

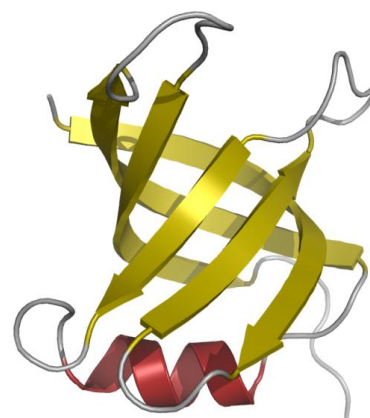
Feb 2011

A unique class of protein drugs and diagnostics

Antibody drugs and diagnostics have changed the face of modern medicine – yet their high development costs, complex manufacturing processes and relatively poor stability restrict their potential. OBodies are a new class of high-specificity binding protein with several important advantages over the conventional antibody approach.

Key advantages

- Small size (15-fold smaller than antibodies) – potential for excellent tissue penetration.
- Produced in *E. coli* – lower cost of goods than antibodies.
- No disulfide bonds – potential for intracellular applications.
- High stability (bacterial OBodies stable to 85°C) – enables the development of diagnostic kits with long shelf-lives or for use in harsh environments without refrigeration.
- Wide range of binding targets, including: proteins, small molecules, sequence-specific DNA/RNA, RNA stem loops, cell-surface oligosaccharides, metal ions and catalytic substrates.
- Avoids royalty stacks associated with the antibody space.
- Excellent potential for applications in therapeutics and diagnostics, including rapid diagnostic kits for infectious diseases.



IP position

Patent applications have been filed.

Partnering and investment

Research and development collaborations and partnerships are sought for the development of OBodies within the therapeutic and diagnostic markets. Strategic partnerships and early-access relationships are also being pursued in the wider life science market.

Technology

OBodies' novel platform technology is based on a small, ubiquitous protein domain – the OB-domain. In nature, the OB-domain has evolved as a highly flexible binding domain, found in a wide variety of functional roles. We are able to exploit this natural flexibility, by selecting a candidate domain from the appropriate organism and engineering high target specificity and affinity. Proprietary libraries based on human and thermophilic bacterial OB-domains are under development for human therapeutics and diagnostics, respectively.

	Bacterial library	Human library
Residues/S-S bonds	86 amino acid residues/no S-S bonds	89 amino acid residues/no S-S bonds
Protein size	10 kDa	8 kDa
Display technology	Phage display	Phage display
Library size	10 ⁹ (10 ¹¹ under construction)	10 ¹¹ (under construction)
Expression system	<i>E. coli</i>	<i>E. coli</i>
Yield	~30 mg/L	Expected at ~30 mg/L
Affinity	High nM (low nM in progress)	Expected low nM

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