

## **Prof. Dr. Irene Wagner-Döbler**

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### **Curriculum vitae**

since 2007 Professor for Microbiology, Technical University of Braunschweig  
2004-2018 Head of Research Group "Microbial Communication", Helmholtz-Center for Infection Research (HZI), Braunschweig  
2001 Habilitation, Technical University of Braunschweig.  
*Towards an understanding of microbial communities in nature and the development of novel microbiological remediation technologies*  
1988-2004 Post-Doc, Department "Microbial Ecology", GBF, Braunschweig  
1985-1988 Assistant of the Director, GBF, Braunschweig  
1984 PhD at the Ludwigs-Maximilians-University München:  
*Vertical migration of Chaoborus flavicans in the field*

### **Prizes**

2002 Schrödinger-Prize of the Helmholtz-Society for "A new technology for mercury remediation"  
2002 Vega-Award for "Excellence in Scientific Communication"  
2016 Walkhoff-Preis of the German Society for Dentistry  
Alumna of the Studienstiftung des Deutschen Volkes

### **Publications**

147 Publications in Scopus, 5670 citations, h-index 44 (March 2020).

### **Project leader**

Collaborative Research Center Roseobacter of the German Research Organisation (DFG)  
<https://www.tu-braunschweig.de/forschung/zentren/brics/forschung/roseobacter/index.html>

Selected previous projects:

- BMBF Systems Biology e:bio: Joint Project e:biofilm
- BMBF Systems Biologie MedSys: Joint Project BioInSys
- EU Coordinator in the 4., 5. and 6. Framework Program: Joint projects and demonstration projects on mercury remediation

Participation in expeditions with RV Polarstern and RV Sonne.

Design, construction and operation of a Mobile Laboratory.

Design and construction of an industrial scale plant for mercury remediation, operation in Germany, Czech Republic and Poland.

### **Cooperations with industry**

- Dr. August Wolff GmbH & Co.
- Voco GmbH
- SmithKlineBeecham
- SPOL Chemie
- Preussag

## Reviewer

Editor for Scientific Reports, Frontiers in Aquatic Microbiology, Frontiers in Marine Microbiology.

Editorial Board for ISME Journal, Applied and Environmental Microbiology.

Ad hoc reviewer for Molecular Microbial Ecology, Int. J. Syst. Ev. Microbiology, J. Dental Research, Nature Communications, Molecular Microbiology etc..

Reviewer for the German Research Organisation (DFG), "Studienstiftung des deutschen Volkes" and various national and international grant agencies.

## Teaching

Lecture "Ecology and Physiology of Microorganisms" since 1995

Labcourse and seminar "Marine Microbial Ecology", Helgoland, 2006 - 2010

Labcourse and seminar "Communication in Biofilms", HZI, 2012 - 2017

Summer Academy of the Studienstiftung: Ftan 2016, Greifswald 2018, Ftan 2020

Supervision of 28 PhD students, various master and bachelor theses.

## PhD students

28	Selene Sanchez	The influence of temperature on toxin production of the marine dinoflagellate <i>Prorocentrum minimum</i>	since 2018
27	Johannes Mansky	Jekyll and Hyde interaction between a marine dinoflagellate and Roseobacter bacteria	since 2018
26	Zhi-Luo Deng	Activity profiling of human microbiota in health and disease using metatranscriptomics	2018
25	Priyanka Premnath	Weakening the enemy: Novel whole cell reporter for natural product screening	2017
24	Jannik Donner	Mode of action of Carolacton in <i>Streptococcus pneumoniae</i>	2017
23	Frederic Meyer	Epidemiologie und Mikrobiomzusammensetzung bei frühkindlicher Karies	2017
22	Cornelia Gottschick	The microbiome of bacterial vaginosis – clinical studies and model biofilms	2017
21	Mathias Milici	Bacterioplankton community composition and biogeography of the Atlantic Ocean	2016
20	Hui Wang	Cell-cell communication in the marine Roseobacter species <i>Dinoroseobacter shibae</i>	2014
19	Diana Patzelt	Unraveling the quorum sensing circuit of <i>Dinoroseobacter shibae</i>	2014
18	Szymon Szafranski	Microbial interactions in polymicrobial biofilms	2014
17	Thomas Riedel	<i>Dokdonia</i> sp. PRO95: A marine flavobacterium with two phylogenetically different rhodopsin genes in its genome	2012

16	Xiaoli Xue	Role of the delta subunit of RNA polymerase in <i>Streptococcus mutans</i>	2011
15	Jürgen Tomasch	Experimentelle und bioinformatische Analyse der aeroben anoxygenen Photosynthese in dem photoheterotrophen Meeresbakterium <i>Dinoroseobacter shibae</i> DFL12 <sup>T</sup>	2011
14	Ina Buchholz	Quorum Sensing in <i>Dinoroseobacter shibae</i> DFL-12 <sup>T</sup> and its possible role in algae symbiosis	2011
13	Andre Lemme	Cell-cell communication in <i>Streptococcus mutans</i> – From a global view to the single cell perspective	2010
12	Agnes Bodor	Quorum Sensing by the Bacterial Signal Autoinducer-2: Phylogenetic Distribution of the Synthesis Gene <i>luxS</i> , and its Role in <i>Shewanella oneidensis</i>	2008
11	Johannes Leonhäuser	Biotechnologische Verfahren zur Reinigung von quecksilberhaltigem Abwasser	2006
10	Ingrid Brümmer	Charakterisierung mikrobieller Biofilmgemeinschaften in Elbe und Spittelwasser mit molekularbiologischen Methoden	2004
9	Kerstin Wilken	Direkte Amplifizierung von Chitin-Deacetylase-Sequenzen aus marinen Habitaten und Mikrokosmen.	2004
8	Wanda Fehr	Mikrobielle Entgiftung von Organoquecksilberverbindungen durch gentechnisch optimierte Mikroorganismen.	2004
7	Björg Pauling	Impact Investigation of a Mercury Reducing GEM in Stream Microcosms & Construction of Mercury Reducing Reporter Strains Based on the Safety Strain <i>Pseudomonas putida</i> KT2440	2003
6	Stefan Örtl	Direkte Klonierung Chitin umwandelnder Enzyme aus marinen Habitaten und Mikrokosmen	
5	Harald von Canstein	Mikrobielle Quecksilberelimination aus Abwässern: Untersuchung der mikrobiellen Gemeinschaft und ihr Einsatz im technischen Prozeß	2001
4	Heike Uphoff	Molekularbiologische Analyse der mikrobiellen Gemeinschaften mariner Habitate	
3	Christine Eichner	Einfluß hoher Gentransferraten selektierbarer und nicht selektierbarer Merkmale auf die Struktur mikrobieller Gemeinschaften	1999
2	Rainer Erb	Schutz mikrobieller Gemeinschaften vor toxischen Phenolmischungen durch ein gentechnisch optimiertes Bakterium und molekularbiologische Charakterisierung eines Schlüsselenzyms des Abbauwegs.	1996
1	Petra Blumenroth	Konstruktion gentechnisch modifizierter Mikroorganismen für den <i>in situ</i> Abbau polychlorierter Biphenyle (PCBs) in Sediment.	1996

## **Conferences and lectures (since 2011)**

Ocean Sciences Meeting 2020, 16. - 21.02.2020, San Diego, CA, USA.

Gordon Research Conference Applied and Environmental Microbiology, 14.- 19.07.2019, Mount Holyoke College, South Hadley, MA, USA.

Symposium Marine Biology (MarBio), 28.-30.08.2019, Oldenburg, Germany (**Main talk**)

Annual Meeting of the VAAM, 17.-20.03.2019, Mainz, Germany

ASLO Summer Meeting, 10 – 15.06.2018, Victoria, British Columbia, Canada

Prof. Andrew Lang, Memorial University, St. John`s, Newfoundland, Canada 26.06.2018 (**invited lecture**)

ISME-17 International Society of Microbial Ecology, 12.-17.08.2018, Leipzig, Germany

Microbial Interactions in Marine Systems (MIMAS2-Symposium), 20-22.08.2018, Greifswald, Germany (**Invited lecture**)

Annual Meeting of the VAAM, 15.-18.04.2018, Wolfsburg, Germany

SFB 1027 Seminar, 18.10.2017, Homburg, Germany (**Invited lecture**)

SFB ChemBioSys Seminar, Jena, 24.04.2017 (**Invited lecture**)

Biotechnology sparks: The Past and Future. Technical University Hamburg-Harburg, Hamburg 2016 (**Invited lecture**)

SFB 987 Seminar, Microbial Diversity in Environmental Signal Response, Marburg, 2.12.2016 (**Invited lecture**)

C3 Research Colloquium Algae-Bacteria Interactions, Sidney, Australia, December 2016 (**Invited lecture**)

Annual Conference of the Association for General and Applied Microbiology (VAAM). Jena, Deutschland (2016)

30. Jahrestagung der Deutschen Gesellschaft für Zahnheilkunde, Leipzig, 2016

DGHM & VAAM, 4th joint congress. Dresden, Deutschland (2014)

Keystone Symposium “Exploiting and Understanding Chemical Biotransformations in the Human Microbiome”, Big Sky Resort, Montana, USA, April 2014

ISME-15, Seoul, Korea, 2014

Shanghai Institute for Biological Sciences, Shanghai, China, July 2013 (**Invited lecture**)

Gordon Conference on Marine Molecular Ecology, Hong-Kong University of Science and Technology, July 2013 (**Session Leader**)

Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, China, July 2013 (**Invited lecture**)

SAME 2013

VAAM 2013

BioMed Central Editors Conference, London, May 2013

ASM 2012 - 112th Meeting of the American Society of Microbiology, San Francisco, CA, USA, June 2012

Scripps Institute of Oceanography, San Diego, June 21, 2012 (**Invited lecture**)

ISME-14, Copenhagen, 2012

Institute of Marine and Environmental Technology, Baltimore, U.S., July 27th, 2011 (**Invited lecture**)

University of South California, Los Angeles, July 19th, 2011 (**Invited lecture**)

GRC Applied and Environmental Microbiology, Functional Interactions from Molecules to Biomes, Mount Holyoke College, South Hadley, MA, USA, 2011 (**Session Leader**)

BAGECO 2011, Korfu

VAAM 2011 Karlsruhe