

Univ.-Prof. Dr. Matthias Horn

Professor in Microbial Symbioses
University of Vienna

University of Vienna
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Research interests

- Microbial symbioses
- Evolution, molecular and cellular biology of intracellular bacteria
- Giant viruses
- Microbial genome evolution
- Mechanisms of microbe-host interactions

Professional experience

Since 10/2024	Adjunct member of the Management Team of the Centre for Microbiology and Environmental Systems Science
10/2019 - 9/2024	Coordinator of the Doctoral School Microbial Symbioses (FWF doc.funds project MAINTAIN)
7/2019 - 12/2019	Visiting Scientists at the Australian Institute for Marine Science (AIMS), Townsville, Australia
9/2018 - 9/2024	Head of the Department of Microbiology and Ecosystem Science
1/2015 – 9/2024	Deputy Head of the Research Network “Chemistry meets Microbiology” Deputy Head of the Division of Microbial Ecology
since 9/2007	Full Professor, University of Vienna
9/2007 - 3/2013	Deputy Head of the Department of Microbial Ecology
2/2006	Associate Professor for Microbial Symbioses (“Vertragsprofessor”) at the Department of Microbial Ecology, University of Vienna
6/2005	“Habilitation” (venia docendi) in Microbiology (thesis “Symbiotic interactions between pro- and eukaryotes”) obtained at the University of Vienna
2/2003 - 1/2006	Assistant Professor (“Universitätsassistent”) at the Department of Microbial Ecology, University of Vienna, Austria
9/2001 - 1/2003	Postdoctoral researcher at the Department of Microbiology, Technische Universität München, Germany
8/1998 - 11/1998	Research stay at the Department of Clinical Microbiology, University of Washington, Seattle, WA, USA

Education

14.08.2001	Dissertation (Dr. rer. nat.), grade achieved: “summa cum laude” (with distinction)
27.05.1998	Diploma in Biology degree (Dipl. Biol. Univ.)

Honors and awards

- 2022 Ars Docendi Recognition Award for Excellence in Teaching, from the Austrian Federal Ministry of Education, Science and Research
- 2011 ERC Starting Grant (Consolidator Track)
- 2009-2017 Member of the Young Academy of the Austrian Academy of Sciences (ÖAW)
- 2005 START Award of the Austrian Science Fund (FWF)
- 2001 Federation of European Microbiological Societies (FEMS) Young Scientist Grant
- 1998 Scholarship Grant from the Deutsche Gesellschaft für Hygiene und Mikrobiologie e.V. (DGHM)

Fund raising summary

Since 2003, raised 16 third party funded projects from Austria, the EU, and the US as PI or Co-PI, including an FWF START Award in 2005, an ERC Starting Grant (Consolidator Track) in 2011, and a FWF doc.funds project for the doctoral school MAINTAIN (as coordinator). In total, my lab's research was supported by more than 7 M€ so far.

Publication summary

Since 1999, 125 papers in peer-reviewed journals and 4 book chapters, including 2 papers in *Nature*, 3 in *Science*, 1 in *Science Advances*, 4 in *PNAS*, 3 in *Nature Communications*, and 1 in *Nature Microbiology*. These papers have received 15,279 citations, which corresponds to an h-index of 56 (Web of Science, 25.11.2024). A complete list of publications and citation data is available at:

<https://ucrisportal.univie.ac.at/en/persons/matthias-horn> or
https://scholar.google.com/citations?user=6yuub_sAAAAJ

Teaching activities and supervision of graduate students

Courses in bachelor and master programs at the University of Vienna since 2003.

Lectures: Biodiversity of microorganisms, Microbial communities and symbioses, Microbial symbiosis – concepts and model systems, Bacterial physiology

Seminars: Current topics in molecular microbial ecology and evolution, Current topics in symbiosis research, Molecular processes of early evolution, Field trips in microbiology

Lab/Computational courses: Cultivation-independent identification of microbes, Molecular phylogeny and evolution

Coordinator of the Ph.D. program in Microbial Symbiosis (FWF doc.funds project MAINTAIN;

<https://maintain.csb.univie.ac.at/>)

Served as main supervisor for 18 diploma/master's students and 13 PhD students, 4 additional PhD students have not yet completed their studies.

Awards and fellowships of lab members

- Stephan Köstlbacher: Rupert Riedl Award 2024
- Anouk Willemsen: ERC Starting Grant 2021
- Anouk Willemsen: Marie Skłodowska-Curie Individual Fellowship 2020-2022
- Alejandro Manzano-Marin: Marie Skłodowska-Curie Individual Fellowship 2019-2022
- Cecilia Wentrup: Back to Research Grant University of Vienna 2018
- Tamara Halter: uni:docs Fellowship 2018-2021

- Vincent Delafont: Marie Skłodowska-Curie Individual Fellowship 2016-2017
- Cecilia Wentrup: Marie Skłodowska-Curie Individual Fellowship 2015-2017
- Barbara S. Sixt: Marie Skłodowska-Curie Individual Global Fellowship 2014-2016
- Elena Toenshoff: Austrian Science Fund (FWF) Erwin Schrödinger Fellowship 2014-16
- Frederik Schulz: Austrian Academy of Sciences (ÖAW) Doc-FORTE stipend 2013-2015
- Karin Aistleitner: Winner of Pecha Kucha Contest „Biology on Stage - 400 Seconds of Life” at the University of Vienna, 2012
- Barbara S. Sixt: San-Pin Wang Award at the CRBS Meeting 2011 (best oral presentation by a PhD student)
- Karin Aistleitner: Jane E. Raulston Award at the CRBS Meeting 2011 (best poster presentation by a PhD student)
- Barbara S. Sixt: Austrian Academy of Sciences (ÖAW) Doc-FORTE fellowship, 2009-2012

Positions of former PhD students and postdocs

At academic institutions

- Patrick Arthofer: BOKU University Vienna, Austria
- Stephan Köstlbacher: Wageningen University and Research, Netherlands
- Paul Herrera: University of Malta, Malta
- Vincent Delafont: University of Poitiers, France
- Frederik Schulz: DOE Joint Genome Institute, Walnut Creek, CA, USA
- Daryl Domman: Wellcome Trust Sanger Institute, Cambridge, UK
- Illias Lagkouvardos: Technische Universität München, Munich, Germany
- Barbara Sixt: Duke University Durham, NC, USA; Laboratory for Molecular Infection Medicine Sweden (MIMS)
- Gitta Szabó: DOE Joint Genome Institute, Walnut Creek, CA, USA
- Karin Aistleitner: U.S. Department of Health and Human, National Institute of Allergy and Infectious Diseases (NIAID)
- Thomas Penz: CeMM Research Center for Molecular Medicine, Vienna, Austria
- Jacqueline Montanaro: Medical University of Vienna, Vienna, Austria
- Eva Heinz: Wellcome Trust Sanger Institute, Cambridge, UK
- Elena Tönshoff: University of Basel, Basel, Switzerland
- Astrid Collingro: University of Vienna, Vienna, Austria
- Stephan Schmitz-Esser: Iowa State University, Ames, IA, USA

At biotech companies and others

- Lena König: Federal Ministry of Social Affairs, Health, Care and Consumer Protection, Austria
- Tamara Halter: Proxygen, Vienna, Austria
- Han Fei (Allen) Tsao: Takeda Pharmaceutical, Vienna, Austria
- Lisa Schuster: Heinekamp Labor- u. Institutsplanung GmbH, Karlsfeld, Germany
- Alexander Siegl: vermicon AG, Munich Germany

Editorial activities

2020/21	Editor in Chief FEMS μ Life
since 2017	Editorial Board Member of <i>Environmental Microbiology</i>
2015-2019	Editorial Board Member of <i>Scientific Reports</i>
since 2012	Editorial board member of <i>Pathogens and Disease</i>
2012-2017	Academic Editor of <i>PLoS One</i>
2010-2016	Associate Editor of <i>Frontiers in Evolutionary and Genomic Microbiology</i>
2010-2014	Editorial board member <i>Journal of Eukaryotic Microbiology</i>

Reviewer activities for journals and funding agencies

Referee for diverse journals including *Nature*, *Cell*, *Nature Commun.*, *Nature Microbiology*, *Proc. Natl. Acad. Sci. U. S. A.*, *Trends in Microbiology*, *PLoS Genetics*, *Genome Research*, *Molecular Microbiology*, *Nucleic Acids Research*, *The ISME Journal*, and others.

Reviewer of grant applications for diverse funding agencies including DFG (Germany), SNF (Switzerland), HFSP Human Frontier Science Program, NSERC (Canada), NERC UK, ERC Starting, Consolidator and Advanced Grant programs; Member of Evaluation Panel for ERC Starting Grants, and others.

Invited lectures and invited conference presentations

More than 40 invited lectures and invited conference presentations at national and international meetings including the 1st Gordon Research Conference on Animal Microbe Symbioses, a State-of-the-Art Lecture at the 5th Meeting of the European Society for Chlamydia Research, a plenary lecture at the Annual Conference of the German Association for General and Applied Microbiology (VAAM), and invited talks at the 9th Symposium of the International Society of Endocytobiology, the 5th Congress of the International Symbiosis Society (ISS), the XII. International Congress of Bacteriology and Applied Microbiology, the 3rd and 5th FEMS Congress of European Microbiologists, the ASM General Meetings 2014 and 2016, a plenary lecture at the IX European Congress of Protistology & Annual Congress of the International Society of Protistologists, 2023, and others.

Served as session chair at international conferences including the 11th and 15th Symposium of the International Society for Microbial Ecology (ISME), the 5th Congress of the International Symbiosis Society (ISS), the 3rd FEMS Congress of European Microbiologists, several Biennial Meetings of the Chlamydia Basic Research Society, and the 15th International Meeting on the Biology and Pathogenicity of Free-Living Amoebae.

Organization of international conferences

2022-24	Member of the organising committee for the German Chlamydia Workshop 2022 and the joint DCW/CBRS Meeting in 2024
2017-19	Councillor of the Chlamydia Basic Research Society (CBRS) for the 9 th Biennial Meeting 2019, Seattle WA, USA
2015	Member of the organising committee for the 13. German Chlamydia Workshop, Vienna, Austria
2013	Member of the organising committee for the Free Living Amoeba Meeting 2013, Vienna, Austria
2010/11	Member of the program committee of the Chlamydia Basic Research Society (CBRS), 2011 Biennial Meeting, Redondo Beach CA, USA
2006	Member of the local organising committee for the International Symposium on Microbial Ecology (ISME-11) 2006, Vienna, Austria

- 2006 Member of the organising committee for the Fifth International Symbiosis Society (ISS) Congress 2006, Vienna, Austria
- 2004 - 2010 Member of the organising committee for the annual German Chlamydia Workshop (DCW) in Berlin/Jena/Düsseldorf/Hannover/Ulm/Lübeck/Munich, Germany
- 2001, 2002, 2004 Co-organiser and lecturer at the “Corso Di Identificazione Di Microrganismi Tramite Ibridazione Fluorescente In Situ (FISH)”, Centro Nazionale Ricerche Istituto Ricerca Sulle Acque (CNR IRSA), Perugia, Italy
- since 2001 Co-organiser, lecturer and supervisor at the annual “International FISH Course”, Technische Universität München, Germany, and University of Vienna, Austria
- 3/2001 Co-organiser and lecturer at the international workshop “Molecular microbial ecology: the rRNA approach and beyond”, Genoscope, Evry, France

Other professional activities / services to the scientific community

- 2021 Member of ERC Starting Grant Panel LS8
- 2017-2021 User representative in the architectural competition, planning and completion of the University of Vienna Biology Building (UBB), Vienna
- since 2013 Substitute Member of the Scientific Advisory Board for Genetic Engineering (“Gentechnikkommission”) of the Austrian Federal Minister for Health
- since 2009 Advisory Board member of the section “Symbiotic Interactions” of the German Association for General and Applied Microbiology (VAAM)
- 2008-2012 National representative of the COST Action FA0701 “Arthropod Symbioses”
- 2008-2018 Developer and webmaster of the online tool probeCheck
- since 2001 Developer of the public online-database probeBase (www.probebase.net)

Public outreach

Over 30 newspaper and magazine articles, among others in the German national news magazines *Der Spiegel* and *Die Zeit*, and the Austrian national newspapers *Der Standard* and *Die Presse*. Appeared on several radio features and served as interview partner in the main news show (ZIB2) on national TV (ORF) in Austria. Contributed several lectures to the Kinderuni (www.kinderuni.at), an annual summer school for children between age 7 and 12.

Last updated: November 2024