Carsten Baldauf

Date of birth:	December 23, 1977
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Academic education

1997-1998	Biochemistry at Ruhr-Universität Bochum, Germany
1998-2002	Biochemistry at Universität Leipzig
2002	Diploma in Biochemistry (*sehr gut*) Thesis: 'Sulfonamidopeptide und vinyloge Peptide als Foldamere'
2005	Dr. rer. nat. in Biochemistry (*magna cum laude*) Thesis: 'Secondary Structure Formation in Homologous Peptides'

Academic career

2002-2005	Institut für Biochemie, Universität Leipzig, PhD student in the group of Prof. Hofmann (funded by DFG-Project HO 2346/1)
2005	Institut für Biochemie, Universität Leipzig, PostDoc in the group of Prof. Hofmann (funded by SFB 610)
2005-2007	BIOTEC of TU Dresden, PostDoc in the group of Dr. Pisabarro (funded by EFRE and Klaus Tschira Stiftung gGmbH)
2008-2010	CAS-MPG PICB in Shanghai, PostDoc (Feodor Lynen Fellowship of Humboldt Foundation)
Since 7/2009	Guest-scientist at HITS gGmbH, Heidelberg
4/2010	Teaching a practical course in physical chemistry at Institut für Biochemie, Universität Leipzig
Since 8/2010	Scientist at Fritz-Haber-Institut der Max-Planck-Gesellschaft, Theory department

Scientific visits

2-5/2009	Massachusetts Institute of Technology (MIT) in Cambridge, Visiting Scholar at the DMSE with Prof. Alexander-Katz
10/2010	CAS-MPG PICB in Shanghai

Scientific interests

peptide, protein, and foldamer structure and dynamics; receptor-ligand and protein-protein interactions; landscapes, algorithms and energy functions in structural biology; mechanic force and protein function; density functional theory

Scientific awards

2008	Feodor Lynen Fellowship of the Alexander von Humboldt Foundation
2010	'Nachwuchsförderpreis' of the German Society for Thrombosis and Hemostasis for work on the protein mechanics of von Willebrand factor
2010	JTH Mannucci Award for best article in 2009 by a young investigator (Shear-Induced Unfolding Activates von Willebrand Factor A2 Domain for Proteolysis)

Ongoing projects

SIBS-President's special funds: The von Willebrand factor – A force sensor in blood

Activities

Organized Conferences: MDCO'07 – Molecular Docking, Complexity and Optimization, Dresden (Germany), October 4th, 2007; Special Session on Metaheuristics and Structural Biology at META'08, Hammamet (Tunisia), October 29th to 31st, 2008; Sino-German Workshop on Shear as Regulatory Driving Force in the Extracellular Space, Beijing (China), January 19th to 24th, 2009.

Reviewer

J Mol Graph Model; J Royal Soc: Interface; European Conference on Complex Systems (ECCS); The Genetic and Evolutionary Computing Conference (GECCO)

Selected publications

1. Scheike, J. A., **Baldauf, C.**, Spengler, J., Albericio, F., Pisabarro, M. T., Koksch, B. (2007) Effects of H-Bond Elimination on Protein Structure Formation. Angew. Chem. Int. Ed. 46 7766-7769.
2. **Baldauf, C.**, Pisabarro, M. T. (2008): Stable Hairpins with β-Peptides: Route to Tackle Protein-Protein Interactions. J. Phys. Chem. B 112, 7581-7591.
3. **Baldauf, C.**, Schneppenheim, R., Stacklies, W., Obser, T., Pieconka, A., Schneppenheim, S., Budde, U., Zhou, J., Gräter, F. (2009): Shear-Induced Unfolding Activates von Willebrand Factor A2 Domain for Proteolysis. J. Thromb. Haemost. 7 2096-2105
4. Rezai Araghi, R., Jäckel, C., Cölfen, H., Salwiczek, M., Völkel, A., Wagner, S. C., Wieczorek, S., **Baldauf, C.**, Koksch, B. (2010): A β/γ Motif To Mimic α-Helical Turns In Proteins. ChemBioChem 11, 335-339.
5. Meier, R., Pippl, M., Brandt, F., Sippl, W., **Baldauf, C.** (2010): PARADOCKS – A Framework for Molecular Docking with Population-Based Metaheuristics. J. Chem. Inf. Mod. 50, 879-889.