**β-Bodies**

- antibody mimetics w/ultrahigh affinity & specificity

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**Value proposition/USP**

The technology will enable a licensee to provide customized antibody equivalents designed to recognize almost any surface of a protein or biopolymer.

Value generation in both the diagnostic and therapeutic markets.

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**Business Opportunity/Objective/Commercial Perspectives**

Small peptides which can be synthesized using standard peptide chemical methods

- Simple and fast generation, selection and synthesis
- The peptide sequence of the antibody mimetic can be generated by computer-based methods for target proteins with a known 3D structure.
- Very large repertoire of recognition molecules is available.

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**Technology Description/Technology Summary**

Typically, the antibody mimetic is a peptide of up to 26 amino acids equal to less than 3 kDa.

- The unique peptide sequence gives the antibody mimetic a very stable 3D structure.
- The antibody mimetic can bind to its target compound with a Kd of down to 10⁻⁹.
- Just by natural amino acids there is > 10¹³ different β-body molecules to choose from.

Applications include therapeutic or neutralizing β-bodies and in vivo use for control of cellular function.

For detecting the presence of a target compound in a sample, the β-body may be linked to a detectable label or it may be used in a sandwich assay.

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**Development Phase/Current state**

For the first time molecular recognition and structural properties of molecules have been segregated in β-bodies allowing molecular design for specific recognition of any biomolecule. β-Bodies have been designed and tested for 65 different proteins by computer-based methods. The selectivity of recognition is excellent. The technology is ready for any target protein with a known 3D structure.

Beyond this design, it is also feasible to use combinatorial selection of these antibody mimetics towards proteins for which the structure is unknown.

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