

CURRICULUM VITAE

NAME & ADDRESS Prof. Dr. Hubert Hilbi
University of Zürich
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PLACE & DATE OF BIRTH Zug (Switzerland); May 30, 1965

NATIONALITY Swiss

MARITAL STATUS Married to Dr. Xiaodan Li, 2 sons (born 1999, 2001)

DEGREES

2023 Professor (full, *ad personam*), University of Zürich, Switzerland
2017 Professor (associate, *ad personam*), University of Zürich, Switzerland
2015 Professor (Titularprofessor), University of Zürich, Switzerland
2010 Professor (W2), Ludwig-Maximilians University Munich, Germany
2009 Lecturer (Privatdozent), Habilitation in Microbiology, Dept. of Biology, ETH Zürich
2002 Assistant Professor, funded by the Swiss National Science Foundation (SNF)
1994 Ph.D. in Natural Sciences (Microbiology), ETH Zürich
1990 Diploma in Natural Sciences (Biochemistry, Microbiology), ETH Zürich
1984 Matura (Type B), Kantonsschule Zug

EDUCATION AND SCIENTIFIC CAREER

1/2014-present Professor, head of scientific unit, University of Zürich, Switzerland
5/2010-12/2015 Professor, group leader, Max von Pettenkofer Institute, LMU Munich, Germany
5/2009-4/2010 Research group leader, Institute of Molecular Life Sciences, University of Zürich
8/2002-4/2009 SNF Assistant Professor, research group leader, Institute of Microbiology, ETH Zürich
2/2000-7/2002 Postdoctoral scientist with Prof. H.A. Shuman, Dept. of Microbiology,
Columbia University, New York, USA
1/1996-1/2000 Postdoctoral scientist with Prof. A. Zychlinsky, Dept. of Molecular Pathogenesis,
Skirball Institute of Biomolecular Medicine,
New York University Medical Center, New York, USA
10/1994-12/1995 Postdoctoral scientist with Prof. P. Dimroth,
Institute of Microbiology, ETH Zürich, Switzerland
11/1990-6/1994 Ph.D. student with Prof. P. Dimroth,
Institute of Microbiology, ETH Zürich, Switzerland
10/1985-5/1990 Studies in Natural Sciences (Biochemistry, Microbiology, Immunology,
Organic Chemistry, Biotechnology), ETH Zürich, Switzerland
Diploma thesis with Prof. T. Leisinger, Institute of Microbiology
1978-1984 Kantonsschule Zug, Switzerland

HONORS AND AWARDS

2018-present Fellow American Academy of Microbiology
2002-2008 SNF Assistant Professorship
1996, 1998, 2000 SNF Fellowship for starting scientists (1x) and advanced scientists (2x)

RESEARCH, TEACHING, AND SERVICES TO THE SCIENTIFIC COMMUNITY

Throughout his international career as a microbiologist, Hubert Hilbi has been interested in how bacteria survive in „extreme“ environments. During his Ph.D. thesis in Zürich (ETH), he analyzed the bioenergetics of a strictly anaerobic environmental bacterium, *Malonomonas rubra*. During his postdoctoral studies and as a research group leader in New York (NYU Medical Center, Columbia University), Munich (LMU) and again in Zürich (ETH, University of Zürich), he explored how intracellular pathogens overcome bactericidal host cells. To this end, he studied how *Shigella flexneri* survives in macrophages, how *Mycobacterium marinum* establishes an intracellular niche in phagocytes, and how *Legionella pneumophila* forms a replicative compartment in amoebae and mammalian cells.

Current research in the group of Hubert Hilbi focuses on the topics „Virulence, communication, and persistence of *Legionella*“. *Legionella* species are Gram-negative aerobic bacteria, which replicate in amoeba in the environment and upon inhalation in lung macrophages, thereby triggering a severe pneumonia termed Legionnaires' disease. The pathogen employs small compounds for cell-cell communication and subverts host cell functions by injecting more than 300 different “effector proteins”. Recent projects aim at elucidating (i) cellular targets and mode of action of effector proteins, (ii) cell-cell communication by small signaling molecules, (iii) mechanisms of persistence and resuscitation, and (iv) One Health aspects of *Legionella* species.

To date, Hubert Hilbi has published more than 160 scientific papers, and he holds a US patent. His publications have been cited over 10'000 times with an h-index of 55. Hubert Hilbi also serves as an editor and reviewer for various books, journals, and funding agencies, and he is a member of the SNF evaluation panel Life Sciences, Biology and Medicine. Teaching activities of Hubert Hilbi include lectures and courses for biologists and medical students. He supervised a number of master students and 30 Ph.D. students. Hubert Hilbi has organized several conferences and workshops, and he has delivered more than 170 talks at meetings and academic institutions. Finally, Hubert Hilbi is a member of the board of the Swiss Society for Microbiology (SSM) and will serve as the SSM president from 2025-2027.

RECENT REVIEWS

- Michaelis, S., Gomez-Valero, L., Chen, T., Schmid, C., Buchrieser, C. & Hilbi, H. (2024) Small molecule communication of *Legionella*: the ins and outs of autoinducer and nitric oxide signaling. *Microbiol. Mol. Biol. Rev.*: submitted (invited review).
- Hüsler, D., Stauffer, P. & Hilbi, H. (2023) Tapping lipid droplets: A rich fat diet of intracellular bacterial pathogens. *Mol. Microbiol.* 120: 194–209.
- Vormittag, S., Ende, R.J., Derré, I. & Hilbi, H. (2023) Pathogen vacuole membrane contact sites – close encounters of the fifth kind. *µLife* 4: uqad018.
- Hilbi, H. & Buchrieser, C. (2022) *Legionella pneumophila* - a copycat eukaryote. *Microbiology* 168: doi: 10.1099/mic.0.001142.
- Striednig, B. & Hilbi, H. (2022) Bacterial quorum sensing and phenotypic heterogeneity: how the collective shapes the individual. *Trends Microbiol.* 30: 379-389.
- Swart, A. L., Gomez-Valero, L., Buchrieser, C. & Hilbi, H. (2020) Evolution and function of bacterial RCC1 repeat effectors. *Cell. Microbiol.* 22: e13246.
- Hochstrasser, R. & Hilbi, H. (2020) *Legionella* quorum sensing meets cyclic-di-GMP signaling. *Curr. Opin. Microbiol.* 55: 9-16.
- Personnic, N., Striednig, B. & Hilbi, H. (2018) *Legionella* quorum sensing and its role in host-pathogen interaction. *Curr. Opin. Microbiol.* 41: 29-35.
- Steiner, B., Weber, S. & Hilbi, H. (2017) Formation of the *Legionella*-containing vacuole: phosphoinositide conversion, GTPase modulation and ER dynamics. *Int. J. Med. Microbiol.* 308: 49-57.
- Personnic, N., Bärlocher, K., Finsel, I. & Hilbi, H. (2016) Subversion of retrograde trafficking by translocated pathogen effectors. *Trends Microbiol.* 24: 450-462.