

Research in Industrial Biotechnology

Innovations from Nature



The **Austrian Centre of Industrial Biotechnology (ACIB)** is a non profit research company and conducts top level research in **Graz, Vienna and Innsbruck** making use of the tools and concepts of nature for industrial production. Expertise is provided by 19 institutes and departments of seven Austrian universities, high-ranking industrial companies and about 120 scientists.

Taking advantage of the synergies from cross disciplinary research in biocatalysis, protein structure/function relationships and protein production to enable new sustainable, eco-efficient, green industrial bioprocesses. Dedicated to the precompetitive research interests of the biotech industry and long term visions of the academic partners, ACIB has defined a cross disciplinary research programme to develop innovative scientific concepts and to create added value by condensed academic brain power.



Scientific Partners

Graz University of Technology
University of Graz
University of Innsbruck
Medical University of Graz

University of Natural Resources and Life Sciences, Vienna
University of Applied Sciences FH Campus Vienna
Vienna University of Technology



Industrial Partners

AB Enzymes

BASF

B&F Concepts

BIA Separations

BIOCRATES Life Sciences

bio-ferm

BIOMERX

BIOMIN Holding

Boehringer Ingelheim RCV

Cytec Austria

DSM Fine Chemicals Austria

F.Hoffmann-La Roche/Roche Diagnostics

Ingenza

Ionimed Analytik

Jungbunzlauer Austria

KWS SAAT

Lonza

Novartis Pharma

OrganoBalance

Sandoz

Siemens Österreich

Süd-Chemie

VTU Technology



Research Areas

Biocatalytic Synthesis

Promotion of the fundamental understanding of novel biotransformations for predictable environmentally benign “green” bioprocesses for the production of low molecular weight compounds in pharma, agro, food and feed, flavour and fragrance applications.

Enzymes for Polymers

Molecular knowledge about the action and interaction of enzymes on polymers and novel tools for the modification of biosynthetic polymers and the production of functional and intelligent polymeric materials.

Cell Design & Engineering

Detailed characterisation of major microbial and animal host cells for predictable protein production and quick identification and compensation of bottlenecks for new and difficult targets. Engineering of metabolic pathways for protein and metabolite production. Reduced development times for new cell factories by novel platform technologies.

Protein Design & Engineering

Identification of minimal functional elements of proteins and the mechanism of protein interaction with other molecules as a key to novel efficient bioprocesses. Research on the structure, function and performance of enzymes, pharmaceutical proteins and regulatory proteins at a molecular level enabling innovative knowledge based molecular engineering routes to create novel functional proteins and cell factories.

Bioprocess Engineering

Development and implementation of novel tools, materials and strategies for improved cultivation processes and for process control and management in the biotechnological production of chemicals, enzymes and biopharmaceuticals. Novel unit operations for downstream processing. Integration of all levels of bioprocesses and linkage of molecular information with online control and management of large scale processes as a key to more successful bioprocesses.



Management



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CEO & CSO



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Funded with the Austrian COMET programme by:

