

## Prof. Dr. Michael Sattler

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### Education

- 1995 Dr. phil. nat., University of Frankfurt, Germany  
1991 Diploma in Chemistry, University of Frankfurt, Germany

### Current positions

- 2007- **Director**, Institute of Structural Biology, Helmholtz Zentrum München, German Research Center for Environmental Health, Munich, Germany  
2007- **Professor (W3)** Biomolecular NMR-Spectroscopy, Department Chemie, TU München  
2007- **Director**, Bavarian NMR Center (<http://www.bnmrz.org>)

### Previous positions

- 1997-2006 **Group Leader**, Structural & Computational- Biology and Gene Expression Programmes; European Molecular Biology Laboratory (EMBL), Heidelberg, Germany  
*Structural biology in RNA-based gene regulation: pre-mRNA splicing (Science 2001, 2006), RNAi (Nature 2003) signaling; NMR methods for large protein complexes*
- 1995-1997 **Postdoctoral Associate**, Abbott Laboratories, Abbott Park, USA  
Advisor: Dr. Stephen W. Fesik *Structural biology of protein complexes in signaling and apoptosis: Shc-PTB/Trk (Nature 1995), Bcl-x<sub>L</sub> (Nature 1996;Science 1997)*
- 1991-1995 **Doctoral research**, Institute of Organic Chemistry, University of Frankfurt, Germany  
Advisor: Prof. Dr. Christian Griesinger *Development of novel multidimensional heteronuclear NMR methods with improved sensitivity for biomacromolecules*

### Academic interests

Biomolecular NMR spectroscopy and integrative structural biology of proteins and RNA; NMR methods; molecular recognition and dynamics in gene regulation: alternative splicing, (long)non-coding RNAs, peroxisome biogenesis and disease-linked pathways, structure-based drug discovery.

### Fellowships and awards

- 2020 **Erwin-Schrödinger Prize/Stifterverband Science Award**  
2017 **Elected Member of the Leopoldina, German National Academy of Sciences**  
2017 **Elected Member ISMAR Council** (International Society of Magnetic Resonance)  
2014 FEBS National Lecturer Spanish Biochemical Society (SEBB), Granada  
2012 **Elected EMBO Member**  
2011-2012 Visiting Professorship for Senior International Scientists, Tianjin, China  
2005 Professor Invité, Ecole Normale Supérieure, Paris, France  
2005 Jean-François Lefevre Lecturer in Biophysics, Strasbourg, France

### Major institutional responsibilities

- 2012 – 2020 **Elected member of the DFG Study Section Foundations of Biology and Medicine**  
2014 - Coordinator, Cross Program Activity “Structural Biology”, Helmholtz Association  
2013-2019 **Member Committee Research Infrastructures (Ausschuss Forschungsbauten)**  
of the **German Wissenschaftsrat**  
2012- Board Member, DFG Cluster of Excellence EXC114: CiPS<sup>M</sup>  
2012 - Steering Committee Helmholtz Association Portfolio Program “Drug discovery”

2009-2012 Coordinator Area C, Cluster of Excellence EXC114: Center for integrated Protein Science Munich (CiPS<sup>M</sup>)

**Co/Organization of international conferences and schools**

- 2019 International conference **New Frontiers in Structure-based Drug Discovery**, Florence, Italy, with Christian Ottmann (supported by ITNs AEGIS and TASPPI)
- 2019 CiPSM Cluster of Excellence *Scientific Octoberfest*, TUM, Garching
- 2022 **EMBO Practical Course** “NMR spectroscopy of biological macromolecules”, co-organizer and instructor, biannually since 1999 (25 students and postdocs)
- 2018 International **Helmholtz Drug Discovery Conference - HDDC 2018**, Munich
- 2017 **Keystone Symposium: Frontiers of NMR in Life Sciences**; co-organizer with K. Wüthrich; S.W. Fesik; 170 participants
- 2013 **35<sup>th</sup> FGMR Discussion Meeting** and Joint Conference of the German, Italian and Slovenian Magnetic Resonance Societies. Frauenchiemsee, Germany, Sep 9-12, 300 participants
- 2008 FP6 CA NMR-Life Workshop *Advances in NMR of Protein and Nucleic Acid Molecular Recognition*, Murnau, Germany (with R. Boelens, Utrecht), 150 participants

**Patents**

- 2020 EPA No. 20214108.1 *Inhibition of virus protease*
- 2016 PCT/EP2016/080316 *CPAP-Tubulin Module*
- 2016 WO2016038045 *Pyrazolopyridine derivatives and their use in therapy*

**Key publications (selected)**

>290 journal articles, ORCID: [0000-0002-1594-0527](https://orcid.org/0000-0002-1594-0527) Researcher ID [A-2407-2012](https://publons.com/researcher/A-2407-2012/) Google Scholar

1. Jones AN, Grass C, Meininger I, Geerlof A, Klostermann M, Zarnack K, Krappmann D, Sattler M. *Modulation of pre-mRNA structure by hnRNP proteins regulates alternative splicing of MALT1* (2022) *Sci Adv* 8(31), 1–15. <https://doi.org/10.1126/sciadv.abp9153>
2. Lopez A.; Dahiya V; Delhommel F; Freiburger L; Stehle R; Asami S; Rutz D; Blair L; Buchner J\*; **Sattler M\***. *Client Binding Shifts the Populations of Dynamic Hsp90 Conformations through an Allosteric Network*. (2021) *Sci. Adv.*, 7 (51)., <https://doi.org/10.1126/sciadv.abl7295>
3. Kooshapur H, Choudhury NR, Simon B, Muhlbauer M, Jussupow A, Fernandez N, Jones AN, Dallmann A, Gabel F, Camilloni C, Michlewski G\*, Caceres JF\*, Sattler M\*. *Structural basis for terminal loop recognition and stimulation of pri-miRNA-18a processing by hnRNP A1*. (2018) *Nat Commun* 9, 2479. <https://doi.org/10.1038/s41467-018-04871-9>
4. Dawidowski M, Emmanouilidis L, Kalel VC, Tripsianes K, Schorpp K, Hadian K, Kaiser M, Maeser P, Kolonko M, Tanghe S, Rodriguez A, Schliebs W, Erdmann R\*, **Sattler M\***, and Popowicz GM\* *Inhibitors of PEX14 disrupt protein import into glycosomes and kill Trypanosoma parasites*. (2017) *Science* 355, 1416-1420. <https://doi.org/10.1126/science.aal1807>
5. Hennig J, Militi C, Popowicz GM, Wang J, Sonntag M, Geerlof A, Gabel F, Gebauer F\*, **Sattler M\*** *Structural basis for the assembly of the Sxl-UNR translation regulatory complex* (2014) *Nature*, 515:287-90. <https://doi.org/10.1038/nature13693>
6. Schlundt A, Heinz GA, Janowski R, Geerlof A, Stehle R, Heissmeyer V\*, Niessing D\*, and **Sattler M\***. *Structural basis for RNA recognition in roquin-mediated post-transcriptional gene regulation*. (2014) *Nat Struct Mol Biol* 21, 671-8. <https://doi.org/10.1038/nsmb.2855>
7. Mackereth CD, Madl T, Bonnal S, Simon B, Zanier K, Gasch A, Rybin V, Valcarcel J\*, **Sattler M\***. *Multi-domain conformational selection underlies pre-mRNA splicing regulation by U2AF* (2011) *Nature* 475, 408-11. <https://doi.org/10.1038/nature10171>
8. Tripsianes K, Madl T, Machyna M, Fessas D, Englbrecht C, Fischer U, Neugebauer KM, and **Sattler M** *Structural basis for dimethylarginine recognition by the Tudor domains of human SMN and SPF30 proteins*. (2011) *Nat Struct Mol Biol* 18, 1414-20. <https://doi.org/10.1038/nsmb.2185>
9. Corsini L, Bonnal S, Basquin J, Hothorn M, Scheffzek K, Valcarcel J\*, and **Sattler M\***. *U2AF Homology Motif interactions are required for alternative splicing regulation by SPF45*. (2007) *Nat Struct Mol Biol* 14, 620-9. <https://doi.org/10.1038/nsmb1260>
10. Lingel A, Simon B, Izaurralde E\*, and **Sattler M\***. *Structure and nucleic-acid binding of the Drosophila Argonaute 2 PAZ domain*. (2003) *Nature* 426, 465-9. <https://doi.org/10.1038/nature02123>