

CV Prof. Dr. Franz Narberhaus

Date of birth: 17.01.1963
Nationality: German
Family status: married, two children (1998 and 2001)

Scientific education

1983 – 1989 Biology student, Georg-August-University in Göttingen, Germany
1989 – 1992 PhD student, Institute of Microbiology, Georg-August-University Göttingen,
1999 Habilitation (Microbiology), ETH Zürich, Switzerland

Academic positions

1992 – 1993 Postdoctoral research associate, Institute of Microbiology, Göttingen
1993 – 1995 Postdoctoral research associate, University of California, Berkeley, USA
1995 – 1998 Research associate, ETH Zürich, Switzerland
1998 – 2004 Oberassistent (group leader), ETH Zürich, Switzerland
since 2004 Full Professor (C4), Ruhr University Bochum, Germany

Fellowships and awards:

1986 to 1989 Student fellowship, 'Studienstiftung des Deutschen Volkes'
1990 to 1992 PhD fellowship, 'Graduiertenförderung des Landes Niedersachsen'
1993 to 1995 Postdoctoral research fellowship, German Research Foundation (DFG)

Other professional activities (selection)

2006 to 2008 Students Dean, Faculty of Biology and Biotechnology, Ruhr University
2008 to 2012 Dean, Faculty of Biology and Biotechnology, Ruhr University
2010 to 2012 Chairman, Council of Deans, Ruhr University
2011 to 2020 Senate, Ruhr University
2006 to 2012 Vice speaker, VAAM (Vereinigung für Allgemeine und Angewandte Mikrobiologie) subdivision „Regulation and signal transduction in prokaryotes“
2007 to 2011 Board member, VAAM section “Molecular Microbiology”
2007 to 2013 Coordinator, DFG priority program 1258 „Sensory and regulatory RNAs in Prokaryotes“
2012 to 2020 DFG reviewing panel “Microbiology, Virology and Immunology”
2016 to 2020 Speaker of the DFG reviewing panel “Microbiology, Virology and Immunology”
since 2013 Editorial Board *Frontiers in Microbiology*, *Frontiers in Plant Science*
since 2014 Editor *FEMS Microbiology Reviews*, Editorial Board *Molecular Microbiology*
since 2017 Elected member of the European Academy of Microbiology (EAM)
since 2018 Coordinator, DFG Research Training Group “Microbial Substrate Conversion (MiCon)”
since 2019 Vice president and president (since 2021) of the VAAM
since 2020 Scientific advisory Board, Max-Planck Institute for Terrestrial Microbiology, Marburg

Research interests:

- Regulatory RNAs (RNA thermometers, small regulatory RNAs)
- Regulated proteolysis, ppGpp and lipopolysaccharid biosynthesis
- Biosynthesis of unusual bacterial membrane lipids, e.g. phosphatidylcholine

15 selected publications:

- Eisfeld J, Kraus A, Ronge C, Jagst M, Brandenburg VB, Narberhaus F. 2021. A LysR-type transcriptional regulator controls the expression of numerous small RNAs in *Agrobacterium tumefaciens*. **Mol Microbiol** 116:126-139.
- Brewer SM, Twittenhoff C, Kortmann J, Brubaker SW, Honeycutt J, Massis LM, Pham THM, Narberhaus F, Monack DM. 2021. A *Salmonella Typhi* RNA thermosensor regulates virulence factors and innate immune evasion in response to host temperature. **PLoS Pathog** 17:e1009345.
- Twittenhoff C, Brandenburg, Righetti F, Nuss AM, Mosig A, Dersch P, Narberhaus F. 2020. Lead-seq: transcriptome-wide structure probing *in vivo* using lead(II) ions. **Nucleic Acids Res** 48:e71.
- Twittenhoff C, Heroven AK, Mühlen S, Dersch P, Narberhaus F. 2020. An RNA thermometer dictates production of a secreted bacterial toxin. **PLoS Pathog** 16:e1008184.
- Borgmann J, Schäkermann S, Bandow JE, Narberhaus F. 2018. A small regulatory RNA controls cell wall biosynthesis and antibiotic resistance. **mBio** 9:e02100-18.
- Danne L, Aktas M, Unger A, Linke WA, Erdmann R, Narberhaus F. 2017. Membrane remodeling by a bacterial phospholipid-methylating enzyme. **mBio** 8:e02082-16.
- Righetti F, Nuss AM, Twittenhoff C, Beele S, Urban K, Will S, Bernhart SH, Stadler PF, Dersch P, Narberhaus F. 2016. The temperature-responsive *in vitro* RNA structure of *Yersinia pseudotuberculosis*. **Proc Natl Acad Sci USA** 113:7237-7242.
- Roßmanith J, Narberhaus F. 2016. Exploring the modular nature of riboswitches and RNA thermometers. **Nucleic Acids Res** 44:541-5423.
- Weber GG, Kortmann J, Narberhaus F, Klose KE 2014. An RNA thermometer controls temperature-dependent virulence factor expression in *Vibrio cholerae*. **Proc Natl Acad Sci USA** 111:14241-14246.
- Böhme K, Steinmann R, Kortmann J, Seekircher S, Heroven AK, Berger E, Pisano F, Thiermann T, Wolf-Watz H, Narberhaus F, Dersch P. 2012. Concerted actions of a thermolabile regulator and a unique intergenic RNA thermosensor control *Yersinia* virulence. **PLoS Pathog** 8:e1002518.
- Kortmann J, Sczodrok S, Rinnenthal J, Schwalbe H & Narberhaus F. 2011. Translation on demand by a simple RNA-based thermosensor. **Nucleic Acids Res** 39:2855-2868.
- Waldminghaus T, Heidrich N, Brantl S, Narberhaus F. 2007. FourU - A novel type of RNA thermometer in *Salmonella*. **Mol Microbiol** 65:413-424.
- Chowdhury S, Maris C, Allain FH & Narberhaus F. 2006. Molecular basis for temperature sensing by an RNA thermometer. **EMBO J** 25:2487-2497.

Other publications:

- Kortmann J & Narberhaus F. 2012. Bacterial RNA thermometers: molecular zippers and switches. **Nat Rev Microbiol** 10:255-265.
- Narberhaus F. 2013. RNAs at fever pitch. **Nature (News & Views)** 502:178-179