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## Manuel Liebeke, Ph.D.

Research Group Leader at Max Planck Institute for Marine Microbiology

### Academic career

- 2021/2022 **Visiting Professor** (Otto Monstedt Foundation) at DTU Copenhagen (CEMIST)
- since 07/2018 Independent **Research Group Leader** *Metabolic Interactions* at Max Planck Institute for Marine Microbiology, Dept. of Symbiosis (HoD N. Dubilier)
- 01/2014 Offer **Juniorprofessur Chemische Biologie** at University of Marburg - declined
- 11/2013 - 7/2018 **Research associate** at Max Planck Institute for Marine Microbiology, Bremen, Dept. of Symbiosis, main topics: development of methods for ultra-high resolution mass spectral imaging of metabolites and proteins in host-microbe interactions
- 2013 - 2015 Honorary research associate at Imperial College London, Dept. of Surgery and Cancer, Faculty of Medicine, Computational and Systems Medicine
- 6/2010 - 10/2013 **Research associate** at Imperial College London, Dept. of Surgery and Cancer, Faculty of Medicine, Biomolecular Medicine, HoD Professor Jeremy Nicholson, group of Dr. Jake Bundy  
Main topic: environmental metabolomics, metabolic profiling on invertebrates, analytical method development, mass spectral imaging of metabolites in animal and plant tissue
- 11/2010 **Ph.D.** (Dr. rer. nat.) in pharmaceutical biology with *summa cum laude*  
Thesis: "*Establishment and application of techniques for microbial metabolomics*", Advisor: Professor Dr. Michael Lalk
- 12/2006 - 5/2010 **Ph.D. student** at the Institute of Pharmacy, Dept. of Pharmaceutical Biology, University of Greifswald, Germany
- 12/2006 Approbation as pharmacist
- 06/2006 - 11/2006 Student apprentice (as part of Approbation) in a pharmacy, Greifswald, Germany
- 11/2005 - 05/2006 **Diploma student** at the Institute of Pharmacy, Dept. of Medicinal and Pharmaceutical Chemistry, University of Greifswald  
Thesis: "*Correlations between the cytotoxicity of anticancer drugs, especially platinum(IV) complexes and the enzymatic status in different human cancer cell lines*", Advisor: Professor P.J. Bednarski

## Education

2001 - 2005 studies in pharmacy at the University of Greifswald, Germany

Main fields: pharmaceutical chemistry, biology, technology and pharmacology

## Publications

>60 peer-reviewed publications (12 corresponding authorships, 16 first-/shared-first authorships), 1 book chapter

(for full list see 'List of publications' or GoogleScholar)

## Funding

2021-2024 Searching for solutions for Carbon-sequestration in coastal ecosystems: sea4soCieTy (total: 5Mio. €, own working package as PI: 400.000 €)

## Scholarships

2021 Otto Monstedt guest professorship to visit Danish Technical University Copenhagen (stipend, 140.000 DKK)

2009 - 2010 Alfried-Krupp von Bohlen and Halbach PhD scholarship "A Functional Genomics Approach to Infection Biology" (30.000 €)

2005 - 2006 "Apotheker-Paul-Marshall" scholarship for diploma thesis (12.000 €)

## Awards

2018 Mass Spectrometry Imaging Award 2018 by ImaBiotech for correlative imaging pipeline, awarded to PhD student B. Geier (5 000 \$)

2012 travel fellowship from "Fonds der chemischen Industrie"

2010 travel award received for presentation at "metabolomics society conference", Edmonton, Canada

2008 poster award "innovative method" at "20th natural products conference", Irsee, Germany

## Invited Talks

2022 Gordon Research Conference "Marine Natural Products"

2022 Gordon Research Conference "Molecular Basis of Microbial One-Carbon Metabolism"

2021 Seminar Series: Recent Progress in Infection Biology, University of Basel  
*Taking a Microscale Look at Host-Microbe Interactions: Visualising Cells and Chemicals in One Picture*

2021 Keynote lecture "Natural Products" at MiComm, Jena

- 2021 Otto Mønsted guest professor lecture, DTU Copenhagen *A microscale look at host-microbe interactions & visualize cells and their chemicals in one picture.*
- 2021 „2nd workshop on Metabolomics in Chronic Inflammatory Barrier Diseases”, CAU Kiel
- 2021 mSystems thinking series ‘Technologies in systems microbiology’ – online talk (400 participants)  
*Spatial Metabolomics of in Situ Host–microbe Interactions at the Micrometre Scale*
- 2019 International conference Microbial secondary metabolites in microbiomes, Copenhagen, Denmark  
*Chemical detection and visualization of microbial secondary metabolites - Spatial metabolomics of in situ, host-microbe interactions*
- 2018 International Imaging Mass Spectrometry Conference OurCon VI, Charleston, USA  
*High resolution mapping of microbes and metabolites exposes a network of beneficial metabolic interactions*  
8th nanoSIMS user meeting, Bremen, Germany  
*Spatial mapping of metabolites in host-microbe interactions*
- 2017 Mass Spectrometry Seminar of the Medical Faculty at the University of Münster, Germany  
*FISHing for molecules - probing metabolic signatures of intracellular bacteria with mass spectrometry imaging*
- 2016 Invited speaker and session convener at ISME Montreal  
*FISHing for Molecules - Probing metabolic signatures of intracellular symbiotic bacteria with mass-spectrometry imaging*
- 2016 Invited talk at the Microbiology and Infectious Disease Colloquium of the University of Greifswald, Germany  
*Spatial mapping of metabolites and proteins in host-microbe interactions at the micrometer scale*
- 2015 Invited speaker at OurCon Imaging Mass Spectrometry Conference, Pisa, Italy  
*Opening a new can of worms with high resolution multimodality imaging?*  
Invited speaker - Internal Seminar at Dept. of BioScience, University of Aarhus, Denmark  
*Spatial mapping of metabolites and proteins in host-microbe interactions*  
Invited speaker - Microbial Ecology Lecture Series, University of Vienna, Austria  
*Mass spectral imaging of metabolites and proteins in host-microbe interactions*

2014 Invited speaker - DFG Core Facility workshop "MALDI-MULTI", Bremen, Germany

*Diving deep – Mass spectral imaging in marine and terrestrial invertebrates*

## Teaching and Outreach

2014 - 2019 member of the faculty of the International Max Planck Research School for Marine Microbiology (MarMic) - Teaching in MSc program 'Marine Microbiology' practical and seminars "Symbiosis"

2015 Featured on the German and French TV show Arte Xenius "Der Regenwurm: Der König der Bodentiere"

2013 Teaching assistant "Toxicology and Pharmacokinetics", seminars

2008 - 2010 Teaching assistant "pharmaceutical biology", practical course and seminars

2008 - 2010 Assistant in instruction for diploma students in "pharmaceutical biology"

## Supervision

Currently supervised students:

Patric Borceau –supervisor for PhD thesis (since 2 years), Grace D'Angelo - supervisor for PhD thesis (1 year)

Past: official supervisor of 2 PhD thesis

(2021 - Dr. D. Michellod, 2020 - Dr. B. Geier), 5 Master theses (D. Jakob, P. Bourceau, M. Janda, D. Michellod, B. Geier), 2 Bachelor theses, planning and supervision of four internships for lab technician job (1 year each)

## Academic Service and Societies

Editor for Journals:

*mSystems* (ASM Press)

Ad-hoc Reviewer:

Analytical Chemistry, Analytical Biochemistry, Analyst, Biointerphases, Chemosphere, Current Biology, Environmental Science and Technology, Environmental Processes, Frontiers in Microbiology, Metabolomics, Metabolites, Metallomics, mSystems, Nature Microbiology, Nature Biotechnology, Nature Ecology and Evolution, PloS One, New Biotechnology, Journal of Proteome Research

Member of Societies:

Biochemical Society, Metabolomics Society, Mass spectrometry Imaging Society, German Pharmaceutical Society (DPhG), VAAM