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## Biochemical Society Focused Meetings

### Transition Metals in Biochemistry

University of East Anglia, Norwich, U.K., 24–26 June 2008

**Edited by Steve Chapman (Edinburgh, U.K.), David Richardson (University of East Anglia, U.K.) and Nick Watmough (University of East Anglia, U.K.).**

Introduction: Andrew Thomson and the Centre for Metalloprotein Spectroscopy and Biology at the University of East Anglia

**Michael T. Wilson** **1103–1105**

Controlling complexity and water penetration in functional *de novo* protein design

**J.L. Ross Anderson, Ronald L. Koder, Christopher C. Moser and P. Leslie Dutton** **1106–1111**

Iron–sulfur cluster biosynthesis

**Sibali Bandyopadhyay, Kala Chandramouli and Michael K. Johnson** **1112–1119**

Exploring the mechanism of tryptophan 2,3-dioxygenase

**Sarah J. Thackray, Christopher G. Mowat and Stephen K. Chapman** **1120–1123**

Avoidance of the cytochrome c biogenesis system by periplasmic CXXCH motifs

**Despoina A.I. Mavridou, Martin Braun, Linda Thöny-Meyer, Julie M. Stevens and Stuart J. Ferguson** **1124–1128**

Structures and reaction pathways of the molybdenum centres of sulfite-oxidizing enzymes by pulsed EPR spectroscopy

**John H. Enemark, Andrei V. Astashkin and Arnold M. Raitsimring** **1129–1133**

The metal centres of particulate methane mono-oxygenase

**Amy C. Rosenzweig** **1134–1137**

Iron acquisition by the haem-binding Isd proteins in *Staphylococcus aureus*: studies of the mechanism using magnetic circular dichroism

**Michael T. Tiedemann, Naomi Muryoi, David E. Heinrichs and Martin J. Stillman** **1138–1143**

Signal perception by FNR: the role of the iron–sulfur cluster

**Jason C. Crack, Adrian J. Jervis, Alisa A. Gaskell, Gaye F. White, Jeffrey Green, Andrew J. Thomson and Nick E. Le Brun** **1144–1148**

The enzymology of nitric oxide in bacterial pathogenesis and resistance

**Brian R. Crane** **1149–1154**

New insights into the activity of *Pseudomonas aeruginosa cd<sub>1</sub>* nitrite reductase

**Serena Rinaldo, Alessandro Arcovito, Giorgio Giardina, Nicoletta Castiglione, Maurizio Brunori and Francesca Cutruzzola** **1155–1159**

Metalloregulatory proteins and nitric oxide signalling in bacteria

**Stephen Spiro** **1160–1164**

Time-resolved FTIR study of CO recombination with horseradish peroxidase

**Amandine Maréchal, W. John Ingle dew and Peter R. Rich** **1165–1168**

Molecular architecture of the proton diode of cytochrome c oxidase

**Peter Brzezinski, Joachim Reimann and Pia Ädelroth** **1169–1174**

## Selected oral communications

Cytochrome  $c_{6A}$ : discovery, structure and properties responsible for its low haem redox potential

**Jonathan A.R. Worrall, Ben F. Luisi, Beatrix G. Schlarb-Ridley, Derek S. Bendall and Christopher J. Howe**

**1175-1179**

Structural and functional comparison of 2-His-1-carboxylate and 3-His metallocentres in non-haem iron(II)-dependent enzymes

**Stefan Leitgeb and Bernd Nidetzky**

**1180-1186**

Coherent Raman detected electron spin resonance spectroscopy of metalloproteins: linking electron spin resonance and magnetic circular dichroism  
**Stephen J. Bingham, Daniel Wolverson and Andrew J. Thomson**

**1187-1190**

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## MicroRNAs and the Regulation of Biological Function

Imperial College London, U.K., 8 July 2008

**Edited by Tamas Dalmay (University of East Anglia, U.K.), Mark Lindsay (Imperial College London, U.K.) and Sterghios Moschos (Imperial College London, U.K.).**

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Regulation of B-cell differentiation by microRNAs and RNA-binding proteins

**Alexander Ademokun and Martin Turner**

**1191-1193**

Identification of genes targeted by microRNAs

**Tamas Dalmay**

**1194-1196**

Targeting of microRNAs for therapeutics

**Jan Stenvang, Morten Lindow and Sakari Kauppinen**

**1197-1200**

Role of microRNAs in myeloid differentiation

**Alessandro Fatica, Alessandro Rosa, Monica Ballarino, Maria Laura De Marchis, Kasper D. Rasmussen and Irene Bozzoni**

**1201-1205**

Role of microRNAs in haemopoiesis, heart hypertrophy and cancer

**Laura Fontana, Antonio Sorrentino, Gianluigi Condorelli and Cesare Peschle**

**1206-1210**

Role of *miRNA-146a* in the regulation of the innate immune response and cancer

**Andrew E. Williams, Mark M. Perry, Sterghios A. Moschos, Hanna M. Larner-Svensson and Mark A. Lindsay**

**1211-1215**

Target site effects in the RNA interference and microRNA pathways

**Gregor Obernosterer, Hakim Tafer and Javier Martinez**

**1216-1219**

## Selected oral communications

Regulation of hepatitis C virus by microRNA-122

**Catherine L. Jopling**

**1220-1223**

How do microRNAs regulate gene expression?

**Ian G. Cannell, Yi Wen Kong and Martin Bushell**

**1224-1231**

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## Metal Metabolism: Transport, Development and Neurodegeneration

Imperial College London, U.K., 9-10 July 2008

**Edited by David Allsop (Lancaster, U.K.) and Harry McArdle (Rowett Research Institute, Aberdeen, U.K.).**

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*Atp7b*  $-/-$  mice as a model for studies of Wilson's disease

**Svetlana Lutsenko**

**1233-1238**

The role of Dcytb in iron metabolism: an update

**Andrew T. McKie**

**1239–1241**

Regulation and function of *Zip4*, the acrodermatitis enteropathica gene

**Glen K. Andrews**

**1242–1246**

A distinct role in breast cancer for two LIV-1 family zinc transporters

**Kathryn M. Taylor**

**1247–1251**

Zinc-controlled gene expression by metal-regulatory transcription factor 1 (MTF1) in a model vertebrate, the zebrafish

**Christer Hogstrand, Dongling Zheng, Graham Feeney, Phil Cunningham and Peter Kille**



**1252–1257**

Iron and copper, and their interactions during development

**Lorraine Gambling, Henriette S. Andersen and Harry J. McArdle**

**1258–1261**

Mechanisms of mammalian zinc-regulated gene expression

**Kelly A. Jackson, Ruth A. Valentine, Lisa J. Coneyworth, John C. Mathers and Dianne Ford**

**1262–1266**

The role of iron in neurodevelopment: fetal iron deficiency and the developing hippocampus

**Michael K. Georgieff**

**1267–1271**

Mechanism of the metal-mediated endocytosis of the prion protein

**Nigel M. Hooper, David R. Taylor and Nicole T. Watt**

**1272–1276**

Ceruloplasmin in neurodegenerative diseases

**Sarah J. Texel, Xueying Xu and Z. Leah Harris**

**1277–1281**

Iron and the translation of the amyloid precursor protein (APP) and ferritin mRNAs: riboregulation against neural oxidative damage in Alzheimer's disease

**Jack T. Rogers, Ashley I. Bush, Hyun-Hee Cho, Deborah H. Smith, Andrew M. Thomson, Avi L. Friedlich, Debomoy K. Lahiri, Peter J. Leedman, Xudong Huang and Catherine M. Cahill**

**1282–1287**

Copper and the structural biology of the prion protein

**John H. Viles, Mark Klewpin and Rebecca C. Nadal**

**1288–1292**

Metal-dependent generation of reactive oxygen species from amyloid proteins implicated in neurodegenerative disease

**David Allsop, Jennifer Mayes, Susan Moore, Atef Masad and Brian J. Tabner**

**1293–1298**

Amyloidogenic metal-binding proteins: new investigative pathways

**Paul Davies, Sarah N. Fontaine, Dima Moualla, Xiaoyan Wang, Josephine A. Wright and David R. Brown**

**1299–1303**

Iron chelation as a potential therapy for neurodegenerative disease

**Robert C. Hider, Yongmin Ma, Francisco Molina-Holgado, Alessandra Gaeta and Sourav Roy**

**1304–1308**

## Selected oral communications

Iron and calcium in the central nervous system: a close relationship in health and sickness

**Ilaria Pelizzoni, Romina Macco, Daniele Zacchetti, Fabio Grohovaz and Franca Codazzi**

**1309–1312**

Genetic screening for novel *Drosophila* mutants with discrepancies in iron metabolism

**Anuja Mehta, Abhyuday Deshpande and Fanis Missirlis**

**1313–1316**

Albumin as a zinc carrier: properties of its high-affinity zinc-binding site

**Jin Lu, Alan J. Stewart, Peter J. Sadler, Teresa J.T. Pinheiro and Claudia A. Blindauer**

**1317–1321**

Role of transition metals in the pathogenesis of amyotrophic lateral sclerosis  
**Willianne I.M. Vonk and Leo W.J. Klomp**

**1322–1328**

## Independent Meetings

### Nuclear Envelope Diseases and Chromatin Organization

New Hunt's House, King's College, Guy's Campus, London, U.K., 23–24 April 2008

**Edited by Juliet Ellis (King's College London, U.K.).**

Functions of the nuclear envelope and lamina in development and disease

**Tatiana V. Cohen, Lidia Hernandez and Colin L. Stewart**

**1329–1334**

Investigating the pathology of Emery–Dreifuss muscular dystrophy

**Susan C. Brown, Richard J. Piercy, Francesco Muntoni and Caroline A. Sewry**

**1335–1338**

A new model for nuclear lamina organization

**Martin W. Goldberg, Jindriska Fiserova, Irm Hüttenlauch and Reimer Stick**

**1339–1343**

Does satellite cell dysfunction contribute to disease progression in Emery–Dreifuss muscular dystrophy?

**Viola F. Gnocchi, Juliet A. Ellis and Peter S. Zammit**

**1344–1349**

Lamin A: a putative colonic epithelial stem cell biomarker which identifies colorectal tumours with a more aggressive phenotype

**Naomi D. Willis, Robert G. Wilson and Christopher J. Hutchison**

**1350–1353**

Molecular signatures of Emery–Dreifuss muscular dystrophy

**Matthew A. Wheeler and Juliet A. Ellis**

**1354–1358**

Patterns of evolutionary conservation in the nesprin genes highlight probable functionally important protein domains and isoforms

**Jennifer G. Simpson and Roland G. Roberts**



**1359–1367**

KASH-domain proteins and the cytoskeletal landscapes of the nuclear envelope

**Maria Schneider, Angelika A. Noegel and Iakowos Karakesisoglu**

**1368–1372**

Inner nuclear membrane protein transport is mediated by multiple mechanisms

**Nikolaj Zuleger, Nadia Korfali and Eric C. Schirmer**

**1373–1377**

Exploring the effects of a dysfunctional nuclear matrix

**Lauren S. Elcock and Joanna M. Bridger**

**1378–1383**

Nuclear motors and nuclear structures containing A-type lamins and emerin: is there a functional link?

**Ishita S. Mehta, Lauren S. Elcock, Manelle Amira, Ian R. Kill and Joanna M. Bridger**

**1384–1388**

Towards a *Drosophila* model of Hutchinson–Gilford progeria syndrome

**Gemma S. Beard, Joanna M. Bridger, Ian R. Kill and David R.P. Tree**

**1389–1392**

### 2nd International Meeting on Molecular Perspectives on Protein–Protein Interactions

Hotel Croatia, Dubrovnic, Croatia, 27 June–1 July 2008

**Edited by Colin Kleanthous (York, U.K.), Jacob Piehler (Frankfurt, Germany) and Gideon Schreiber (Weizmann Institute, Rehovot, Israel).**

Competition between LIM-binding domains

**Jacqueline M. Matthews, Mugdha Bhati, Vanessa J. Craig, Janet E. Deane, Cy Jeffries, Christopher Lee, Amy L. Nancarrow, Daniel P. Ryan and Margaret Sunde**

**1393–1397**

|  |                  |
|--|------------------|
| Topological properties of protein interaction networks from a structural perspective<br><b>Attila Gursoy, Ozlem Keskin and Ruth Nussinov</b>   | <b>1398–1403</b> |
| Protein energy landscape roughness<br><b>Ruti Kapon, Reina Nevo and Ziv Reich</b>  | <b>1404–1408</b> |
| Colicins exploit native disorder to gain cell entry: a hitchhiker's guide to translocation<br><b>Daniel A. Bonsor, Nicola A. Meenan and Colin Kleanthous</b>   | <b>1409–1413</b> |
| $\alpha$ -Helix mimetics as inhibitors of protein–protein interactions<br><b>Ishu Saraogi and Andrew D. Hamilton</b>   | <b>1414–1417</b> |
| <b>Selected oral communications</b>  |                  |
| FunHunt: model selection based on energy landscape characteristics<br><b>Nir London and Ora Schueler-Furman</b>  | <b>1418–1421</b> |
| Kinetics and thermodynamics of metal-loaded transferrins: transferrin receptor 1 interactions<br><b>Nguyêt-Thanh Ha-Duong, Miryana Hémadi, Zohra Chikh and Jean-Michel El Hage Chahine</b>   | <b>1422–1426</b> |
| Modulation of the Rcs-mediated signal transfer by conformational flexibility<br><b>Vladimir V. Rogov, Kerstin Schmöe, Fank Löhr, Natalia Yu. Rogova, Frank Bernhard and Volker Dötsch</b>  | <b>1427–1432</b> |
| Residual dipolar couplings as a tool to study molecular recognition of ubiquitin<br><b>Nils-Alexander Lakomek, Oliver F. Lange, Korvin F.A. Walter, Christophe Farès, Dalia Egger, Peter Lunkenhimer, Jens Meiler, Helmut Grubmüller, Stefan Becker, Bert L. de Groot and Christian Griesinger</b> | <b>1433–1437</b> |
| Crystallography and protein–protein interactions: biological interfaces and crystal contacts<br><b>Bostjan Kobe, Gregor Guncar, Rebecca Buchholz, Thomas Huber, Bohumil Maco, Nathan Cowieson, Jennifer L. Martin, Mary Marfori and Jade K. Forwood</b>  | <b>1438–1441</b> |
| iPEP: peptides designed and selected for interfering with protein interaction and function<br><b>Jody M. Mason, Kristian M. Müller and Katja M. Arndt</b>  | <b>1442–1447</b> |
| MAPPIT: a versatile tool to study cytokine receptor signalling<br><b>Irma Lemmens, Sam Lievens and Jan Tavernier</b>   | <b>1448–1451</b> |

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**23rd International Lectin Meeting (Interlec-23)**  
Universities of Edinburgh and Stirling, Scotland, U.K., 11–16 July 2008

**Edited by Dave Kilpatrick (Scottish National Blood Transfusion Service, National Science Laboratory, Edinburgh, U.K.).**

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| Lectin–glycoconjugate interactions in health and disease<br><b>David C. Kilpatrick</b> | <b>1453–1456</b> |
| Lectins: past, present and future<br><b>Nathan Sharon</b>                              | <b>1457–1460</b> |
| Mannose-binding lectin genetics: from A to Z<br><b>Peter Garred</b>                    | <b>1461–1466</b> |

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| Siglecs as positive and negative regulators of the immune system<br><b>Paul R. Crocker and Pierre Redelinghuys</b>   | <b>1467–1471</b> |
| Galectin–glycan lattices regulate cell-surface glycoprotein organization and signalling<br><b>Omai B. Garner and Linda G. Baum</b>   | <b>1472–1477</b> |
| C-type lectins on dendritic cells: key modulators for the induction of immune responses<br><b>Yvette van Kooyk</b>   | <b>1478–1481</b> |
| Lectin–epithelial interactions in the human colon<br><b>Jonathan M. Rhodes, Barry J. Campbell and Lu-Gang Yu</b>   | <b>1482–1486</b> |
| Lessons learned from murine models of mannose-binding lectin deficiency<br><b>Kazue Takahashi</b>  | <b>1487–1490</b> |
| Glycans: bioactive signals decoded by lectins<br><b>Hans-Joachim Gabius</b>  | <b>1491–1496</b> |
| Is mannan-binding lectin (MBL) detectable on monocytes and monocyte-derived immature dendritic cells?<br><b>Shirley L. MacDonald, Ian Downing, Marc Turner and David C. Kilpatrick</b> | <b>1497–1500</b> |
| <hr/>  |                  |
| <b>Retraction</b>  | <b>1501</b>      |
| <hr/>  |                  |
| <b>Correction</b>  | <b>1503</b>      |
| <hr/>  |                  |
| <b>Cumulative indexes:</b>   |                  |
| <hr/>  |                  |
| Author Index   | <b>1505</b>      |
| Subject Index  | <b>1511</b>      |