

Mark Pfuhl:

DATE OF BIRTH: 25th March 1966

DEGREES: Diplom, Biochemistry, Freie Universität Berlin, 1991
Dr. rer. nat, EMBL-Heidelberg/Freie Universität Berlin, 1996

APPOINTMENTS: 1991-1996 EMBL predoctoral studentship, EMBL Heidelberg
1996 short term EMBO postdoctoral fellowship, Université de Haute Normandie
1996-1998 long term EMBO fellowship, University College London
1998-2001 Royal Society University Research Fellowship, UCL
2001-2006 Lecturer and Royal Society URF, University of Leicester
2006-2010 Lecturer, University of Leicester
since 2010 Reader in Cardiovascular Structural Biology, King's College London,
Cardiovascular Division and Randall Division for Cell and Molecular
Biophysics

MEASURES OF ESTEEM:

EMBL predoctoral studentship 1991
EMBO fellowship 1996
Royal Society University Research Fellowship 1998
Member executive committee CCPN initiative 2005-2008
Member studentship committee Royal Society 2006

SELECTED PUBLICATIONS:

R. Croasdale, F. J. Ivins, F. Muskett, T. Daviter, D. J. Scott, T. Hardy, S. J. Smerdon, A. M. Fry, **M. Pfuhl**, "An undecided coiled-coil: the leucine zipper of Nek2 kinase exhibits atypical conformation exchange dynamics", in the press, J. Biol. Chem. 06/2011

D. Philippe, A. Ababou, X. Yang, R. Ghosh, T. Daviter, J.E. Ladbury, **M. Pfuhl**, "Making Ends Meet: The Importance of the N- and C-termini for the Structure, Stability and Function of the Third SH3 Domain of Cin85", Biochemistry 50, 3649-3659, 2011

M. Pfuhl, S. Al-Sarayreh, M. El-Mezgueldi, "The calponin regulatory region is intrinsically unstructured: novel insight into actin-calponin and calmodulin-calponin interfaces using NMR Spectroscopy", Biophys. J. 100, 1718-1728, 2011

J. Ratti, E. Rostkova, M. Gautel, **M. Pfuhl**, "Structure and interactions of myosin binding protein domain C0: Cardiac specific regulation of myosin at its neck?", J. Biol. Chem. 286, 12650-12658, 2011

S. Schroder, F. Fraternali, X. Quan, D. Scott, F. Qian, **M. Pfuhl**, "When a module is not a domain: the case of the REJ module and the redefinition of the architecture of polycystin-1", Biochem. J. 435, 651-660, 2011

A. Ababou, **M. Pfuhl**, J. D. Ladbury, "Novel Insights into Binding Mechanisms of CIN85 SH3 Domains to Cbl Proteins: Solution based Investigations and in vivo Implications", J. Mol. Biol. 387, 1120-1136, 2009

A. Ababou, E. Rostkova, S. Mistry, C. Le Masurier, M. Gautel, **M. Pfuhl**, "Myosin Binding Protein C (MyBP-C) Positioned to Play a Key Role in Regulation of Muscle Contraction: Structure and Interactions of domain C1", J. Mol. Biol. 384, 615-630, 2008

A. Ababou, **M. Pfuhl**, J. D. Ladbury, "The binding stoichiometry of CIN85 SH3 domain A and Cbl-b", Nat. Struct. Mol. Biol., 15, 890-891, 2008

A. Ababou, M. Gautel and **M. Pfuhl**, "Dissecting the N-terminal Myosin Binding Site of Human Cardiac Myosin Binding Protein C: Structure and Myosin Binding of Domain C2", J. Biol. Chem 282, 9204-9215, 2007

A. Ababou, L. Zhou, M. Gautel and **M. Pfuhl**, "Sequence specific assignment of domain C1 of the N-terminal myosin binding site of Myosin Binding Protein C", J. Biomol. NMR 29, 431-432, 2004

S. M. Idowu, M. Gautel, S. J. Perkins, **M. Pfuhl**, "Structure, Stability and Dynamics of the Central Domain of Cardiac Myosin Binding Protein C (MyBP-C): Implications for Multidomain Assembly and Causes for Cardiomyopathy", J. Mol. Biol 329, 745-761, 2003

H. A. Chen, **M. Pfuhl**, P. C. Driscoll, "The pH dependence of CD2 domain 1 self-association and 15N chemical exchange broadening is correlated with the anomalous pKa of Glu41", Biochemistry 41, 14680-14688, 2002

S. M. Idowu, M. Gautel, **M. Pfuhl**, "Sequence specific resonance assignment of the central domain of

cardiac Myosin Binding Protein C (MyBP-C)", J. Biomol. NMR 22, 2002, 199-200

D. Renzoni, D. Esposito, **M. Pfuhl**, C. F. Higgins, P. C. Driscoll, J. E. Ladbury, "Structural Characterization of the Oligomerization Domain of the Bacterial Chromatin Structuring Protein H-NS", J. Mol. Biol 306, 1127-1137, 2001

H. A. Chen, **M. Pfuhl**, M. S. B. McAlister, P. C. Driscoll, "An elevated glutamate pKa on the binding interface of rat CD2 domain 1", Biochemistry 39, 6814-6824, 2000

D. Esposito, P. C. Driscoll, **M. Pfuhl**, "NMR of natural macromolecules". Royal Society of Chemistry, Specialist Periodical Reports, ed G. A. Webb, vol 29, 340-396, 2000

M. Pfuhl, P. C. Driscoll, "Protein nuclear magnetic resonance in the next millenium", review article, Philosophical Transactions of the Royal Society A, millenium issue 3, Chemistry and biological physics, Vol 358, 513-546, 2000

M. Pfuhl, H. A. Chen, S. M. Kristensen, P. C. Driscoll, "NMR exchange broadening arising from specific low affinity protein self-association: Analysis of nitrogen-15 nuclear relaxation for rat CD2 domain 1", J. Biomol. NMR 14,307-320, 1999

J. Pascual, **M. Pfuhl**, D. Walter, M. Saraste, M. Nilges, "Solution structure of the spectrin repeat: a Left-handed Antiparallel Triple-helical Coiled-coil ", J. Mol. Biol. 273, 740-751, 1997

M. Pfuhl, S. Improtta, A. S. Politou, A. Pastore, "When a module is also a domain: The importance of the N-terminus in the dynamics and the stability of Immunoglobulin domains from Titin.", J. Mol. Biol. 265, 242-256, 1997

M. Pfuhl, S. J. Winder, M.-A. Castiglione-Morelli, S. Labeit, A. Pastore, "Correlation Between Conformational and Binding Properties of Nebulin Repeats", J. Mol. Biol. 257, 367-384, 1996

G. Travé, P.-J. Lacombe, **M. Pfuhl**, M. Saraste, Annalisa Pastore, "Molecular mechanism of the calcium induced conformational change in the spectrin EF-hands", EMBO J. 14, 4922-4931, 1995

M. Gautel, M. A. Castiglione-Morelli, **M. Pfuhl**, A. Motta, A. Pastore, "A calmodulin binding sequence in the C-terminus of human cardiac titin kinase", Eur. J. Biochem. 230, 752-759, 1995

M. Pfuhl, A. Pastore, "Tertiary structure of an immunoglobulin-like domain from the giant muscle protein titin: a new member of the I-set", Structure 3, 391-401, 1995

M. Pfuhl, M. Gautel, A. S. Politou, C. Joseph, A. Pastore, "Secondary structure determination by NMR spectroscopy of an immunoglobulin domain of the giant muscle protein titin", J. Biomol. NMR 5, 48-58, 1995

A.S. Politou, M. Gautel, **M. Pfuhl**, S. Labeit, A. Pastore, "Immunoglobulin-Type Domains of Titin: Same Fold, Different stability ?", Biochemistry 33, 4730-4737, 1994

M. Pfuhl, S. J. Winder, A. Pastore, "Nebulin, a helical actin binding protein", EMBO J. 13, 1782-1789, 1994

RECENT GRANTS:

British Heart Foundation, PhD studentship FS/11/24/28735, "Structure of thin filament complexes: new insights by solid state NMR spectroscopy" with S. Brown (Warwick), £106,678, 2012-2014

British Heart Foundation, project grant, "The interaction of myosin binding protein C with the myosin regulatory light chain: new leverage to address an old problem", with M. Gautel, £249,085, 2011-2013

British Heart Foundation Centre of Excellence King's College London, studentship, "MS1 – a two faced cardiac regulator of proliferation and differentiation", with F. Wardle, £75,361, 2010-2013

Wellcome Trust, Programme Grant 4103, "NIMA-related kinases in cell cycle control and human disease", £1,295,835, 2008-2013, co-applicant of Prof. A. M. Fry

KRUK project grant RP2/22006, "Refining the domain structure of the membrane proximal region of polycystin 1 - a prerequisite to understanding the cause of polycystic kidney disease", £96,994, 2007-2009

BBSRC project grant BB/D018994/1, "Cooperativity of SH3 domains in Cin85: a NMR and thermodynamics study", £237,154, 2006-2008

British Heart Foundation, PhD studentship, "NMR solution structural studies of the interaction between domains C5 and C8 of cardiac Myosin Binding Protein C ", £ 65,992, 2005-2008