

# CONTENTS

Volume 250, No. 3, 1988

## REVIEW ARTICLE

The biochemistry of diabetes

R. TAYLOR & L. AGIUS 625-640

## FULL AND RAPID PAPERS

### Proteins

Tryptic digestion of human GPIIIa. Isolation and biochemical characterization of the 23 kDa *N*-terminal glycopeptide carrying the antigenic determinant for a monoclonal antibody (P37) which inhibits platelet aggregation

J. J. CALVETE, G. RIVAS, M. MARURI, M. V. ALVAREZ, J. L. MCGREGOR, C.-L. HEW & J. GONZALEZ-RODRIGUEZ 697-704

$\alpha$ -Amidated peptides derived from pro-opiomelanocortin in normal human pituitary

M. FENGER & A. H. JOHNSEN 781-788

<sup>1</sup>H-n.m.r. and c.d. studies of haem orientational disorder in sperm-whale myoglobin and human haemoglobin

H. S. AOJULA, M. T. WILSON, G. R. MOORE & D. J. WILLIAMSON 853-858

Hydrolysis of histones by proteinases

R. J. HARVIMA, K. YABE, J. E. FRÄKI, K. FUKUYAMA & W. L. EPSTEIN 859-864

Binding of the cyclic AMP receptor protein of *Escherichia coli* to RNA polymerase

M. PINKNEY & J. G. HOGGETT 897-902

Isolation and characterization of a minor legumin and its constituent polypeptides from *Pisum sativum* (pea)

J. F. MARCH, D. J. C. PAPPIN & R. CASEY 911-915

### Enzymes

The modulator protein dissociates the catalytic subunit of hepatic protein phosphatase G from glycogen

M. BOLLEN & W. STALMANS 659-663

5'-Nucleotidase activities in human erythrocytes. Identification of a purine 5'-nucleotidase stimulated by ATP and glycerate 2,3-bisphosphate

F. BONTEMPS, G. VAN DEN BERGHE & H.-G. HERS 687-696

Paradoxical inhibition of rat glutathione transferase 4-4 by indomethacin explained by substrate-inhibitor-enzyme complexes in a random-order sequential mechanism

U. H. DANIELSON & B. MANNERVIK 705-711

Leukotriene C synthase in mouse mastocytoma cells. An enzyme distinct from cytosolic and microsomal glutathione transferases

M. SÖDERSTRÖM, S. HAMMARSTRÖM & B. MANNERVIK 713-718

A cadmium-binding protein in rat liver identified as ornithine carbamoyltransferase

Y. AOKI, H. SUNAGA & K. T. SUZUKI 735-742

Benzyl alcohol dehydrogenase and benzaldehyde dehydrogenase II from *Acinetobacter calcoaceticus*. Purification and preliminary characterization

R. W. MACKINTOSH & C. A. FEWSON 743-751

Consequences of molecular recognition in the S<sub>1</sub>-S<sub>2</sub> intersubsite region of papain for catalytic-site chemistry. Change in pH-dependence characteristics and generation of an inverse solvent kinetic isotope effect by introduction of a P<sub>1</sub>-P<sub>2</sub> amide bond into a two-protonic-state reactivity probe

K. BROCKLEHURST, D. KOWLESSUR, G. PATEL, W. TEMPLETON, K. QUIGLEY, E. W. THOMAS, C. W. WHARTON, F. WILLENBROCK & R. J. SZAWELSKI 761-772

Purification and characterization of [acyl-carrier-protein] acetyltransferase from *Escherichia coli*

P. N. LOWE & S. RHODES 789-796

Changes in ornithine decarboxylase and antizyme activities in developing mouse brain

H. ONOUE, S. MATSUFUJI, M. NISHIYAMA, Y. MURAKAMI & S. HAYASHI 797-803

Kinetic studies of chicken and turkey liver mitochondrial aspartate aminotransferase

M. CASCANTE & A. CORTÉS 805-812

Purification and some properties of the extracellular  $\alpha$ -amylase-pullulanase produced by *Clostridium thermohydrosulfuricum*

H. MELASNIEMI 813-818

The iron(III)-adriamycin complex inhibits cytochrome *c* oxidase before its inactivation

B. B. HASINOFF & J. P. DAVEY 827-834

Synthesis of lysine-containing sulphonium salts and their properties as proteinase inhibitors

P. RAUBER, B. WALKER, S. STONE & E. SHAW 871-876

Detection of inositol 1,4,5-trisphosphate kinase in retina. A direct demonstration of phosphorylation of inositol 1,4,5-trisphosphate by ATP

A. P. TARVER & R. E. ANDERSON 891-895

## CONTENTS (continued)

Affinity purification and biochemical characterization of histolysin, the major cysteine proteinase of <i>Entamoeba histolytica</i>	A. L. LUACES & A. J. BARRETT	903-909
<i>Proteus mirabilis</i> urease. Partial purification and inhibition by boric acid and boronic acids	J. M. BREITENBACH & R. P. HAUSINGER	917-920
Stoichiometry of electron uptake and oxidation-reduction midpoint potentials of NADH:nitrate reductase	J. T. SPENCE, M. J. BARBER & L. P. SOLOMONSON	921-923
<b>Carbohydrates</b>		
Heparan sulphate-degrading endoglycosidase in liver plasma membranes	J. T. GALLAGHER, A. WALKER, M. LYON & W. H. EVANS	719-726
<b>Gene structure and expression</b>		
Testosterone induces the expression of the uteroglobin gene in rabbit epididymis	M. S. LÓPEZ DE HARO, L. ALVAREZ & A. NIETO	647-651
Sequence and comparative analysis of three <i>Enterobacter cloacae</i> <i>ampC</i> $\beta$ -lactamase genes and their products	M. GALLEN, F. LINDBERG, S. NORMARK, S. COLE, N. HONORE, B. JORIS & J.-M. FRERE	753-760
Interaction of the <i>trp</i> repressor from <i>Escherichia coli</i> with a constitutive <i>trp</i> operator	L. R. CHANDLER & A. N. LANE	925-928
<b>Synthesis and degradation of macromolecules</b>		
Contribution of blood and systemic circulation to the processing of pro-(atrial natriuretic factor)	K. K. MURTHY, G. THIBAUT & M. CANTIN	665-670
Laminin biosynthesis in the extracellular matrix-producing cell line PFHR9 studied with monoclonal and polyclonal antibodies	J.-C. S. LISSITZKY, C. CHARPIN, C. BIGNON, M. BOUZON, F. KOPP, P. DELORI & P.-M. MARTIN	843-852
<b>Intermediary metabolism and metabolic control</b>		
Dependence of mitochondrial and cytosolic adenine nucleotides on oxygen partial pressure in isolated hepatocytes. Application of a new rapid high pressure filtration technique for fractionation	H. HUMMERICH, H. DE GROOT, T. NOLL & S. SOBOLL	641-645
Depletion of plasma-membrane sphingomyelin rapidly alters the distribution of cholesterol between plasma membranes and intracellular cholesterol pools in cultured fibroblasts	J. P. SLOTTE & E. L. BIERMAN	653-658
Effect of 24,25-dihydroxyvitamin D <sub>3</sub> on 1,25-dihydroxyvitamin D <sub>3</sub> metabolism in calcium-deficient rats	T. MATSUMOTO, K. IKEDA, H. YAMATO, K. MORITA, I. EZAWA, M. FUKUSHIMA, Y. NISHII & E. OGATA	671-677
Effects of nutritional status and acute variation in substrate supply on cardiac and skeletal-muscle fructose 2,6-bisphosphate concentrations	T. J. FRENCH, M. J. HOLNESS, P. A. MACLENNAN & M. C. SUGDEN	773-779
Effects of propionate and carnitine on the hepatic oxidation of short- and medium-chain-length fatty acids	E. P. BRASS & R. A. BEYERINCK	819-825
Acute regulation of the branched-chain 2-oxo acid dehydrogenase complex by adrenaline and glucagon in the perfused rat heart	E. F. HILDEBRANDT, D. B. BUXTON & M. S. OLSON	835-841
Reduction of acetaldehyde to ethanol by some micro-organisms and its stereospecificity	E. MACONI, A. GRIFFINI, V. CAVAZZONI & F. ARAGOZZINI	929-932
<b>Membranes and receptors</b>		
Photoaffinity labelling of the vasoactive-intestinal-peptide-binding site on intact human colonic adenocarcinoma cell line HT29-D4. Synthesis and use of photosensitive vasoactive-intestinal-peptide derivatives	J.-M. MARTIN, H. DARBON, J. LUIS, A. EL BATTARI, J. MARVALDI & J. PICHON	679-685
Long-term atropine treatment lowers the efficacy of carbachol to stimulate phosphatidylinositol breakdown in the cerebral cortex and hippocampus of rats	L. GOOBAR & T. BARTFAI	727-734
Ectoenzymes of the kidney microvillar membrane. Differential solubilization by detergents can predict a glycosyl-phosphatidylinositol membrane anchor	N. M. HOOPER & A. J. TURNER	865-869
Human placental calcitonin receptors	G. C. NICHOLSON, C. S. D'SANTOS, T. EVANS, J. M. MOSELEY, B. E. KEMP, V. P. MICHELANGELI & T. J. MARTIN	877-882
<b>Cell structure and function</b>		
Cellular content of ubiquitin and formation of ubiquitin conjugates during chicken spermatogenesis	N. AGELL & C. MEZQUITA	883-899

**CONTENTS (continued)**

**BJ LETTERS**

Indomethacin and e.s.r. signals in uterine cervix	D. B. McPHAIL, K. W. J. WAHLE & B. A. GOODMAN	933
Indomethacin and e.s.r. signals in uterine cervix: a reply	T. F. SLATER, M. C. R. SYMONS & A. TOMASI	933-934