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

### **Morton Medal Lecture**



The ubiquitous phosphoinositides

P.J. Parker 893–898

## Focus Topics at BioScience2004

#### Genes: Regulation, Processing and Interference

A Focus Topic at BioScience2004, held at SECC Glasgow, U.K., 18–22 July 2004

Edited by I. McEwan (Aberdeen, U.K.), B. White (Glasgow, U.K.), S. Graham (Glasgow, U.K.), S. Roberts (Manchester, U.K.), A. Sharrocks (Manchester, U.K.), D. Black (Organon, U.K.), S. Newbury (Oxford, U.K.), J. Sayers (Sheffield, U.K.) and A. Lloyd (University College London, U.K.)

Proteomic analysis of chromatin-modifying complexes in *Saccharomyces* cerevisiae identifies novel subunits K.K. Lee, P. Prochasson, L. Florens, S.K. Swanson, M.P. Washburn and J.L. Workman 899-903 Structure and chemistry of the Sir2 family of NAD+-dependent histone/protein deactylases R. Marmorstein 904-909 Zebularine: a new drug for epigenetic therapy C.B. Yoo, J.C. Cheng and P.A. Jones 910-912 Control of gene expression by CpG island methylation in normal cells G. Strathdee, A. Sim and R. Brown 913-915 CpG-island methylation and epigenetic control of resistance to chemotherapy J.M. Teodoridis, G. Strathdee, J.A. Plumb and R. Brown 916-917 HMGN proteins play roles in DNA repair and gene expression in mammalian cells K.L. West 918-919 Complex regulation and nuclear localization of JRK protein R. Waldron and T. Moore 920-923 A molecular code for splicing silencing: configurations of quanosine-rich motifs P.J. Grabowski 924-927 Roles of the U5 snRNP in spliceosome dynamics and catalysis I.A. Turner, C.M. Norman, M.J. Churcher and A.J. Newman 928-931 Transcriptional regulation by the Wilms' tumour suppressor protein WT1 K.J. Wagner and S.G.E. Roberts 932-935 Regulation of NF- $\kappa$ B by atypical activators and tumour suppressors N.D. Perkins 936-939

Volume 32 Part 6 © 2004 Biochemical Society

| The Flightless I protein and the gelsolin family in nuclear hormone receptor-mediated signalling  S.K. Archer, C.A. Behm, C. Claudianos and H.D. Campbell   | 940-942          |
|---|------------------|
| Factor inhibiting hypoxia-inducible factor (FIH) and other asparaginyl hydroxylases <b>D.E. Lancaster, M.A. McDonough and C.J. Schofield</b>  | 943-945          |
| Silence is green  A.J. Herr   | 946-951          |
| RNA interference and double-stranded-RNA-activated pathways <b>C.A. Sledz and B.R.G. Williams</b>   | 952-956          |
| Understanding the roles of RecQ helicases in the maintenance of genome integrity and suppression of tumorigenesis  H.W. Mankouri and I.D. Hickson   | 957-958          |
| Poly(ADP-ribose) polymerase inhibitors as potential chemotherapeutic agents <b>H.E. Bryant and T. Helleday</b>  | 959-961          |
| Monitoring base excision repair proteins on damaged DNA using human cell extracts  J.L. Parsons and G.L. Dianov   | 962-963          |
| Arabidopsis DNA double-strand break repair pathways C.E. West, W.M. Waterworth, P.A. Sunderland and C.M. Bray   | 964-966          |
| Cell cycle-regulated transcription in fission yeast  C.J. McInerny  | 967-972          |
| Dissection of the signalling mechanisms underlying $Fc_{\gamma}RIIB$ -mediated apoptosis of mature B-cells N.A. Carter and M.M. Harnett   | 973-975          |
| Mitogenic stimulation of transcription by RNA polymerase III  E. Mauger and P.H. Scott  | 976-977          |
| Energy: Generation and Information A Focus Topic at BioScience2004, held at SECC Glasgow, U.K., 18–22 July 2004   |                  |
| Edited by J. Arthur (Rowett Research Institute, Aberdeen, U.K.), P. Newsholme (University College D<br>M. Murphy (MRC-Dunn Human Nutrition Unit, Cambridge, U.K.) and R. Reece (Manchester, U.K.) | ublin, Ireland), |
| Oxidative stress in colon tissue induced by vitamin E depletion J.E. Drew, D.K. Mercer, C. Mayer, A.J. Farquharson, P.C. Morrice, J.R. Arthur and G.G. Duthie                                     | 979–981          |
| Vitamin A regulates proliferation and apoptosis of human T- and B-cells <b>H.K. Blomhoff</b>  | 982-984          |
| Dietary carotenoids, connexins and cancer: what is the connection?  J.S. Bertram  | 985-989          |
| 3'-Untranslated regions are important in mRNA localization and translation: lessons from selenium and metallothionein  1. Hesketh   | 990-993          |

| 994-998   |
|-----------|
| 999-1002  |
| 1003-1005 |
| 1006-1007 |
| 1008-1010 |
| 1011-1014 |
| 1015-1017 |
| 1018-1020 |
| 1021-1024 |
|           |

# Research Colloquia at BioScience2004

#### **Research Colloquia**

Research Colloquia at BioScience2004, held at SECC Glasgow, U.K., 18-22 July 2004

Edited by M. Bouvier (Montreal, Canada), G. Milligan (Glasgow, U.K.), V. O'Donnell (Cardiff, U.K.), M. Brand (MRC-Dunn Human Nutrition Unit, Cambridge, U.K.), M. Schweizer (Heriot-Watt University, Edinburgh, U.K.), R. Insall (Birmingham, U.K.), A. Ridley (Ludwig Institute for Cancer Research, London, U.K.) and M. Sutcliffe (Leicester, U.K.)

Oligomeric assembly of dopamine D<sub>1</sub> and glutamate NMDA receptors: molecular mechanisms and functional implications C. Fiorentini and C. Missale 1025-1028 Kinetics of G-protein-coupled receptor signalling and desensitization C. Krasel, J.-P. Vilardaga, M. Bünemann and M.J. Lohse 1029-1031 Direct interactions between NMDA and  $D_1$  receptors: a tale of tails F.J.S. Lee and F. Liu 1032-1036 Evidence to support a spectrum of active states for the glucagon receptor N. Strudwick, N. Bhogal, N.A. Evans, F.E. Blaney and J.B.C. Findlay 1037-1039 Small GTP-binding protein-coupled receptors M. Bhattacharya, A.V. Babwah and S.S.G. Ferguson 1040-1044 Participation of RGS8 in the ternary complex of agonist, receptor and G-protein A. Benians, M. Nobles and A. Tinker 1045-1047

| The third extracellular loop of G-protein-coupled receptors: more than just a linker between two important transmembrane helices  Z. Lawson and M. Wheatley   | 1048-1050 |
|---|-----------|
| Lipids in health and disease  J. Shepherd   | 1051-1056 |
| Mass spectroscopic analysis of phosphatidylinositol synthesis using 6-deuteriated-<br>myo-inositol: comparison of the molecular specificities and acyl remodelling<br>mechanisms in mouse tissues and cultured cells<br>A.D. Postle, H. Dombrowsky, H. Clarke, C.J. Pynn, G. Koster and A.N. Hunt | 1057-1059 |
| Lipidomic analysis of the molecular specificity of a cholinephosphotransferase in situ  |           |
| A.N. Hunt, H.C. Fenn, G.T. Clark, M.M. Wright, A.D. Postle and C.R. McMaster  | 1060-1062 |
| Use of mass spectrometry-based lipidomics to probe $PITP\alpha$ (phosphatidylinositol transfer protein $\alpha$ ) function inside the nuclei of $PITP\alpha^{+/+}$ and $PITP\alpha^{-/-}$ cells <b>A.N. Hunt, J.G. Alb, G. Koster, A.D. Postle and V.A. Bankaitis</b>                             | 1063-1065 |
| Immunodetection of UCP1 in rat thymocytes A.M. Carroll, L.R. Haines, T.W. Pearson, C. Brennan, E.P. Breen and R.K. Porter   | 1066-1067 |
| Nitric oxide, hypoxia and brain inflammation  P. Mander and G.C. Brown  | 1068-1069 |
| Selective elimination of mitochondria from living cells induced by inhibitors of bioenergetic functions  K.G. Lyamzaev, O.Y. Pletjushkina, V.B. Saprunova, L.E. Bakeeva, B.V. Chernyak and V.P. Skulachev   | 1070-1071 |
| Cell-penetrating peptides are excluded from the mitochondrial matrix <b>M.F. Ross and M.P. Murphy</b>   | 1072-1074 |
| Sab (SH3BP5), a novel mitochondria-localized JNK-interacting protein C. Wiltshire, D.A.F. Gillespie and G.H.W. May  | 1075-1077 |
| Study of prostaglandin receptors in mitochondria on apoptosis of human lung carcinoma cell line A549  | 1079 1090 |
| K.M. Fang, W.H. Shu, H.C. Chang, J.J. Wang and O.T. Mak   | 1078-1080 |
| Programmed —1 ribosomal frameshifting in the SARS coronavirus <b>F. Dos Ramos, M. Carrasco, T. Doyle and I. Brierley</b>  | 1081-1083 |
| Transcriptional control of <i>Nramp1</i> : a paradigm for the repressive action of <i>c-Myc</i> <b>A.S. Lapham, E.S. Phillips and C.H. Barton</b>   | 1084-1086 |
| Post-translational modification of RelA(p65) NF- $\kappa$ B <b>K.J. Campbell and N.D. Perkins</b>   | 1087-1089 |
| Oscillations in transcription factor dynamics: a new way to control gene expression  D.E. Nelson, V. Sée, G. Nelson and M.R.H. White  | 1090-1092 |
| Haem oxygenase-1 in inflammation S.A. Rushworth and M.A. O'Connell  | 1093-1094 |
| Epigenetic approaches to cancer therapy  J.A. Plumb, N. Steele, P.W. Finn and R. Brown  | 1095-1097 |

| Author Index<br>Subject Index  | 1137<br>1151 |
|--|--------------|
| Cumulative Indexes:  |              |
| Corrections:   | 1133-1135    |
| Immunoglobulin A1 proteases: a structure–function update <b>H.K. Parsons, S. Vitovski and J.R. Sayers</b>  | 1130-1132    |
| The aggregation and membrane-binding properties of an $lpha$ -synuclein peptide fragment<br>J. Madine, A.J. Doig and D.A. Middleton  | 1127-1129    |
| Lymphocyte activation receptors: new structural paradigms in group V<br>of C-type animal lectins<br>J. Pavlíček, D. Kavan, P. Pompach, P. Novák, O. Lukšan and K. Bezouška | 1124-1126    |
| Annexin A2 expression during cellular differentiation in myeloid cell lines <b>W.S. Gilmore, S. Olwill, H. McGlynn and H.D. Alexander</b>                                  | 1122-1123    |
| The telling tail of L-selectin  A. Ivetic and A.J. Ridley  | 1118-1121    |
| What is in a filopodium? Starfish versus hedgehogs<br>S. Passey, S. Pellegrin and H. Mellor  | 1115-1117    |
| Control of SCAR activity in <i>Dictyostelium discoideum</i> S.L. Blagg and R.H. Insall   | 1113-1114    |
| Filling the GAPs in cell dynamics control: BPGAP1 promotes cortactin translocation to the cell periphery for enhanced cell migration <b>B.L. Lua and B.C. Low</b>          | 1110-1112    |
| A PLC $\delta_1$ -binding protein, p122RhoGAP, is localized in focal adhesions K. Kawai, M. Yamaga, Y. Iwamae, M. Kiyota, H. Kamata, H. Hirata, Y. Homma and H. Yagisawa   | 1107-1109    |
| In vitro regulation of reporter gene transcription by the androgen receptor AF1 domain  M.A. Choudhry and I.J. McEwan  | 1103-1106    |
| The importance of butyrate transport to the regulation of gene expression in the colonic epithelium  M.A. Cuff and S.P. Shirazi-Beechey                                    | 1100-1102    |
| The role of TFIIB conformation in transcriptional regulation <b>L.M. Elsby and S.G.E. Roberts</b>  | 1098-1099    |