



## THE BIOCHEMICAL SOCIETY

The Biochemical Society exists to advance the science of biochemistry through meetings and publications. Several meetings a year are held, each at a different place; original papers are presented and special topics are discussed at symposia and colloquia.

### OFFICERS AND COMMITTEE: 1989–1990

#### Chairman

R. H. Burdon, F.R.S.E.

#### Treasurer

B. Spencer

#### Meetings Secretary

A. D. B. Malcolm

#### Publications Secretary

C. I. Pogson

#### Committee

H. Baum\*†

R. J. Beynon

P. H. W. Butterworth

M. P. Coughlan

C. J. Coulson

P. J. England

R. B. Freedman

K. Gull

D. S. Jones

A. J. Kenny

R. D. Marshall

C. Rice-Evans

L. J. Rogers

K. Snell

A. J. Turner\*‡

R. T. Walker

P. D. J. Weitzman

\* *Ex officio* Member of Committee

† Representative of Professional and Educational Committee

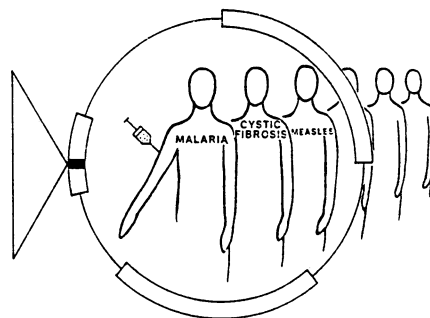
‡ Representative of Editorial Board of the *Biochemical Journal*

*Executive Secretary*: G. D. Jones (7 Warwick Court, London WC1R 5DP)

Persons interested in biochemistry are eligible for election as Members. Details of further facilities accorded to Members, and forms of application for membership, are available from the **Executive Secretary, The Biochemical Society, 7 Warwick Court, London WC1R 5DP [01-242 1076 (4 lines)]**.

# 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. Blaas & 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. *Schistosoma elastases: biological importance, structure, function, and stage-specific expression* by G. Newport, J. McKerrow, R. Hedstrom, J. Culpepper, 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

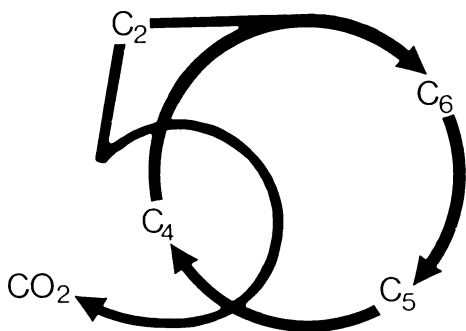


Order from

THE BIOCHEMICAL SOCIETY BOOK DEPOT

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

# Krebs' Citric Acid Cycle – Half a Century and Still Turning



Edited by J. KAY and  
P. D. J. WEITZMAN

List of contents and authors:

*Introductory remarks* by **H. L. Kornberg**. *Evolutionary roots of the citric acid cycle in prokaryotes* by **H. Gest**. *Control of flux through the citric acid cycle and the glyoxylate bypass in Escherichia coli* by **W. H. Holms**. *Patterns of diversity of citric acid cycle enzymes* by **P. D. J. Weitzman**. *Molecular genetic aspects of the citric acid cycle of Escherichia coli* by **J. S. Miles & J. R. Guest**. *2-Oxo acid dehydrogenase multi-enzyme complexes: in the beginning and halfway there* by **R. N. Perham, L. C. Packman & S. E. Radford**. *Structural basis for regulation in Gram-negative bacterial citrate synthases* by **H. W. Duckworth, D. H. Anderson, A. W. Bell, L. J. Donald, A. L. Chu & G. D. Brayer**. *Regulation of the enzymes at the branchpoint between the citric acid cycle and the glyoxylate bypass in Escherichia coli* by **H. G. Nimmo, A. C. Borthwick, E. M. T. El-Mansi, W. H. Holms, C. MacKintosh & G. A. Nimmo**. *The subunits of succinyl-coenzyme A synthetase – function and assembly* by **W. A. Bridger, W. T. Wolodko, W. Henning, C. Upton, R. Majumdar & S. P. Williams**. *The role of the citric acid cycle in fungal organic acid fermentations* by **C. P. Kubicek**. *Hormonal regulation of fluxes through pyruvate dehydrogenase and the citric acid cycle in mammalian tissues* by **R. M. Denton, J. G. McCormack, P. J. W. Midgley & G. A. Rutter**. *The role of the citric acid cycle in cells of the immune system and its importance in sepsis, trauma and burns* by **E. A. Newsholme, P. Newsholme & R. Curi**. *Enzyme-enzyme interactions as modulators of the metabolic flux through the citric acid cycle* by **S. Beeckmans & L. Kanarek**. *Organizational aspects of the citric acid cycle* by **P. A. Srere, B. Sumegi & A. D. Sherry**. *Compensatory regulation in metabolic pathways – responses to increases and decreases in citrate synthase levels* by **K. Walsh, M. Schena, A. J. Flint & D. E. Koshland Jr**. *Subject index*.

195 pp. ISBN 0 904498 22 0 £30.00 (US \$55.00)



Order from  
THE BIOCHEMICAL SOCIETY BOOK DEPOT  
PO Box 32, Commerce Way, Colchester CO2 8HP, Essex, U.K.

# The BIOCHEMICAL JOURNAL REVIEWS 1989

Edited by P. J. England

The *Biochemical Journal* has published reviews on broad topics of general interest to biochemists and scientists in related disciplines since 1982. These reviews have proved extremely successful and popular (one classic review was one of the most-cited papers of the last decade) and with the aim of making them readily available even to those who do not subscribe to the journal it was decided to produce an annual compilation of all the reviews published in the previous year. This is the first such volume. The 23 reviews published in 1989 covered a wide range of molecular and cellular biochemistry, from fundamental chemical enzymology via the intricacies of signal transduction mechanisms through to cell biology and whole-animal metabolism. *Biochemical Journal* reviews are intended for research scientists, but are written in such a way as to be intelligible to the non-specialist who wishes to learn about progress in other areas. They are thus ideally suited as material both for teaching staff and for senior students.

#### Contents:

Phosphotyrosyl protein phosphatases by K.-H. W. Lau, J. R. Farley & D. J. Baylink; The 2-oxo acid dehydrogenase complexes: recent advances by S. J. Yeaman; Calcium/calmodulin-dependent protein kinase II by R. J. Colbran, C. M. Schworer, Y. Hashimoto, Y.-L. Fong, D. P. Rich, M. K. Smith & T. R. Soderling; Comparison of butyrylcholinesterase and acetylcholinesterase by A. Chatonnet & O. Lockridge; The anomalous kinetics of sulphatase A by A. B. Roy & T. J. Mantle; Catalytic antibodies by G. M. Blackburn, A. S. Kang, G. A. Kingsbury & D. R. Burton; Recognition mechanisms in the synthesis of animal virus DNA by R. T. Hay & W. C. Russell; Detection of single base changes in nucleic acids by R. G. H. Cotton; High-M<sub>r</sub> microtubule-associated proteins: properties and functions by G. Wiche; Complement membrane attack on nucleated cells: resistance, recovery and non-lethal effects by B. P. Morgan; Acylation of viral and eukaryotic proteins by R. J. A. Grand; Binding of plasminogen activators to fibrin: characterization and pharmacological consequences by R. Fears; Biochemistry of the chromogranin A protein family by J.-P. Simon & D. Aunis; Gas vesicle proteins by A. E. Walsby & P. K. Hayes; Calmodulin-binding proteins as calpain substrates by K. K. W. Wang, A. Villalobo & B. D. Roufogalis; High molecular mass intracellular proteases by A. J. Rivett; Metabolic interactions between eicosanoids in blood and vascular cells by M. Lagarde, N. Gualde & M. Rigaud; The eicosanoids and their biochemical mechanisms of action by W. L. Smith; Influence of polyamines on membrane functions by F. Schuber; Metabolism of the inositol phosphates produced upon receptor activation by S. B. Shears; Multiple actions of  $\beta$ -adrenergic agonists on skeletal muscle and adipose tissue by Y. T. Yang & M. A. McElligott; Fuel selection and carbon flux during the starved-to-fed transition by M. C. Sugden, M. J. Holness & T. N. Palmer; Sulphane sulphur in biological systems: a possible regulatory role by J. I. Toohey.

ISBN 1 85578 000 3

262 pp.

£15.00/US\$25.00

Order from: Portland Press, Commerce Way, Colchester CO2 8HP, U.K.,  
or with credit card by telephone (0206 46351) or fax (0206 549331)

The *Biochemical Journal* is published by Portland Press on behalf of the  
Biochemical Society