

CV Prof. Dr. Julia Bandow

Scientific education

- 1993 – 1998 Study of Biology, Ernst-Moritz-Arndt-University Greifswald, Germany
 1998 – 2002 PhD student, Institute of Microbiology, Ernst-Moritz-Arndt-University Greifswald

Positions in industry

- 2002 – 2008 Senior/Principal Scientist, Pfizer Global Research and Development, Ann Arbor, Michigan, USA

Academic positions

- 2008 – 2014 Juniorprofessor, Microbial Antibiotic Research, Ruhr-Universität Bochum, Germany
 since 2014 Associate Professor, Applied Microbiology, Ruhr-Universität Bochum, Germany

Fellowships and awards:

- 2006 Pfizer Clinical Research and Development Publication Award
 2014 Research Award: "Forschungspreis der Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM)"

Other professional activities (selection)

- since 2004 ad hoc reviewer, NIH/NIAID, DFG, Wellcome Trust, FNRA
 2010 to 2013 Coordinator, Ziel2-Project „Innovative Antibiotics from NRW“
 2011 to 2014 Board member of DGPF (Deutsche Gesellschaft für Proteomforschung)
 since 2012 Board member of BBA – Proteins and Proteomics
 2013 to 2014 Early Career Researcher Board Member of Research School Plus at Ruhr-Universität Bochum
 since 2014 Faculty council
 since 2015 Vice Director of RUBION (Zentrale Einrichtung für Ionenstrahlen und Radionuklide)
 since 2016 Liaison Lecturer of the German Academic Scholarship Foundation (Vertrauensdozentin der Studienstiftung des Deutschen Volkes)

Ten selected publications

- Senges CHR, Al-Dilaimi A, Marchbank DH, Wibberg D, Winkler A, Haltli B, Nowrousian M, Kalinowski J, Kerr RG, **Bandow JE**. 2018. The secreted metabolome of *Streptomyces chartreusis* and implications for bacterial chemistry. **Proc Natl Acad Sci USA** 115:2490-5
 Sukul P, Schäkermann S, **Bandow JE**, Kusnezowa A, Nowrousian M, Leichert LI. 2017. Simple discovery of bacterial biocatalysts from environmental samples through functional metaproteomics. **Microbiome** 5:28
 Müller A, Wenzel M, Strahl H, Grein F, Saaki TNV, Kohl B, Siersma T, **Bandow JE**, Sahl HG, Schneider T, Hamoen LW. 2016. Daptomycin inhibits cell envelope synthesis by interfering with fluid membrane microdomains. **Proc Natl Acad Sci USA** 113:E7077-7086
 Müller A, Lupilova N, Kuhlmann K, Langklotz S, **Bandow JE**, Leichert LI. 2014. Activation of RidA chaperone function by N-chlorination. **Nat Commun** 5:5804

- Wenzel M, Chiriac AI, Otto A, Zweytick D, May C, Schumacher C, Gust R, Albada HB, Penkova M, Krämer U, Erdmann R, Metzler-Nolte N, Straus SK, Bremer E, Becher D, Brötz-Oesterhelt H, Sahl HG, **Bandow JE**. 2014. Small cationic antimicrobial peptides delocalize peripheral membrane proteins. **Proc Natl Acad Sci USA** 111:E1409-1418.
- Lackmann JW, Schneider S, Edengeiser E, Jarzina F, Brinckmann S, Steinborn E, Havenith M, Benedikt J, **Bandow JE**. 2013. Photons and particles from atmospheric-pressure plasma inactivate bacteria and biomolecules independently and synergistically. **J R Soc Interface** 10: 20130591.
- Raatschen N, Wenzel M, Leichert LI, Düchting P, Krämer U, **Bandow JE**. 2013. Extracting iron and manganese from bacteria with ionophores – a mechanism against competitors characterized by increased potency in environments low in micronutrients. **Proteomics** 13:1358-1370.
- Wenzel M, Patra M, Albrecht D, Chen DY, Nicolaou KC, Metzler-Nolte N, **Bandow JE**. 2011. Proteomic signature of fatty acid biosynthesis inhibition available for *in vivo* mechanism of action studies. **Antimicrob Agents Chemother** 55:2590-2596.
- Brötz-Oesterhelt H, Beyer D, Kroll HP, Schroeder W, Hinzen B, Raddatz S, Paulsen H, **Bandow JE**, Sahl HG, Labischinski H. 2005. Dysregulation of bacterial proteolytic machinery by a new class of antibiotics. **Nat Med** 11:1082-1087.
- Bandow JE**, Brötz H, Leichert LI, Labischinski H, Hecker M. 2003. Proteomic approach to understanding antibiotic action. **Antimicrob Agents Chemother** 47:948-955.

Funded projects since 2010:

Project	Funding agency	Funding period
Innovative antibiotics from NRW (InA aus NRW)	NRW & EU	2010-2013
Characterization of effects of different low temperature plasmas on bio-macromolecules and vegetative cells	DFG (PAK 728)	2012-2015
Translation of innovative antibiotics from NRW (TinA aus NRW)	NRW	2014-2016
The role of calcimycin in the fight for iron	DFG (BA 4193/6-1)	2016-2019
Effects of low-temperature plasmas on bio-macromolecules and vegetative cells – and bacterial defenses	DFG (BA 4193/7-1)	2016-2019
Physiology of ribosome rescue in bacteria (role: Co-PI)	NIH (R01GM121650)	2017-2021
Starke Forschung Chemie.NRW	NRW (005-1707-0011)	2018
Transient atmospheric plasmas - from plasmas to liquids to solids (role: PI)	DFG (SFB 1316-1)	2018-2022
Microbial Substrate Conversion (roles: PI and Co-Spokesperson)	DFG (GRK 2341-1)	2018-2022
Investigating mechanism of action of membrane targeting antibacterial agents (role: PI)	DAAD (57389759)	2019-2020