affimer Advantage



- Engineerable
  - Designing specificity and targeting of difficult targets
- Rapid Development
  - 12 week screening and development timeline
- Ease of Manufacturing
  - High yield - Expressed in *E. coli* – (up to 100s of mgs/L, easy purification)
  - No cysteines or PTMs
- High thermal and chemical stability
- Flexible Formatting
  - Both chemical and genetic functionalization options
  - Site directed amine and thiol chemistries
  - Site directed genetic fusions, multimers, and protein tags
  - Controlled orientation

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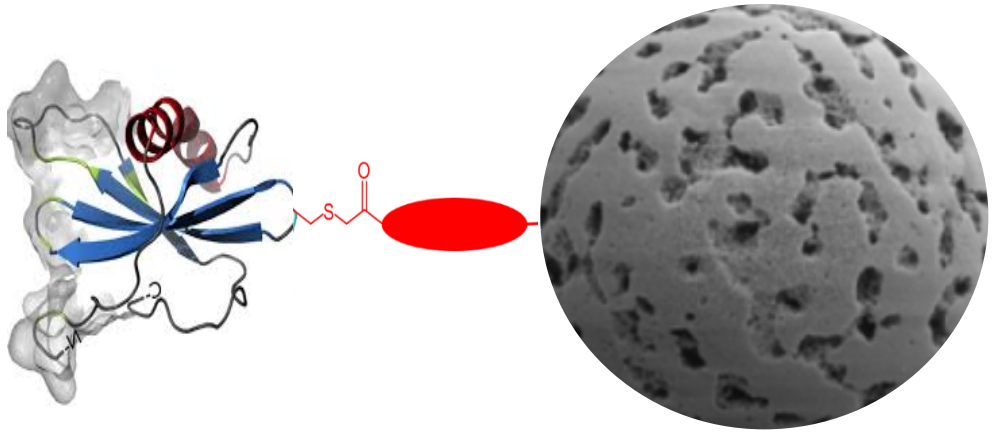
Avacta's Approach

We develop alternative binders with distinct advantages over classical approaches for affinity purifications.

- Custom Affimer Ligand Development Services
- Bioprocess and R&D Purifications
  - Antibody Purification
  - Protein Purification
  - Viral Vectors and Gene Therapies
- Sample Preparation and Depletion
- Analytical Separations for IP-MS



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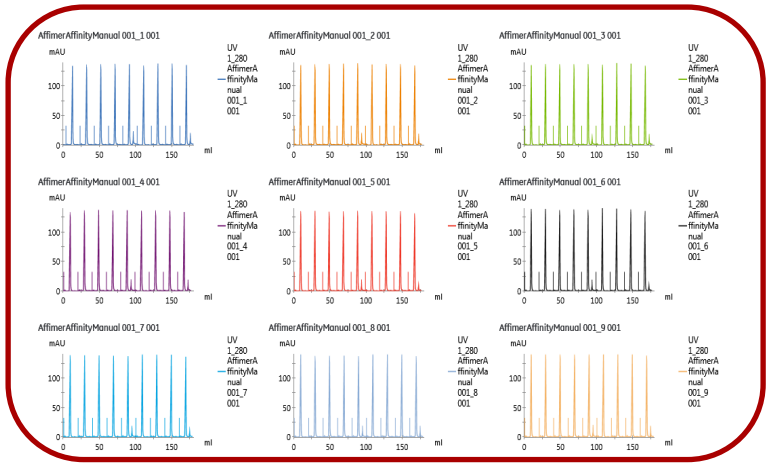
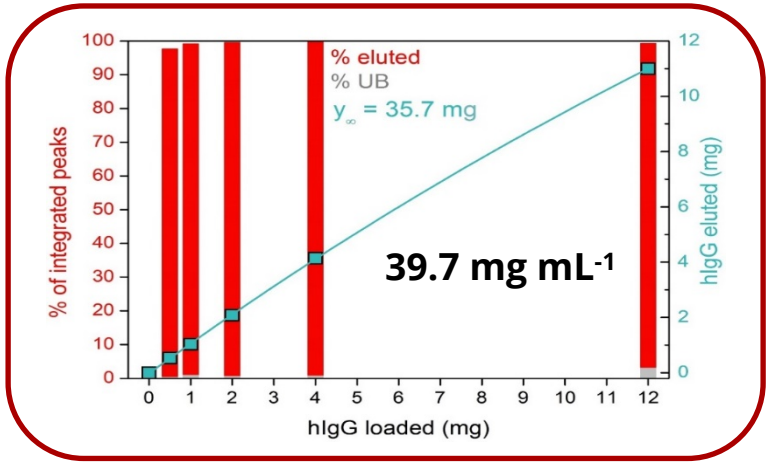
Benefits of Affimer Separation Tools

- High stability allowing for CIP (100mM NaOH)
  - >98% efficiency after 80 cycles
- Low costs of production for scalable manufacturing
  - High yield in a simple bacterial production system
- Stable across a wide range of pH's and solvents
  - Good tolerance of organic solvents (25% DMF/DMSO/DMA)
  - Extremely low leaching
- Customizable options catering for capacity, specificity, and formatting
  - Compatible with various chemistry and site directed orientation
  - Several orientation options
  - High binding capacity





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Affinity Resin Validation

- Custom Affimer affinity ligands developed on-demand
- <3 month development timeline
- Formatted onto resin in consistent orientation, flexible formatting options
- Affimer candidates validated as small scale affinity tools

- Transferred to partners for large scale production as needed

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For further information please contact:
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