Biosynthesis and Degradation

Comparative biochemistry of \( \beta \)-oxidation. An investigation into the abilities of isolated heart mitochondria of various animal species to oxidize long-chain fatty acids, including the C\(_{22,1}\) monoeno.

*By H. Osmundsen & J. Bremer*

Mechanism of dealkylation of clionasterol in the insect *Tenebrio molitor*.

*By P. J. Pettler, W. J. S. Lockley, H. H. Rees & T. W. Goodwin*

Utilization by the isolated perfused rat liver \( N \)-acetyl-d-[\( 1^{-14} \)C]galactosamine and \( N \)-[\( ^3 \)H]-acetyl-\( d \)-galactosamine for the biosynthesis of glycoproteins.

*By A. D. MacNicoll, F. S. Wusteman, G. M. Powell & C. G. Curtis*

Kinetics of polyamine synthesis and turnover in mouse fibroblasts.

*By F. McCormick*

Effects of amino acids, ammonia and leupeptin on protein synthesis and degradation in isolated rat hepatocytes.

*By P. O. Seglen*

Modeccin, the toxin of *Adenia digitata*. Purification, toxicity and inhibition of protein synthesis *in vitro*.

*By A. Gasperi-Campani, L. Barbieri, E. Lorenzoni, L. Montanaro, S. Sperti, E. Bonetti & F. Stirpe*

Incorporation of ribonucleic acid *in vitro* into dense ribonucleoprotein-like materials by isolated rat liver nuclei.

*By I. Suzuka*

Metabolism and the triggering of germination of *Bacillus megaterium*. Concentrations of amino acids, organic acids, adenine nucleotides and nicotinamide nucleotides during germination.

*By I. R. Scott & D. J. Ellar*

Metabolism and the triggering of germination of *Bacillus megaterium*. Use of L-[\( ^3 \)H]alanine and tritiated water to detect metabolism.

*By I. R. Scott & D. J. Ellar*

Bioenergetics

Superoxide dismutase and catalase in the protection of the proton-donating systems of nitrogen fixation in the blue-green alga *Anabaena cylindrica*.

*By L. E. A. Henry, I. N. Gogotov & D. O. Hall*

The purification and some properties of rusticyanin, a blue copper protein involved in iron(II) oxidation from *Thiobacillus ferrooxidans*.

*By J. C. Cox & D. H. Boxer*

Derivation of an electron-transport rate equation, energy-conservation equations and a luminescence-flux equation of algal and plant photosynthesis.

*By Y.-S. Li*

Calcium ion cycling in rat liver mitochondria.

*By C. Ramachandran & F. L. Bygrave*

Subcellular Structures

The distribution of phosphatidylinositol in microsomal membranes from rat liver after biosynthesis *de novo*. Evidence for the existence of different pools of microsomal phosphatidylinositol by the use of phosphatidylinositol-exchange protein.

*By P. J. Brophy, P. Burbach, S. A. Nelemans, J. Westerman, K. W. A. Wirtz & L. L. M. van Deenen*

Analytical subcellular fractionation of needle-biopsy specimens from human liver.

*By T. J. Peters & C. A. Seymour*

The brush border of rabbit kidney, a cellular compartment free of glycolytic enzymes.

*By D. Busse, H. U. Wahle, H. Bartel & B. Pohl*

Transverse organization of phospholipids across the bilayer plasma-membrane subfractions of rat hepatocytes.

*By J. A. Higgins & W. H. Evans*
Differential light-scattering of granal and agranal chloroplasts and their fragments.


Cellular Interactions and Control Processes

Oestrogen-induced cholesterol and fatty acid biosynthesis in Xenopus laevis liver during vitellogenic response.

By D. F. Smith, T. M. Penning, A. Q. Ansari, K. A. Munday & M. Akhtar 353

Measurement of adenosine 3':5'-cyclic monophosphate by competitive binding to salt-dissociated protein kinase.

By S. O. Døskeland & H.-J. Haga 363

The pH-dependence of sugar transport and of glycolysis in cultured Ehrlich ascites-tumour cells.

By E. Kaminsky 453

Induction of rat kidney gluconeogenesis during acute liver intoxication by carbon tetrachloride.

By M. J. Faus, J. A. Lupiánez, A. Vargas & F. Sánchez-Medina 461

Chromatin structure through the cell cycle. Studies with regenerating rat liver.

By A. Caplan, M. G. Ord & L. A. Stocken 475

The effect of sugars on (pro)insulin biosynthesis.

By S. J. H. Ashcroft, J. Bunce, M. Lowry, S. E. Hansen & C. J. Hedeskov 517

The effect of dietary carbohydrate and fat on the activities of some enzymes responsible for glycerolipid synthesis in rat liver.


Effects of testosterone on messenger ribonucleic acid and protein synthesis in rat seminal vesicle.

By S. J. Higgins & J. M. Burchell 543

The mode of regulation of pyruvate dehydrogenase of lactating rat mammary gland. Effects of starvation and insulin.

By M. A. Baxter & H. G. Coore 553

The role of lipid components of the diet in the regulation of the fatty acid composition of the rat liver endoplasmic reticulum and lipid peroxidation.

By C. T. Hammer & E. D. Wills 585

The influence of passive stretch on the growth and protein turnover of the denervated extensor digitorum longus muscle.

By D. F. Goldspink 595

Phosphorylation of glucose in isolated rat hepatocytes. Sigmoidal kinetics explained by the activity of glucokinase alone.

By F. Bontemps, L. Hue & H.-G. Hers 603

Effect of adrenalectomy on acceleration of gluconeogenesis by calcium ions, adenosine 3':5'-cyclic monophosphate and adrenaline in rat kidney tubules.

By D. W. R. Macdonald & E. D. Saggerson 641

Development

Developmental change in the activity of lipoprotein lipase (clearing-factor lipase) in rat lung, cardiac muscle, skeletal muscle and brown adipose tissue.

By A. Cryer & H. M. Jones 447

Functional heterogeneity of UDP-glucuronosyltransferase as indicated by its differential development and inducibility by glucocorticoids. Demonstration of two groups within the enzyme's activity towards twelve substrates.

By G. J. Wishart 485

Adenine nucleotides in foetal rat liver cells. Compartmentation and variation with age.

By P. H. van Lelyveld & F. A. Hommes 527

Metabolism in Whole Organisms

Glutamine metabolism in the kidney during induction of, and recovery from, metabolic acidosis in the rat.

By D. M. Parry & J. T. Brosnan 387

Metabolism of surfactants: sodium undecyltriethoxy sulphate and sodium dodecyltriethoxy sulphate in the rat.


The metabolic fate of [2-14C]folic acid and a mixture of [2-14C]- and [3',5'-9-3H]-folic acid in the rat.

By P. A. Barford, F. J. Staff & J. A. Blair 579

The biochemical basis for the conjugation of bile acids with either glycine or taurine.

By D. A. Vessey 621
## RAPID PAPERS

<table>
<thead>
<tr>
<th><strong>Biosynthesis and Degradation</strong></th>
<th>PAGE</th>
<th><strong>Demonstration of functional heterogeneity of hepatic uridine diphosphate glucuronosyltransferase activities after administration of 3-methylcholanthrene and phenobarbital to rats.</strong></th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stereospecific biosynthesis of triacylglycerols in mammary glands from lactating rats.</td>
<td>659</td>
<td>By S. M. Cooper &amp; M. R. Grigor</td>
<td>659</td>
</tr>
<tr>
<td>The lipoprotein lipase (clearing-factor lipase) activity of cells isolated from rat cardiac muscle.</td>
<td>663</td>
<td>By P. Chohan &amp; A. Cryer</td>
<td>663</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cellular Interactions and Control Processes</strong></th>
<th>PAGE</th>
<th><strong>Development</strong></th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The involvement of phosphatidate phosphohydrolase and phospholipase A activities in the control of hepatic glycerolipid synthesis. Effects of acute feeding with glucose, sorbitol, glycerol and ethanol.</td>
<td>667</td>
<td>Disialoganglioside G\textsubscript{D1a} of rat brain subcellular particles during development.</td>
<td>655</td>
</tr>
</tbody>
</table>