

Cellular Aspects
Contents of Volume 182, No. 3, 1979

FULL PAPERS

Biosynthesis and Degradation

Incorporation of exogenous precursors into uridine and ribonucleic acid. Nucleotide compartmentation in the renal cortex <i>in vivo</i>	P. CORTES, N. W. LEVIN, F. DUMLER, K. K. VENKATACHALAM, C. P. VERGHESE & J. BERNSTEIN	677-686
Incorporation of <i>N</i> -fluoroacetyl-D-glucosamine into hyaluronate by rabbit tracheal explants in organ culture	D. J. WINTERBOURNE, R. J. BARNABY, P. W. KENT & N. MIAN	707-716
Biosynthesis and degradation of prolactin in the rat anterior pituitary gland. Time course of incorporation of label <i>in vitro</i> and evidence for rapid degradation	R. SHENAI & M. WALLIS	735-743
The metabolism of cholecalciferol in the liver of Japanese quail (<i>Coturnix coturnix japonica</i>) with particular reference to the effects of oestrogen	R. A. NICHOLSON, M. AKHTAR & T. G. TAYLOR	745-750
Evidence for the operation of the extra-hepatic receptor system <i>in vivo</i> in rats. Effect of dietary cholesterol and orotic acid, alone or in combination, on the rate of synthesis of cholesterol and fatty acid in various tissues, measured by using $^3\text{H}_2\text{O}$	R. FEARS & A. M. UMPLEBY	803-809
Effects of bivalent cations on prostaglandin biosynthesis and phospholipase A ₂ activation in rabbit kidney medulla slices	A. ERMAN & A. RAZ	821-825
Biosynthesis of ethylene from methionine. Isolation of the putative intermediate 4-methylthio-2-oxobutanoate from culture fluids of bacteria and fungi	D. C. BILLINGTON, B. T. GOLDING & S. B. PRIMROSE	827-836
Casein turnover in rabbit mammary explants in organ culture	K. AL-SARRAJ, J. NEWBURY, D. A. WHITE & R. J. MAYER	837-845
Mechanisms of protein degradation in growing and non-growing L-cell cultures	J. S. AMENTA & M. J. SARGUS	847-859
The synthesis of myosin, actin and the major protein fractions in rabbit skeletal muscle	G. E. LOBLEY & J. M. LOVIE	867-874

Bioenergetics

Quantitative analysis of proton-linked transport systems. The lactose permease of <i>Escherichia coli</i>	I. R. BOOTH, W. J. MITCHELL & W. A. HAMILTON	687-696
Mössbauer spectra of Photosystem-I reaction centres from the blue-green alga <i>Chlorogloea fritschii</i>	E. H. EVANS, J. D. RUSH, C. E. JOHNSON & M. C. W. EVANS	861-865

Subcellular Structures

Characterization and localization of human placental ferritin	P. J. BROWN, P. M. JOHNSON, O. OGBIMI & J. A. TAPPIN	763-769
Detection of peroxisomal fatty acyl-coenzyme A oxidase activity	N. C. INESTROSA, M. BRONFMAN & F. LEIGHTON	779-788

Cellular Interactions and Control Processes

Polyamines and cellular adenosine 3':5'-cyclic monophosphate	C. CLÔ, C. M. CALDARERA, B. TANTINI, D. BENALAL & U. BACHRACH	641-649
Early stimulation of rat liver microsomal protein synthesis after tri-iodothyronine injection <i>in vivo</i>	W. J. CARTER & F. H. FAAS	651-654
Calcium ion-dependent adenosine triphosphatase activity and plasma-membrane phosphorylation in the human neutrophil	C. SCHNEIDER, C. MOTTOLA & D. ROMEO	655-660
Phosphatidylinositol metabolism in rat hepatocytes stimulated by glycogenolytic hormones. Effects of angiotensin, vasopressin, adrenaline, ionophore A23187 and calcium-ion deprivation	M. M. BILLAH & R. H. MICHELL	661-668
Stimulation of phosphatidylinositol turnover in various tissues by cholinergic and adrenergic agonists, by histamine and by caerulein	L. M. JONES, S. COCKCROFT & R. H. MICHELL	669-676
Mechanism of the stimulation of serine and alanine transport into isolated rat liver cells by bicarbonate ions	J. D. McGIVAN	697-705
Corticotropin regulation of the synthesis of a specific rat adrenal cytosolic protein. Effects of hypophysectomy and actinomycin D	A. DAZORD, D. GALLETT, H. COHEN & J. M. SAEZ	717-725
Glycogen synthesis by hepatocytes from diabetic rats	S. GOLDEN, P. A. WALS, F. OKAJIMA & J. KATZ	727-734
A study of the glycerol phosphate acyltransferase and dihydroxyacetone phosphate acyltransferase activities in rat liver mitochondrial and microsomal fractions. Relative distribution in parenchymal and non-parenchymal cells effects of <i>N</i> -ethylmaleimide, palmitoyl-coenzyme A concentration, starvation, adrenalectomy and anti-insulin serum treatment	E. J. BATES & E. D. SAGGERSON	751-762
Inhibition of gluconeogenesis in isolated rat liver cells by methylenecyclopropylpyruvate (ketohypoglycin)	E. A. KEAN & C. I. POGSON	789-796
Effects <i>in vitro</i> of alloxan on the glucose metabolism of mouse pancreatic B-cells	L. A. H. BORG, S. J. EIDE, A. ANDERSSON & C. HELLERSTRÖM	797-802
Importance of mammalian nuclear-envelope nucleoside triphosphatase in nucleo-cytoplasmic transport of ribonucleoproteins	P. A. AGUTTER, B. McCALDIN & H. J. MCARDLE	811-819

Development

Uridine kinase activities in developing, adult and neoplastic rat tissues	A. HERZFELD & S. M. RAPER	771-778
---	---------------------------	---------

RAPID PAPERS**Subcellular Structures**

The subcellular distribution of alanine-glyoxylate amino-transferase and serine-pyruvate aminotransferase in dog liver	E. OKUNO, Y. MINATOGAWA, J. NAKANISHI, M. NAKAMURA, N. KAMODA, M. MAKINO & R. KIDO	877-879
--	--	---------

Cellular Interactions and Control Processes

- Stimulation by secretin of bilirubin UDP-glycosyltransferase activities and of cytochrome *P-450* concentration in rat liver G. L. RICCI & J. FEVERY 881-884
- N*-formyl-L-methionine deformylase activity in human leucocytes and platelets R. S. K. ACKERMAN & S. D. DOUGLAS 885-887

INDEXES

- Author Index** 889-890
Subject Index 891-899

Contents of Volume 182, No. 1

FULL PAPERS

Biosynthesis and Degradation

<i>sn</i> -Glycero(3)phosphoinositol glycerophosphohydrolase. A new phosphodiesterase in rat tissues	R. M. C. DAWSON, N. HEMINGTON, D. E. RICHARDS & R. F. IRVINE	39–45
Translation of embryonic-chick tendon procollagen messenger ribonucleic acid in two cell-free protein-synthesizing systems	K. S. E. CHEAH, M. E. GRANT & D. S. JACKSON	81–93
Uptake and degradation of mast-cell granules by mouse peritoneal macrophages	U. LINDAHL, H. PERTOFT & R. SELJELID	189–193
Proteolysis of the products of mitochondrial protein synthesis in yeast mitochondria and submitochondrial particles	S. L. KALNOV, L. A. NOVIKOVA, A. S. ZUBATOV & V. N. LUZIKOV	195–202

Bioenergetics

The effect of inhibitors on the oxygen kinetics of terminal oxidases of <i>Acanthamoeba castellanii</i>	D. LLOYD, S. EDWARDS, B. KRISTENSEN & H. DEGN	11–15
Effect of growth conditions on the involvement of cytochrome <i>c</i> in electron transport, proton translocation and ATP synthesis in the facultative methylotroph <i>Pseudomonas AM1</i>	C. W. KEEVIL & C. ANTHONY	71–79
The mechanism of transmembrane $\Delta\mu_{H^+}$ generation in mitochondria by cytochrome <i>c</i> oxidase	M. LORUSSO, F. CAPUANO, D. BOFFOLI, R. STEFANELLI & S. PAPA	133–147
Limited-turnover studies on proton translocation in reconstituted cytochrome <i>c</i> oxidase-containing vesicles	R. P. CASEY, J. B. CHAPPELL & A. AZZI	149–156
The subcellular distribution and some properties of the cytochrome <i>b</i> component of the microbicidal oxidase system of human neutrophils	A. W. SEGAL & O. T. G. JONES	181–188

Subcellular Structures

Studies on the mechanism of hepatic microsomal <i>N</i> -oxide formation. <i>N</i> -Oxidation of <i>NN</i> -dimethylaniline by a reconstituted rabbit liver microsomal cytochrome <i>P-448</i> enzyme system	P. HLAVICA & S. HÜLSMANN	109–116
The mechanism of hepatic iron uptake from native and denatured transferrin and its subcellular metabolism in the liver cell	J. P. MILSOM & R. G. BATEY	117–125
Tissue-culture cell fractionation. Fractionation of membranes from tissue-culture cells homogenized by glycerol-induced lysis	J. M. GRAHAM & J. K. SANDALL	157–164
Tissue-culture cell fractionation. Zonal centrifugation of Lettré cells homogenized by glycerol-induced lysis: subfractionation of membranes in sucrose gradients	J. M. GRAHAM & K. H. M. COFFEY	165–171
Tissue-culture cell fractionation. Fractionation of cellular membranes from ^{125}I /lactoperoxidase-labelled Lettré cells homogenized by bicarbonate-induced lysis: resolution of membranes by zonal centrifugation and in sucrose and metrizamide gradients	J. M. GRAHAM & K. H. M. COFFEY	173–180

Synthesis of membrane glycoproteins in rat small-intestinal villus cells. Redistribution of L-[1,5,6- ³ H]-fucose-labelled membrane glycoproteins among Golgi, lateral basal and microvillus membranes <i>in vivo</i>	A. QUARONI, K. KIRSCH & M. M. WEISER	203-212
Synthesis of membrane glycoproteins in rat small-intestinal villus cells. Effects of colchicine on the redistribution of L-[1,5,6- ³ H]fucose-labelled membrane glycoproteins among Golgi, lateral basal and microvillus membranes	A. QUARONI, K. KIRSCH & M. M. WEISER	213-221
Sulphate-ion/sodium-ion co-transport by brush-border membrane vesicles isolated from rat kidney cortex	H. LÜCKE, G. STANGE & H. MURER	223-229
Cellular Interactions and Control Processes		
Superoxide dismutase, catalase and scavengers of hydroxyl radical protect against the toxic action of alloxan on pancreatic islet cells <i>in vitro</i>	K. GRANKVIST, S. MARKLUND, J. SEHLIN & I.-B. TÄLJEDAL	17-25
Enhanced transport of natural amino acids after activation of pig lymphocytes	A. F. BORGHETTI, J. E. KAY & K. P. WHEELER	27-32
Clofibrate-induced increase in coenzyme A concentration in rat tissues	H. VOLTTI, M. J. SAVOLAINEN, V. P. JAUVONEN & I. E. HASSINEN	95-102
The distribution of glutathione in the rat liver lobule	M. T. SMITH, N. LOVERIDGE, E. D. WILLS & J. CHAYEN	103-108
Effect of oestradiol on progesterone receptors in normal mammary glands and its relationship with lactation	S. Z. HASLAM & G. SHYAMALA	127-131
Development		
Changes in the sensitivity of chick fibroblasts to <i>Ricinus</i> lectin (RCA I) toxicity in relation to the stage of embryo development	B. BERNARD, M. AUBERY & R. BOURRILLON	33-38
Metabolism in Whole Organisms		
Metabolism and biological activity of 25-fluorocholecalciferol, 24-dehydrocholecalciferol and 25-dehydrocholecalciferol in the rat	B. L. ONISKO, H. K. SCHNOES, H. F. DELUCA & R. S. GLOVER	1-9
Haem transport to the liver by haemopexin. Receptor-mediated uptake with recycling of the protein	A. SMITH & W. T. MORGAN	47-54
General Methods		
Determination of vitamin D and its metabolites in plasma from normal and anephric man	R. M. SHEPARD, R. L. HORST, A. J. HAMSTRA & H. F. DELUCA	55-69
RAPID PAPERS		
Biosynthesis and Degradation		
Inhibition of degradation of insulin by ophthalmic acid and by a bovine pancreatic proteinase inhibitor	R. E. OFFORD, J. PHILIPPE, J. G. DAVIS, P. A. HALBAN & M. BERGER	249-251

Cellular Interactions and Control Processes

- Enhanced stability of the Na^+ -dependent amino acid-transport system after lymphocyte activation A. F. BORGHETTI & J. E. KAY 237-239
- Uterine oestrogen-receptor binding to oligo(dT)-cel lulose. An inhibitor from hypothalamic cytosol G. SHEN, S. THROWER & L. LIM 241-243
- Endocytosis of β -N-acetylglucosaminidase from secretions of mucolipidosis-II and -III fibroblasts by non-paren chymal rat liver cells K. ULLRICH & K. VON FIGURA 245-247
- Rapid effects of isoprenaline, glucagon, pacing and potass ium arrest on post-heparin lipoprotein lipase activity in the perfused rat heart J. SIMPSON 253-255

Development

- Precocious development of cytochrome *P*-450 in neonatal rat liver after glucocorticoid treatment J. E. A. LEAKEY & J. R. FOUTS 233-235

Contents of Volume 182, No. 2**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 *Penicillium urticae* J. SEKIGUCHI & G. M. GAUCHER 445-453
- Abnormal ribosome assembly in a mutant of *Escherichia 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 *Moniliella tomentosa* 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 xenobiotics	R. N. SHARMA, R. G. CAMERON, E. FARBER, M. G. GRIFFIN, J.-G. JOLY & R. K. MURRAY	317-327
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 administration 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. ROBKN & 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

CONTENTS

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 permeability 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 oestrogenic 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
Changing pattern of cyclic AMP-binding proteins during germination of <i>Mucor racemosus</i> sporangiospores	M. ORLOWSKI	547-554
Interactions <i>in vivo</i> between oxidation of non-esterified fatty acids and gluconeogenesis in the newborn rat	P. FERRÉ, J.-P. PÉGORIER, D. H. WILLIAMSON & J. GIRARD	593-598
Metabolism in Whole Organisms		
Metabolism of glucose in hyper- and hypo-thyroid rats <i>in vivo</i> . Glucose-turnover values and futile-cycle activities obtained with ¹⁴ C- and ³ H-labelled glucose	F. OKAJIMA & M. UI	565-575
Metabolism of glucose in hyper- and hypo-thyroid rats <i>in vivo</i> . 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 <i>in vivo</i> . Relation of catecholamine actions to thyroid activity in controlling glucose turnover	F. OKAJIMA & M. UI	585-592
RAPID PAPERS		
Biosynthesis and Degradation		
Glycosylation of exogenous protein by endoplasmic reticulum membranes from castor-bean (<i>Ricinus communis</i>) 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

Contents of Volume 182, No. 3**FULL PAPERS****Biosynthesis and Degradation**

- Incorporation of exogenous precursors into uridine and ribonucleic acid. Nucleotide compartmentation in the renal cortex *in vivo*
P. CORTES, N. W. LEVIN, F. DUMLER, K. K. VENKATACHALAM, C. P. VERGHESE & J. BERNSTEIN 677-686
- Incorporation of *N*-fluoroacetyl-D-glucosamine into hyaluronate by rabbit tracheal explants in organ culture
D. J. WINTERBOURNE, R. J. BARNABY, P. W. KENT & N. MIAN 707-716
- Biosynthesis and degradation of prolactin in the rat anterior pituitary gland. Time course of incorporation of label *in vitro* and evidence for rapid degradation
R. SHENAI & M. WALLIS 735-743
- The metabolism of cholecalciferol in the liver of Japanese quail (*Coturnix coturnix japonica*) with particular reference to the effects of oestrogen
R. A. NICHOLSON, M. AKHTAR & T. G. TAYLOR 745-750
- Evidence for the operation of the extra-hepatic receptor system *in vivo* in rats. Effect of dietary cholesterol and orotic acid, alone or in combination, on the rate of synthesis of cholesterol and fatty acid in various tissues, measured by using $^3\text{H}_2\text{O}$
R. FEARS & A. M. UMPLEBY 803-809
- Effects of bivalent cations on prostaglandin biosynthesis and phospholipase A₂ activation in rabbit kidney medulla slices
A. ERMAN & A. RAZ 821-825
- Biosynthesis of ethylene from methionine. Isolation of the putative intermediate 4-methylthio-2-oxobutanoate from culture fluids of bacteria and fungi
D. C. BILLINGTON, B. T. GOLDING & S. B. PRIMROSE 827-836
- Casein turnover in rabbit mammary explants in organ culture
K. AL-SARRAJ, J. NEWBURY, D. A. WHITE & R. J. MAYER 837-845
- Mechanisms of protein degradation in growing and non-growing L-cell cultures
J. S. AMENTA & M. J. SARGUS 847-859
- The synthesis of myosin, actin and the major protein fractions in rabbit skeletal muscle
G. E. LOBLEY & J. M. LOVIE 867-874

Bioenergetics

- Quantitative analysis of proton-linked transport systems. The lactose permease of *Escherichia coli*
I. R. BOOTH, W. J. MITCHELL & W. A. HAMILTON 687-696

Mössbauer spectra of Photosystem-I reaction centres from the blue-green alga <i>Chlorogloea fritschii</i>	E. H. EVANS, J. D. RUSH, C. E. JOHNSON & M. C. W. EVANS	861-865
Subcellular Structures		
Characterization and localization of human placental ferritin	P. J. BROWN, P. M. JOHNSON, O. OGBIMI & J. A. TAPPIN	763-769
Detection of peroxisomal fatty acyl-coenzyme A oxidase activity	N. C. INESTROSA, M. BRONFMAN & F. LEIGHTON	779-788
Cellular Interactions and Control Processes		
Polyamines and cellular adenosine 3':5'-cyclic monophosphate	C. CLÔ, C. M. CALDARERA, B. TANTINI, D. BENALAL & U. BACHRACH	641-649
Early stimulation of rat liver microsomal protein synthesis after tri-iodothyronine injection <i>in vivo</i>	W. J. CARTER & F. H. FAAS	651-654
Calcium ion-dependent adenosine triphosphatase activity and plasma-membrane phosphorylation in the human neutrophil	C. SCHNEIDER, C. MOTTOLA & D. ROMEO	655-660
Phosphatidylinositol metabolism in rat hepatocytes stimulated by glycogenolytic hormones. Effects of angiotensin, vasopressin, adrenaline, ionophore A23187 and calcium-ion deprivation	M. M. BILLAH & R. H. MICHELL	661-668
Stimulation of phosphatidylinositol turnover in various tissues by cholinergic and adrenergic agonists, by histamine and by caerulein	L. M. JONES, S. COCKCROFT & R. H. MICHELL	669-676
Mechanism of the stimulation of serine and alanine transport into isolated rat liver cells by bicarbonate ions	J. D. McGIVAN	697-705
Corticotropin regulation of the synthesis of a specific rat adrenal cytosolic protein. Effects of hypophysectomy and actinomycin D	A. DAZORD, D. GALLET, H. COHEN & J. M. SAEZ	717-725
Glycogen synthesis by hepatocytes from diabetic rats	S. GOLDEN, P. A. WALS, F. OKAJIMA & J. KATZ	727-734
A study of the glycerol phosphate acyltransferase and dihydroxyacetone phosphate acyltransferase activities in rat liver mitochondrial and microsomal fractions. Relative distribution in parenchymal and non-parenchymal cells effects of <i>N</i> -ethylmaleimide, palmitoyl-coenzyme A concentration, starvation, adrenalectomy and anti-insulin serum treatment	E. J. BATES & E. D. SAGGERSON	751-762
Inhibition of gluconeogenesis in isolated rat liver cells by methylenecyclopropylpyruvate (ketohypoglycin)	E. A. KEAN & C. I. POGSON	789-796
Effects <i>in vitro</i> of alloxan on the glucose metabolism of mouse pancreatic B-cells	L. A. H. BORG, S. J. EIDE, A. Andersson & C. HELLERSTRÖM	797-802
Importance of mammalian nuclear-envelope nucleoside triphosphatase in nucleo-cytoplasmic transport of ribonucleoproteins	P. A. AGUTTER, B. McCALDIN & H. J. MCARDLE	811-819
Development		
Uridine kinase activities in developing, adult and neoplastic rat tissues	A. HERZFELD & S. M. RAPER	771-778

RAPID PAPERS**Subcellular Structures**

The subcellular distribution of alanine-glyoxylate amino-transferase and serine-pyruvate aminotransferase in dog liver

E. OKUNO, Y. MINATOGAWA, 877-879
J. NAKANISHI, M. NAKAMURA,
N. KAMODA, M. MAKINO & R. KIDO

Cellular Interactions and Control Processes

Stimulation by secretin of bilirubin UDP-glycosyltransferase activities and of cytochrome *P-450* concentration in rat liver

G. L. RICCI & J. FEVERY 881-884

N-formyl-L-methionine deformylase activity in human leucocytes and platelets

R. S. K. ACKERMAN & S. D. DOUGLAS 885-887

INDEXES

Author Index

889-890

Subject Index

891-899