

SUBJECT INDEX

- Amino acids
Interactions between — during transport and exchange diffusion in Novikoff and Ehrlich ascites tumor cells (Belkhole, Scholefield) (173) 290
- Amino acid transport
Effect of carbon chain length and amino group position on neutral — systems in rat small intestine (Daniels et al.) (173) 575
- Amino acid transport
— in *Neurospora crassa*. I. Properties of two amino acid transport systems (Pall) (173) 113
- Amino acid uptake
— by mouse pancreas in vitro IV. The role of exchange diffusion (Clayman, Scholefield) (173) 277
- Amino acid uptake
— by particulate fractions from brain (Navon, Lajtha) (173) 518
- α -Aminoisobutyric acid uptake
— in isolated mouse fat cells (Touabi, Jeanrenaud) (173) 128
- Amphibian skin glands
Secretory response to the stimulation of — (House) (173) 344
- Amytal
Inhibition by — of water movements in gastric mucosa (Villegas) (173) 348
- Arabinogalactan
Linkage between mycolic acid and — in phenol-treated mycobacterial cell walls (Kanetsuna et al.) (173) 341
- ATPase
Distribution of sodium-potassium stimulated — activity in rat intestinal mucosa (Quigley, Gotterer) (173) 456
- ATPase
Properties of a sodium-potassium stimulated — with high specific activity from rat intestinal mucosa (Quigley, Gotterer) (173) 469
- ATPase
Studies on sodium-potassium activated —. XXIV. Localization and properties of ATPase in the inner ear of the guinea pig (Kuijpers, Bonting) (173) 477
- Barbiturates
Role of hydration in the effect of — on the haemolysis of rabbit erythrocytes (Coldman et al.) (173) 62
- Betaine transport
Evidence for the existence of separate mechanisms for choline transport and — in rat kidney (Sung, Johnstone) (173) 548
- Brain
Amino acid uptake by particulate fractions from — (Navon, Lajtha) (173) 518
- Brain cortex
Action of trypsin and neuraminidase on the synaptic membranes of — (Sellinger et al.) (173) 185
- Brain cortex
Zonal density gradient electrophoresis of intracellular membranes of — (Sellinger, Borens) (173) 176
- Brush border membrane
Phlorizin hydrolase A β -glucosidase of hamster intestinal — (Malathi, Crane) (173) 245
- Calcium binding by membranes
Hydrogen bonding by vitamin D and egg lecithin in the solid state: A possible molecular role for vitamin D in — (Zull, Sciotto) (173) 409
- Calcium transport
Detection, by hydrogen exchange, of a modified membrane conformation linked to — by sarcoplasmic vesicles (François) (173) 86
- Carrier association-dissociation
Effect of the — rate on membrane permeation (Blumenthal, Katchalsky) (173) 357
- Cell membranes
Purification of plasma membranes of rat liver. Application of zonal centrifugation to isolation of — (Weaver, Boyle) (173) 377
- Cell walls
Linkage between mycolic acid and arabinogalactan in phenol-treated mycobacterial — (Kanetsuna et al.) (173) 341
- Cell wall
— of *Peridinium westii*, a non cellulosic glucan (Nevo, Sharon) (173) 161
- Chloride movements
Respiration and energy-dependent — at plasmalemma and tonoplast of carrot root cells (Cram) (173) 213
- Chromate
Sulphate transport system of *Chlorella pyrenoidosa* and its regulation. IV. Studies with — (Vallée) (173) 486
- Cholesterol
Role of — in lipid membranes (De Gier et al.) (173) 143
- Cholesterol
Tetrodotoxin interaction with — (Camejo, Villegas) (173) 351
- Cholesterol effect
— on hydraulic conductivity of erythro-

- cyte membranes (Sha'afi et al) (173) 141
- Cholesterol uptake
Study of the kinetics of — at the endothelial cell surface of the rabbit aorta in vitro (Jensen) (173) 71
- Choline
Use of radioactive — as a label for microsomal membranes II Studies on membrane-ribosome interaction, subfractionation and function (Hallinan et al) (173) 554
- Choline transport
Evidence for the existence of separate mechanisms for — and betaine transport in rat kidney (Sung, Johnstone) (173) 548
- Cytochrome c-phospholipid complexes
Small-angle X-ray scattering studies of — (Shipley et al) (173) 1
- 2-Deoxyglucose transfer
— in rabbit intestine (Goldner et al.) (173) 572
- Electrolyte content
Effects of ethacrynic acid on the — and water content of rat renal cortical slices (Macknight) (173) 223
- Endothelial cell surface
Study of the kinetics of cholesterol uptake at the — of the rabbit aorta in vitro (Jensen) (173) 71
- Erythrocytes
Evidence against the involvement of the carbonyl group in the glucose transport mechanism of human — (Evans et al.) (173) 569
- Erythrocytes
Inhibition by β -phenylethylamine and similar compounds of glycine transport by pigeon — (Kittams, Vidaver) (173) 540
- Erythrocytes
Role of hydration in the effect of barbiturates on the haemolysis of rabbit — (Coldman et al.) (173) 62
- Erythrocyte membranes
Cholesterol effect on hydraulic conductivity of — (Sha'afi et al) (173) 141
- Erythrocyte membranes
Effects of ATP and Ca^{2+} on a potassium-activated phosphatase from — (Pouchan et al) (173) 151
- Erythrocyte membranes
Spin-label study of — (Chapman et al.) (173) 154
- Escherichia coli
Isolation and properties of thiogalactoside transacetylase-negative mutants of — (Wilson, Kashket) (173) 501
- Ethacrynic acid
Effects of — on the electrolyte and water content of rat renal cortical slices (Macknight) (173) 223
- Ethacrynic acid
Effects of — on sodium fluxes in frog sartorius muscle (Leblanc, Erly) (173) 149
- Exchange diffusion
Amino acid uptake by mouse pancreas in vitro IV. The role of — (Clayman, Scholefield) (173) 277
- Exchange diffusion
Interactions between amino acids during transport and — in Novikoff and Ehrlich ascites tumor cells (Belkhole, Scholefield) (173) 290
- Fat cells
 α -Aminoisobutyric acid uptake in isolated mouse — (Touabi, Jeanrenaud) (173) 128
- β -Galactosides
Transmembrane effects of — on thio-methyl- β -galactoside transport in *Escherichia coli* (Robbie, Wilson) (173) 234
- Gastric mucosa
Action of thiocyanate on — in vitro (Sachs et al) (173) 509
- Gastric mucosa
Inhibition by amyltal of water movements in — (Villegas) (173) 348
- Glucan
Cell wall of *Peridinium westii*, a non cellulosic — (Nevo, Sharon) (173) 161
- Glucose diffusion
Activation of — from egg lecithin liquid crystals by serum albumin (Sweet, Zull) (173) 94
- Glucose transport
Evidence against the involvement of the carbonyl group in the — mechanism of human erythrocytes (Evans et al) (173) 569
- β -Glucosidase
Phlorizin hydrolase A — of hamster intestinal brush border membrane (Malathi, Crane) (173) 245
- Glycine transport
Inhibition by β -phenylethylamine and similar compounds of — by pigeon erythrocytes (Kittams, Vidaver) (173) 540
- Haemolysis
Role of hydration in the effect of barbiturates on the — of rabbit erythrocytes (Coldman et al) (173) 62
- Halophilic unicellular organisms
Unusual membrane permeability of two — (Ginzburg) (173) 370
- Hydrogen ion movement
— and movement of other ions at the onset of photosynthesis in *ulva* (Cummins et al) (173) 198
- Ileum
Effect of sugars and amino acids on mucosal sodium and potassium concentrations in rabbit — (Koopman, Schultz) (173) 338
- Inner ear
Studies on sodium-potassium activated ATPase XXIV. Localization and properties of ATPase in the — of the guinea pig (Kuijpers, Bonting) (173) 477
- myo-Inositol transport
— in slices of rat kidney cortex. I.

- Effect of incubation conditions and inhibitors (Hauser) (173) 257
- myo-Inositol transport
 — in slices of rat kidney cortex II. Effect of the ionic composition of the medium (Hauser) (173) 267
- Intestinal mucosa
 Distribution of sodium-potassium stimulated ATPase activity in rat — (Quigley, Gotterer) (173) 456
- Intestinal mucosa
 Properties of a sodium-potassium stimulated ATPase with high specific activity from rat — (Quigley, Gotterer) (173) 469
- Intestine
 2-Deoxyglucose transfer in rabbit — (Goldner et al.) (173) 572
- Intestine
 Effect of carbon chain length and amino group position on neutral amino acid transport systems in rat small — (Daniels et al.) (173) 575
- Intracellular membranes
 Zonal density gradient electrophoresis of — of brain cortex (Sellinger, Borens) (173) 176
- Jejunum
 Effects of eversion of transmural electrical properties of rat — (Baker et al.) (173) 192
- Junctional membrane permeability
 Depression of — by substitution of lithium for extracellular sodium (Rose, Loewenstein) (173) 146
- Kidney cortex
 myo-Inositol transport in slices of rat —
 I. Effect of incubation conditions and inhibitors (Hauser) (173) 257
- Kidney cortex
 myo-Inositol transport in slices of rat —
 II. Effect of the ionic composition of the medium (Hauser) (173) 267
- Lecithin
 Hydrogen bonding of vitamin D and egg — in the solid state A possible molecular role for vitamin D in calcium binding by membranes (Zull, Sciotto) (173) 409
- Lecithin liquid crystals
 Activation of glucose diffusion from egg — by serum albumin (Sweet, Zull) (173) 94
- Leucine transport
 — by rat liver mitochondria in vitro (Buchanan et al.) (173) 532
- Lithium
 Depression of junctional membrane permeability by substitution of — for extracellular sodium (Rose, Loewenstein) (173) 146
- Membranes
 Action of trypsin and neuraminidase on the synaptic — of brain cortex (Sellinger et al.) (173) 185
- Membrane
 Phlorizin hydrolase A β -glucosidase of hamster intestinal brush border — (Malathi, Crane) (173) 245
- Membranes
 Role of cholesterol in lipid — (De Gier et al.) (173) 143
- Membranes
 Thermodynamic analysis of particle flow through biological — (Simons) (173) 34
- Membranes
 Zonal density gradient electrophoresis of intracellular — of brain cortex (Sellinger, Borens) (173) 176
- Membrane parameters
 Light intensity and the — of *Nitella translucens* (Hogg et al.) (173) 564
- Membrane permeability
 Depression of junctional — by substitution of lithium for extracellular sodium (Rose, Loewenstein) (173) 146
- Membrane permeability
 Unusual — of two halophilic unicellular organisms (Ginzburg) (173) 370
- Membrane permeation
 Effect of the carrier association-dissociation rate on — (Blumenthal, Katchalsky) (173) 357
- Membrane-ribosome interaction
 Use of radioactive choline as a label for microsomal membranes II. Studies on —, subfractionation and function (Hallinan et al.) (173) 554
- Membrane systems
 Morphogenesis of the photosynthetic apparatus in *Rhodospirillum rubrum*. I. Isolation and characterization of two — (Oelze et al.) (173) 436
- Microsomal membranes
 Use of radioactive choline as a label for — II. Studies on membrane-ribosome interaction, subfractionation and function (Hallinan et al.) (173) 554
- Microsomes
 Structural and functional modification induced in muscle — by trypsin (Cleman et al.) (173) 51
- Mitochondria
 Effects of phospholipids in liver —. Osmotic properties and binding of cations (Scarpa, Azzone) (173) 78
- Mitochondria
 Leucine transport by rat liver — in vitro (Buchanan et al.) (173) 532
- Mucosal sodium and potassium concentrations
 Effect of sugars and amino acids on — in rabbit ileum (Koopman, Schultz) (173) 338
- Mycobacterial cell walls
 Linkage between mycolic acid and arabinogalactan in phenol-treated — (Kanetsuna et al.) (173) 341
- Mycolic acid
 Linkage between — and arabino-

- galactan in phenol-treated mycobacterial cell walls (Kanetsuna et al) (173) 341
- Myelin
A low-angle X-ray diffraction study of the swelling behavior of peripheral nerve ——— (Worthington, Blaurock) (173) 427
- Myelinated nerves
Low-angle X-ray diffraction patterns from a variety of ——— (Blaurock, Worthington) (173) 419
- Nerves
Low-angle X-ray diffraction patterns from a variety of myelinated ——— (Blaurock, Worthington) (173) 419
- Nerve myelin
A low-angle X-ray diffraction study of the swelling behavior of peripheral ——— (Worthington, Blaurock) (173) 427
- Nitella translucens
Light intensity and the membrane parameters of ——— (Hogg et al) (173) 564
- Nitrogen starvation
Derepression of a proline transport system in *Saccharomyces chevalieri* by ——— (Schwencke, Magaña-Schwencke) (173) 302
- Peridinium westii
Cell wall of ———, a non cellulosic glucan (Nevo, Sharon) (173) 161
- β -Phenylethylamine
Inhibition by ——— and similar compounds of glycine transport by pigeon erythrocytes (Kittams, Vidaver) (173) 540
- Phlorizin hydrolase
——— β -Glucosidase of hamster intestinal brush border membrane (Malathi, Crane) (173) 245
- Phosphatase
Effects of ATP and Ca^{2+} on a potassium-activated ——— from erythrocyte membranes (Pouchan et al) (173) 151
- Phosphatases
Thallium activation of potassium-activated ——— from beef brain (Inturrisi) (173) 567
- Phospholipids
Effects of ——— in liver mitochondria
Osmotic properties and binding of cations (Scarpa, Azzone) (173) 78
- Phospholipid-cytochrome c complexes
Small-angle X-ray scattering studies of ——— (Shipley et al.) (173) 1
- Phosphoproteins
——— in plasma membranes from rat liver cells, ^{32}P incorporation into phosphoproteins (Blat, Harel) (173) 23
- Photosynthesis
Movement of H^+ and other ions at the onset of ——— in *Ulva* (Cummins et al.) (173) 198
- Photosynthetic apparatus
Morphogenesis of the ——— in *Rhodospirillum rubrum*. I. Isolation and characterization of two membrane systems (Oelze et al) (173) 436
- Photosynthetic apparatus
Morphogenesis of the ——— in *Rhodospirillum rubrum*. II. Kinetics of chromatophore (thylakoid) synthesis by membranes labelled with $[2\text{-}^{14}\text{C}]\text{acetate}$ (Oelze, Drews) (173) 448
- Plasmalemma
Respiration and energy-dependent chloride movements at ——— and tonoplast of carrot root cells (Cram) (173) 213
- Plasma membranes
——— of liver cells of the chick embryo I. Isolation procedures (Rosenberg) (173) 11
- Plasma membranes
Phosphoproteins in ——— from rat liver cells ^{32}P incorporation into phosphoproteins (Blat, Harel) (173) 23
- Plasma membranes
Purification of ——— of rat liver. Application of zonal centrifugation to isolation of cell membranes (Weaver, Boyle) (173) 377
- Plasma membranes
Studies on ———. VIII The effects of sodium deoxycholate and dodecyl sulphate on isolated rat-liver plasma membranes (Bont et al) (173) 389
- Polymorphonuclear leukocytes
Purine transport in ——— (Hawkins, Berlin) (173) 324
- Potassium-activated phosphatase
Effects of ATP and Ca^{2+} on a ——— from erythrocyte membranes (Pouchan et al.) (173) 151
- Potassium-activated phosphatases
Thallium activation of ——— from beef brain (Inturrisi) (173) 567
- Potassium concentration
Effect of sugars and amino acids on mucosal sodium concentration and ——— in rabbit ileum (Koopman, Schultz) (173) 338
- Proline transport system
Derepression of a ——— in *Saccharomyces chevalieri* by nitrogen starvation (Schwencke, Magaña-Schwencke) (173) 302
- Proline transport system
——— in *Saccharomyces chevalieri* (Magaña-Schwencke, Schwencke) (173) 313
- Purine transport
——— in polymorphonuclear leukocytes (Hawkins, Berlin) (173) 324
- Renal cortical slices
Effects of ethacrynic acid on the electrolyte and water contents of rat ——— (Macknight) (173) 223
- Rhodospirillum rubrum*
Morphogenesis of the photosynthetic apparatus in ———. I. Isolation and characterization of two membrane systems (Oelze et al) (173) 436
- Rhodospirillum rubrum*
Morphogenesis of the photosynthetic apparatus in ———. II. Kinetics of chromatophore (thylakoid) synthesis by membranes labelled with $[2\text{-}^{14}\text{C}]\text{acetate}$ (Oelze, Drews) (173) 448
- Root cells
Respiration and energy-dependent chloride

- movements at plasmalemma and tonoplast of carrot — (Cram) (173) 213
- Saccharomyces chevalieri
Derepression of a proline transport system in — by nitrogen starvation (Schwencke, Magaña-Schwencke) (173) 302
- Saccharomyces chevalieri
Proline transport system in — (Magaña-Schwencke, Schwencke) (173) 313
- Sarcoplasmatic vesicles
Detection, by hydrogen exchange, of a modified membrane conformation linked to calcium transport by — (François) (173) 86
- Skin glands
Secretory response to the stimulation of amphibian — (House) (173) 344
- Sodium concentration
Effect of sugars and amino acids on mucosal — and potassium concentration in rabbit ileum (Koopman, Schultz) (173) 338
- Sodium fluxes
Effects of ethacrynic acid on — in frog sartorius muscle (Leblanc, Erly) (173) 149
- (Sodium-potassium)-activated ATPase
Studies on — XXIV Localization and properties of ATPase in the inner ear of the guinea pig (Kuipers, Bonting) (173) 477
- (Sodium-potassium)-stimulated ATPase
Distribution of — activity in rat intestinal mucosa (Quigley, Gotterer) (173) 456
- (Sodium-potassium)-stimulated ATPase
Properties of a — with high specific activity from rat intestinal mucosa (Quigley, Gotterer) (173) 469
- Sodium transport
Influence of anaerobic conditions on — and adenine nucleotide levels in the isolated skin of the frog *Rana temporaria* (Kristensen, Schousboe) (173) 206
- Sucrase
Studies on intestinal — and sugar transport. VII. A method for measuring intestinal uptake The absorption of the anomeric forms of some monosaccharides (Semenza) (173) 104
- Sugar transport
Studies on intestinal sucrase and —. VII. A method for measuring intestinal uptake. The absorption of the anomeric forms of some monosaccharides (Semenza) (173) 104
- Sulphate transport
— system of *Chlorella pyrenoidosa* and its regulation. IV. Studies with chromate (Vallée) (173) 486
- Synaptic membranes
Action of trypsin and neuraminidase on the — of brain cortex (Sellinger et al.) (173) 185
- Tetrodotoxin interaction
— with cholesterol (Camejo, Villegas) (173) 351
- Thallium
— activation of potassium-activated phosphatases from beef brain (Inturrisi) (173) 567
- Thiocyanate
Action of — on gastric mucosa in vitro (Sachs et al.) (173) 509
- Thiogalactoside transacetylase
Isolation and properties of — negative mutants of *Escherichia coli* (Wilson, Kashket) (173) 501
- Thiomethyl- β -galactoside transport
Transmembrane effects of β -galactosides on — in *Escherichia coli* (Robbie, Wilson) (173) 234
- Thylakoid
Morphogenesis of the photosynthetic apparatus in *Rhodospirillum rubrum*. II. Kinetics of chromatophore (—) synthesis by membranes labelled with [2-¹⁴C]acetate (Oelze, Drews) (173) 448
- Tonoplast
Respiration and energy-dependent chloride movements at plasmalemma and — of carrot root cells (Cram) (173) 213
- Transmural electrical properties
Effects of eversion on — of rat jejunum (Baker et al.) (173) 192
- Transport
Interactions between amino acids during — and exchange diffusion in Novikoff and Ehrlich ascites tumor cells (Belkhome, Scholefield) (173) 290
- Vitamin D
Hydrogen bonding of — and egg lecithin in the solid state A possible molecular role for vitamin D in calcium binding by membranes (Zull, Sciotto) (173) 409
- Water content
Effects of ethacrynic acid on the electrolyte content and — of rat renal cortical slices (Macknight) (173) 223
- Water movements
Inhibition by amytal of — in gastric mucosa (Villegas) (173) 348