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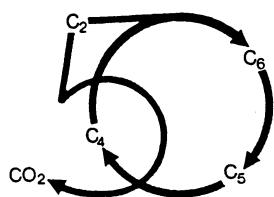
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KREBS' CITRIC ACID CYCLE



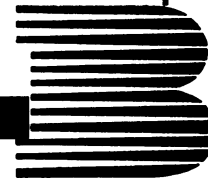
– Half a century
and still turning

Edited by J. Kay & 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. Simegi & 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.

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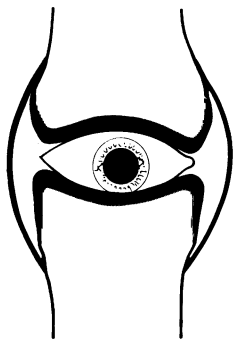


KERATAN SULPHATE

Chemistry, Biology,
Chemical Pathology

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Keratan sulphate is unique, standing at a crossroads, sharing the potential of both typical glycoproteins and typical proteoglycans. In one direction lie immunology, cell development and oncogenesis; in the other, important roles in the ultrastructure and function of cornea, joints and intervertebral discs. This book, the first in the field, is the fruit of the first full international symposium on keratan sulphate. The challenge of new viewpoints produced controversy, but also much common ground; this is revealed by the edited discussions, grouped for continuity, which follow the main sections. The bibliography is collected into one section, providing much of the literature on keratan sulphate in one place.

Contents: PART I - CHEMISTRY: Structure of keratan sulphate proteoglycans: core proteins, linkage regions, carbohydrate chains (Stuhlsatz, Keller, Becker, Oehen, Lemnars, Fisher & Greiling); Structural and conformational analysis of keratan sulphate oligosaccharides and related carbohydrate structures (Houssell); Discussion. PART II - IMMUNOLOGY: Keratan sulphate oligosaccharides, members of a family of antigens of the poly-N-acetyl-lactosamine series (Fritz); Studies of keratan sulphates of aorta and cartilage utilizing MA5 6D2 (Baker); Detection and purification of corneal keratan sulphate proteoglycan from non-corneal tissues (Funderburg & Conradi); Discussion. PART III - BIOSYNTHESIS: Biosynthesis of skeletal and corneal keratan sulphate (Baldoni, De Luca & Castellani); Keratan sulphate proteoglycans: chemistry and biosynthesis of the linkage regions (Hascall & Kimura); Discussion. PART IV - REGULATION OF BIOSYNTHESIS: Factors affecting the pathway for the biosynthesis of keratan sulphate (Mason & Sweney); Sulphation, chain elongation and chain termination in keratan sulphate biosynthesis (Keller, Stuhlsatz & Greiling); Keratan sulphate: a functional substitute for chondroitin sulphate in O₂-deficient tissues? (Scott, Stockwell, Baldoni & De Luca); Discussion. PART V - DEGRADATION: Substrate specificity of keratan sulphate-degrading enzymes (endo- β -galactosidase, keratanase and keratanase II) from micro-organisms (Nakazawa, Ito, Yamagata & Suzuki); Degradation of keratan sulphate proteoglycans (Kresse); Discussion. PART VI - KERATAN SULPHATE IN THE TISSUES: The chemical morphology of keratan sulphate proteoglycans (Scott); Articular cartilage keratan sulphate: maturation, ageing, biomechanical and scale effects (Stockwell); Proteoglycans of mammalian corneal stroma (Damlé & Gregori); Discussion. Developmental aspects of keratan sulphate (Cintron, Covington, Kublin, Gregori & Damlé); Keratan sulphate proteoglycans in organ and cell culture (Dahl); Discussion. PART VII - CHEMICAL PATHOLOGY: Studies of the metabolism of keratan sulphate-bearing proteoglycans of cartilage (Thonar, Williams, Sweet, Maldonado, Lenz, Schmitzer & Kuetner); Serum keratan sulphate in rheumatoid arthritis and different clinical subsets of osteoarthritis (Seibel, Towbin, Braun, Kiefer, Müller & Paulsson); Factors affecting the determination of keratan sulphate using monoclonal antibodies in immunoassay procedures (Citeron, Brooks, Sattangi, Ratcliffe, Hardingham & Murray); Discussion; Alterations in the synthesis of keratan sulphate proteoglycans in corneal wound healing and in macular corneal dystrophy (Hassell, SundarRaj, Cintron, Midana & Hascall); Distribution of keratan sulphate-containing proteoglycans in human aorta and their possible role in the calcification of aorta (Greiling, Löffler & Stuhlsatz); Discussion. Bibliography. Index.

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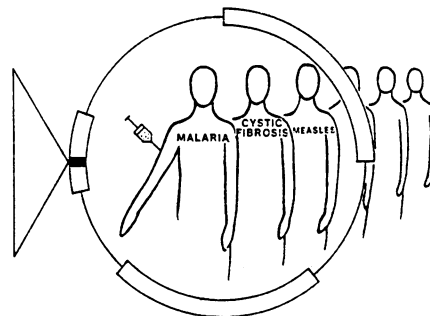
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The
BIOCHEMICAL JOURNAL
REVIEWS 1989

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.

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