

## Curriculum Vitae

**Name** Markus Weingarth  
**Date of birth** 02 June 1982 (in Mainz, Germany)  
**Children** 2



**2002** Biochemistry studies, Greifswald University (Germany), with Distinction (1.0)  
**2007** PhD, ENS Ulm (France) & EPFL (Switzerland), advisor: G. Bodenhausen & P. Tekely, degree 29.9.10  
**2010** Post-doc fellow, Utrecht University, advisor: M. Baldus  
**2015** Assistant Professor, Utrecht University  
**2019** Associate Professor, Utrecht University

### Selected Recent Publications

**I.** Jekhmane, S., Derks, M.G.N., Maity, S., Slingerland, C.J., Tehrani, K.H.M.E., Medeiros-Silva, J., Vermeer, B., Ammerlaan, D., Charitou, V., Weijde, M., Elenbaas, B.O.W., Fetz, C., Cox, R., Lorent, J.H.F.F., Baldus, M., Künzler, M., Lelli, M., Cochrane, S., Martin, N.I., Roos, W.H., Breukink, E., Weingarth, M., (2024) *Nature Microbiology*, accepted, *Plectasin kills bacteria by a Ca<sup>2+</sup>-sensitive supramolecular mechanism*

**II.** Lewis, K., Richard E. Lee, R.E., Brötz-Oesterhelt, H., Hiller Odermatt, S., Rodnina, M., Schneider, T., Weingarth, M., Wolgemuth, I. (2024) *Nature*, *Sophisticated antibiotics from nature*, accepted

**III.** Shukla, R., Peoples, A.J., Ludwig, K.C., Maity, S., Derks, M.G.N, de Benedetti, S., Krueger, A.M., Vermeulen, B.J.A., Lavore, F., Honorato, R.V., Grein, F., Bonvin, A.M.J.J., Kubitscheck, U., Breukink, E., Achorn, C., Nitti, A., Schwalen, C.J., Spoering, A.L., Ling, L.L., Hughes, D., Lelli, M., Roos, W.H., Lewis, K., Schneider, T., Weingarth, M. (2023) *Cell*, *A new antibiotic from an uncultured bacterium binds to an immutable target*

**IV.** Shukla, R., Lavore, Sourav, M., F., Derks, G.N., Jones, C.R., Vermeulen, B.J.A., Melcrova, A., Morris, M.A., Becker, L.M., Wang, X., Kumar, R., Medeiros-Silva, J., van Beekveld, R., Bonvin, A.M.J.J., Lorent, J., Lelli, M., Nowick, J., MacGillavry, H., Peoples, A.J., Spoering, A.L., Ling, L.L., Hughes, Roos, W., D., Breukink, E., Lewis, K., Weingarth, M., (2022) *Nature*, 608, 390, *Teixobactin kills bacteria by a two-pronged attack on the cell envelope*

### Awards & Honours

Award/Funding	Amount	Year of award
ICMRBS Founders Medal	/	2022
ERC Consolidator award	2.000.000 €	2022
Netherlands Center for One Health (NCOH) grant	300.000 €	2019
INSTRUCT JRA award	20.000€	2019
NWO ECHO grant	260.000 €	2017
NWO VIDI award	800.000 €	2015
FEBS Distinguished Young Investigator award	/	2014
NWO VENI award	250.000 €	2012
FEBS Long-Term fellowship	~100.000 €	2010
PhD fellowship of the French Research Ministry	~70.000 €	2007
German Chemical Society (GDCh) Pre-diploma Award	/	2004

## Full publication list

64. van Aalst, E.J., Yekefallah, M., van Beekveld, R., Breukink, E., [Weingarh, M.](#), Wylie, B. J., *Coordination of Bilayer Properties by an Inward-Rectifier K<sup>+</sup> Channel is a Cooperative Process Driven by Protein-Lipid Interaction*, submitted
63. Lawrence, W.S., Peel, J.E., de Winter, R., Ling, L.L., Nitti, A.G., Peoples, A.J., Shukla, R., Harold MacGillavry, H., Henry Heine, H., [Weingarh, M.](#), Kim Lewis, K., Hughes, D., *A Resistance-Evading Antibiotic for Treating Anthrax*, submitted
62. Jekhmane, S., Derks, M.G.N., Maity, S., Slingerland, C.J., Tehrani, K.H.M.E., Medeiros-Silva, J., Vermeer, B., Ammerlaan, D., Charitou, V., Weijde, M., Elenbaas, B.O.W., Fetz, C., Cox, R., Lorent, J.H.F.F., Baldus, M., Künzler, M., Lelli, M., Cochrane, S., Martin, N.I., Roos, W.H., Breukink, E., [Weingarh, M.](#), (2024) *Nature Microbiology*, accepted, *Plectasin kills bacteria by a Ca<sup>2+</sup>-sensitive supramolecular mechanism*
61. Yekefallah, M., van Aalst, E.J., van Beekveld, R., Breukink, E., [Weingarh, M.](#), Wylie, B. J., (2024) *J. Am. Chem. Soc.*, accepted, *Cooperative Gating of a K<sup>+</sup> Channel by Unmodified Biological Anionic Lipids Viewed by Solid-state NMR Spectroscopy*
60. Lewis, K., Richard E. Lee, R.E., Brötz-Oesterhelt, H., Hiller Odermatt, S., Rodnina, M., Schneider, T., [Weingarh, M.](#), Wolgemuth, I. (2024) *Nature*, accepted, *Sophisticated antibiotics from nature*
59. Ali Javed, A., Balhuizen, M.D., Pannekoek, A., Bikker, F., Heesterbeek, D.A.C., Haagsman, H.P., Broere, F., [Weingarh, M.](#), Veldhuizen, E.J.A. (2023) *Pharmaceuticals*, 16, 1485, *Effects of E. coli LPS structure on antibacterial and anti-endo-toxin activities of host defense peptides*
58. van der Krift, F., Zijlmans, D.W., Shukla, R., Javed, A., Koukos, P.I., Schwarz, L.L.E., Timmermans-Sprang, E.P.M., Maas, P.E.M., Gahtory, D., van den Nieuwboer, M., Mol, J.A., Strous, G.J., Bonvin, A.M.J.J., van der Stelt, M., Veldhuizen, E.J.A., [Weingarh, M.](#), Vermeulen, M., Klumperman, Maurice, M.M. (2023) *Life Sciences Alliance*, *A novel antifolate suppresses growth of FPGS-deficient cells and overcomes methotrexate resistance*
57. Shukla, R., Peoples, A.J., Ludwig, K.C., Maity, S., Derks, M.G.N., de Benedetti, S., Krueger, A.M., Vermeulen, B.J.A., Lavore, F., Honorato, R.V., Grein, F., Bonvin, A.M.J.J., Kubitscheck, U., Breukink, E., Achorn, C., Nitti, A., Schwalen, C.J., Spoering, A.L., Ling, L.L., Hughes, D., Lelli, M., Roos, W.H., Lewis, K., Schneider, T., [Weingarh, M.](#) (2023) *Cell*, *A new antibiotic from an uncultured bacterium binds to an immutable target*
56. Javed, A., Slingerland, C.J., Wood, T.M., Martin, N.I., Broere, F., [Weingarh, M.](#), Veldhuizen, E.J.A. (2023) *ACS Infectious Diseases*, 3, 518, *A chimeric peptidomimetic antibiotic efficiently neutralizes LPS and bacteria-induced activation of RAW macrophages*
55. van Beekveld, R., Derks, D., Kumar, R., Smid, L., Maass, T., Medeiros-Silva, J., Breukink, E., [Weingarh, M.](#) (2022) *Chemistry – a European Journal*, *Specific Lipid Studies in Complex Membranes by Solid-State NMR Spectroscopy*
54. Beek, C., Killian, L., Lutz, M., [Weingarh, M.](#), Asundi, A.S., Sarangi, R., Klein Gebbink, R.J.M., Broere, D.L.J. (2022) *Chemistry – a European Journal*, *E-selective Semi-hydrogenation of Alkynes Under Mild Conditions by a Diruthenium Hydride Complex*
53. Shukla, R., Lavore, Sourav, M., F., Derks, G.N., Jones, C.R., Vermeulen, B.J.A., Melcrova, A., Morris, M.A., Becker, L.M., Wang, X., Kumar, R., Medeiros-Silva, J., van Beekveld, R., Bonvin, A.M.J.J., Lorent, J., Lelli, M., Nowick, J., MacGillavry, H., Peoples, A.J., Spoering, A.L., Ling, L.L., Hughes, Roos, W., D., Breukink, E., Lewis, K., [Weingarh, M.](#) (2022) *Nature*, 608, 390, *Teixobactin kills bacteria by a two-pronged attack on the cell envelope*
52. Rončević, T., Gerdol, M., Mardirossian, M., Cvjetan, S., Benincasa, M., Maravić, A., Gajski, G., Krce, L., Aviani, I., Hrabar, J., Pavelin, T., Trumbić, Z., Derks, M., Pallavicini, A., [Weingarh, M.](#), Tossi, A., Mladine, I. (2022) *Acta Biomaterialia*, *Anisaxins, helical antimicrobial peptides from marine parasites, kill resistant bacteria by lipid extraction and membrane disruption*
51. Rohaim, A., Vermeulen, B., Li, J., Kümmerer, F., Napoli, F., Blachowicz, Medeiros-Silva, J., Roux, B., [Weingarh, M.](#) (2022) *Nature Communications*, 13, 1574, *A distinct mechanism of C-type inactivation in the Kv-like KcsA mutant E71V*
50. Zhao, X., Wang, X., Shukla, R., Kumar, R., [Weingarh, M.](#), Breukink, E., Kuipers, O. (2021) *Frontiers Microbiology*, *Brevibacillin 2V, a novel antimicrobial lipopeptide with an exceptional low hemolytic activity*
49. Zhao, X., Wang, X., Shukla, R., Kumar, R., [Weingarh, M.](#), Breukink, E., Kuipers, O. (2021) *Frontiers Microbiology*, *Brevibacillin 2V exerts its bactericidal activity via binding to Lipid II and permeabilizing cellular membranes*

48. van Eijk, M., van Dijk, A., van der Ent, C., Arets, H., Breukink, E., van Os, N., Adrichem, R., van der Water, S., Gomez, R.L., Kristensen, M., Hessing, M., Jekhmane, S., Weingarth, M., Veldhuizen, R., Haagsman, H. (2021) BBA – General Subjects, *PepBiotics, novel cathelicidin-inspired antimicrobials to fight pulmonary bacterial infections*
47. Beriashvili, D., Schellevis, R.D., Napoli, F., Weingarth, M.,\* Baldus, M.\* (2021) JoVE, accepted, *High-resolution studies of proteins in natural membranes by solid-state NMR*
46. Zhai, W., Paioni, L.A., Cai, X., Narasimhan, S., Medeiros-Silva, J., Zhang, W., Rockenbauer, A., Weingarth, M., Song, Y., Baldus, M., Liu, Y. (2020) J. Chem. Phys., 124, 9046, *Postmodification via Thiol-click Chemistry Yields Hydrophilic Trityl-nitroxide Biradicals for Biomolecular High-Field Dynamic Nuclear Polarization*
45. Lau, Y.J.L., Fontana, F., Mandemaker, L., Wezendonk, D., Vermeer, B., Bonvin, A., de Vries, R., Zhang, H., Remaut, K., van den Dikkenburg, J., Hassan, A., Perrone, B., Kuemmerle, R., Gelain, F., Hennink, W., Weingarth, M.,\* Enrico Mastrobattista, E.\* (2020), Communications Chemistry, 3, 164, *Control over the fibrillization yield by varying the oligomeric nucleation propensities of self-assembling peptides*
44. Shukla, S., Medeiros-Silva, J., Parmar, A., Vermeulen, B.J.A., Das, S., Paioni, L.A., Jekhmane, S., Lorent, J., Bonvin, A.M.J.J., Baldus, M., Lelli, M., Veldhuizen, E.J.A., Breukink, E., Singh, I., Weingarth, M. (2020) Nature Comm., 11, 2848, *Mode of action of teixobactins in cellular membranes*
43. Bear, B., Veldhuizen, J.A.E., Molchanova, N., Jekhmane, S., Weingarth, M., Jenssen, H., Lin, J.S., Barron, A.E., Yamashita, C., Veldhuizen, R. (2020) Scientific Reports, 10, 9392, *Exogeneous Surfactant as a Pulmonary Delivery Vehicle for Chicken Cathelicidin-2*
42. Sarkar, D., Chakraborty, I., Condorelli, M., Baijayanti, G., Maass, T., Weingarth, M., Mandal, A.K., La Rosa, C., Subramanian, V., Bhunia, A. (2019) ChemMedChem, *Self-assembling and neurotoxicity of amyloid-beta peptide: The crucial role of GXXXG motifs*
41. Jekhmane, S., Prachar, M., Fontana, F., Medeiros-Silva, J., Pugliese, R., Gelain, F., Weingarth, M. (2019) Angew. Chem., 58, 16943, *Design parameters of tissue engineering scaffolds at atomic scale*
40. Damman, R., Schütz, S., Luo, Y., Prachar, M., Weingarth, M., Sprangers, R., Baldus, M. (2019) Nature Comm., 10, 4536, *Atomic-level insight into the maturated state of mRNA processing bodies by combining solid and solution-state NMR spectroscopy*
39. Weingarth, M. (2019) Spektrum der Wissenschaft, 3, 20, *Angriff auf die Zellmembran*
38. Medeiros-Silva, J., Jekhmane, S., Weingarth, M. (2019) ChemBioChem, 14, 1731, *Towards the native binding modes of Lipid II targeting antibiotics, invited review for special issue 'ChemBioTalents'*
37. Jekhmane, S., Medeiros-Silva, J., Li, J., Kümmerer, F., Müller-Hermes, C., Baldus, M., Roux, B., Weingarth, M. (2019) Nature Comm., 10, 12, *Shifts in the selectivity filter dynamics cause modal gating in K<sup>+</sup> channels*
36. Medeiros-Silva, J., Jekhmane, S., Lucini Paioni, A., Gawarecka, K., Baldus, M., Swiezewska, E., Breukink, E., Weingarth, M. (2018) Nature Comm., 9, 3963, *High-resolution NMR studies of antibiotics in cellular membranes*
35. Pinto, C., Mance, D., Sinnige, T., Daniëls, M., Weingarth, M., Baldus, M. (2018) Nature Comm., 9, 4135, *The beta-barrel assembly machinery exhibits Conformational Flexibility in lipid bilayers as seen by high-sensitivity solid-state NMR*
34. Tikhonova, E., Hariharan, P., Medeiros-Silva, J., Bogdanov, M.V., Dowhan, W., Weingarth, M.,\* Guan, L.,\* (2018) BMC Biology, 16, 85, *Structural and functional characterization of protein-lipid interactions of the Salmonella typhimurium melibiose transporter MelB*
33. Saracino, A., Fontana, F., Jekhmane, S., Medeiros-Silva, J., Weingarth, M., Gelain, F. (2018) Advanced Science, 5, 1800471, *Elucidating self-assembling peptide aggregation via Morphoscanner: a new tool for protein-peptide structural characterization*
32. Pinto, C., Mance, D., Julien, M., Daniëls, M., Weingarth, M., Baldus, M. (2018) J. Struct. Bio., 17, 1047, *Studying the assembly of the BAM complex in native membranes by cellular solid-state NMR spectroscopy*

31. Visscher, K.M., Medeiros-Silva, J., Mance, D., Rodrigues, J.P.G.L.M., Daniëls, M., Bonvin, A.M.J.J., Baldus, M., Weingarth, M. (2017) *Angew. Chem.*, 56, 13222, *Supramolecular organization and functional implications of K<sup>+</sup> channel clusters in membranes*, *Frontispiece article*
30. Medeiros-Silva, J., Jekhmane, S., Baldus, M., Weingarth, M. (2017) *Solid State Nucl. Magn. Reson.*, 87, 80, *Identifying very strong hydrogen bonds in membrane proteins by time-resolved <sup>1</sup>H-detected solid-state NMR and molecular dynamics simulations*, *invited article special issue 'Ultra-fast MAS*
29. Medeiros-Silva, J., Mance, D., Daniels, M., Jekhmane, S., Houben, K., Baldus, M., Weingarth, M. (2016) *Angew. Chem.*, 55, 13606, *<sup>1</sup>H- detected solid-state NMR studies of water-inaccessible proteins in vitro and in situ*
28. Chung, S., Angelici, C., Hinterding, S.O.M., Weingarth, M., Baldus, M., Houben, K., Weckhuysen, B.M., Bruijninx, P.C.A. (2016) *ACS Catal.*, 6, 4034, *On the role of magnesium silicates in wet-kneaded silica-magnesia catalysts for the Lebedev ethanol-to-butadiene process*
27. Mance, D., Sinnige, T., Kaplan, M., Daniels, M., Houben, K., Baldus, M., Weingarth, M. (2015) *Angew. Chem.*, 54, 15799, *A labeling approach to harness backbone and side chain protons in <sup>1</sup>H-detected solid-state NMR*
26. Jantschke, A., Koers, E., Mance, D., Weingarth, M., Brunner, E., Baldus, M. (2015) *Angew. Chem.*, 54, 15069, *Insight into the Supramolecular Architecture of Intact Diatom Biosilica Using a DNP-Solid-State NMR-Based Approach*
25. Rad Malekshahi, M., Visscher, K.M., Rodrigues, J.P.G.L.M., de Vries, R., Hennink, W.E., Baldus, M., Bonvin, A.M.J.J., Mastrobattista, E., Weingarth, M. (2015) *J. Am. Chem. Soc.*, 137, 7775, *The supramolecular organization of a peptide based nanocarrier at high molecular detail*
24. van der Cruijssen, E., Koers, E., Sauvée, C., Hulse, R.E., Weingarth, M., Ouari, O., Perozo, E., Tordo, T., Baldus, M., Chemistry, (2015) *Chemistry - A European Journal*, 21, 12971, *Biomolecular DNP- supported NMR spectroscopy using site directed spin labeling*
23. van Zandvoort, I., Koers, E.J., Weingarth, M., Bruijninx, P.C.A. Baldus, M., Weckhuysen, B.M., (2015) *Green Chemistry*, 17, 4383, *Structural Characterization of <sup>13</sup>C-Enriched Humins and Alkali-treated <sup>13</sup>C Humins by 2D Solid-state NMR*
22. Sinnige, T., Weingarth, M., Daniels, M., Boelens, R., Bonvin, A.M.J.J., Houben, K., Baldus, M., (2015) *Structure*, 23, 1317, *Conformational plasticity of the POTRA 5 domain in the outer membrane protein assembly factor BamA*
21. Koers, E., van der Cruijssen, E., Rosay, M., Weingarth, M., Prokofyev, A., Sauvée, C., Ouari, O., Pongs, O., Tordo, P., Maas, W., Baldus, M. (2014) *J. Biomol. NMR*, 60, 157, *NMR-based Structural Biology enhanced by Dynamic Nuclear Polarization at high magnetic field*
20. Sinnige, T., Weingarth, M., Renault, M., Baker, L., Tommassen, J., Baldus, M. (2014) *J. Mol. Bio.*, 426, 2009. *Solid-state NMR studies of full-length BamA in lipid bilayers suggest limited overall POTRA mobility*
19. Sinnige, T., Daniels, M., Baldus, M., Weingarth, M. (2014) *J. Am. Chem. Soc.*, 136, 4452. *Proton clouds to measure non-exchangeable sidechain protons in solid-state NMR*, **Cover article**
18. Weingarth, M.,\* van der Cruijssen, E., Ostmeyer, J., Lievestro, S. Roux, B., Baldus, M.,\* (2014) *J. Am. Chem. Soc.*, 136, 2000, *Quantitative analysis of the water occupancy around the selectivity filter of a K<sup>+</sup> channel in different gating modes* \*corresponding author
17. Koers, E. J., Lopez-Deber, M. P., Weingarth, M., Nand, D., Hickman, D. T., MlakiNdao, D., Pfeifer, A., Muhs, A., Baldus, M. (2013) *Angew. Chem.*, 52, 10905, *Dynamic Nuclear Polarization NMR reveals multiple conformations in lipid-anchored Peptide Vaccines*
16. van der Cruijssen, E., Nand, D., Weingarth, M., Prokofyev, A., Hornig, S., Cukkemane, A., Bonvin, A. MMJ, Becker, S., Hulse, R. E., Perozo, E., Pongs, O., Baldus, M. (2013) *Proc. Natl. Acad. Sci. USA*, 110, 13008. *The importance of the lipid-pore loop interface for potassium channel structure and function*
15. Weingarth, M., Baldus, M. (2013) *Acc. Chem. Res.*, 46, 2037. *Solid-State NMR-Based Approaches for Supramolecular Structure Elucidation*

14. Weingarth, M., Prokopyef, A., van der Crujisen, E., Nand, D., Bonvin, A., Pongs, O., Baldus, M. (2013) *J. Am. Chem. Soc.*, 135, 10. *Structural determinants of specific lipid binding to potassium channels*
13. Weingarth, M., Ader, C., Melqiond, A., Nand, D., Becker, S., Bonvin, A., Baldus, M. (2012) *Biophys. J.*, 103, 29. *Supramolecular structure of membrane-associated polypeptides by combining solid-state NMR and MD simulations*
12. Cukkemane, A., Nand, D., Gradmann, S., Weingarth, M., Baldus, M. (2012) *Biomol. NMR Assign.* 6, 225, *Solid-state NMR [13C,15N] resonance assignments of the nucleotide-binding domain of a bacterial cyclic nucleotide-gated channel*
11. Weingarth, M., Trebosc, J., Amoureux, J.P., Bodenhausen, G., Tekely, P. (2011) *Solid State Nucl. Magn. Reson.* 40, 21. *Efficiency at high spinning frequencies of heteronuclear decoupling methods designed to quench rotary resonance*
10. Weingarth, M., Masuda, Y., Takegoshi, Bodenhausen, G., Tekely, P. (2011) *J. Biol. NMR* 50, 129. *Sensitive (13)C- (13)C correlation spectra of amyloid fibrils at very high spinning frequencies and magnetic fields*
9. Weingarth, M., Bodenhausen, G. and Tekely, P. (2010) *Chem. Phys. Lett.* 502, 259, *Probing the quenching of rotary resonance by PISSARRO decoupling*
8. Weingarth, M., Bodenhausen, G., Tekely, P. (2010) *Chem. Phys. Lett.* 488, 10, *Broadband magnetization transfer using moderate radio-frequency fields for NMR with very high static fields and spinning speeds, Editor's choice article.*
7. Weingarth, M., Tekely, P., Brüschweiler, R., Bodenhausen, G. (2010) *Chem. Comm.* 46, 952. *Improving the quality of 2D solid-state NMR spectra of microcrystalline proteins by covariance analysis*
6. Weingarth, M., Bodenhausen, G., Tekely, P. (2009) *J. Am. Chem. Soc.* 131, 13937. *Broadband carbon-13 correlation spectra of microcrystalline proteins in very high magnetic fields*
5. Weingarth, M., Bodenhausen, G., Tekely, P. (2009) *J. Magn. Reson.* 199, 238. *Low-power decoupling at high spinning frequencies in high static fields*
4. Weingarth, M., Demco, D., Bodenhausen, G., Tekely, P. (2009) *Chem. Phys. Lett.* 469, 342. *Improved magnetization transfer in solid-state NMR with fast magic angle spinning*
3. Rettig, M.\*, Weingarth, M.\*, Langel, W., Kamal, A., Kumar, P., Weisz, K. (2009) *Biochemistry* 48, 12223. *\*co-first authors, Solution structure of a covalently bound pyrrolo-benzodiazepine-benzimidazole hybrid to a 10mer DNA duplex*
2. Weingarth, M., Tekely, P., Bodenhausen, G. (2008) *Chem. Phys. Lett.* 466, 247. *Efficient heteronuclear decoupling by quenching rotary resonance in solid-state NMR*
1. Weingarth, M., Raouafi, N., Duma, L., Bodenhausen, G., Boujlel, K., Schöllhorn, B., Tekely, P. (2008) *Chem. Comm.* 45, 5981. *Revealing molecular self-assembly and geometry of non-covalent halogen bonding by solid-state NMR spectroscopy*

## Talks

86. Meeting 'New Horizons in Membrane Biology', Frankfurt (Germany), 2024, invited
85. 3<sup>rd</sup> Structural and Computational Biology Symposium, St. Jude Children's Hospital, Memphis (USA), 2024, invited
84. RSC NMR discussion group postgraduate meeting, Birmingham (England), 2024, invited
83. Molecular Biophysics of Membranes, Lake Tahoe (California, USA), 2024, invited
82. 20<sup>th</sup> EUROMAR, Bilbao (Spain) 2024, invited
81. 6<sup>th</sup> Instruct Biennial Structural Biology Conference, Cascais (Portugal), 2024, invited
80. Seminar, Queen's University, Belfast (Northern Ireland), 2024, invited
79. Gordon Research Conference - New Antibacterial Discovery and Development, Ventura (USA), 2024, invited
78. Irseer Naturstofftage, Irsee (Germany), 2024, invited
77. Bruker workshop, Beijing (China), 2023, invited (virtual talk)
76. Young Belgian Magnetic Resonance Scientists meeting, Blankenberge (Belgium), 2023, invited (plenary)

75. Journées ‘MultiFonction des Peptides AntiMicrobiens’, Lille (France), 2023, invited
74. 16<sup>th</sup> Deutsches Peptidymposium, Jena (Germany), 2023, invited (keynote)
73. CHAINS 2023, focus session: Addressing antibiotic resistance, The Hague (Netherlands), 2023, invited
72. Sonderforschungsbereich TRR261 conference ‘Cellular Mechanisms of Antibiotics’, Bad Boll (Germany), 2023, invited
71. NVBMB structural biology symposium, Groningen (Netherlands), 2023, invited
70. 44<sup>th</sup> FGMR meeting (Fachgruppe Magnetic Resonance), Konstanz (Germany) 2023, invited (plenary)
69. 23<sup>rd</sup> French Group of Peptides and Proteins (GFPP) meeting, Foulorns (France) 2023, invited
68. Alpine Conference on Magnetic Resonance in Solids, Chamonix (France) 2023, invited
67. Pasteur meeting – ‘NMR: a tool for biology’, Paris (France), 2023, invited
66. 64<sup>st</sup> ENC, workshop ‘Ultrahigh Field NMR’, Asilomar (USA) 2023, invited
65. 64<sup>st</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Asilomar (USA) 2023, invited
64. RSC Chemical Biology and Bioorganic Group Forum, Belfast (Northern Ireland), 2023, invited (plenary)
63. Seminar, NYU Abu Dhabi, Abu Dhabi, (United Arab Emirates), 2022, invited
62. Seminar, Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP), Berlin (Germany), 2022, invited
61. 29<sup>th</sup> ICRMBS, Boston (USA), 2022, invited (‘Founders’ medal’ award presentation)
60. Instruct-ERIC, ‘From structure to function’ webinar series, 2022, invited
59. Seminar, University of Naples Federico II, Naples (Italy), 2022, invited
58. 17<sup>th</sup> Workshop on Bioactive Peptides, Naples (Italy) 2022
57. iNEXT JRA meeting, Bad Homburg (Germany) 2022, invited
56. Konstantin Ivanov Intercontinental seminar webinar series, 2022, invited
55. Chianti workshop ‘Opening New Doors for Magnetic Resonance in Life Sciences’, Grosseto (Italy) 2022, invited
54. iNEXT-Discovery Annual Scientific Meeting, Warsaw (Poland) 2022, invited
53. Ibero-American network ‘BUDEPAV-AM’ 2021, invited seminar
52. 22<sup>nd</sup> International Society of Magnetic Resonance (ISMAR) Conference, Osaka (Japan) 2021
51. 17<sup>th</sup> EUROMAR, Portorož (Slovenia) 2021, invited
50. VIROCARB PhD symposium (Germany) 2021, invited
49. ‘New Approaches to Tackle Antibiotic Resistance’, AntiResist program, Basel University, 2020 invited
48. Instruct-ERIC, ‘From structure to function’ series, 2020, invited
47. National Magnetic Resonance Society of India (India), 2020, invited
46. Institut Pasteur, Paris (France) 2020, invited seminar
45. ‘Emerging Topics in Biomolecular Magnetic Resonance’, 2020, invited (webinar)
44. NovoBiotic Pharmaceutical, Boston (USA) 2020, invited seminar
43. Solid State NMR of Metal containing compounds - LE STUDIUM conference, Orléans (France) 2020, invited
42. NCOH-AMR meeting, Utrecht (Netherlands) 2020, invited talk
41. 26<sup>th</sup> National Magnetic Resonance Society of India meeting, Gujarat (India), 2020, invited
40. 9<sup>th</sup> International meeting on antimicrobial peptides (IMAP), Utrecht (the Netherlands) 2019, invited
39. Ecole Normale Supérieure, Paris (France) 2019, invited
38. 4<sup>st</sup> FEBS fellows meeting, Krakow (Poland) 2019, invited
37. 10<sup>th</sup> International Peptide Symposium, Kyoto (Japan) 2018
36. Ultra-High-Field NMR spectroscopy workshop, Lille (France) 2018, invited
35. Biochemisches Kolloquium, Leipzig (Germany) 2018, invited
34. FGMR meeting (Fachgruppe Magnetic Resonance), Leipzig (Germany) 2018

33. Vrije Universiteit Amsterdam (the Netherlands) 2018, invited Seminar
32. 8<sup>th</sup> International meeting on antimicrobial peptides (IMAP), Edinburgh (UK) 2018
31. Mini-symposium 'The Future of Magnetic Resonance', Frankfurt (Germany) 2018, invited
30. 16<sup>th</sup> Workshop on Bioactive Peptides, Naples (Italy) 2018
29. 42<sup>nd</sup> FEBS congress, Jerusalem (Israel) 2017
28. 3<sup>rd</sup> FEBS fellows meeting, Jerusalem (Israel) 2017, invited
27. NextGenChem symposium, 2017 Utrecht (The Netherlands)
26. Goethe University Frankfurt (Germany) 2016, invited seminar
25. CCPN/Biosim joint-conference, Derby (England) 2016, invited
24. 57<sup>th</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Pittsburgh (USA) 2016
23. Bijvoet Symposium, Soesterberg (Netherlands) 2016
22. Polymers and Self- Assembly: From Biology to Nanomaterials (BPS Meeting), Rio de Janeiro (Brazil) 2015
21. CHAINS 2015 – the Dutch Chemistry conference, Veldhoven (Netherlands) 2015
20. Membrane Symposium, Chicago (USA) 2015, invited
19. Conference for W2 professor-position, LMU Munich (Germany) 2015 (selected for short-list)
18. 2<sup>nd</sup> FEBS fellows meeting, Paris (France) 2014, invited
17. Protons & Membrane Reactions, Gordon Conference, Ventura (USA) 2014
16. 58<sup>th</sup> Meeting of the Biophysical Society, San Francisco (USA) 2014
15. BIOMOS Symposium on Biomolecular Simulation, Ausserberg (Switzerland) 2014
14. Meeting of the Dutch NMR group, Eindhoven (The Netherlands) 2013, invited
13. International Society of Magnetic Resonance (ISMAR), Rio de Janeiro (Brazil) 2013
12. BIOMOS Symposium on Biomolecular Simulation, Ausserberg (Switzerland) 2013
11. 53<sup>rd</sup> Experimental Nuclear Magnetic Resonance Conference (ENC), Miami (USA) 2012
10. The Netherlands Society on Biomolecular Modelling meeting, Utrecht (Netherlands) 2012
9. 12<sup>th</sup> Young Scientist Forum of the IUBMB & FEBS Congress, Sevilla (Spain) 2012
8. BIOMOS Symposium on Biomolecular Simulation, Ausserberg (Switzerland) 2011
7. 51<sup>st</sup> Exp. Nuclear Magnetic Resonance Conference (ENC), Daytona (USA) 2010
6. University of Illinois, seminar, invited by Chad Rienstra, Urbana-Champaign (USA) 2010
5. Mass. Inst. of Tech., seminar, invited by Prof. Griffin, Boston (USA) 2010
4. National Institute of Health, seminar, invited by Prof. Tycko, Bethesda (USA) 2010
3. Groupe d'Etude de Résonance Magnétique (GERM), Fréjus (France) 2009
2. Grand Bassin Parisien, Paris (France) 2009
1. Grand Bassin Parisien, Rennes (France) 2008

## Teaching Experience

- Since 2022 Coordinator & Lecturer 'Physical Chemistry for Life Sciences' (BSc level)
- Since 2020 Coordinator & Lecturer 'Molecules & Cell track course' (MSc level)
- Since 2021 Lecturer 'Concepts in Science 4 Life' (MSc level)
- Since 2018 Lecturer 'Advanced NMR', responsible for solid-state NMR part (MSc level)
- Since 2018 Lecturer 'Molecules & Cells' (MSc level)
- Since 2015 Lecturer: NMR and Molecular Modelling (BSc level)
- 2012 Lecturer: Dutch NMR summer school (post-graduate level)

## Committees/Academic Administration

- Member of Programme Committee NWO Dutch Biophysics (2022 - 2024)
- Director of Bijvoet Summer School ‘Exploring Nature’s Molecular Machines’ (since 2017)
- Local organizing committee EUROMAR 2022
- Organizer EUROMAR 2022 Satellite meeting ‘Magnetic Resonance at Ultra-High Field’
- Member of ‘Toekomstvisie/Vision for the future’ committee of Chemistry Department, Utrecht University (2022)
- Utrecht University ERC Consolidator Grant advice-commission (Life sciences) (2023)
- Exam Committee of the Chemistry Department (since 2022)

## Supervised PhD Students

João Silva (2015 - 2019)    Miranda Jekhmane (2016 - 2020)    Rhythm Shukla (2019 - 2023)  
 Maik Derks (2020 - )    Raj Kumar (2020 - )    Francesca Lavore (2021 - )  
 Ali Javed (2021 - )    Roy van Beekveld (2022 - )    Rosan de Winter (2023 - )  
 Shadan Geshani (2023 - )    Charalampos Ntallis (2023 - )

## Supervised MSc Students

Christoph Müller-Hermes	Felix Torres	Felix Kümmerer	Barend Elenbaas
Marek Prachar	Benjamin Vermeer	Bram Vermeulen	Thorben Maass
Francesca D’Amico	Danique Ammerlaan	Federico Napoli	Vicky Charitou
Leanna Smid	Lea-Maria Becker	Mick van der Weijde	Roy van Beekveld
Mia Rafferty	Lisa Renee van Haften	Jochem de Waard	Koen Clevers

## Selected Awards of Supervised Personnel

### *Rhythm Shukla*

- Promotion cum laude 2023
- Best Dutch PhD thesis Biophysics (BIOPM award) 2023
- For Women in Science (l’Oréal-UNESCO), Honorary mention, 2022
- Manrao-Rastogi Awards for Young Scientists, 2022

### *Shehrazade Jekhmane*

- Bert Schram Young Investigator award of the American Peptide Society 2019

### *João Medeiros-Silva:*

- Promotion cum laude 2019
- Bijvoet student of the year 2019
- Best Dutch PhD thesis Biophysics (BIOPM award) 2020
- Best Dutch PhD thesis Biochemistry (Westenbrink prize of the NVBMB) 2020
- Best Dutch PhD thesis in NMR (Gorter award) 2020
- Portuguese Young Chemist of the year 2020
- Rubicon postdoc fellowship 2020
- EMBO postdoc fellowship

### *Felix Kümmerer*

- Vliegenhart Award (‘Vliegenhart Scriptieprijs’), best MSc thesis in Life Sciences of Utrecht University, 2019

## Funded European Consortia

- FragmentScreen (2023-2027, EU initiative to improve drug discovery, UU funding 0.5M€; role: co-applicant)
- Inext-Discovery (2018-2023, EU initiative to provide access to structural biology equipment, role: co-applicant)

## Recent Reviewer Activities

Nature // Nature Communications // Journal of the American Scientific Society // Trends in Microbiology // Angewandte Chemistry // eLife // Advanced Science // ACS Infectious Diseases // Biophysical Journal // Journal of Molecular Medicine //



Journal of Biomolecular NMR // Biomacromolecules // Scientific Reports // Journal of Physical Chemistry B // MedChemComm // Chemistry – an European Journal // ChemBioChem // PLOS One // Infection and Drug Resistance // Protein Engineering, Design, Selection // Journal of Structural Biology // Journal of Molecular Recognition // BBA – proteins and proteomics // Computational Biology and Chemistry // etc.

Reviewer for: German Research Foundation (DFG) // Agence Nationale de Recherche, France // The Israel Science Foundation // ETH Zurich postdoctoral fellowships // National Science Center of Poland // The Wellcome trust/DBT India Alliance Fellowships // Leibniz Competition // U.S.-Israel Binational Science Foundation

## Book Chapters

1. Weingarth, M., Baldus, M., *Introduction to biological solid-state NMR*, in: *Advances in Biological Solid-State NMR: Proteins and Membrane Active Peptides* (ISBN 978-1-84973-910-8)
2. Mance, D., Weingarth, M., Baldus, M., *Solid-State NMR on Complex Biomolecules: Methods and Applications*, in: *Modern Magnetic Resonance* (DOI: 10.1007/978-3-319-28275-6\_33-1)
3. Narasimhan, S., Mance, D., Pinto, C., Weingarth, M., Bonvin, A.M.J.J., Baldus, M., *Rapid Prediction of Multi-dimensional NMR Data Sets using FANDAS*, in: *Protein NMR: Methods and Protocols* (ISBN 978-1-4939-7385-9)
4. Damman, R., Narasimhan, S., Weingarth, M., Baldus, M., *Cellular solid-state NMR Spectroscopy*, RSC Advances (ISBN 978-1-78801-217-1)
5. Derks, M., Smid, Leanna, S., Kumar, R., Becker, L.M., Shukla, R., Breukink, E., Weingarth, M., *High-resolution NMR Studies of Antibiotics in Membranes*, in: *NMR Spectroscopy for Probing Functional Dynamics at Biological Interfaces*, RSC Advances, (ISBN 978-1-83916-209-1)

## Patents

'Efficient heteronuclear decoupling by quenching rotary resonance in solid-state NMR'; US Patent US2010052673; European Patent EP2159589A1; with Bruker Biospin, Ecole Normale Supérieure, CNRS, EPF Lausanne

## Monographs

1. PhD thesis '*Decoupling and Recoupling in solid-state NMR at very high spinning frequency and static fields*'. Directed by Prof. G. Bodenhausen and Dr. P. Tekely. Grade 'Très honorable' (best possible grade)
2. Diploma thesis '*Structural investigations of the DNA-pyrrolobenzodiazepine interaction*'. Directed by Prof. K. Weisz and Prof. W. Langel. Grade 'mit Auszeichnung/with distinction' (all grades 1.0 / best possible grade).