

# CONTENTS

## Volume 251, No. 3, 1988

### FULL AND RAPID PAPERS

#### Proteins

- Isolation of mouse isometallothioneins. A comparison of isometallothioneins in growing cells and post-mitotic cells  
S. KOBAYASHI & J. SAYATO-SUZUKI 649-655
- Primary- and secondary-structural analysis of a unique prokaryotic metallothionein from a *Synechococcus* sp. cyanobacterium  
R. W. OLAFSON, W. D. MCCUBBIN & C. M. KAY 691-699
- Characterization of link protein(s) from human intervertebral-disc tissues  
P. J. DONOHUE, M. R. JAHNKE, J. D. BLAHA & B. CATERSON 739-747
- An investigation of the functioning of the two major haemoglobins of the *Sphenodon* using fast reaction kinetic methods  
T. BRITAIN 771-776
- A 36 kDa monomeric protein and its complex with a 10 kDa protein both isolated from bovine aorta are calpactin-like proteins that differ in their Ca<sup>2+</sup>-dependent calmodulin-binding and actin-severing properties  
F. MARTIN, J. DERANCOURT, J.-P. CAPONY, A. WATRIN & J.-C. CAVADORE 777-785
- The dimerization of half-molecule fragments of transferrin  
J. WILLIAMS & K. MORETON 849-855
- Analysis of the conformation and ligand-binding properties of the activation segment of pig procarboxypeptidase A  
M. VILANOVA, J. VENDRELL, C. M. CUCHILLO & F. X. AVILÉS 901-905
- Isolation and characterization of fatty acid binding proteins from mammary tissue of lactating rats  
P. D. JONES, A. CARNE, N. M. BASS & M. R. GRIGOR 919-925

#### Enzymes

- Alkali-metal-ion- and H<sup>+</sup>-dependent activation and/or inhibition of intestinal brush-border sucrose. A model involving three functionally distinct key prototropic groups  
M. VASSEUR, G. VAN MELLE, R. FRANGNE & F. ALVARADO 667-675
- The opposite effect of bivalent cations on cytochrome *b*<sub>5</sub> reduction by NADH:cytochrome *b*<sub>5</sub> reductase and NADPH:cytochrome *c* reductase  
M. TAMURA, T. YUBISUI & M. TAKESHITA 711-715
- A mechanistic and kinetic analysis of the interactions of the diastereoisomers of adenosine 3',5'-(cyclic)phosphorothioate with purified cyclic AMP-dependent protein kinase  
J. D. ROTHERMEL & L. H. PARKER BOTELHO 757-762
- A new spectrophotometric assay for citrate synthase and its use to assess the inhibitory effects of palmitoyl thioesters  
A. J. ELSE, S. J. BARNES, M. J. DANSON & P. D. J. WEITZMAN 803-807
- Significance of alterations in hepatic antioxidant enzymes. Primacy of glutathione peroxidase  
T. W. SIMMONS & I. S. JAMALL 913-917

#### Carbohydrates

- A study of the interaction *in vitro* between type I collagen and a small dermatan sulphate proteoglycan  
N. ULDBJERG & C. C. DANIELSEN 643-648

#### Gene structure and expression

- The sequence of a gene encoding convicilin from pea (*Pisum sativum* L.) shows that convicilin differs from vicilin by an insertion near the *N*-terminus  
D. BOWN, T. H. N. ELLIS & J. A. GATEHOUSE 717-726
- Effects of 5-azacytidine and methyl-group deficiency on NAD(P)H:quinone oxidoreductase and glutathione *S*-transferase in liver  
G. WAGNER, U. POTT, M. BRUCKSCHEN & H. SIES 825-829
- Isolation and expression of a pea vicilin cDNA in the yeast *Saccharomyces cerevisiae*  
M. D. WATSON, N. LAMBERT, A. DELAUNEY, J. N. YARWOOD, R. R. D. CROY, J. A. GATEHOUSE, D. J. WRIGHT & D. BOULTER 857-864
- Expression of human liver epoxide hydrolase in *Saccharomyces pombe*  
M. R. JACKSON & B. BURCHELL 931-933

#### Synthesis and degradation of macromolecules

- Biosynthesis and characterization of rabbit tooth enamel extracellular-matrix proteins  
M. ZEICHNER-DAVID, J. VIDES, M. MACDOUGALL, A. FINCHAM, M. L. SNEAD, C. BESSEM & H. C. SLAVKIN 631-641
- Inhibition of protein synthesis by glucagon in different rat muscles and protein fractions *in vivo* and in the perfused rat hemi-corpus  
V. R. PREEDY & P. J. GARLICK 727-732

## CONTENTS (continued)

Regulation of the breakdown rates of biotin-containing proteins in Swiss 3T3-L1 cells	C. S. CHANDLER & F. J. BALLARD	749-755
Biosynthesis, import and processing of precursor polypeptides of mammalian mitochondrial pyruvate dehydrogenase complex	O. G. L. DE MARCUCCI, G. M. GIBB, J. DICK & J. G. LINDSAY	817-823
<b>Intermediary metabolism and metabolic control</b>		
Analysis of the phosphofructokinase subunits and isoenzymes in human tissues	G. A. DUNAWAY, T. P. KASTEN, T. SEBO & R. TRAPP	677-683
Development of insulin-sensitivity at weaning in the rat. Role of the nutritional transition	T. ISSAD, C. COUPÉ, M. PASTOR-ANGLADA, P. FERRÉ & J. GIRARD	685-690
Lipogenesis in rat brown adipocytes. Effects of insulin and nor-adrenaline, contributions from glucose and lactate as precursors and comparisons with white adipocytes	E. D. SAGGERSON, T. W. J. McALLISTER & H. S. BAHT	701-709
The response of adipocyte glucose metabolism and fatty acid release to adenosine deaminase, insulin and perfusion. Investigation of intermediary metabolism by perfusion	R. D. HARPER	733-737
Effect of oxygen concentration on microsomal oxidation of ethanol and generation of oxygen radicals	S. PUNTARULO & A. I. CEDERBAUM	787-794
Enhancement of glycogen concentrations in primary cultures of rat hepatocytes exposed to glucose and fructose	M. A. PARNIAK & N. KALANT	795-802
Effects of oleic acid on the biosynthesis of lipoprotein apoproteins and distribution into the very-low-density lipoprotein by the isolated perfused rat liver	W. H. SALAM, H. G. WILCOX & M. HEIMBERG	809-816
Hepatic inositol release upon hormonal stimulation of perfused rat liver	S. VOM DAHL, P. GRAF & H. SIES	843-848
Enzymatically inactive forms of acetyl-CoA carboxylase in rat liver mitochondria	J. B. ALLRED & C. R. ROMAN-LOPEZ	881-885
Superoxide dismutase enhances the formation of hydroxyl radicals in the reaction of 3-hydroxyanthranilic acid with molecular oxygen	H. IWAHASHI, T. ISHII, R. SUGATA & R. KIDO	893-899
<b>Membranes and receptors</b>		
Differential regulation of cholecystokinin- and muscarinic-receptor-mediated phosphoinositide turnover in Flow 9000 cells	W. W. Y. LO & J. HUGHES	625-630
Distance between the propylbenzylcholine mustard attachment site and carbohydrates and thiol groups in muscarinic acetylcholine receptor protein from rat cerebral cortex	D. M. ALPERIN, C. B. BOUZAT & F. J. BARRANTES	657-665
Investigation of endosomal compartments involved in endocytosis and transcytosis of polymeric immunoglobulin A by subcellular fractionation of perfused isolated rat liver	J. H. PEREZ, W. J. BRANCH, L. SMITH, B. M. MULLOCK & J. P. LUZIO	763-770
A heparin-binding protein involved in inhibition of smooth-muscle cell proliferation	W. LANKES, A. GRIESMACHER, J. GRÜNWALD, R. SCHWARTZ-ALBIEZ & R. KELLER	831-842
Ethanol-induced phospholipase C activation is inhibited by phorbol esters in isolated hepatocytes	J. B. HOEK, R. RUBIN & A. P. THOMAS	865-871
New probes for angiotensin II receptors. Synthesis, radioiodination and biological properties of biotinylated and haptentated angiotensin derivatives	J.-C. BONNAFOUS, M. TENCE, R. SEYER, J. MARIE, A. AUMELAS & S. JARD	873-880
Phorbol ester inhibits arginine vasopressin activation of phospholipase C and promotes contraction of, and prostaglandin production by, cultured mesangial cells	D. A. TROYER, O. F. GONZALEZ, J. G. DOUGLAS & J. I. KREISBERG	907-912
Metabolism of inositol 1,3,4,5-tetrakisphosphate by human erythrocyte membranes. A new mechanism for the formation of inositol 1,4,5-trisphosphate	C. DOUGHNEY, M. A. MCPHERSON & R. L. DORMER	927-929
<b>Cell structure and function</b>		
The effect of the NADPH oxidase inhibitor diphenyleneiodonium on aerobic and anaerobic microbicidal activities of human neutrophils	J. A. ELLIS, S. J. MAYER & O. T. G. JONES	887-891
<b>Methods</b>		
Chemically synthesized non-radioactive biotinylated long-chain nucleic acid hybridization probes	A. H. AL-HAKIM & R. HULL	935-938