

CONTENTS OF VOLUME 117, No. 3, 1970

	PAGE		PAGE
Studies of the congenitally goitrous sheep. Iodoproteins of the goitre. By I. R. Falconer, I. M. Roitt, R. F. Seamark and G. Torrigiani	417	Isolation of ribosomes from cell-wall preparations of barley (<i>Hordeum vulgare</i>). By L. Jervis and M. Hallaway	505
Some effects of testosterone on the rat ventral prostate. By I. C. Parsons, F. R. Mangan and G. E. Neal	425	Histone F1 from rat thymus. Subfractionation and incorporation of [³² P]phosphate <i>in vitro</i> . By R. H. Buckingham and L. A. Stocken	509
The cell wall of <i>Bacillus licheniformis</i> N.C.T.C. 6346. Linkage between the teichuronic acid and mucopeptide components. By R. C. Hughes	431	Properties and reaction with iodoacetamide of adenosine 5'-triphosphate-creatinine phosphotransferase from human skeletal muscle. Further evidence about the role of the essential thiol group in relation to the mechanism of action. By I. Kumudavalli, B. H. Moreland and D. C. Watts	513
Some structural features of the teichuronic acid of <i>Bacillus licheniformis</i> N.C.T.C. 6346 cell walls. By R. C. Hughes and P. F. Thurman	441	A variant of rabbit phosphoglucose isomerase. By S. G. Welch, L. I. Fitch and C. W. Parr	525
Biosynthesis of <i>N</i> -(α -hydroxyethyl)-lysergamide, a metabolite of <i>Claviceps paspali</i> Stevens & Hall. By N. Castagnoli, jun., K. Corbett, E. B. Chain and R. Thomas	451	The biosynthesis of androst-16-enes in boar testis tissue. By T. Katkov and D. B. Gower	533
The control by insulin of amino acid accumulation in muscle. By K. L. Manchester	457	The stereochemistry of hydrogen elimination from C-7 in cholesterol and ergosterol biosynthesis. By M. Akhtar, A. D. Rahimtula and D. C. Wilton	539
Effect of cortisone on the developmental pattern of the neutral and the acid β -galactosidases of the small intestine of the rat. By O. Koldovský and P. Sunshine	467	Partial characterization of a biologically active steroid glycoside isolated from the starfish <i>Marthasterias glacialis</i> . By A. M. Mackie and A. B. Turner	543
A comparative study of the ability of methionine or linolenic acid to act as precursors of ethylene in plant tissues. By L. W. Mapson, J. F. March, M. J. C. Rhodes and L. S. C. Woollorton	473	The function of ubiquinone in <i>Escherichia coli</i> . By G. B. Cox, N. A. Newton, F. Gibson, A. M. Snowsall and J. A. Hamilton	551
Phospholipid synthesis and exchange in isolated liver cells. By F. B. Jungalwala and R. M. C. Dawson	481	Pathways leading to and from serine during growth of <i>Pseudomonas</i> AM1 in C ₁ compounds or succinate. By J. Heptinstall and J. R. Quayle	563
Hepatic drug-metabolizing enzyme activity in rats pretreated with (-)-emetine or (\pm)-2,3-dehydroemetine. By H. H. Miller, R. K. Johnson, J. D. Donahue and W. R. Jondorf	491	Biosynthesis of amino acids in <i>Clostridium pasteurianum</i> . By R. H. Dainty and J. L. Peel	573
Equilibrium relations between the cytoplasmic adenine nucleotide system and nicotinamide-adenine nucleotide system in rat liver. By R. L. Veech, L. Rajzman and H. A. Krebs	499	Purification and properties of threonine aldolase from <i>Clostridium pasteurianum</i> . By R. H. Dainty	585

	PAGE		PAGE
Biosynthesis of phytoquinones. Homogen- tistic acid: a precursor of plastoquinones, tocopherols and α -tocopherolquinone in higher plants, green algae and blue-green algae. By G. R. Whistance and D. R. Threlfall	593	Micro-analysis of pure deoxyribonucleic acid-dependent ribonucleic acid poly- merase from <i>Escherichia coli</i> . Action of heparin and rifampicin on structure and function. By V. Neuhoff , W.-B. Schill and H. Sternbach	623
Cathepsin D. Purification of isoenzymes from human and chicken liver. By A. J. Barrett	601	SHORT COMMUNICATIONS	
Activation of δ -aminolaevulate synthetase in extracts of <i>Rhodopseudomonas spher-</i> <i>oides</i> . By J. Marriott , A. Neuberger and G. H. Tait	609	Chain-length specificity for termination of fatty acid biosynthesis by fatty acid syn- thetase complexes from lactating rabbit mammary gland and rat liver. By E. M. Carey , R. Dils and H. J. M. Hansen	633
Factors affecting the permeability of iso- lated fat-cells from the rat to [^{42}K]potas- sium and [^{36}Cl]chloride ions. By M. C. Perry and C. N. Hales	615	Uridine diphosphate α -D-galactofuranose, an intermediate in the biosynthesis of galactofuranosyl residues. By A. G. Trejo , G. J. F. Chittenden , J. G. Buchanan and J. Baddiley	637

Proceedings of the Biochemical Society

	PAGE
Functional thiol groups in enzymic catalysis. By F. LYNEN	47P
Selective reactivity of thiol groups in proteins. By K. WALLENFELS and B. EISELE	48P
Kinetic probes for the stoichiometry and reactivity of thiol groups in enzymes. By H. GUTFREUND and C. H. McMURRAY	49P
The thiol groups of aldolase. By P. J. ANDERSON and R. N. PERHAM	49P
Imidazole and proton transfer in catalysis. By WM. P. JENCKS	50P
Imidazole catalysis in model reactions for 'serine' peptidase and 'cysteine' peptidase activities. By G. M. BLACKBURN , H. L. H. DODDS and D. J. SHIRE	50P
Catalysis by carboxyl groups. By B. CAPON	51P
Steric assistance for intramolecular catalysis. By A. J. KIRBY and P. W. LANCASTER	51P
Amino and aromatic groups in enzymic catalysis: active and allosteric sites of glutamate dehydro- genase. By G. DI PRISCO , B. D'UDINE , M. PEPE and F. SCALENGHE	51P
The reactivity of group-specific chromophoric reagents. By D. J. BIRKETT , R. B. FREEDMAN , N. C. PRICE and G. K. RADDA	52P
X-ray analysis of an unusual reaction in lysozyme. By C. C. F. BLAKE	52P
Selective photo-oxidation of amino acids in proteins. By E. SCOFFONE , G. JORI and G. GALIAZZO	53P
Pulse radiolysis: an oxidative-reductive probe in general biochemical and enzyme studies. By G. E. ADAMS , R. B. CUNDALL and R. L. WILLSON	53P
Elucidation of the fine structure of large molecules by nuclear magnetic resonance. By R. G. SHULMAN	54P
Cobalt as a functional group in enzymes. By S. COCKLE , S. DAVIES , M. FOSTER , H. A. O. HILL and R. J. P. WILLIAMS	54P
The contribution of studies of the reactivity of protein functional groups to an understanding of enzymic mechanisms. By B. R. RABIN	54P
The activity of polyribosomes from liver. By A. KORNER	55P
The structure and activity of polyribosomes and subparticles from reticulocytes. By H. R. V. ARNSTEIN	55P
Formation and function of polyribosomes in the early embryonic development. By A. MONROY	57P
The function of polyribosomes attached to membranes in animal cells. By P. N. CAMPBELL	57P

CONTENTS

iii

	PAGE
Model building studies on the structure of deoxyribonucleohistone. By J. F. PARDON and B. M. RICHARDS	58P
The structure of deoxyribonucleohistone and the role of individual histone proteins. By B. M. RICHARDS, J. F. PARDON and E. HIRST	59P
The isolation of rapidly labelled deoxyribonucleic acid fragments of nuclear origin from the poly-ribosome fraction of cultured embryonic liver cells. By R. WILLIAMSON	59P
The effects of chloramphenicol on the synthesis of bacterial ribonucleic acids. By W. J. H. GRAY	60P
The rate of transcription of 23S ribosomal ribonucleic acid in normal and chloramphenicol-inhibited bacteria. By J. E. M. MIDGLEY	60P
The function of ribosomal thiol groups. By J. A. BEELEY	61P
Electron-microscopic study of polyribosomes extracted from HeLa cells. By A. O. A. MILLER, A. MILLER-FAURES, S. BRAM and D. KAY	62P
An immunological method of fractionation of ribosomes from the chick lens. By R. M. CLAYTON, D. E. S. TRUMAN and J. C. CAMPBELL	63P
Structure and function of polyribosomes in ischaemic liver cells. By G. RAGNOTTI and F. CAJONE	63P
Ribosome tetramers from cold-treated chick embryos. By N. H. CAREY	64P
Factors affecting separation of free polyribosomes from membrane-bound polyribosomes. By D. LOWE and T. HALLINAN	64P
Amino acid incorporation into protein of neuronal and neuropil fractions <i>in vitro</i> . By B. TIPLADY and S. P. R. ROSE	65P
Speculations on the biological occurrence of isethionic acid. By F. CHALLENGER	65P
The effects of various inhibitors on the stimulation of lipid peroxidation produced by dimethylnitrosamine in rat liver microsomes <i>in vitro</i> . By P. J. JOSE and T. F. SLATER	66P
Effects of aliphatic aldehydes on protein synthesis in cell-free systems. By A. F. BORGHETTI, B. GIGLIONI, S. OTTOLENGHI and G. G. GUIDOTTI	67P
Protein synthesis in mammalian epidermis: are polyribosomes involved in fibrous-protein biosynthesis? By L. CHURCHILL and P. T. SPEAKMAN	67P
The site of the inhibitory action of salicylate on protein biosynthesis <i>in vitro</i> . By M. BURLEIGH and M. J. H. SMITH	68P
Protein and ribonucleic acid synthesis <i>in vitro</i> : calculation of the bivalent cation requirement and the extent of complex-formation in incubation media. By K. L. MANCHESTER	68P
Quantitative analysis of proteins by displacement electrophoresis. By D. PEEL, J. O. N. HINCKLEY and A. J. P. MARTIN	69P
The effect of mechanical stress on the properties of reconstituted collagen. By D. A. HALL	69P
Isolation of ovomucoid by using an insoluble trypsin derivative. By J. G. BEELEY	70P
The states of aggregation of citrate lyase. By T. J. BOWEN and M. G. MORTIMER	71P

INDEX TO AUTHORS

	PAGE		PAGE
Adams, G. E.	53P	Bram, S.	62P
Akhtar, M.	539	Buchanan, J. G.	637
Anderson, P. J.	49P	Buckingham, R. H.	509
Arnstein, H. R. V.	55P	Burleigh, M.	68P
Baddiley, J.	637	Cajone, F.	63P
Barrett, A. J.	601	Campbell, J. C.	63P
Beeley, J. A.	61P	Campbell, P. N.	57P
Beeley, J. G.	70P	Capon, B.	51P
Birkett, D. J.	52P	Carey, E. M.	633
Blackburn, G. M.	50P	Carey, N. H.	64P
Blake, C. C. F.	52P	Castagnoli, N., jun.	451
Borghetti, A. F.	67P	Chain, E. B.	451
Bowen, T. J.	71P	Challenger, F.	65P