

CONTENTS OF VOLUME 125, No. 2, 1971

	PAGE		PAGE
Metabolism of <i>m-tert.</i> -butylphenyl <i>N</i> -methylcarbamate in insects and mice. By P. G. C. Douch and J. N. Smith	385	The energy-linked transhydrogenase reaction in respiratory mutants of <i>Escherichia coli</i> K 12. By G. B. Cox , N. A. Newton , J. D. Butlin and F. Gibson	489
The metabolism of 3,5-di- <i>tert.</i> -butylphenyl <i>N</i> -methylcarbamate in insects and by mouse liver enzymes. By P. G. C. Douch and J. N. Smith	395	Structural proteins in the egg-shell of the oriental garden cricket, <i>Gryllus mitratus</i> . By H. Kawasaki , H. Sato and M. Suzuki	495
Appearance of a methylated ribonucleic acid on illumination of <i>Euglena gracilllis</i> cells grown in the dark. By M. Perl	401	Properties of phosphofructokinase from the mucosa of rat jejunum and the relation to the lack of Pasteur effect. By G. A. Tejwani and A. Ramaiah	507
The effect of vitamin E on the intracellular distribution of the different oxidation states of selenium in rat liver. By C. P. J. Caygill , J. A. Lucy and A. T. Diplock	407	Action of insulin and growth hormone on protein synthesis in muscle from non-hypophysectomized rabbits. By P. J. Reeds , K. A. Munday and M. R. Turner	515
Studies on flavonoid metabolism. Biliary and urinary excretion of metabolites of (+)-[U- ¹⁴ C]catechin. By N. P. Das and S. P. Sothy	417	The kinetics of phenethylhydrazine oxidation by monoamine oxidase. By K. F. Tipton and I. P. C. Spires	521
The C ₄ -pathway of photosynthesis. Evidence for an intermediate pool of carbon dioxide and the identity of the donor C ₄ -dicarboxylic acid. By M. D. Hatch	425	Properties of the sarcolemmal calcium ion-stimulated adenosine triphosphatase of hamster skeletal muscle. By D. B. McNamara , P. V. Sulakhe and N. S. Dhalla	525
Hydroxylysine in the <i>N</i> -terminal regions of the α ₁ - and α ₂ -chains of various collagens. By M. J. Barnes , B. J. Constable , L. F. Morton and E. Kodicek	433	Pyruvatephosphate dikinase from <i>Bacteroides symbiosus</i> . By R. E. Reeves	531
Biochemical adaptation in rat liver in response to marginal oxygen toxicity. By R. R. Gorman , J. P. Jordan , J. B. Simmons and D. P. Clarkson	439	The effect of acetoacetate on plasma insulin concentration. By R. A. Hawkins , K. G. M. M. Alberti , C. R. S. Houghton , D. H. Williamson and H. A. Krebs	541
Microbial oxidation of amines. Partial purification of a mixed-function secondary-amine oxidase system from <i>Pseudomonas aminovorans</i> that contains an enzymically active cytochrome- <i>P</i> -420-type haemoprotein. By R. R. Eady , T. R. Jarman and P. J. Large	449	Differences in distribution of esterase between cell fractions of rat liver homogenates prepared in various media. Relevance to the lysosomal location of the enzyme in the intact cell. By P. C. Barrow and S. J. Holt	545
The composition of the cell wall of <i>Fusicoccum amygdali</i> . By K. W. Buck and M. A. Obaidah	461	Inhibition by oxalomalate of rat liver mitochondrial and extramitochondrial aconitate hydratase. By A. Adinolfi , V. Guarriera-Bobyleva , A. Olezza and A. Ruffo	557
Characterization of two cell-wall polysaccharides from <i>Fusicoccum amygdali</i> . By M. A. Obaidah and K. W. Buck	473	The inactivation of phenylalanine hydroxylase by 2-amino-4-hydroxy-6,7-dimethyltetrahydropteridine and the aerobic oxidation of the latter. The effects of catalase, dithiothreitol and reduced nicotinamide-adenine dinucleotide. By A. Jakubovič , L. I. Woolf and E. Chan-Henry	563
Ribonucleic acid-deoxyribonucleic acid hybridization in aqueous solutions and in solutions containing formamide. By S. Gillespie and D. Gillespie	481		

	PAGE		PAGE
The non-enzymic hydroxylation of phenylalanine to tyrosine by 2-amino-4-hydroxy-6,7-dimethyl-5,6,7,8-tetrahydropteridine. By L. I. Woolf, A. Jakubovič and E. Chan-Henry	569	Sporulation in <i>Bacillus subtilis</i> . Effect of medium on the form of chromosome replication and on initiation to sporulation in <i>Bacillus subtilis</i> . By J. Mandelstam, J. M. Sterlini and D. Kay	635
Human senile cataractous lens protease. Isolation and some chemical characteristics. By A. A. Swanson and J. T. Nichols	575	Cell-free synthesis of tryptophanase from <i>Escherichia coli</i> . Use of ribonucleic acid isolated from induced cells and a comparison of the product from a system employing ribosomes with that from one employing ribosomes and exogenous ribonucleic acid. By J. H. Parish, S. A. M. Khairul Bashar, N. L. Brown and M. Brown	643
Separation and structural analysis of vinyl- and isovinyl-azobilirubin derivatives. By F. H. Jansen and M. S. Stoll	585	Thermal denaturation in acidic solutions of double-helical ribonucleic acid from virus-like particles found in <i>Penicillium chrysogenum</i> . A spectrophotometric study. By R. A. Cox, K. Kanagalingam and E. Sutherland	655
The effects of certain glycols, substituted glycols and related organic solvents on the thermal stability of soluble collagen. By G. J. Hart, A. E. Russell and D. R. Cooper	599		
The synthesis of ribonucleic acid in immature rat uterus responding to oestradiol-17 β . By J. T. Knowler and R. M. S. Smellie	605		
Biosynthesis of liver membranes. Incorporation of [³ H]leucine into proteins and of [¹⁴ C]glucosamine into proteins and lipids of liver microsomal and plasma-membrane fractions. By W. H. Evans and J. W. Gurd	615		
Studies on the mechanism and regulation of C-4 demethylation in cholesterol biosynthesis. The role of adenosine 3':5'-cyclic monophosphate. By D. P. Bloxham, D. C. Wilton and M. Akhtar	625		

SHORT COMMUNICATIONS

The influence of growth conditions on the presence of bacteriophage-receptor sites in walls of <i>Bacillus subtilis</i> W23. By A. R. Archibald and H. E. Coapes	667
Peptidylhydroxamate formation in yeast: a re-evaluation. By J. G. C. van de Meene, H. P. J. Bloemers and V. V. Koningsberger	671

Proceedings of the Biochemical Society

	PAGE
Cholesterol hydroxylation in the adrenal cortex and liver. By G. S. Boyd, A. C. Brownie, C. R. Jefcoate and E. R. Simpson	1 P
Functional components of the liver microsomal enzyme system catalysing fatty acid, hydrocarbon and drug hydroxylation. By M. J. Coon, H. W. Strobel, A. P. Autor, J. Heidema and W. Duppel	2 P
Oxygenated cytochrome <i>P</i> -450 as an intermediate in hydroxylation reactions. By R. W. Estabrook, J. Baron, J. Peterson and Y. Ishimura	3 P
Microsomal hydroxylases: studies on the mechanism of induction and their role in polycyclic hydrocarbon action. By H. V. Gelboin	4 P
Structure and reactions of oxygenase active centres: cytochrome <i>P</i> -450 and iron-sulphur proteins. By I. C. Gunsalus, J. D. Lipscomb, V. Marshall, H. Frauenfelder, E. Münck and E. Greenbaum	5 P
The binding of metyrapone to cytochrome <i>P</i> -450 and its inhibitory action on liver microsomal mixed-function oxidase reactions. By A. G. Hildebrandt	6 P
The significance of drug-induced spectral changes in liver microsomal fraction. By S. Orrenius, B. Wilson, C. von Bahr and J. B. Schenkman	8 P
Model systems for mono-oxygenases, with results with iron (II)-sulphur complexes as models for cytochrome <i>P</i> -450. By V. Ullrich, H.-H. Ruf and H. Mimoun	9 P
Cytochrome <i>P</i> -450 from the adrenal cortex: interaction of steroids and the hydroxylation reaction. By H. Schleyer, D. Y. Cooper, S. S. Levin and O. Rosenthal	10 P
Cytochrome <i>P</i> -450 as a microsomal peroxidase in steroid hydroxylations. By E. G. Hrycay and P. J. O'Brian	12 P

	PAGE
Plasma 11-hydroxy corticosteroid concentrations in stressed adult rats after undernutrition in early life. By B. P. F. ADLARD and J. L. SMART	12 P
An assay method for cholesterol 7 α -hydroxylase in rat liver microsomal fraction. By S. BALASUBRAMANIAM and K. A. MITROPOULOS	13 P
The cofactor requirement for the rat liver microsomal cholesterol 7 α -hydroxylase enzyme system. By A. M. GRIMWADE, M. E. LAWSON and G. S. BOYD	14 P
Studies on the site specificity of a hydroxy steroid dehydrogenase. By W. GIBB and J. JEFFERY	14 P
Biological oxygenation of drugs and steroids in the placenta. By J. CHAKRABORTY, R. HOPKINS and D. V. PARKE	15 P
The effect of diet on rat plasma corticosteroids and liver aromatic hydroxylase activity. By T. K. BASU, J. W. T. DICKERSON and D. V. PARKE	16 P
Studies on the hydroxylation of lysine occurring in the non-helical region at the N-terminal end of the collagen molecule. By M. J. BARNES, B. J. CONSTABLE, L. F. MORTON and E. KODICEK	16 P
Hydroxylation of <i>p</i> -hydroxyphenylpyruvate and the N I H shift: a hypothesis. By B. L. GOODWIN	17 P
The state of the iron atoms in hydroxylase iron-sulphur proteins. By R. CAMMACK, C. E. JOHNSON, D. O. HALL and K. K. RAO	18 P
Some studies on the purified 2-furoylcoenzyme A hydroxylase from <i>Pseudomonas putida</i> F2. By M. GRIFFIN, J. P. KITCHER and P. W. TRUDGILL	19 P
Hydroxylation and toxicity of aflatoxins. By D. S. P. PATTERSON	19 P
Purification of nicotinamide-adenine dinucleotide-dependent dehydrogenases by affinity chromatography. By K. MOSBACH, H. GUILFORD, P.-O. LARSSON, R. OHLSSON and M. SCOTT	20 P
A possible role of zinc in the metabolism of testosterone by the prostate gland. By J. K. GRANT, J. MINGUELL, P. TAYLOR and M. WEISS	21 P
Selective increases in type I hydrogen from reduced nicotinamide-adenine dinucleotide phosphate in liver from phenobarbitone-treated rats. By F. P. ALTMAN	21 P
The effect of phenobarbitone on the production of type I hydrogen from reduced nicotinamide-adenine phosphate in different regions of the liver lobule. By R. G. BUTCHER	22 P
Changes in the mechanism regulating liver uridine diphosphate glucuronyltransferase activity during embryonic life. By B. BURCHELL, G. J. DUTTON and A. M. NEMETH	23 P
Intestinal azo reduction and glucuronide conjugation of Prontosil. By R. GINGELL and J. W. BRIDGES	24 P
The biliary excretion of hydroxyethylrutosides and other flavonoids in the rat. By A. BARROW and L. A. GRIFFITHS	24 P
The biliary excretion of anions of molecular weight 300-800 in the rat, guinea pig and rabbit. By F. T. A. AZIZ, P. C. HIROM, P. MILLBURN, R. L. SMITH and R. T. WILLIAMS	25 P
Some aspects of the metabolism of ¹⁴ C-labelled (\pm)-2,3-dehydroemetine in the rat. By R. K. JOHNSON, W. T. WYNN and W. R. JONDORF	26 P
The adsorption excretion and metabolism of disodium [¹⁴ C]chromoglycate in man. By S. R. WALKER, A. J. RICHARDS and J. W. PATERSON	27 P
The fate of [³ H]salbutamol in man. By M. E. EVANS, A. J. RICHARDS, S. R. WALKER and J. W. PATERSON	27 P
Formation of epoxides as microsomal metabolites of polycyclic hydrocarbons. By P. SIMS, A. HEWER and P. L. GROVER	28 P
Enzymic formation of β -D-monoglucuronide, β -D-monoglucoside and mixtures of β -D-monoxylsode and β -D-dixylsode of bilirubin by microsomal preparations from rat liver. By K. P. M. HEIRWEGH, J. A. T. P. MEUWISSEN and J. FEVERY	28 P
The incorporation of glycylglycine into humic acid. By D. R. PERRY and W. A. ADAMS	29 P
Effect of gibberellic acid on the development of some cereal carbohydrases. By D. J. MANNERS, G. H. PALMER, G. WILSON and D. YELLOWLEES	30 P
Observations on the purity of some yeast glycogen preparations. By R. B. EVANS and D. J. MANNERS	31 P
The cell and exocellular mannans from <i>Hansenula holstii</i> N.C.Y.C. 560. By W. L. CUNNINGHAM and G. S. BLAS	31 P
Formation of yeast protoplasts by using an enzyme preparation from <i>Cytophaga</i> . By J. K. BAIRD and W. L. CUNNINGHAM	32 P

	PAGE
Serum acid hydrolases in the mucopolysaccharidoses. By W. L. CUNNINGHAM and P. R. RAMAGE	33 P
Properties of phosphoenolpyruvate carboxylase isolated from maize leaves. By M. W. KERR and A. ROBERTSON	34 P
Carbonic anhydrase: multiple forms in plants. By B. D. PATTERSON, C. A. ATKINS and D. GRAHAM	34 P
Histochemical localization of enzymes in heart muscle. By D. R. JARVIE, J. H. OTTAWAY, J. NOLTE and D. PETTE	35 P
Isoenzymes of glutamine synthetase in rat tissues. By M. P. GONZALEZ and J. H. OTTAWAY	35 P
The development of hypoxanthine/guanine phosphoribosyltransferase activity in man. By A. ADAMS, J. M. ANDERSON, A. D. NICOL and R. A. HARKNESS	36 P
The effect of starvation on the cholinesterase activity of the liver and serum of young male rats. By A. R. HENDERSON, I. HAMILTON and J. KING	36 P
The effect of feeding on the apparent kinetic constants and activation energy of the magnesium ion-activated deoxyribonucleic acid-dependent ribonucleic acid polymerase of rat liver. By C. A. SPENCER and A. R. HENDERSON	37 P
Stimulation of the release of unesterified fatty acids in synaptosomes by noradrenaline and 5-hydroxytryptamine. By C. J. PRICE and C. E. ROWE	38 P
Synthesis of fatty acids from [1- ¹⁴ C]acetyl-coenzyme A in subcellular particles of rat epididymal adipose tissue. By H. KANOH and D. B. LINDSAY	38 P
Incorporation of acetate into β -hydroxy- β -methylglutaryl-coenzyme A by rat liver microsomal fraction: the effect of feeding with cholesterol. By K. S. SHEPHERD and R. BOOTH	39 P
The effect of development on the gangliosides of rat brain. By J. W. T. DICKERSON and A. MERAT	40 P
The effect of development on the gangliosides of pig brain. By J. W. T. DICKERSON, A. MERAT and E. M. WIDDOWSON	40 P
Compartmental analysis of the distribution of cholesterol in the isolated perfused rat liver. By L. B. ROBERTS and I. W. PERCY-ROBB	41 P
Optical-rotary-dispersion studies of steroid molecules in liposomes and erythrocyte membranes. By J. R. GREEN, P. A. EDWARDS and C. GREEN	41 P
Aggregated states of chromatophore membrane protein from <i>Rhodospseudomonas spheroides</i> . By L. S. ENGLISH, D. N. LEES and L. J. ROGERS	42 P
Inhibition of photosynthetic electron transport by 1,1,1-trichloro-2,2-bis-(<i>p</i> -chlorophenyl)ethane (DDT) at a site in the intermediate electron-transport chain. By W. J. OWEN and L. J. ROGERS	43 P
Occurrence of histones in the trypanosomatid flagellate <i>Crithidia oncopelti</i> . By J. L. LEAVER and G. RAMPONI	44 P
Normalization factors in the fitting of exponential curves to results obtained in isotopic-tracer studies. By J. H. OTTAWAY	44 P
Inhibition by salicylate of porcine lactate dehydrogenase isoenzyme 5. By R. M. CHESHIRE and M. V. PARK	45 P
Liver perfusion with a closed gas circuit. By J. COCHRANE, J. S. CHAHL and J. H. OTTAWAY	45 P
Evidence for an atypical binding of haem in a protozoan cytochrome. By G. PETTIGREW and T. MEYER	46 P
The metabolism <i>in vitro</i> of [ureyl- ¹⁴ C]tolbutamide by microsomal preparations from rat and human liver. By F. J. DARBY and D. A. P. EVANS	46 P
Steroid hydroperoxides as intermediates in steroid biogenesis. By J. E. VAN LIER and G. KAN	47 P

INDEX TO AUTHORS

	PAGE		PAGE
Adams, A.	36 P	Archibald, A. R.	667
Adams, W. A.	29 P	Atkins, C. A.	34 P
Adinolfi, A.	557	Autor, A. P.	2 P
Adlard, B. P. F.	12 P	Aziz, F. T. A.	25 P
Akhtar, M.	625		
Alberti, K. G. M. M.	541	Baird, J. K.	32 P
Altman, F. P.	21 P	Balasubramaniam, S.	13 P
Anderson, J. M.	36 P	Barnes, M. J.	433, 16 P