

Personal & Contact Details

Date of birth	22 nd May 1980	Nationality	German
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Academic Positions & Education

Junior professorship 03/2011 – present	Institute of Pharmaceutical Sciences, University of Freiburg, Germany , Pharmaceutical and Medicinal Chemistry / Chemical Biology (with parental leave 06/2014 – 03/2015). Offer from TU Delft, Netherlands (10/2015, tenure-track associate professorship) declined.
Postdoc 12/2010 – 02/2011	Institute of Pharmaceutical Sciences, University of Freiburg, Germany (DAAD return fellowship) in the group of Prof. M. Müller.
08/2008 – 11/2010	Department of Chemistry / Department of Biochemistry, University of Cambridge, UK , DAAD postdoc fellowship (08/2008 – 07/2010) in the groups of Prof. P. F. Leadlay (Biochemistry) and Dr. J. B. Spencer / Dr. F. J. Leeper (Chemistry).
02/2008 – 07/2008	Institute of Molecular Enzyme Technology, University of Düsseldorf / Research Centre Jülich, Germany , Research assistant in the groups of Prof. K.-E. Jäger and Prof. M. Pohl.
Ph.D. 11/2004 – 01/2008	Institute of Molecular Enzyme Technology, University of Düsseldorf / Research Centre Jülich, Germany Ph.D. in Biology (<i>summa cum laude</i>), supervised by PD Dr. T. Eggert, Prof. M. Pohl and Prof. K.-E. Jäger.
Studies 07/2003 – 04/2004	Institute of Plant Biochemistry, University of Düsseldorf, Germany Diploma thesis, supervised by Prof. G. Groth and Prof. H. Strotmann.
1999 – 2004	University of Düsseldorf, Germany , Studies in Biology (Diploma).

Research Experience

Junior professorship	New enzymes for chemical synthesis <ul style="list-style-type: none">▪ Structural and functional characterisation of enzymes▪ Synthesis and conversion of non-natural substrates to new products▪ Enzyme cascades and cofactor regeneration▪ Internal and external cooperation projects with groups from chemistry, structural biology and reaction engineering Current projects <ul style="list-style-type: none">▪ Structure, mechanism and phylogeny of chorismatases▪ S-adenosylmethionine (SAM)-dependent enzymes, SAM regeneration▪ Polyphosphate kinases, polyphosphate-dependent ATP regeneration
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Postdoc	<i>Studies on biosynthetic pathways of different polyketides</i> <ul style="list-style-type: none"> ▪ <i>In vivo</i> and <i>in vitro</i> experiments on the modification of biosynthetic pathways ▪ Chemical synthesis of building blocks and authentic standards ▪ Biochemical characterisation of heterologously expressed enzymes ▪ Identification of compounds using HPLC(-MS) und NMR spectroscopy
Ph.D.	<i>“The first R-selective hydroxynitrile lyase with α/β-hydrolase fold – characterisation of biochemical properties and structure-function relationships”</i> (Original title: “ <i>Die erste R-selektive Hydroxynitril-Lyase mit α/β-Hydrolasefaltung – Charakterisierung biochemischer Eigenschaften und Struktur-Funktionsbeziehungen</i> “) <ul style="list-style-type: none"> ▪ Biochemical studies on α/β-hydrolases ▪ Development and optimisation of enzyme assays ▪ Protein crystallisation and structure solution ▪ Involvement in industry cooperation projects
Diploma thesis	<i>“Characterisation of the of the ETR1 receptor protein histidine kinase domain from Arabidopsis thaliana”</i> (Original title: “ <i>Charakterisierung der Histidinkinase-Domäne des ETR1-Rezeptorproteins aus Arabidopsis thaliana</i> “) <ul style="list-style-type: none"> ▪ Cloning of a plant protein and heterologous expression in <i>E. coli</i> ▪ Comparison of different assay methods for kinases
Studies	Student assistant in the group of Prof. G. Groth <ul style="list-style-type: none"> ▪ Purification of membrane proteins ▪ Optimisation of expression and purification protocols

Teaching Experience

Junior professorship	Supervision and co-supervision of Ph.D., diploma, master and bachelor students, laboratory apprentices and interns <i>Lectures and seminars:</i> <ul style="list-style-type: none"> ▪ “Biocatalysts: From Nature to application” (lecture, 2015) ▪ “Enzymes in Pharmaceutical Chemistry” (lab course, 2013 – ongoing) ▪ Organic analysis (lecture, 2013) ▪ Scientific writing (seminar, 2012 - ongoing) ▪ Toxicology (seminar, 2012) ▪ Stereochemistry (lecture/seminar, 2011 - ongoing) ▪ Quantitative analysis (head of practical course, 2011 – 2013, 2016)
Postdoc	<ul style="list-style-type: none"> ▪ Supervision of student groups doing biosynthetic pathway coursework ▪ Lab supervisor of diploma thesis and internship projects
Ph.D.	<ul style="list-style-type: none"> ▪ Organisation and supervision of student courses ▪ Lab supervisor of diploma students, technicians and interns ▪ Organisation of projects and tours for visiting school groups
Studies	<ul style="list-style-type: none"> ▪ Supervision of undergraduate students in practical courses

Major Collaborations

National

University of Freiburg	Prof. Michael Müller Prof. Manfred Jung Prof. Stefan Günther Prof. Oliver Einsle Prof. Henning Jessen
Fraunhofer Inst. Straubing	Dr. Michael Richter
University of Stuttgart	Prof. Jürgen Pleiss
MPI Marburg	Dr. Tobias Erb

International

University of Cambridge, UK	Prof. Peter F. Leadlay
UCL, London, UK	Prof. Helen Hailes Prof. John Ward
University of Southampton, UK	Prof. Peter L. Roach

Funding Acquired

2017 - 2022	ERC Starting Grant ("A Flexible Platform for the Application of SAM-dependent enzymes (AppSAM)", European research Council, start in 10/2017): € 1.5 million.
2014 – 2019	Principal investigator (research project: "SAM-dependent methyltransferases in chemical synthesis") within the research training group 1976 ("Functional diversity of cofactors in enzymes"), Deutsche Forschungsgemeinschaft: € 286 568 (per PI, including overhead, total amount € 4.1 million).
2014	Juniorprofessoren-Programm Lehre (Funding for the improvement of the teaching environment): € 9 727.
2013 – 2017	Juniorprofessoren-Programm, Ministry for Science, Research and Art, Baden-Württemberg "Structure and function of chorismatases": € 149 100.
2014	Innovationsfond, University of Freiburg "Development of a flexible platform for ATP regeneration": € 20 575.

Prizes & Awards

- ERC Starting Grant 2016.
- Eugen-Graetz Prize 2016 (award for junior scientists of the Faculty of Medicine and the Faculty of Chemistry and Pharmacy, University of Freiburg).
- Independent principal investigator of the research training group 1976.
- Poster prize at the 2013 Biotrans conference (M. Richter, S. Aschwanden, J. Siegrist, L. Thöny-Meyer, J. N. Andexer: "Development of cascade enzyme reactions for methylation processes", Manchester, UK, 07/2013).
- DAAD postdoc fellowship (08/2008 – 02/2011).

Academic Administration (Freiburg)

- Member of the faculty board and dissertation committee of the Faculty for Chemistry and Pharmacy
- Equal opportunity commissioner for the Institute of Pharmaceutical Sciences (2013-2016)
- Member of the Institute of Pharmaceutical Sciences diploma committee

Reviewer Activities

Peer reviews for *ChemBioChem*, *Chem. Commun.*, *Org. Biomol. Chem*, *Beilstein J. Org. Chem.*, *World J. Microbiol. Biotechnol.*, *Appl. Microbiol. Biotechnol.*, *Process Biochem.*

Other Skills & Experience

Languages	German (native), English (fluent), French (basics)
Programming/ scripting	Basic experience with Java and Perl
Professional training	Attendance of university didactic courses with the aim to complete the "Baden-Württemberg-Zertifikat für Hochschuldidaktik" (Higher Education Didactics Certificate) and the "e-learning certificate" (ongoing). Pharmacy-specific e-learning workshop (07/2013). Project leader genetic engineering [§15 GenTSV (D)] (2012). Certificate "Biologische Sicherheit" (Biological safety), University of Freiburg, Germany (10/2011).

Waldkirch, 18th January 2017

