Cellular Aspects Contents of Volume 182, No. 2, 1979

FULL PAPERS

	•	
Biosynthesis and Degradation		
Lactose synthesis in the rat, and the effects of litter size and malnutrition	C. J. Wilde & N. J. Kuhn	287–294
Studies on enzymes of collagen biosynthesis and the synthesis of hydroxyproline in macrophages and mast cells	R. Myllylä & H. Seppä	311–316
Biosynthesis of skin collagens in normal and diabetic mice	P. KERN, M. MOCZAR & L. ROBERT	337-345
Effect of calcipenia on proteoglycan metabolism and aggregation in normal articular cartilage in vivo	M. J. Palmoski & K. D. Brandt	399-406
Biosynthesis and turnover of outer-membrane proteins in Escherichia coli ML308-225	R. J. Allen & G. K. Scott	407-412
Isoepoxydon, a new metabolite of the patulin pathway in <i>Penicillium urticae</i>	J. Sekiguchi & G. M. Gaucher	445-453
Abnormal ribosome assembly in a mutant of <i>Escherichia</i> coli	P. Butler, P. F. G. Sims & D. G. Wild	493-502
Hydrolysis of membrane phospholipids by phospholipases of rat liver lysosomes	D. E. RICHARDS, R. F. IRVINE & R. M. C. DAWSON	599-606
Bioenergetics		
Characterization of cyanide-insensitive respiration in mitochondria and submitochondrial particles of <i>Moniliella tomentosa</i>	J. Vanderleyden, J. Kurth & H. Verachtert	437–443
Stimulation of mitochondrial calcium ion efflux by thiol- specific reagents and by thyroxine. The relationship to adenosine diphosphate retention and to mitochondrial permeability	E. J. Harris, M. Al-Shaikhaly & H. Baum	455-464
Characterization and phenotypic control of the cytochrome content of Escherichia coli	G. A. REID & W. J. INGLEDEW	465-472
Kinetics of 3-O-Methyl-D-glucose transport in isolated rat hepatocytes	J. D. Craik & K. R. F. Elliott	503-508
Electron-paramagnetic-resonance measurements of the electron-transfer components of the reaction centre of <i>Rhodopseudomonas viridis</i> . Oxidation-reduction potentials and interactions of the electron acceptors	A. W. RUTHERFORD, P. HEATHCOTE & M. C. W. EVANS	515-523
Subcellular Structures		
Studies on the isolation and properties of renin granules from the rat kidney cortex	G. A. Sagnella & W. S. Peart	301–309
Intracellular localization of long-chain acyl-coenzyme A hydrolase and acyl-L-carnitine hydrolase in brown adipose tissue from guinea pigs	R. K. Berge, E. Slinde & M. Farstad	347–351
Cellular Interactions and Control Processes		
Transport of glutamine by rat kidney brush-border membrane vesicles	N. McFarlane-Anderson & G. A. O. Alleyne	295-300
Multiplicity of induction patterns of rat liver microsomal mono-oxygenases and other polypeptides produced by administration of various venobiotics	R. N. SHARMA, R. G. CAMERON, E. FARBER, M. G. GRIFFIN, JG. JOLY	317–327

iv

Endocytosis of lysosomal enzymes by non-parenchymal rat liver cells. Comparative study of lysosomal-enzyme uptake by hepatocytes and non-parenchymal liver cells	K. Ullrich, V. Gieselmann, G. Mersmann & K. Von Figura	329-335
4-Methyl-2-oxopentanoate oxidation by rat skeletal- muscle mitochondria	V. W. M. Van Hinsbergh, J. H. Veerkamp & J. F. C. Glatz	353-360
Adenylate metabolism in the heart. Regulatory properties of rabbit cardiac adenylate deaminase	R. Barsacchi, M. Ranieri-Raggi, C. Bergamini & A. Raggi	361–366
Tri-iodothyronine-induced increase in rat liver nuclear thyroid-hormone receptors associated with increased mitochondrial α-glycerophosphate dehydrogenase activity	S. Hamada, H. Nakamura, M. Nanno & H. Imura	371–375
Sequential changes in rat liver nuclear tri-iodothyronine receptors and mitochondrial α -glycerophosphate dehydrogenase activity after administeration of tri-iodothyronine	H. Nakamura, S. Hamada & H. Imura	377–382
Studies on the biosynthesis of hepatic pyruvate kinase and its correlation with enhanced hepatic lipogenesis in meal-trained rats	T. J. Hopkirk & D. P. Bloxham	383–397
Effects of antimycin A and 2-deoxyglucose on secretion in human platelets. Differential inhibition of the secretion of acid hydrolases and adenine nucleotides	H. Holmsen, L. Robkin & H. J. Day	413-419
Role of insulin receptors in the changing metabolism of adipose tissue during pregnancy and lactation in the rat	D. J. FLINT, P. A. SINNETT-SMITH, R. A. CLEGG & R. G. VERNON	421–427
Effect of vitamin D deficiency on bone formation in the chick	I. R. DICKSON & E. KODICEK	429–435
Uptake of L-tri-iodothyronine by isolated rat liver cells. A process partially inhibited by metabolic inhibitors; attempts to distinguish between uptake and binding to intracellular proteins	J. ECKEL, G. S. RAO, M. L. RAO & H. Breuer	473–491
Protein phosphorylation in human peripheral blood lymphocytes. Subcellular distribution and partial characterization of adenosine 3':5'-cyclic monophosphate-dependent protein kinase	D. D. Chaplin, H. J. Wedner & C. W. Parker	525-536
Protein phosphorylation in human peripheral blood lymphocytes. Phosphorylation of endogenous plasma membrane and cytoplasmic proteins	D. D. Chaplin, H. J. Wedner & C. W. Parker	537-546
Calcium ions and cell fusion. Effects of chemical fusogens on the premeability of erythrocytes to calcium and other ions	A. M. J. Blow, G. M. Botham & J. A. Lucy	555-563
Development		
Studies on sex-organ development. Changes in the oestro- genic response of the chick Müllerian duct as measured by chromatin template and ribonucleic acid initiation capacity	G. K. Andrews & C. S. Teng	257-269
Studies on sex-organ development. Prenatal effect of oestrogenic hormone on tubular-gland cell morphogenesis and ovalbumin-gene expression in the chick Müllerian duct	G. K. Andrews & C. S. Teng	271–286
Activation of 3-hydroxy-3-methylglutaryl-coenzyme A reductase in homogenates of developing rat brain	W. A. Maltese & J. J. Volpe	367-370
Increase in fatty acid synthetase content of 3T3-L cells undergoing spontaneous and chemically induced differentiation to adipocytes	P. M. Ahmad, T. R. Russell & F. Ahmad	509-514

CONTENTS

Changing pattern of cyclic AMP-binding proteins during germination of <i>Mucor racemosus</i> sporangiospores	M. Orlowski	547-554
Interactions in vivo between oxidation of non-esterified fatty acids and gluconeogensis in the newborn rat	P. Ferré, JP. Pégorier, D. H. Williamson & J. Girard	593-598
Metabolism in Whole Organisms		
Metabolism of glucose in hyper- and hypo-thyroid rats in vivo. Glucose-turnover values and futile-cycle activities obtained with ¹⁴ C- and ³ H-labelled glucose	F. Окајіма & M. Ui	565–575
Metabolism of glucose in hyper- and hypo-thyroid rats in vivo. Minor role of endogenous insulin in thyroid-dependent changes in glucose turnover	F. Okajima & M. Ui	577-584
Metabolism of glucose in hyper- and hypo-thyroid rats in vivo. Relation of catecholamine actions to thyroid activity in controlling glucose turnover	F. Окајіма & M. Ui	585–592
RAPID PAI	PERS	
Biosynthesis and Degradation		
Glycosylation of exogenous protein by endoplasmic- reticulum membranes from castor-bean (<i>Ricinus</i> communis) endosperm	R. B. Mellor, L. M. Roberts & J. M. Lord	629–631
Bioenergetics		
Composition and spectral properties of a cytochrome- enriched fraction obtained from chloroplasts by digitonin treatment	R. P. Cox	613–615
An active-site-directed adenosine triphosphate analogue binds to the β -subunits of factor F_1 mitochondrial adenosine triphosphatase with its triphosphate moiety	V. L. Drutsa, I. A. Kozlov, Y. M. Milgrom, Z. Shabarova & N. I. Sokolova	617–619
Cellular Interactions and Control Processes		
The maximum activities of enzymes that are involved in substrate cycles in liver and muscle of obese mice	E. A. Newsholme, K. Brand, J. Lang, J. C. Stanley & T. Williams	621–624
Comparison of superoxide with other reducing agents in the biological production of hydroxyl radicals	C. C. WINTERBOURN	625-628
Inhibition of protein synthesis in vitro by a lectin from Momordica charantia and by other haemagglutinins	L. Barbieri, E. Lorenzoni & F. Stirpe	633-635
Lipid environment of gastric potassium ion-stimulated adenosine triphosphatase	P. C. Sen & T. K. Ray	637–640
Metabolism in Whole Organisms		
Identification of isobutyronitrile and isobutyraldoxime o- methyl ether as volatile microbial catabolites of valine	D. B. Harper & P. A. Gibbs	609-611