

Collaborations within the DK

P. Macheroux

Expression of enzymes and enzyme variants as well as their biochemical characterization.

W. Kroutil

Biocatalytic characterization of berberine bridge enzyme variants.

R. Breinbauer

Synthesis of inhibitors of dipeptidyl-peptidases (DPP) for co-crystallization and soaking.

K. Zangger

NMR experiments to characterize ligand binding to DPP3.

Collaborating research groups

Marija Abramic

The group of M. Abramic from the Ruder Boskovic Institute in Zagreb, Croatia has extensive experience in the biochemistry and pharmacology of DPP3 enzymes. They have been working especially with the enzymes from yeast and humans and are interested in the specificity and regulation of these enzymes as well as their physiological role.

Christian Hübner

The group of C. Hübner from the Univ. of Lübeck, Germany uses single-molecule fluorescence spectroscopy to study conformational dynamics in proteins. In this collaboration we are going to use these techniques to investigate the substrate induced domain motion in human DPP3.

David Baker

The group of D. Baker at the University of Washington, Seattle, USA has pioneered methods for protein modeling and enzyme design. The focus of this collaboration is the redesign and engineering of enzyme active sites.

Sirano Dhe-Paganon

The group of S. Dhe-Paganon from the Univ. of Toronto, Canada is also involved in "The Structural Genomics Consortium" (SGC), which aims at determining 3D structures of human proteins of therapeutic relevance to diseases such as cancer and metabolic disorders. We have recently established a collaboration focusing on structural and biophysical studies of dipeptidyl peptidases.

Industrial partners

In the framework of the K2 centre 'ACIB – Austrian Centre for Industrial Biotechnology', industrial collaborations exist especially to DSM (Linz & Gelsen, NL), Sandoz (Kundl, AT) and BASF (Ludwigshafen, DE) and involve structural and modeling studies on enzymes, which are utilized in industrial biocatalysis.