# University of Greifswald & Polyclone Announce Collaboration for a Joint Research Project for Engineering Transaminase Enzyme

Germany, 21st March 2014 - Today, the Dept. of Biotechnology & Enzyme Catalysis of the Institute of Biochemistry at Ernst-Moritz-Arndt University Greifswald and Polyclone Bioservices announced a joint research project to engineer transaminase enzymes to broaden their substrate scope as these biocatalysts are very useful to make chiral compounds for the chemical and pharmaceutical industry. The joint research project will be headed by Prof. Uwe Bornscheuer and an application for funding has been submitted. The joint research project will leverage Polyclone's *in silico* enzyme engineering framework (eEF) to predict suitable modifications and Prof. Bornscheuer's group's *in vitro* expertise on transaminase enzymes to validate the *in silico* predictions.

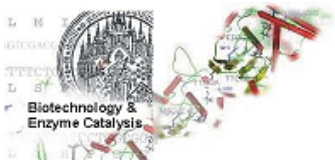
"This collaboration will strengthen our research on engineering transaminases as Polyclone's advanced computational tools will substantially help us in understanding different transition states of the enzyme to guide improvement of these very important biocatalysts" said Prof. Uwe Bornscheuer.

"This collaboration creates a fruitful feedback loop: Polyclone will predict how we can improve our enzymes, and we will check this experimentally. The results will help us in deepening our understanding of the transaminases, and Polyclone to validate and further strengthen their computer modeling algorithms" said Jun.-Prof. Matthias Höhne.

"The advances in molecular modeling and molecular dynamics techniques have been underutilized when it comes to understanding the behavior of biocatalysts. Many conformational and quantum mechanics attributes like reaction coordinates of thetransition states, electrostatic potential, pi-pi interactions and many more such descriptors provide an insight into the enzyme mechanism like never before. We hope this collaboration will address many such challenges in the future and help pave the way for better productivity of critical enzymes" said Naveen Kulkarni, CEO of Polyclone.

**About University of Greifswald:** The University of Greifswald was founded in 1456 andisoneoftheoldestacademicinstitutions in Europe. Over 12,000 students from all over the world receive the most modern academic instruction and exciting research opportunities. Research priorities at the University of Greifswald are in the life sciences, physics and geosciences, cultural interaction in the Baltic/Nordic region, as well as law and economics. The Institute of Biochemistry with ten Professors teaching the various fields of biochemistry is located in a modern building (opened 2006) and provides state-of-the-art equipment for education and research.

**About Polyclone:** Polyclone is an integrated biology company with expertise in molecular, cell & computational biology catering to the bio-pharma& healthcare industries. Polyclone's innovative solutions based on synergistic combination of *in silico* & *in vitro* approaches aim to facilitate nucleic acid studies, peptide analysis & design, protein & enzyme engineering and small molecule research in addition to providing technology support for cell culture studies and molecular diagnostics. Polyclone is headquartered in Bangalore, India with presence in Europe and US.

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