

Curriculum Vitae Marc Baldus

Date of birth: 28 November 1967
Place of birth: Bendorf/Rhein, Germany
Marital Status: Married

Professional career

Since 2000 *Group Leader (C3, tenured)*
Solid-state NMR, Department for NMR-based Structural Biology
Max-Planck-Institute for Biophysical Chemistry,
Göttingen/Germany

1999 - 2000 *University Lecturer*
Leiden Institute of Chemistry, Leiden University,
Leiden/The Netherlands

1997 - 1999 *Postdoctoral research associate*
MIT/Harvard Center for Magnetic Resonance,
Massachusetts Institute of Technology, Cambridge/USA

1996 - 1997 *Postdoctoral research fellow*
NSR Center for Molecular Structure, Design and Synthesis,
University of Nijmegen, Nijmegen/The Netherlands

Education

1991 - 1996 *Ph.D. studies*
Laboratorium für Physikalische Chemie,
Supervisors: Prof. R.R. Ernst & Prof. B.H. Meier, ETH Zentrum,
Zürich/Switzerland

1991 *Summer student*
'Princeton Lectures on Biophysics',
University of Princeton, Princeton/USA

1990 - 1991 *Research student*
Department of Physics, University of Florida, Gainesville/USA

1986 - 1991 *Study of Physics*
Technische Universität Darmstadt, Darmstadt/Germany

Stipends and awards

2007 EBSA Prize of the European Biophysical Societies' Association,
London

2006 Founder's Medal of the International Council on Magnetic
Resonance in Biological Systems

1997 Alexander-von-Humboldt research stipend
DFG Postdoc Stipend

1996 Poster award, 18th GDCh-Fachgruppen Tagung NMR, Eichstätt

1992 - 1996 Ph.D. research fellow, Swiss Chemical Industry

1991 Travel stipend 'Princeton lectures on Biophysics'

1990 Graduate Research Assistanship DSRB award, University of
Florida

Activities and memberships

- Member of the Gesellschaft Deutscher Chemiker (GDCh) and of the Biophysical Society.
- Member of the organizing committee Ph.D. seminar series (since 2002) and Labday 2007, Max-Planck-Institute for Biophysical Chemistry.
- Elected member of the managing board, GdCh-Fachgruppe Magnetische Resonanzspektroskopie, 2005-2008.
- Chairman (with L. Frydman) of the Minerva-Gentner Symposium on *Methodological Frontiers in Magnetic Resonance*, Eilat/Israel 2005.
- Member RCSB (PDB-BMRB) taskforce for NMR (head R. Kaptein), Since 2006.
- Session chair, *Membrane Protein Structure determination by NMR*, FASEB summer research conference on molecular biophysics of cellular membranes, 2006, Saxton Rivers, VT.
- Chairman (with C. Griesinger) of the 29th annual meeting of the GDCh Magnetic Resonance division, *Magnetic Resonance in Biophysical Chemistry*, Göttingen/Germany 2007.
- Elected member of the Executive Committee of the Experimental NMR Conference (ENC), 2007-2010.
- Session chair, *Membrane Protein Structure: Freed from the Lattice*, 52nd Annual Meeting of the Biophysical Society, 2008, Long Beach, CA.

Research Profile

Development and application of solid-state Nuclear Magnetic Resonance (ssNMR) methods for the characterization of molecular structure and (time-resolved) molecular interactions. Combination of ssNMR with other biophysical and quantum-chemical methods to study signal transduction, protein folding and aggregation. Additional applications include (bio)polymers and bionanomaterials.

Selected publications

- Etzkorn, M., Martell, S., Andronesi, O.C., Seidel, K., Engelhard, M. and Baldus, M. (2007), Secondary Structure and topology of a seven-helix receptor in native membranes studied by solid-state NMR, *Angew. Chem. Int. Ed.*, 46, 459-462.
- Lange, A., Giller, K., Hornig, S., Martin-Eauclaire, M.F. Pongs, O., Becker, S., and Baldus, M. (2006), Toxin-induced conformational changes in a potassium channel revealed by solid-state NMR. *Nature*, 440, 959-962.
- Heise, H., Hoyer, W., Becker, S., Andronesi, O.C., Riedel, D., and Baldus, M. (2005), Molecular Level secondary structure, polymorphism and dynamics of full-length α -synuclein fibrils studied by solid-state NMR, *Proc. Natl. Acad. Sci. U.S.A.*, 102, 15871-15876.
- Luca, S., Sohal, A.K., Phillipov, D., van Boom, J., Grisshammer, R., and Baldus, M. (2003), The conformation of neurotensin bound to its G-protein-coupled receptor, *Proc. Natl. Acad. Sci. U.S.A.*, 100, 10706-10711.
- Luca, S., Heise, H., and Baldus, M. (2003): High-resolution solid-state NMR applied to polypeptides and membrane proteins, *Accounts Chem. Res.*, 36, 858-865.