

Biochemical Journal Reviews 1990

edited by

P.J. England (*SmithKline Beecham, Welwyn*)

and

W.H. Evans (*National Institute for Medical Research, London*)

This second annual compendium contains all the reviews published in the *Biochemical Journal* in 1990. Each article is a comprehensive account of a topic of current biochemical interest; the volume will appeal both to the working scientist wishing to learn about progress in a related field and to the senior student as background reading.

Contents: The glyoxalase system: new developments towards a functional characterization of a metabolic pathway fundamental to biological life (*Thornalley*); On the biological role of histone acetylation (*Csordas*); DNA methylation: the effect of minor bases on DNA-protein interactions (*Adams*); Eukaryotic transcription factors (*Latchman*); Interleukin-6 and the acute phase response (*Heinrich and others*); Scavenger functions of the liver endothelial cell (*Smedsrod and others*); The role of transferrin in the mechanism of cellular iron uptake (*Thorstensen & Romslo*); γ -Carboxyglutamate-containing proteins and the vitamin K-dependent carboxylase (*Vermeer*); The prolamin storage proteins of cereal seeds: structure and evolution (*Shewry & Tatham*); Emerging approaches in the molecular design of receptor-selective peptides: conformational, topographical and dynamic considerations (*Hruby and others*); Protein folding (*Creighton*); The structure and function of human IgA (*Kerr*); Assembly and secretion of hepatic very-low-density lipoprotein (*Gibbons*); Prion liposomes (*Gabizon & Prusiner*); The role of G proteins in transmembrane signalling (*Taylor*); Nitrogen metabolism in liver: structural and functional organization and physiological relevance (*Haussinger*); The regulation and cellular functions of phosphatidylcholine hydrolysis (*Billah & Anthes*); Molecular mechanisms of drug resistance (*Hayes & Wolf*)

238 pages, soft cover ISBN 1 85578 006 2 Price £9.50 (US\$20)



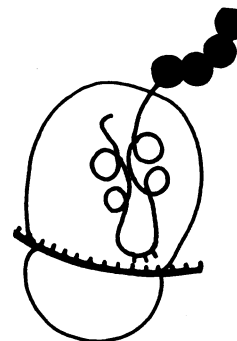
**Portland Press Ltd, P.O. Box 32, Commerce Way,
Colchester CO2 8HP, U.K.**

Order with credit card by telephone (0206 46351) or fax (0206 549331)

GENE EXPRESSION

— Regulation at the RNA and Protein Levels

Edited by J. Kay, F.J. Ballard and R.J. Mayer



204 pp. ISBN 0 904498 24 7 Price £35 (US \$65) BIOCHEMICAL SOCIETY SYMPOSIUM NO. 55

List of contents and authors: *Gene Expression and Differentiation in F9 Mouse Embryonal Carcinoma* by **Merilyn J. Sleigh**; *Regulation of Genes Associated with Drug Metabolism* by **William H. Elliott, Brian K. May, Michael J. Bawden & Antony J. Hansen**; *Cloning and Expression of the Genes for Calpains and Calpastatins* by **Takashi Murachi, Emiko Takano, Masatoshi Maki, Yoshifumi Adachi & Masakazu Hatanaka**; *Peptide Signals for Protein Degradation within Lysosomes* by **J. Fred Dice & Hui-Ling Chiang**; *Haemopoietic Growth Factor Control of Normal and Neoplastic Cellular Proliferation* by **Antony W. Burgess, Jonathan Cebon & Sandra Smith**; *Nuclear Pre-mRNA Splicing in *Saccharomyces cerevisiae** by **Jean Beggs, Marie Lossky & Gordon J. Anderson**; *Control of mRNA Stability During Development of *Dictyostelium discoideum** by **Giorgio Mangiarotti**; *Effects of Insulin-Like Growth Factors on Protein Metabolism: Why are some Molecular Variants more Potent?* by **F. John Ballard, Geoffrey L. Francis, Christopher J. Bagley, Laszlo Szabo & J. C. Wallace**; *Hormonal Regulation of Gene Expression* by **John W. Funder**; *Mechanisms by which Prolactin and Glucocorticoids Regulate Casein Gene Expression* by **Jeffrey M. Rosen, Patrick Poyet, Heather Goodman & Kuo-Fen Lee**; *Processing of the Polymeric Immunoglobulin Receptor* by **Roberto Solari, Esther Schaerer, Corinne Tallichet, Liliane Racine & Jean-Pierre Kraehenbuhl**; *Experimental Characterization of the Autophagic - Lysosomal Pathway in Isolated Rat Hepatocytes* by **Paul B. Gordon, Gunn Ø. Kisen, Attila L. Kovacs & Per O. Seglen**; *The Molecular Chaperone Concept* by **R. John Ellis, Saskia M. Van Der Vies & Sean M. Hemmingsen**; *Protein Folding and Intracellular Transport: Studies on Influenza Virus Haemagglutinin* by **Mary-Jane Gething & Joe Sambrook**; *Role of Protein Disulphide-Isomerase in the Expression of Native Proteins* by **Robert B. Freedman, Neil J. Bulleid, Hilary C. Hawkins & Jan. L. Paver**; *Intermediate Filament-Ubiquitin Diseases: Implications for Cell Sanitization* by **R. John Mayer, James Lowe, Graham Lennox, Michael Landon, Ken MacLennan & Fergus J. Doherty**; Subject index.

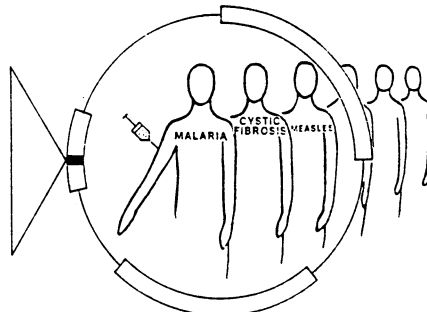


Portland Press Ltd.

P.O. Box 32, Commerce Way, Colchester, CO2 8HP, U.K.
Telephone 0206 46351 Facsimile 0206 549331

MOLECULAR PATHOLOGY

Edited by J. Kay & M.J. Morgan



List of contents and authors: *Ribosomal modification and resistance in antibiotic-producing organisms* by **E. Cundliffe**. Genetic assembly and selective toxicity of diphtheria-toxin-related polypeptide hormone fusion proteins by **J.R. Murphy, W. Bishai, D. Williams, P. Bacha, M. Borowski, K. Parker, J. Boyd, C. Waters & T.B. Strom**. *The molecular biology of the morbillivirus (measles) group* by **T. Barrett**. *The development of novel hepatitis B vaccines* by **A.J. Zuckerman**. *The role of coxsackie B viruses in the pathogenesis of myocarditis, dilated cardiomyopathy and inflammatory muscle disease* by **L.C. Archer, P.J. Richardson, E.G.J. Olsen, V. Dubowitz, C. Sewry & N.E. Bowles**. *The molecular biology of human rhinoviruses* by **T. Skern, M. Duechler, W. Sommergruber, D. Blas & E. Kuechler**. *From Jenner to genes - the next generation of virus vaccines* by **F. Brown**. *Studies on the genetic basis of attenuation of the Sabin type 3 poliovirus vaccine* by **J.W. Almond, G.D. Westrop, K.A. Wareham, M.A. Skinner, D.M.A. Evans, D. Magrath, G.S. Schild & P.D. Minor**. *Cloned antigens of *Brugia filarial* parasites* by **M.E. Selkirk, P.J. Rutherford, D.A. Denham, F. Partono and R.M. Maizels**. *Structure and function of candidate vaccine antigens in *Plasmodium falciparum** by **R.F. Anders, L.J. Murray, L.M. Thomas, K.M. Davern, G.V. Brown & D.J. Kemp**. *Schistosome elastases: biological importance, structure, function, and stage-specific expression* by **G. Newport, J. McKerrow, R. Hedstrom, J. Culppepper, L. McGarrigle & N. Agabian**. *Topogenesis of glycolytic enzymes in *Trypanosoma brucei** by **F.R. Opperdoes**. *DNA probes in human disease* by **A.D. Malcolm, R.A. Fallon, J.A. Langdale, H. Figueiredo, P.J. Nicholls, U.B. Voss, C. Wickenden & J.L. Woodhead**. *Molecular genetic approaches to cystic fibrosis* by **K.W. Klinger, G. Landes, R.H. Schwartz, R. Doherty, T. Lerner & P. Watkins**. *Apolipoprotein B gene: plasma cholesterol and atherosclerosis* by **J. Scott, R.J. Pease, L.M. Powell, S.C. Wallis, B.J. McCarthy, R.W. Mahley, B. Levy-Wilson & T.J. Knott**. *Highly variable minisatellites and DNA fingerprints* by **A.J. Jeffreys, V. Wilson, Z. Wong, N. Royle, I. Patel, R. Kelley & R. Clarkson**. Subject index.

180 pp. ISBN 0 904498 20 4 £30.00 (\$55.00) BIOCHEMICAL SOCIETY SYMPOSIUM No. 53



Order from
PORTLAND PRESS LTD.

PO Box 32, Commerce Way, Colchester CO2 8HP, Essex, U.K.

Protein structure, prediction and *design*

edited by John Kay, George Lunt and
David Osguthorpe

The 57th annual symposium of the Biochemical Society, held at the University of Bath in April 1990, presented current attempts to determine ways of predicting protein structure and to manipulate protein structure. Some of the world's leading experts in the field presented their view of the current state of the art, and this volume recaptures some of the excitement of the symposium and serves to demonstrate that the prediction and design of protein structure and function is now an attainable goal.

Contents: An assessment of COMPOSER: a rule-based approach to modelling protein structure (*Topham and others*); Secondary structure prediction and protein design (*Garnier and others*); Inverting the protein-folding problem (*Sander*); Structural homology in ligand-specific transport proteins (*North*); Holistic approaches to receptor and channel structure and dynamics (*Kosower*); Modelling of binding sites of the nicotinic acetylcholine receptor and their relation to models of the whole receptor (*Cockcroft and others*); Monoamine neurotransmitter receptors: ligand-receptor models (*Saunders and Findlay*); The expert system approach to predicting protein structure (*Ball and others*); Basic design features of the parallel $\alpha\beta$ barrel, a ubiquitous protein-folding motif (*Wodak and others*); Preparation of artificial bifunctional enzymes by gene fusion (*Bülow*); Restructuring catalysis in the mandelate pathway (*Neidhart and others*); Identification and design of binding determinants in proteins (*Wells and Cunningham*); Antibody-combining sites: prediction and design (*Gregory and others*).

ISBN 1 85578 002 X

Casebound, 158 pages

Price £40/US\$80



Portland Press Ltd., P.O. Box 32, Commerce Way,
Colchester CO2 8HP, U.K.

Order with credit card by telephone (0206-46351) or fax (0206-549331)