Prof. Dr. Roland Lill

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Curriculum Vitae

University Studies

1995	Habilitation in Biochemistry and Physiological Chemistry, Universität München
1981-1986	PhD (Dr. rer. nat.) in Biochemistry, Universität München
1975-1980	Studies in Chemistry, Diploma, Universitäten Ulm and München

Academic career and activities

2024-2026	Guest Professorship, Medical Faculty, Philipps-Universität Marburg
10-2024	Retired
2021-	Vice-President of the von-Behring-Röntgen-Foundation
2020-	Spokesperson of Class II, Life Sciences, German National Academy of Sciences Leopoldina
2016-2024	Member and vice-chair of DFG Priority Program SPP 1927 "*Iron-sulfur for Life*"
2016-2024	Member of the Senate of German National Academy of Sciences Leopoldina
2014-2020	Member of the Senate of Deutsche Forschungsgemeinschaft (DFG)
2014-2021	Member of DFG Priority Program SPP 1710 "*Dynamics of Thiol-based Redox Switches in Cellular Physiology*"
2013-	Advisory board member for Biochemie Zentrum BZH, Universität Heidelberg
2013-2014	Member of the Board Advisory Group of the MRC Mitochondrial Biology Unit, Cambridge, UK
2012-2020	Principal investigator of DFG Collaborative Research Center SFB 987, "*Microbial Diversity in Environmental Signal Response*", Marburg
2010	Member of the LOEWE Center for Synthetic Microbiology, SYNMIKRO
2007-2016	Advisory board member, German Society for Biochemistry and Molecular Biology GBM
2008	Full Professor (W3), Universität Marburg
2007-2008	Offer declined for a W3 Professorship from Universität Heidelberg (ZMBH)
2006-2015	Executive board member of the DFG Graduate Research School GRK 1216
2005-2006	Referee for Elite Network of Bavaria and Fonds der chemischen Industrie (FCI)
2003-2014	Spokesperson of the DFG Collaborative Research Center SFB 593 "*Mechanisms of cellular compartmentalisation and the relevance for disease*"
2003-2012	Principal investigator of DFG Collaborative Research Center Transregio SFB TR1, "*Endosymbiosis-From prokaryotes to eukaryotic organelles*", München-Düsseldorf-Marburg
2003-2012	Member of the DFG study section (Fachkollegium) 'Biochemistry'
2002-2011	Chairman of the examination panel for Human Biology studies at Philipps Universität Marburg
2002-2006	Co-chair of EU-sponsored Concerted Action on "*Mitochondrial Biogenesis and disease – MitEURO*"
2002-2008	Full Professor (C4), Universität Marburg
2002	Offers declined for C4 Professorships from the Universities of Regensburg, Kassel and München
1996-2002	Associate Professor (C3), Universität Marburg
1996-2002	Principal investigator of DFG Collaborative Research Center SFB 286, Marburg

1996-2003 Coordinator of the ´*Mitochondria Project*´ (MITOP), a research unit of the German Ministry of Research and Technology
1993-1996 Principal investigator of DFG Collaborative Research Center SFB 184, München
1990-1996 Senior Research Assistant, Universität München (Prof. W. Neupert)
1987-1989 Post-doctoral Fellow of DFG at the University of California, Los Angeles, USA (Prof. W. Wickner)
1986-1987 Post-doctoral Fellow, Universität München (Prof. W. Wintermeyer)
1982-1985 Research Assistant, Universität München (Profs. W. Wintermeyer, H.G. Zachau)

Awards and Honors

- 2025 Euricius-Cordus Medal, Medical Faculty, Philipps-Universität Marburg
- 2022 Prize for 'Best Teaching'
- 2020 Research Medal of the von-Behring-Röntgen-Foundation
- 2019 Paul-Ehrlich Prize of the International BioIron Society IBIS
- 2018,2020 Prizes for 'Best Teaching'
- 2016-2024 Reinhart Koselleck Grant, DFG
- 2015 Lecture at Gairdner Symposium "Frontiers in Cell Biology", Edmonton Canada
- 2014 Luigi Sacconi Medal of Italian Chemical Society and Luigi Sacconi Foundation
- 2014 Albrecht-Kossel Prize of German Chemical Society, GDCh
- 2013 EMBO Member
- 2013 Distinguished Lecture at the Lady Davis Research Institute, McGill University, Montreal Canada
- 2010,2014 Prizes for 'Best Teaching'
- 2010 Feldberg Foundation Prize
- 2009 Aline & James Orten Memorial Lecture, Wayne State University, Detroit, USA
- 2009-2014 Max-Planck fellow of Max-Planck Society
- 2007 Member of the German Academy of Sciences Leopoldina
- 2003 Gottfried-Wilhelm Leibniz Prize of DFG
- 2003 H.W. Rand Fellowship of Marine Biology Laboratories, Woods Hole, MA USA
- 1987-1989 Postdoctoral Fellowship of DFG at Molecular Biology Institute, University of California at Los Angeles, USA

- Associate Editor of Current Genetics, European Journal of Cell Biology, Reviews of Physiology, Biochemistry and Pharmacology, BBA – Molecular Cell Research
- Advisory Editorial Board of The Journal of Biochemistry, EMBO Reports, Microbial Cell

- 2006, 2012, 2020 Guest Editor, Biochim. Biophys. Acta, Mol. Cell Research (Metals in Biology I, II, and III)
- 2015, 2024 Guest Editor, Biochim. Biophys. Acta, Mol. Cell Research (Iron-sulfur proteins)
- 2015 Guest Editor, Eur. J. Cell Biol. Special Issue (Mechanisms of cell compartmentalization)

Scientific meetings organized (selection)

- 2020-22 Online seminars on "Iron-sulfur protein biogenesis" (Chair; with co-chair Prof. F. Barras, Pasteur Institute, Paris)
- 2019 EMBO Practical Course on 'Techniques for studying iron in health and disease'
- 2017 Gordon Research Conference on "Cell Biology of Metals", Mount Snow, West Dover, VT, USA (Chair)

- 2015 Spring Meeting of the German Society of Biochemistry and Molecular Biology GBM, “Metals in Biology” (Chair)
- 2014 International meeting of the Collaborative Research Center (SFB) 593, Marburg, Germany (Chair)
- 2012 International meeting of the Collaborative Research Center (SFB) 593, Marburg, Germany (Chair)
- 2011 Annual international meeting of the German Society of Biochemistry and Molecular Biology GBM, Molecular Life Sciences, Frankfurt Germany (Co-organizer)
- 2009 FEBS Advanced Lecture Course on “Mitochondria in Life, Death and Disease”, Aussois, France (Chair)
- 2009 International meeting of the Collaborative Research Center (SFB) 593, Marburg, Germany (Chair)
- 2008 Mini-Symposium on “Synthetic Microbiology”, Marburg, Germany (Co-chair)
- 2008 Annual international meeting of the German Society of Cell Biology DGZ, Marburg, Germany (Chair)
- 2005 International meeting of the Collaborative Research Center (SFB) 593, Marburg, Germany (Chair)
- 2004 International Cell Biology Symposium “Cell compartments”, Marburg, Germany (Chair)
- 2003 *Dies Academicus* on “Cell organelles and associated diseases”, Marburg, Germany (Chair)
- 2002 DFG-sponsored international congress on “Iron-sulfur proteins: Structure, function and biogenesis”, Marburg, Germany (Chair)
- 1992 International meeting of the Collaborative Research Center (SFB) 186, München, Germany (Co-chair)

Ten most important publications (Marburg)

1) Kispal, G., Csere, P., Prohl, C. & **Lill, R.** (1999). The mitochondrial proteins Atm1p and Nfs1p are required for biogenesis of cytosolic Fe/S proteins. **EMBO J. 18**, 3981-3989.
2) Mühlenhoff, U., Gerber, J., Richhardt, N. & **Lill, R.** (2003). Components involved in assembly and dislocation of iron-sulfur clusters on the scaffold protein Isu1p. **EMBO J. 22**, 4815-4825.
3) Goldberg, A.V.*, Molik, S.*, Tsaousis, A.D., Neumann, K., Kuhnke, G., Delbac, F., Vivares, C.P., Hirt, R.P., **Lill, R.**[#] & Embley, M.[#] (2008). Localization and functionality of microsporidian iron-sulphur cluster assembly proteins. **Nature 452,** 624-628. * Joint first authors; [#] joint corresponding authors.
4) **Lill, R.** (2009). Function and biogenesis of iron-sulphur proteins. **Nature 460**, 831-838.
5) Netz, D.J.A., Stümpfig, M., Doré, C., Mühlenhoff, U., Pierik, A.J. & **Lill, R.** (2010). Tah18 transfers electrons to Dre2 in cytosolic iron-sulfur protein biogenesis. **Nature Chem. Biol. 6,** 758-765.
6) Stehling, O.*, Vashisht, A.A.*, Mascarenhas, J., Jonsson, Z.O., Sharma, T., Netz, D.J.A., Pierik, A.J., Wohlschlegel, J.A.[#], & **Lill, R.**[#] (2012). MMS19 assembles iron-sulfur proteins required for DNA metabolism and genomic integrity. **Science 337**, 195-199. *Joint first authors; [#] joint corresponding authors.
7) Srinivasan, V., Pierik, A.J., & **Lill, R.** (2014). Crystal structures of nucleotide-free and glutathione-bound mitochondrial ABC transporter Atm1. **Science 343**, 1137-1140.
8) Stehling, O., Jeoung, J.H., Freibert, S.A., Paul, V.D., Bänfer, S., Niggemeyer, B., Rösser, R., Dobbek, H., & **Lill, R.** (2018). Function and crystal structure of the dimeric P-loop ATPase CFD1 coordinating an exposed [4Fe-4S] cluster for transfer to apoproteins. **Proc. Natl. Acad. Sci. U.S.A. 115**, E9085-E9094.
9) Freibert, S.A.*, Boniecki, M.T.*, Stümpfig, C., Schulz, V., Krapoth, N., Winge, D.R., Mühlenhoff, U., Stehling, O., Cygler, M.[#], & **Lill, R.**[#] (2021). N-terminal tyrosine of ISCU2 triggers [2Fe-2S]

cluster synthesis by ISCU2 dimerization. **Nat. Commun. 12**, 6902. * Joint first authors; # joint corresponding authors.

10) Schulz, V., Basu, S., Freibert, S.A., Webert, H., Boss, L., Mühlenhoff, U., Pierrel, F., Essen, L.O., Warui, D.M., Booker, S.J., Stehling, O.#, & **Lill, R.**# (2023). Functional spectrum and specificity of mitochondrial ferredoxins FDX1 and FDX2. **Nat. Chem. Biol. 19**, 206–217. # Joint corresponding authors.

Research Interests

Function and biogenesis of mitochondria; post-translational modification; iron-sulfur protein biogenesis in mitochondria (ISC proteins), cytosol and nucleus (CIA proteins); structure and function of ISC and CIA protein complexes; structure and function of iron-sulfur proteins; transport across the mitochondrial membranes; intracellular iron homeostasis; transcriptional and post-transcriptional control of iron uptake and regulation; structure and function of ABC transporters, mitochondrial carriers, ISCU scaffold proteins, ferredoxins, Hsp70 chaperones, glutaredoxins, P-loop ATPases, WD40 proteins, and hydrogenase-like proteins; intracellular redox control; mitochondrial iron-sulfur diseases; Friedreich's ataxia; iron-storage diseases; diseases related to the CIA machinery.

Private

9. Oct. 1955	Born in Öhringen / Württ. (Germany)
1986	Married to Angelika Haag-Lill, geb. Haag, music therapist
	Children: Michael (1987), Daniel (1989), Sandra (1992)