



## Advanced Antibody Engineering

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Monoclonal antibodies (mAbs) have had a huge impact on both diagnostics and treatment of diseases. However, it is still a challenge to design, evaluate and compare the right functions, as well as to optimize them for optimal specificity, affinity, avidity, stability, solubility, expressability, effector-functions, valency, payload(s), etc. Let acib do it for you!

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### BACKGROUND

acib key researchers Prof. Florian R ker and Dr. Gordana Wozniak-Knopp are world-renowned experts on antibody engineering. They have e.g. founded the company F-star Therapeutics (currently 100+ million dollar company NASDAQ-listed company), published the book 'Introduction to Antibody Engineering' (ISBN 978-3-030-54629-8), headed the Austrian CD-lab for Innovative Immunotherapeutics, as well as a plenitude of industrial projects and teaching students in Antibody Engineering at the University of Natural Resources and Life Sciences, Vienna (BOKU).

### TECHNOLOGY

The 'Modular Antibody Technology' developed by Prof. R ker and Dr. Wozniak-Knopp allows the use of Fcabs i.e. Fc fragments able to bind antigens through engineered loops in their CH3 domain, thus creating bi-specific antibodies (binding with their modified Fc-terminus, as well as with their Fab-fragments). They can also modify the CH3-region to form heterodimeric antibodies and mastered fusion of antibody fragments for the generation of IgG-like multi-valent multi-paratopic antibodies to elicit T-lymphocyte-mediated killing more efficiently. They have also developed a method for simplified directional coupling of toxin warheads to antibodies without impairment of reactivity with target cells or negative impact on their biophysical properties. The expertise and methods that acib can offer include phage and yeast display, molecular simulation and modelling, supported by excellent available infrastructure for generation of wet-lab results.

### OFFER

Under protection of a CDA/NDA we provide you with professional strategies for engineering your antibody of choice. Any IP developed in such a project would fully belong to the investor/industrial partner.

### acib-EXPERTS:

Prof. Dr. Florian R ker  
Dr. Gordana Wozniak-Knopp

### AVAILABLE FOR:

- Investments
- Joint Research Projects
- Contract Research

### DEVELOPMENT STATUS:

Technology Readiness Level 2-5  
(Technology validated in lab)

### IPR:

Will be generated for our industrial partner / investor

### KEYWORDS:

Antibody Engineering  
Rational Design  
Directed Evolution  
Heterodimeric Antibodies  
Bi-Specific Antibodies  
Multivalent Antibodies  
Humanized Antibodies  
Modular Antibody Engineering  
Antibody-Drug Conjugates (ADCs)  
Prolonged Half-Life  
Increased affinity

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