

Subscribing organizations are encouraged to copy and distribute this table of contents for non-commercial purposes.

Centenary Award and Sir Frederick Gowland Hopkins Memorial Lecture



Protein folding, structure prediction and design

David Baker

225–229

Biochemical Society Hot Topic Event

Targeting cAMP Signalling to Combat Cardiovascular Disease

Charles Darwin House, London, U.K., 9 December 2013

Edited by Mark Bond (University of Bristol, U.K.), Tim Palmer (University of Glasgow, U.K.) and Stephen Yarwood (University of Glasgow, U.K.).

Targeting mitochondria to restore failed adaptation to exercise in diabetes

Kate Geary, Leslie A. Knaub, Irene E. Schauer, Amy C. Keller, Peter A. Watson, Matthew W. Miller, Chrystelle V. Garat, Kristen J. Nadeau, Melanie Cree-Green, Subbiah Pugazhenthii, Judith G. Regensteiner, Dwight J. Klemm and Jane E.B. Reusch

231–238

Dynamics of adenylate cyclase regulation via heterotrimeric G-proteins

Markus Milde, Ruth C. Werthmann, Kathrin von Hayn and Moritz Bünemann

239–243

TGR5 in inflammation and cardiovascular disease

Thijs W.H. Pols

244–249

Cyclic nucleotide phosphodiesterases (PDEs): coincidence detectors acting to spatially and temporally integrate cyclic nucleotide and non-cyclic nucleotide signals

Donald H. Maurice, Lindsay S. Wilson, Sarah N. Rampersad, Fabien Hubert, Tammy Truong, Milosz Kaczmarek, Paulina Brzezinska, Silja I. Freitag, M. Bibiana Umana and Alie Wudwud

250–256

Epac proteins: specific ligands and role in cardiac remodelling

Malik Bisserier, Jean-Paul Blondeau and Frank Lezoualc'h

257–264

Selected Oral Communications

cAMP signalling meets mitochondrial compartments

Konstantinos Lefkimiatis

265–269

The cardioprotective role of small heat-shock protein 20

Tamara P. Martin, Susan Currie and George S. Baillie

270–273

Interactions between Epac1 and ezrin in the control of endothelial barrier function Euan Parnell and Stephen J. Yarwood	274–278
Platelet myosin light chain phosphatase: keeping it together Ahmed Aburima and Khalid M. Naseem	279–283
Cavin-1: caveolae-dependent signalling and cardiovascular disease Jamie J.L. Williams and Timothy M. Palmer	284–288
The control of blood platelets by cAMP signalling Zaher Raslan and Khalid M. Naseem	289–294
The cAMP-binding Popdc proteins have a redundant function in the heart Thomas Brand, Subreena L. Simrick, Kar Lai Poon and Roland F.R. Schindler	295–301
Tapping the translation potential of cAMP signalling: molecular basis for selectivity in cAMP agonism and antagonism as revealed by NMR Stephen Boulton, Madoka Akimoto, Bryan VanSchouwen, Kody Moleschi, Rajeevan Selvaratnam, Rajanish Giri and Giuseppe Melacini	302–307

Biochemical Society Focused Meetings

Regulation of Fertilization and Early Seed Development

University of Bath, U.K., 11–13 September 2013

Edited by James Doughty (University of Bath, U.K.) and Thomas Dresselhaus (University of Regensburg, Germany).

Regulation of fertilization and early seed development Thomas Dresselhaus and James Doughty	309–312
S-locus receptor kinase signalling June B. Nasrallah and Mikhail E. Nasrallah	313–319
Poly(dimethylsiloxane)-based microdevices for studying plant reproduction Hideyuki Arata and Tetsuya Higashiyama	320–324
Hormonal responses during early embryogenesis in maize Junyi Chen, Andreas Lausser and Thomas Dresselhaus	325–331
Patterning of the angiosperm female gametophyte through the prism of theoretical paradigms Dmytro S. Lituiev and Ueli Grossniklaus	332–339
Interactions between pollen tube and pistil control pollen tube identity and sperm release in the <i>Arabidopsis</i> female gametophyte Alexander R. Leydon, Adisorn Chaibang and Mark A. Johnson	340–345
Genetic control of identity and growth in the early <i>Arabidopsis</i> embryo Dolf Weijers	346–351
MicroRNA functions in plant embryos Divya Vashisht and Michael D. Nodine	352–357
Signalling events regulating seed coat development Duarte D. Figueiredo and Claudia Köhler	358–363

Flavonoids and the regulation of seed size in <i>Arabidopsis</i> James Doughty, Maha Aljabri and Rod J. Scott	364–369
Selected Oral Communications	
Self-incompatibility in <i>Papaver</i> : advances in integrating the signalling network Deborah J. Eaves, Carlos Flores-Ortiz, Tamanna Haque, Zongcheng Lin, Nianjun Teng and Veronica E. Franklin-Tong	370–376
Evolutionarily conserved mechanisms of male germline development in flowering plants and animals Patrícia A. Pereira, Paulo Navarro-Costa, Rui Gonçalo Martinho and Jörg D. Becker	377–382
Phosphoproteomic studies in <i>Arabidopsis</i> and tobacco male gametophytes Jan Fila, Věra Čapková and David Honys	383–387
In search of ligands and receptors of the pollen tube: the missing link in pollen tube perception Said Hafidh, David Potěšil, Jan Fila, Jana Feciková, Věra Čapková, Zbyněk Zdráhal and David Honys	388–394
Identifying plant cell-surface receptors: combining ‘classical’ techniques with novel methods Susanne Uebler and Thomas Dresselhaus	395–400
Same same but different: sperm-activating EC1 and ECA1 gametogenesis-related family proteins Stefanie Sprunck, Thomas Hackenberg, Maria Enghart and Frank Vogler	401–407
YODA signalling in the early <i>Arabidopsis</i> embryo Thomas J. Musielak and Martin Bayer	408–412



Glyoxalase Centennial: 100 Years of Glyoxalase Research and Emergence of Dicarbonyl Stress

University of Warwick, U.K., 27–29 November 2013

Edited by Naila Rabbani and Paul Thornalley (University of Warwick, U.K.).

Glyoxalase Centennial conference: introduction, history of research on the glyoxalase system and future prospects Naila Rabbani and Paul J. Thornalley	413–418
Activity, regulation, copy number and function in the glyoxalase system Naila Rabbani, Mingzhan Xue and Paul J. Thornalley	419–424
Dicarbonyl proteome and genome damage in metabolic and vascular disease Naila Rabbani and Paul J. Thornalley	425–432
Dicarbonyl stress and glyoxalases in ovarian function Carla Tatone, Ursula Eichenlaub-Ritter and Fernanda Amicarelli	433–438
Reactive metabolites as a cause of late diabetic complications Thomas Fleming and Peter P. Nawroth	439–442
Methylglyoxal and glyoxalase I in atherosclerosis Nordin M.J. Hanssen, Coen D.A. Stehouwer and Casper G. Schalkwijk	443–449

Methylglyoxal in diabetes: link to treatment, glycaemic control and biomarkers of complications Paul J. Beisswenger	450–456
Glycative stress and glyoxalase in kidney disease and aging Reiko Inagi	457–460
Glo1 inhibitors for neuropsychiatric and anti-epileptic drug development Katherine M.J. McMurray, Margaret G. Distler, Preetpal S. Sidhu, James M. Cook, Leggy A. Arnold, Abraham A. Palmer and Leigh D. Plant	461–467
Carbonyl stress in schizophrenia Masanari Itokawa, Mitsuhiro Miyashita, Makoto Arai and Toshio Miyata	468–472
Glyoxalase diversity in parasitic protists Marcel Deponte	473–478
Bacterial glyoxalase I enzymes: structural and biochemical investigations John F. Honek	479–484
Glyoxalases and stress tolerance in plants Charanpreet Kaur, Ajit Ghosh, Ashwani Pareek, Sudhir K. Sopory and Sneh L. Singla-Pareek	485–490
Methods Workshop	
Measurement of glyoxalase activities Makoto Arai, Naomi Nihonmatsu-Kikuchi, Masanari Itokawa, Naila Rabbani and Paul J. Thornalley	491–494
Measurement of glyoxalase gene expression Mingzhan Xue, Naila Rabbani and Paul J. Thornalley	495–499
Copy number variation of glyoxalase I Alaa Shafie, Mingzhan Xue, Paul J. Thornalley and Naila Rabbani	500–503
Assay of methylglyoxal and glyoxal and control of peroxidase interference Paul J. Thornalley and Naila Rabbani	504–510
Assay of methylglyoxal-derived protein and nucleotide AGEs Naila Rabbani, Fozia Shaheen, Attia Anwar, Jinit Masania and Paul J. Thornalley	511–517
Selected Oral Communications	
Prevention of dicarbonyl-mediated advanced glycation by glyoxalases: implication in skin aging Sabrina Radjei, Bertrand Friguet, Carine Nizard and Isabelle Petropoulos	518–522
Reducing methylglyoxal as a therapeutic target for diabetic heart disease Branka Vulesevic, Ross W. Milne and Erik J. Suuronen	523–527
Glyoxalase I (Glo1) and its metabolites in vascular disease Markus Wortmann, Andreas S. Peters, Maani Hakimi, Dittmar Böckler and Susanne Dihlmann	528–533
The temporal and spatial dynamics of glyoxalase I following excitotoxicity and brain ischaemia Philipp Pieroh, Gerd Birkenmeier and Faramarz Dehghani	534–537



Possible role of methylglyoxal and glyoxalase in arthritis Usman Ahmed, Paul J. Thornalley and Naila Rabbani	538–542
Why don't plants have diabetes? Systems for scavenging reactive carbonyls in photosynthetic organisms Ginga Shimakawa, Mayumi Suzuki, Eriko Yamamoto, Ryota Saito, Tatsuya Iwamoto, Akiko Nishi and Chikahiro Miyake	543–547
A fluorogenic assay for methylglyoxal Fozia Shaheen, Anatoly Shmygol, Naila Rabbani and Paul J. Thornalley	548–555

Independent Meeting

Brain Disorders Across the Lifespan: Translational Neuroscience from Molecule to Man

University College Cork, Ireland, 12–13 September 2013

Edited by Eoin Fleming (University College Cork, Ireland).

Brain damage of the preterm infant: new insights into the role of inflammation Juliette Van Steenwinckel, Anne-Laure Schang, Stéphanie Sigaut, Vibol Chhor, Vincent Degos, Henrik Hagberg, Olivier Baud, Bobbi Fleiss and Pierre Gressens	557–563
Neonatal encephalopathy: pre-clinical studies in neuroprotection Shyama D. Patel, Leslie Pierce, Amber J. Ciardiello and Susan J. Vannucci	564–568
HDAC inhibitors as cognitive enhancers in fear, anxiety and trauma therapy: where do we stand? Nigel Whittle and Nicolas Singewald	569–581
Depression during pregnancy: molecular regulations of mothers' and children's behaviour Carmine M. Pariante	582–586
From epidemiology to pathophysiology: what about caffeine in Alzheimer's disease? Vanessa Flaten, Cyril Laurent, Joana E. Coelho, Ursula Sandau, Vânia L. Batalha, Sylvie Burnouf, Malika Hamdane, Sandrine Humez, Detlev Boison, Luísa V. Lopes, Luc Buée and David Blum	587–592
Insulin, incretins and other growth factors as potential novel treatments for Alzheimer's and Parkinson's diseases Christian Hölscher	593–599
Glutamatergic pathways as a target for the treatment of dyskinesias in Parkinson's disease M. Angela Cenci	600–604
Correction	605
