

## SUBJECT INDEX

- Acetate, fatty acid synthesis from — by cell-free preparations of rat liver and mammary gland; role of microsomes in, (ABRAHAM, MATTHES, CHAIKOFF) . . . 357
- Acetate, incorporation of C from, into lipid and protein of isolated rat diaphragm; stimulation of, by insulin (MANCHESTER) . . . 208
- Acetate, metabolism of, by sheep tissues *in vitro*; effect of citrate on, (HOLDSWORTH, NEVILLE) . . . 338
- Acyl thioesters, long-chain — of CoA; inhibition of citrate formation by, as possible control mechanism in fatty acid biosynthesis (TUBBS) . . . 608
- Adenosine triphosphate, — induced contraction of rat-liver mitochondria and synthesis of mitochondrial phospholipids (WOJTCZAK, WLODAWER, ZBOROWSKI) . . . 290
- Adipose tissue, cell-free preparations of human —; fatty acid synthesis in, (JACOB) . . . 231
- Adipose tissue, conversion of aromatic amino acids to fatty acids by, (FELLER, FEIST) . . . 85
- Adipose tissue, — triglycerides; turnover of, (GORIN, SHAFRIR) . . . 109
- Amaurotic idiocy, — see Idiocy
- Amino acids, aromatic —; conversion of, to fatty acids by adipose tissue (FELLER, FEIST) . . . 85
- Amphibia, lipovitellin of, see Lipovitellin
- Aortas, homogenates of; enzymic pathway of glyceride and phospholipid synthesis in, (STEIN, STEIN, SHAPIRO) . . . 33
- Ascites tumour, Ehrlich — lipids; incorporation of formate into, (MARINETTI, KAY) . . . 168
- Azotobacter agilis*, hydroxy fatty acids of, (KANESHIRO, MARR) . . . 271
- Bacteria, lipids of; presence of ornithine in, (LANÉEELLE, LANÉEELLE, ASSELINEAU) . . . 99
- Bacteria, lipids of; transmethylation reactions in, (LAW, ZALKIN, KANESHIRO) . . . 143
- Bacteria, phospholipid of; identification of, as O-ornithine ester of phosphatidyl glycerol (HOUTSMULLER, VAN DEENEN) . . . 211
- Benzidine, modified — method for chromatographic detection of sphingolipids and acid polysaccharides (BICHEL, AUSTIN) . . . 598
- Bile, human late pregnancy —; gas chromatography of methylated estrogens for analysis of, (LUUKKAINEN, ADLERCREUTZ) . . . 701
- Bile, ruminant —; phospholipids of, (ADAMS, HEATH) . . . 688
- Bile salt, behavior and solubility of monoglycerides in dilute micellar — solutions (HOFMANN) . . . 306
- Biotin, deficiency of; effect of, on synthesis of fatty acids by yeast (SUOMALAINEN, KERÄNEN) . . . 493
- Bird, — lipovitellin, see Lipovitellin
- Blood, neutral — serum glycolipids; separation of, by thin-layer chromatography (SVENNERHOLM, SVENNERHOLM) . . . 432
- Blood, possible role of placental lipid fraction in transport of glycine from maternal to fetal — (BARNABEI, NINNI) . . . 586
- Brain white matter, bovine —; tightly bound proteolipid phospholipid in, (PRITCHARD, FOLCH-PI) . . . 481
- Brain, calf —; fatty acid components of polyphosphoinositides prepared from, (KERR, READ) . . . 477
- Brain, chicken —; mucolipids and cerebrosides of, during embryonic development (GARRIGAN, CHARGAFF) . . . 452
- Brain, nature of linkage between phosphoinositides and proteins in, (LEBARON) . . . 658
- Brain, — phospholipids; nature of dialyzable phosphate associated with di- and tri-phosphoinositides of, (KERR, KFOURY, DJIBELIAN) . . . 474
- Brain, rat — homogenates; phospholipid and plasmalogen synthesis in, (CARR, HEARLE, EILER) . . . 205
- Butyric acid, biosynthesis of, in lactating rabbit mammary gland (SINGH, KUMAR) . . . 711
- Calf, — brain, see Brain
- Candida genus, oxidative breakdown of ricinoleic acid by; intermediates of, (OKUI *et al.*) . . . 346
- Cell components, incorporation *in vitro* of palmitate into glycerolipids by, (JOHNSON, KERUR) . . . 152
- Cerebroside, odd- and even-numbered — fatty acids; biosynthesis of, (HAJRA, RADIN) . . . 97
- Cerebrosides, direct conversion of sulfatides into, (STOFFYN, STOFFYN) . . . 107
- Cerebrosides, of chicken brain during embryonic development (GARRIGAN, CHARGAFF) . . . 452
- Chicken, — brain, see Brain
- Chloroform, — methanol-water system; distribution of inorganic phosphate in,

- (BADER) . . . . . 87
- Chloroplast, lettuce ——— preparations; biosynthesis of long-chain fatty acids by, (STUMPF, JAMES) . . . . . 20
- Chloroplasts, lettuce ———; relation of fatty acid synthesis and photophosphorylation in, (STUMPF, BOVÉ, GOF-FAU) . . . . . 260
- Cholesterol, absorption of, in rats; mechanism of, (MURTHY, DAVID, GANGULY) . . . . . 490
- Cholesterol, ——— esterification by rat-liver preparations (BENNETT) . . . . . 465
- Cholesterol, ——— esterification in serum; enhancement of, by extract of Group-A streptococcus (ROWEN, MARTIN) . . . . . 396
- Cholesterol, ——— esters and synthesis of milk fat (MCCARTHY, PATTON) . . . . . 102
- Cholesterol, free ———; effect of ethionine treatment on esterification *in vitro* of, by rat plasma (LOSSOW *et al.*) . . . . . 593
- Cholesterol, plasma ——— esterification reaction; mechanism of, (GLOMSET) . . . . . 389
- Cholesterol, reciprocal relationship between fatty acid and ——— biosynthesis (FOSTER, BLOOM) . . . . . 341
- Chromatography, precise gradient-elution ———; system for, WALLACH, NORDBY) . . . . . 188
- Citrate, effect of, on metabolism of acetate by sheep tissues *in vitro* (HOLDSWORTH, NEVILLE) . . . . . 338
- Citrate, incorporation of ——— carbon into fatty acids (BHADURI, SRERE) . . . . . 221
- Citrate, inhibition of ——— formation by long-chain acyl thioesters of CoA as possible control mechanism in fatty acid biosynthesis (TUBBS) . . . . . 608
- Coenzyme A, long-chain acyl thioesters of; inhibition of citrate formation by, as possible control mechanism in fatty acid biosynthesis (TUBBS) . . . . . 608
- Coenzyme A, malonyl ———; preparation of, by thioester exchange (KLOSS, DICKINSON) . . . . . 90
- Corticotropin, effect of, on fat metabolism in isolated rat diaphragm (MANCHESTER) . . . . . 531
- Cyclopropane, ——— fatty acids; path of hydrogen in formation of, (POHL, LAW, RYHAGE) . . . . . 583
- Diaphragm, isolated rat ———; effects of pituitary growth hormone and corticotropin on fat metabolism in, (MANCHESTER) . . . . . 531
- Diaphragm, isolated rat ———; stimulation by insulin of incorporation of phosphate and C from acetate into lipid and protein of, (MANCHESTER) . . . . . 208
- Diglycerides, mono- and digalactosyl ——— of leaves; isolation and characterization of, (SASTRY, KATES) . . . . . 214
- Ehrlich ascites tumour, see Ascites tumour
- Eicosatrienoic acid, position of, in phosphatidylcholine and phosphatidyl-ethanolamine from rats deficient in essential fatty acids (DE TOMÁS, BRENNER, PELUFFO) . . . . . 472
- Electron transfer, mitochondrial ———; role of lipids in, (GREEN, FLEISCHER) . . . . . 554
- Erythrocyte, ——— lysolecithin interaction; quantitative study of, (KLIBANSKY, DE VRIES) . . . . . 176
- Erythrocytes, human ———; lipophilic sialic acid derivatives in, (BOOTH) . . . . . 486
- Erythrocytes, mature ———; selective incorporation of fatty acids into phospholipids of, (MULDER, DE GIER, VAN DEENEN) . . . . . 94
- Estrogens, methylated ———; application of gas chromatography of, to analysis of human late pregnancy bile (LUUKKAINEN ADLERCREUTZ) . . . . . 701
- Ethionine, effect of ——— treatment on esterification *in vitro* of free cholesterol by rat plasma (LOSSOW *et al.*) . . . . . 593
- Euglena, extracts of; fatty acid synthesis by, (CHENIAE) . . . . . 504
- Euglena gracilis*, sulfolipids in; effect of light and streptomycin on incorporation of sulfate into, (ABRAHAM, BACHHAWAT) . . . . . 104
- Fat, depot ———; characterization of hydroxy acids in, after feeding ricinoleic acid (UCHIYAMA, SATO, MIZUGAKI) . . . . . 344
- Fat, ——— metabolism in isolated rat diaphragm; effects of pituitary growth hormone and corticotropin on, (MANCHESTER) . . . . . 531
- Fat, milk ———; cholesterol esters and synthesis of, (MCCARTHY, PATTON) . . . . . 102
- Fatty acid, ——— biosynthesis; inhibition of citrate formation by long-chain acyl thioesters of CoA as possible control mechanism in, (TUBBS) . . . . . 608
- Fatty acid, ——— biosynthesis; mechanism of inhibition of, by tetrol-lyl-coenzyme A (BRADY) . . . . . 467
- Fatty acid, ——— components of polyphosphoinositide prepared from calf brain (KERR, READ) . . . . . 477
- Fatty acid, ——— composition of serum lipids; determination of, (BOWYER *et al.*) . . . . . 423
- Fatty acid, ——— compositions of naturally occurring lysolecithins and lecithins (TATTRIE, CYR) . . . . . 693
- Fatty acid, ——— metabolism in isolated perfused rat heart (STEIN, STEIN) . . . . . 517
- Fatty acids, of several *Nocardia* species; study on, (BORDET, MICHEL) . . . . . 613
- Fatty acid, reciprocal relationship between ——— and cholesterol biosynthesis (FOSTER, BLOOM) . . . . . 341
- Fatty acid, ——— synthesis by complex systems; possibility of regulation of, by microsomes (LORCH, ABRAHAM, CHAIKOFF) . . . . . 627
- Fatty acid, ——— synthesis by extracts of

- Euglena (CHENIAE). . . . . 504
- Fatty acid, — synthesis from acetate by cell-free preparations of rat liver and mammary gland; role of microsomes in, (ABRAHAM, MATTHES, CHAIKOFF). . . . . 357
- Fatty acid, — synthesis; hydrogen transfer in, by rat liver and mammary-gland cell-free preparations (MATTHES, ABRAHAM, CHAIKOFF). . . . . 242
- Fatty acid, — synthesis in cell-free preparations of human adipose tissue (JACOB). . . . . 231
- Fatty acid, — synthesis; relation of, and photophosphorylation in lettuce chloroplasts (STUMPF, BOVÉ, GOFFEAU). . . . . 260
- Fatty acids, conversion of aromatic amino acids to, by adipose tissue (FELLER, FEIST). . . . . 85
- Fatty acids, cyclopropane —; path of hydrogen in formation of, (POHL, LAW, RYHAGE). . . . . 583
- Fatty acids, distribution of, in triglycerides synthesized from monoglycerides (BROWN, JOHNSTON). . . . . 603
- Fatty acids, elaidinized —; incorporation of, in depot triglycerides of white rat (RAULIN, LORIETTE, CLEMENT). . . . . 642
- Fatty acids, — formed by lactating rat mammary gland; origin of hydrogen in, (ABRAHAM *et al.*). . . . . 690
- Fatty acids, hydroxy — of *Azotobacter agilis* (KANESHIRO, MARR). . . . . 271
- Fatty acids, incorporation of citrate carbon into, (BHADURI, SRERE). . . . . 221
- Fatty acids, long-chain —; biosynthesis of, by lettuce chloroplast preparations (STUMPF, JAMES). . . . . 20
- Fatty acids, long-chain —; interconversion of, in rat (SCHLENK, SEN, SAND). . . . . 708
- Fatty acids, long-chain saturated and unsaturated —; biosynthesis of, in isolated plant leaves (JAMES). . . . . 9
- Fatty acids, odd- and even-numbered cerebroside —; biosynthesis of, (HAJRA, RADIN). . . . . 97
- Fatty acids, of various chain length; induction of swelling of liver mitochondria by, (ZBOROWSKI, WOJTCZAK). . . . . 596
- Fatty acids,  $\omega$ -oxidation of, *in vitro*; overall reaction and intermediate of, (WAKABAYASHI, SHIMAZONO). . . . . 132
- Fatty acids, plasma-free — and onset of laying in domestic fowl (HEALD, BADMAN). . . . . 381
- Fatty acids, rats deficient in essential —; position of eicosatrienoic acid in phosphatidylcholine and phosphatidylethanolamine from, (DE TOMÁS, BRENNER, PELUFFO). . . . . 472
- Fatty acids, relative incorporation of propionate carbons into, by lactating mammary gland (CADY, ABRAHAM, CHAIKOFF). . . . . 118
- Fatty acids, selective incorporation of, into phospholipids of mature red cells (MULDER, DE GIER, VAN DEENEN). . . . . 94
- Fatty acids, — synthesis by yeast; effect of biotin deficiency on, (SUOMALAINEN, KERÄNEN). . . . . 493
- Fatty acids, unsaturated —; inhibition of autoxidation of, by haematin proteins (LEWIS, WILLS). . . . . 336
- Fatty acids, with longer chain than butyric acid; biosynthesis of, in lactating rabbit mammary gland (SINGH, KUMAR). . . . . 711
- Formate, incorporation of, into Ehrlich ascites tumour lipids (MARINETTI, KAY). . . . . 168
- Foruitine, of *Mycobacterium fortuitum*; isolation and characterization of, (VILKAS, MIQUEL, LEDERER). . . . . 217
- Fowl, domestic —; plasma-free fatty acids and onset of laying in, (HEALD, BADMAN). . . . . 381
- Frog, — sartorius muscle, see Sartorius muscle
- Gangliosides, mono- and di- and trisialo- —; isolation of, (JOHNSON, MCCLUER). . . . . 487
- Glyceride, enzymic pathway of synthesis of, in aortic homogenates (STEIN, STEIN, SHAPIRO). . . . . 33
- Glycerides, partial —; positional isomery of, during biosynthesis of triglycerides in intestinal mucosa (AILHAUD, SAMUEL, DESNUELLE). . . . . 610
- Glycerides, see also Diglycerides
- Glycerol, phosphatidyl —; identification of bacterial phospholipid as *O*-ornithine ester of, (HOUTSMULLER, VAN DEENEN). . . . . 213
- Glycerolipids, incorporation *in vitro* of palmitate into, by cell components (JOHNSON, KERUR). . . . . 152
- Glycine, transport of, from maternal to fetal blood; possible role of placental lipid fraction in, (BARNABEI, NINNI). . . . . 586
- Glycolipids, neutral blood-serum —; separation of, by thin-layer chromatography (SVENNERHOLM, SVENNERHOLM). . . . . 432
- Halobacterium cutirubrum*, phosphatidyl glycerophosphate from; isolation and characterization of diether analog of, (KATES, SASTRY, YENGGOYAN). . . . . 705
- Haematin proteins, — see Proteins
- Heart, isolated perfused rat —; fatty acid metabolism in, (STEIN, STEIN). . . . . 517
- Hormone, pituitary growth —; effect of, on fat metabolism in isolated rat diaphragm (MANCHESTER). . . . . 531
- Hydrogen, in fatty acids formed by lactating rat mammary gland; origin of, (ABRAHAM *et al.*). . . . . 690
- Hydrogen, path of, in formation of cyclopropane fatty acids (POHL, LAW, RYHAGE). . . . . 583
- Hydrogen, — transfer in fatty acid synthesis by rat-liver and mammary-gland

- cell-free preparations (MATTHES, ABRAHAM, CHAIKOFF) . . . . . 242
- Hydroxy acids, in depot fat after feeding ricinoleic acid; characterization of, (UCHIYAMA, SATO, MIZUGAKI) . . . . . 344
- Idiocy, infantile amaurotic —; biochemically special form of, (JATZKE-WITZ, SANDHOFF) . . . . . 354
- Inositol, phosphoinositide containing four phosphates per, (SANTIAGO-CALVO, MULÉ, HOKIN) . . . . . 91
- Insulin, stimulation by, of incorporation of phosphate and C from acetate into lipid and protein of isolated rat diaphragm (MANCHESTER) . . . . . 208
- Intestines, mucosa of; positional isomery of partial glycerides during biosynthesis of triglycerides in, (AILHAUD, SAMUEL, DESNUELLE) . . . . . 610
- Intestines, rat — mucosa; monoglyceride transacylase of, (CLARK, HÜBSCHER) . . . . . 43
- Leaves, mono- and digalactosyl diglycerides and lecithin of; isolation and characterization of, (SASTRY, KATES) . . . . . 214
- Lecithin, hydrolysis of, by snake-venom phospholipase A; time study of, (MOORE, WILLIAMS) . . . . . 348
- Lecithin, lipoprotein-bound —; conversion of, to lysolecithin induced by snake-venom phospholipase A (KLIBANSKY *et al.*) . . . . . 591
- Lecithin, metabolism of, in yeast supernatant (KOKKE *et al.*) . . . . . 351
- Lecithin, of leaves; isolation and characterization of, (SASTRY, KATES) . . . . . 214
- Lecithin, ultrasonically irradiated —; enzymic hydrolysis of, by phospholipase A (DAWSON) . . . . . 697
- $\beta$ -Lecithin, stereospecific action of phospholipase A on, (DE HAAS, VAN DEENEN) . . . . . 469
- Lecithins, naturally occurring —; fatty acid compositions of, (TATTRIE, CYR) . . . . . 693
- Lettuce, — chloroplast preparations; biosynthesis of long-chain fatty acids by, (STUMPF, JAMES) . . . . . 20
- Lettuce, — chloroplasts; relation of fatty acid synthesis and photophosphorylation in, (STUMP, BOVÉ, GORFEAU) . . . . . 260
- Leukocytes, polymorphonuclear —; incorporation of linoleic acid into lipids of, (ELSBACH) . . . . . 157
- [1-<sup>14</sup>C]Lignoceric acid, metabolism of, in rat (GATT) . . . . . 370
- Linoleic acid, incorporation of, into lipids of polymorphonuclear leukocytes (ELSBACH) . . . . . 157
- Lipase, pancreatic —; hydrolysis of long-chain monoglycerides in micellar solution by, (HOFMANN, BORGSTRÖM) . . . . . 317
- Lipid, — components of respiratory chain (HAFKENSCHIED, LINKS, SLATER) . . . . . 202
- Lipid, different — classes; changes in occurrence of, during postnatal development of rat (DOBIÁSOVÁ, HAHN, KOLDOVSKÝ) . . . . . 713
- Lipid, — extracts; quantitative estimation of sulfates in, (MÄRTENSSON) . . . . . 1
- Lipid, — metabolism of photosynthetic tissues (CHENIAE) . . . . . 504
- Lipid, — myo-inositol; formation of, in intact rat (HAUSER) . . . . . 278
- Lipid, of isolated rat diaphragm; stimulation by insulin of incorporation of phosphate and C from acetate into, (MANCHESTER) . . . . . 208
- Lipid, placental — fraction; possible role of, in transport of glycine from maternal to fetal blood (BARNABEI, NINNI) . . . . . 586
- Lipid, stimulation of — synthesis by yeast ribosomal preparations (KLEIN) . . . . . 606
- Lipids, bacterial —; presence of ornithine in, (LANÉELLE, LANÉELLE, ASSELINEAU) . . . . . 99
- Lipids, bacterial —; transmethylation reactions in, (LAW, ZALKIN, KANESHIRO) . . . . . 143
- Lipids, Ehrlich ascites tumour —; incorporation of formate into, (MARINETTI, KAY) . . . . . 168
- Lipids, of polymorphonuclear leukocytes; incorporation of linoleic acid into, (ELSBACH) . . . . . 157
- Lipids, of photosynthetic tissues; separation of, (NICHOLS) . . . . . 417
- Lipids, role of, in mitochondrial electron transfer and oxidative phosphorylation (GREEN, FLEISCHER) . . . . . 554
- Lipids, serum —; determination of fatty acid composition of, (BOWYER *et al.*) . . . . . 423
- Lipids, uptake of, by human  $\alpha$ -lipoprotein (ASHWORTH, GREEN) . . . . . 68
- Lipogenesis, control of; inhibitory mechanism in, (KORCHAK, MASORO) . . . . . 647
- Lipogenin, extraction and purification of, (CATRAVAS) . . . . . 331
- Lipoprotein, — bound lecithin; conversion of, to lysolecithin induced by snake-venom phospholipase A (KLIBANSKY *et al.*) . . . . . 591
- $\alpha$ -Lipoprotein, human —; uptake of lipids by, (ASHWORTH, GREEN) . . . . . 68
- Lipovitellin, avian and amphibian —; comparative chromatographic and dissociative behaviour of, (RADOMSKI, WALLACE, COOK) . . . . . 600
- Liver, cell-free preparations of rat —; role of microsomes in fatty acid synthesis from acetate by, (ABRAHAM, MATTHES, CHAIKOFF) . . . . . 357
- Liver, — cell nucleus; phospholipid composition of, (GURR, FINEAN, HAWTHORNE) . . . . . 406
- Liver, — mitochondria; induction of swelling of, by fatty acids of various chain length (ZBOROWSKI, WOJTCZAK) . . . . . 596

- Liver, — mitochondria; rapid labelling of diphosphoinositide in, (GALLIARD, HAWTHORNE) . . . . . 479
- Liver, rat — cell-free preparations; hydrogen transfer in fatty acid synthesis by, (MATTHES, ABRAHAM, CHAIKOFF) . . . . . 242
- Liver, rat — mitochondria; ATP-induced contraction of, and synthesis of mitochondrial phospholipids (WOJTCZAK, WLODAWER, ZBOROWSKI) . . . . . 290
- Liver, rat — preparations; cholesterol esterification by, (BENNETT) . . . . . 465
- Lysolecithin, conversion of lipoprotein-bound lecithin to, induced by snake-venom phospholipase A (KLIBANSKY *et al.*) . . . . . 591
- Lysolecithin, erythrocyte—interaction; quantitative study of, (KLIBANSKY, DE VRIES) . . . . . 176
- Lysolecithin, metabolism of, in yeast supernatant (KOKKE, VAN DEN BOSCH *et al.*) . . . . . 351
- Lysolecithin, — prepared from ovoid lecithin; use of trypsin to eliminate residual snake-venom phospholipase A activity in, (DOIZAKI, ZIEVE) . . . . . 700
- Lysolecithins, naturally occurring —; fatty acid compositions of, (TATTRIE, CYR) . . . . . 693
- Malonyl coenzyme A, see Coenzyme A
- Mammary gland, cell-free preparations of rat —; role of microsomes in fatty acid synthesis from acetate by, (ABRAHAM, MATTHES, CHAIKOFF) . . . . . 357
- Mammary gland, lactating rabbit —; biosynthesis of butyric and longer-chain fatty acids in, (SINGH, KUMAR) . . . . . 711
- Mammary gland, lactating rat —; origin of hydrogen in fatty acids formed by, (ABRAHAM *et al.*) . . . . . 690
- Mammary gland, lactating rat —; relative incorporation of propionate carbons into fatty acids by, (CADDY, ABRAHAM, CHAIKOFF) . . . . . 118
- Mammary-gland, rat — cell-free preparations; hydrogen transfer in fatty acid synthesis by, (MATTHES, ABRAHAM, CHAIKOFF) . . . . . 242
- Methanol, chloroform—water system distribution of inorganic phosphate in, (BADER) . . . . . 87
- Micellar bile-salt solution, dilute —; behavior and solubility of monoglycerides in, (HOFMANN) . . . . . 306
- Micellar solution, hydrolysis of long-chain monoglycerides in, by pancreatic lipase (HOFMANN, BORGSTRÖM) . . . . . 317
- Microsomes, possibility of regulation of fatty acid synthesis by complex systems by, (LORCH, ABRAHAM, CHAIKOFF) . . . . . 627
- Microsomes, role of, in fatty acid synthesis from acetate by cell-free preparations of rat liver and mammary gland (ABRAHAM, MATTHES, CHAIKOFF) . . . . . 357
- Milk, — fat; cholesterol esters and synthesis of, (McCARTHY, PATTON) . . . . . 102
- Mitochondria, electron transfer in; role of lipids in, (GREEN, FLEISCHER) . . . . . 554
- Mitochondria, liver —; induction of swelling of, by fatty acids of various chain length (ZBOROWSKI, WOJTCZAK) . . . . . 596
- Mitochondria, liver —; rapid labelling of diphosphoinositide in, (GALLIARD, HAWTHORNE) . . . . . 479
- Mitochondria, phospholipids of; ATP-induced contraction of rat-liver mitochondria and synthesis of, (WOJTCZAK, WLODAWER, ZBOROWSKI) . . . . . 290
- Mitochondria, rat-liver —; ATP-induced contraction of, and synthesis of mitochondrial phospholipids (WOJTCZAK, WLODAWER, ZBOROWSKI) . . . . . 290
- Monoglycerides, behavior and solubility of, in dilute micellar bile-salt solutions (HOFMANN) . . . . . 306
- Monoglycerides, long-chain —; hydrolysis of, in micellar solutions by pancreatic lipase (HOFMANN, BORGSTRÖM) . . . . . 317
- Monoglycerides, triglycerides synthesized from; distribution of fatty acids in, (BROWN, JOHNSTON) . . . . . 603
- Monoglyceride transacylase, see Transacylase
- Mucolipids, of chicken brain during embryonic development (GARRIGAN, CHARGAFF) . . . . . 452
- Mucosa, intestinal —; positional isomery of partial glycerides during biosynthesis of triglycerides in, (AILHAUD, SAMUEL, DESNUELLE) . . . . . 610
- Mucosa, rat intestinal —; monoglyceride transacylase of, (CLARK, HÜBSCHER) . . . . . 43
- Mycobacterium fortuitum*, fortuitine of; isolation and characterization of, (VILKAS, MIQUEL, LEDERER) . . . . . 217
- Mycobacterium tuberculosis*, peptidoglycolipid of, called wax D; fractionation of, (TANAKA) . . . . . 483
- C<sub>32</sub>-Mycocerosic acid, biosynthesis of; incorporation of propionic acid during, (GASTAMBEIDE-ODIER, DELAUMÉNY, LEDERER) . . . . . 670
- Mycoside B, chemical structure of, (DEMARTEAU-GINSBURG, LEDERER) . . . . . 442
- Myo-inositol, free and lipid —, formation of, in intact rat (HAUSER) . . . . . 278
- Nocardia*, fatty acids of several — species; study on, (BORDET, MICHEL) . . . . . 613
- Nucleus, liver-cell —; phospholipid composition of, (GURR, FINEAN HAWTHORNE) . . . . . 406
- Nucleus, saturated and unsaturated sterols in; separation of, (AZARNOFF, TUCKER) . . . . . 589
- Organs, adult and immature-rat organs; phospholipid patterns in subcellular fractions of, (BIEZENSKI, SPAET, GORDON) . . . . . 75
- Ornithine, O- — ester of phosphatidyl

- glycerol; identification of bacterial phospholipid as, (HOUTSMULLER, VAN DEENEN) . . . . . 211
- Ornithine, presence of, in bacterial lipids (LANÉELLE, LANÉELLE, ASSELINEAU) . . . . . 99
- Ovolecithin, lysolecithin prepared from; use of trypsin to eliminate residual snake-venom phospholipase A activity in, (DOIZAKI, ZIEVE) . . . . . 700
- Ox, — brain white matter, see Brain white matter
- Palmitate, incorporation *in vitro* of, into glycerolipids by cell components (JOHNSON, KERUR) . . . . . 152
- Pancreas, lipase of; hydrolysis of long-chain monoglycerides in micellar solutions by, (HOFMANN, BORGSTRÖM) . . . . . 317
- Peptidoglycolipid, of *Mycobacterium tuberculosis* called wax D; fractionation of, (TANAKA) . . . . . 483
- Phosphate, dialyzable — associated with di- and tri-phosphoinositides of brain phospholipids; nature of, (KERR, KFOURY, DJIBELIAN) . . . . . 474
- Phosphate, incorporation of, into lipid and protein of isolated rat diaphragm; stimulation of, by insulin (MANCHESTER) . . . . . 208
- Phosphate, inorganic —; distribution of, in chloroform-methanol-water system (BADER) . . . . . 87
- Phosphates, phosphoinositide containing four — per inositol (SANTIAGO-CALVO, MULÉ, HOKIN) . . . . . 91
- Phosphatides, chromatography of small amounts of, on columns of silicic acid (WALLACH, NORDBY) . . . . . 188
- Phosphatidylcholine, from rats deficient in essential fatty acids; position of eicosatrienoic acid in, (DE TOMÁS, BRENNER, PELUFFO) . . . . . 472
- Phosphatidylethanolamine, from rats deficient in essential fatty acids; position of eicosatrienoic acid in, (DE TOMÁS, BRENNER, PELUFFO) . . . . . 472
- Phosphatidyl glycerol, see Glycerol
- Phosphatidyl glycerophosphate, from *Halobacterium cutirubrum*; isolation and characterization of diether analog of, (KATES, SASTRY, YENGGOYAN) . . . . . 705
- Phosphocreatine, metabolism of, during isometric tetanus in frog sartorius muscle (MARÉCHAL, MOMMAERTS) . . . . . 53
- Phosphoinositide, — containing four phosphates per inositol (SANTIAGO-CALVO, MULÉ, HOKIN) . . . . . 91
- Phosphoinositide, di- —; rapid labelling of, in liver mitochondria (GALLIARD, HAWTHORNE) . . . . . 479
- Phosphoinositide, poly- — prepared from calf brain; fatty acid components of, (KERR, READ) . . . . . 477
- Phosphoinositides, di- and tri- — of brain phospholipids; nature of dialyzable phosphate associated with, (KERR, KFOURY, DJIBELIAN) . . . . . 474
- Phosphoinositides, nature of linkage between, and proteins in brain (LEBARON) . . . . . 658
- Phospholipase A, enzymic hydrolysis of ultrasonically irradiated lecithin by, (DAWSON) . . . . . 697
- Phospholipase A, stereospecific action of, on  $\beta$ -lecithins (DE HAAS, VAN DEENEN) . . . . . 469
- Phospholipase A, substrate specificity of, (VAN DEENEN, DE HAAS) . . . . . 538
- Phospholipase A, venom- —, see Venom phospholipase A
- Phospholipid, bacterial —; identification of, as *O*-ornithine ester of phosphatidyl glycerol (HOUTSMULLER, VAN DEENEN) . . . . . 213
- Phospholipid, — composition of liver-cell nucleus (GURR, FINEAN, HAWTHORNE) . . . . . 406
- Phospholipid, enzymic pathway of synthesis of, in aortic homogenates (STEIN, STEIN, SHAPIRO) . . . . . 33
- Phospholipid, — patterns in subcellular fractions of adult- and immature-rat organs (BIEZENSKI, SPAET, GORDON) . . . . . 75
- Phospholipid, tightly bound proteolipid — in bovine white matter (PRITCHARD, FOLCH-PI) . . . . . 481
- Phospholipid, — synthesis in rat-brain homogenates (CARR, HEARLE, EILER) . . . . . 205
- Phospholipids, brain- —; nature of dialyzable phosphate associated with di- and tri-phosphoinositides of, (KERR, KFOURY, DJIBELIAN) . . . . . 474
- Phospholipids, mitochondrial —; ATP-induced contraction of rat-liver mitochondria and synthesis of, (WOJTCZAK, WLODAWER, ZBOROWSKI) . . . . . 290
- Phospholipids, — of mature red cells; selective incorporation of fatty acids into, (MULDER, DE GIER, VAN DEENEN) . . . . . 94
- Phospholipids, of ruminant bile (ADAMS, HEATH) . . . . . 688
- Phosphorylation, oxidative —; role of lipids in, (GREEN, FLEISCHER) . . . . . 554
- Photophosphorylation, relation of, and fatty acid synthesis in lettuce chloroplasts (STUMPF, BOVÉ, GOFFEAU) . . . . . 260
- Photosynthetic tissues, — see Tissues
- Pituitary growth hormone, — see Hormone
- Plasma, — cholesterol esterification reaction; mechanism of, (GLOMSET) . . . . . 389
- Plasma, — free fatty acids and onset of laying in domestic fowl (HEALD, BADMAN) . . . . . 381
- Plasma, rat —; effect of ethionine treatment on esterification *in vitro* of free cholesterol by, (LOSSOW *et al.*) . . . . . 593
- Plasmalogen, — synthesis in rat-brain homogenates (CARR, HEARLE, EILER) . . . . . 205
- Plant, isolated leaves of; biosynthesis of long-chain saturated and unsaturated fatty acids in, (JAMES) . . . . . 9

- Pregnancy bile, — see Bile
- Protein, of isolated rat diaphragm; stimulation by insulin of incorporation of phosphate and C from acetate into, (MANCHESTER). . . . . 208
- Proteins, haematin —; inhibition of autoxidation of unsaturated fatty acids by, (LEWIS, WILLS) . . . . . 336
- Proteins, nature of linkage between, and phosphoinositides in brain (LEBARON) 658
- Proteolipid, tightly bound — phospholipid in bovine brain white matter (PRITCHARD, FOLCH-PI) . . . . . 481
- Propionate carbons, relative incorporation of, into fatty acids by lactating rat mammary gland (CADY, ABRAHAM, CHAIKOFF) . . . . . 118
- Propionic acid, incorporation of, during biosynthesis of C<sub>32</sub>-mycocerosic acid (GASTAMBIÉ-ODIER, DELAUMÉNY, LEDERER) . . . . . 670
- Rabbit, lactating — mammary gland, see Mammary gland
- Rat, — brain, see Brain
- Rat, — diaphragm, see Diaphragm
- Rat, formation of free and lipid myoinositol in intact — (HAUSER) . . . 278
- Rat, — heart, see Heart
- Rat, interconversion of long-chain fatty acids in, (SCHLENK, SEN, SAND) . . . 708
- Rat, — intestinal mucosa, see Mucosa
- Rat, lactating — mammary gland, see Mammary gland
- Rat, — liver, see Liver
- Rat, — mammary-gland, see Mammary-gland
- Rat, metabolism of [1-<sup>14</sup>C]lignoceric acid in, (GATT) . . . . . 370
- Rat, — organs, see Organs
- Rat, — plasma, see Plasma
- Rat, postnatal development of; changes in occurrence of different lipid classes during, (DOBIÁSOVÁ, HAHN, KOLDOVSKÝ) . . . . . 713
- Rat, white —; incorporation of elaidinized fatty acids in depot triglycerides of, (RAULIN, LORLETTE, CLEMENT) 642
- Rats, absorption of cholesterol in; mechanism of, (MURTHY, DAVID, GANGULY) . 490
- Rats, — deficient in essential fatty acids; position of eicosatrienoic acid in phosphatidylcholine and phosphatidylethanolamine from, (DE TOMÁS, BRENNER, PELUFFO) . . . . . 472
- Respiratory chain, lipid components of, (HAFKENSCHIED, LINKS, SLATER) . . 202
- Ribosomes, yeast —; stimulation of lipid synthesis by preparations from, (KLEIN) . . . . . 606
- Ricinoleic acid, feeding of; characterization of hydroxy acids in depot fat after, (UCHIYAMA, SATO, MIZUGAKI) . 344
- Ricinoleic acid, oxidative breakdown of, by *Candida* genus; intermediates of, (OKUI *et al.*) . . . . . 346
- Saccharides, acid poly—; modified benzidine method for chromatographic detection of, (BICHEL, AUSTIN) . . . 598
- Sartorius muscle, frog —; metabolism of phosphocreatine during isometric tetanus in, (MARÉCHAL, MOMMAERTS) . 53
- Serum, neutral blood— glycolipids; separation of, by thin-layer chromatography (SVENNERHOLM, SVENNERHOLM) 432
- Serum, cholesterol esterification in; enhancement of, by extract of Group-A streptococcus (ROWEN, MARTIN) . . . 396
- Serum, — lipids; determination of fatty acid composition of, (BOWYER *et al.*) . 423
- Sheep, — tissues, see Tissues
- Sialic acid, lipophilic — derivatives in human erythrocytes (BOOTH) . . . . 486
- Snake, — venom, see Venom
- Sphingolipids, modified benzidine method for chromatographic detection of, (BICHEL, AUSTIN) . . . . . 598
- Sphingolipids, new type of, called sphingoplasmalogens (KOUCHETKOV, ZHUKOVA, GLUKHODED) . . . . . 716
- Sphingoplasmalogens, as new type of sphingolipids (KOUCHETKOV, ZHUKOVA, GLUKHODED) . . . . . 716
- Steroid number, — concept; extension of, (HAMILTON, VANDENHEUVEL, HORNING) . . . . . 679
- Steroids, relationship between structure of, and their gas-chromatographic retention times observed with selective phases; extension of "steroid number" concept to, (HAMILTON, VANDENHEUVEL, HORNING) . . . . . 679
- Sterols, nuclear saturated and unsaturated —; separation of, (AZARNOFF, TUCKER) . . . . . 589
- Streptococcus, Group-A, —; enhancement of cholesterol esterification in serum by extract of, (ROWEN, MARTIN) 396
- Streptomycin, effect of, on incorporation of sulfate into sulfolipids in *Euglena gracilis* (ABRAHAM, BACCHAWAT) . . . 104
- Sulfate incorporation of, into sulfolipids in *Euglena gracilis*; effect of light and streptomycin on, (ABRAHAM, BACCHAWAT) . . . . . 104
- Sulfates, quantitative estimation of, in lipid extracts (MÄRTENSSON) . . . . . 1
- Sulfatides, direct conversion of, into cerebroside (STOFFYN, STOFFYN) . . . . . 107
- Sulfatides, structure of, (STOFFYN, STOFFYN) . . . . . 218
- Sulfolipids, in *Euglena gracilis*; effect of light and streptomycin on incorporation of sulfate into, (ABRAHAM, BACCHAWAT) . . . . . 104
- Tetanus, isometric — in frog sartorius muscle; metabolism of phosphocreatine during, (MARÉCHAL, MOMMAERTS) 53
- Tetrol-yl-coenzyme A mechanism of inhi-

- bition of fatty acid biosynthesis by, (BRADY) . . . . . 467
- Thioester, — exchange; preparation of malonyl-coenzyme A by, (KLOSS, DICKINSON) . . . . . 90
- Tissues, photosynthetic —; lipid metabolism of, (CHENIAE) . . . . . 504
- Tissues, photosynthetic —; separation of lipids of, (NICHOLS) . . . . . 417
- Tissues, sheep —; effect of citrate on metabolism of acetate by, *in vitro* (HOLDSWORTH, NEVILLE) . . . . . 338
- Transacylase, monoglyceride — of rat-intestinal mucosa (CLARK, HÜBSCHER) . . . . . 43
- Triglyceride-glycerol, rates of synthesis and release of; turnover of adipose tissue triglycerides measured by, (GORIN, SHAFRIR) . . . . . 109
- Triglycerides, adipose tissue —; turnover of, (GORIN, SHAFRIR) . . . . . 109
- Triglycerides, biosynthesis of, in intestinal mucosa; positional isomery of partial glycerides during, (AILHAUD, SAMUEL, DESNUELLE) . . . . . 610
- Triglycerides, depot — of white rat; incorporation of elaidinized fatty acids in, (RAULIN, LORLETTE, CLEMENT) . . . . . 642
- Triglycerides, — synthesized from monoglycerides; distribution of fatty acids in, (BROWN, JOHNSTON) . . . . . 603
- Trypsin, use of, to eliminate residual snake-venom phospholipase A activity in lysolecithin prepared from owolecithin (DOIZAKI, ZIEVE) . . . . . 700
- Venom phospholipase A, snake — activity in lysolecithin prepared from owolecithin; use of trypsin for elimination of, (DOIZAKI, ZIEVE) . . . . . 700
- Venom phospholipase A, snake —; conversion of lipoprotein-bound lecithin to lysolecithin induced by, (KLIBANSKY *et al.*) . . . . . 591
- Venom phospholipase A, snake —; time study of hydrolysis of lecithin by, (MOORE, WILLIAMS) . . . . . 348
- Water, chloroform-methanol — system; distribution of inorganic phosphate in, (BADER) . . . . . 87
- Wax D, fractionation of, (TANAKA) . . . . . 483
- Yeast, fatty acid synthesis by; effect of biotin deficiency on (SUOMALAINEN, KERÄNEN) . . . . . 493
- Yeast, — ribosomal preparations; stimulation of lipid synthesis by, (KLEIN) . . . . . 606
- Yeast, — supernatant; metabolism of lysolecithin and lecithin in, (KOKKE *et al.*) . . . . . 351

## ERRATA

BIOCHIMICA ET BIOPHYSICA ACTA, VOL. 70 (1963)

p. 208, line 8 up: change "2,cm" into "2-cm".

p. 354, third paragraph, line 2: change "SVENNERHOOM" into "SVENNERHOLM".

p. 356, list of references: change ref. 4 into "S. BOGOCH, *Nature*, 180 (1957) 197 and *J. Am. Chem. Soc.*, 79 (1957) 328".

p. 356, list of references: delete ref. 5.

p. 356: change numbers of refs. 6 to 10 into 5 to 9, respectively.