



Structural Biology

Structure-function elucidation using experimental methods and computer modeling ... acib provides 'structural support' for your research!

BACKGROUND

To understand the functions of proteins at a molecular level, it is often necessary to determine their three-dimensional structure. Thus, protein structures allow you to e.g. rationalize an enzymatic mechanism, design site-directed mutations with the intent of changing function or to study the effect of a novel biotherapeutic.

TECHNOLOGY

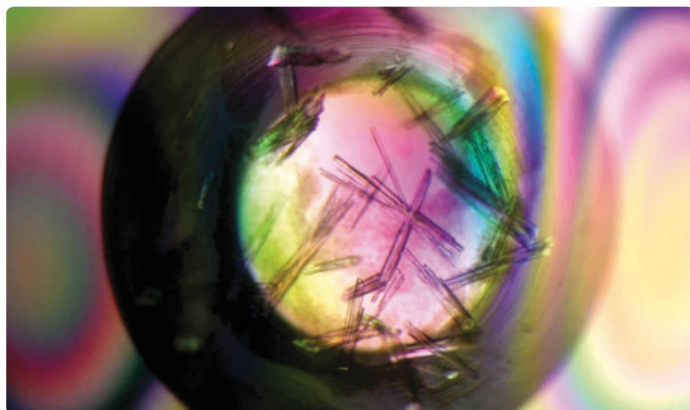
acib has an expert structural biology group, conducting protein X-ray crystallography and cryo-electron microscopy (cryo-EM) on proteins and protein-ligand complexes of interest. Depending on the method individual steps include initial protein crystallization trials, crystallization optimization, grid screening data collection, data processing, and structure solution.

In case similar protein models are available computer modelling can be performed to quickly yield homology based models for your R&D. In combination with our capabilities in molecular dynamics and docking simulations the interaction between your protein of choice and any compound/ligand can be further investigated.

In collaboration with the acib-spin off 'Innophore' advanced algorithms can perform structure-based protein searches based on physico-chemical structural properties (independent of protein sequences) to identify suitable proteins for biotechnological or medical applications.

OFFER

Under protection of a CDA/NDA we provide you with professional strategies for the structural analysis of your protein of choice. IP developed in such a project would belong to our investor/industrial partner.



EXPERTS

Prof. Dr. Karl Gruber
Prof. Dr. Tea Pavkov-Keller
Dr. Christian Gruber
Dr. Georg Steinkellner

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

- Biotechnology
- Structural Biology
- Computer Modeling
- X-ray crystallography
- Structural Bioinformatics
- Homology Models
- Molecular Dynamics Simulations

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