

Subject Index

- Absorption, 92, 673
- Acarbose, 322
- ACAT, 414, 479
- N*-Acetylcysteine, 660
- Acyl-CoA oxidase, 579
- S*-Adenosylhomocysteine, 634
- S*-Adenosylmethionine, 634
- Adipose tissue, 702
- AIDS, 660
- AIN76A diet, 140
- Albumin, 211
- Alkaline phosphatase, 44
- Amino acids, 211, 341
- Aminobutyric acids, 279
- Antioxidant defense enzymes, 629
- Antioxidants, 32, 270, 445
- Antisickling agents, 19
- Apo B/E receptor, 479
- β -Apo-carotenol, 652
- β -Apo-carotenoic acid, 652
- Apolipoprotein A-I, 451
- Apolipoprotein serum amyloid A (apoSAA), 328
- Appetite regulation, 702
- Arachidonic acid, 641
- Arteriovenous balance, 133
- Arthritis, 397
- Ascorbic acid, 13, 265, 341
- Aspartate aminotransferase, 44
- Automated DNA sequencing, 355

- Beta-carotene, 364
- Betaine, 541
- Betaine-homocysteine methyltransferase, 541
- BeWo cells, 548
- BHE/cdb rats, 275
- Bile acids, 127
- Binding protein, 195
- Bioavailability, 13, 164, 190, 392
- Blood flow, 133
- Blood pressure, 689
- Body composition, 702
- Brain, 217, 472
- Brain lipids, 527
- Brain regions, 527
- Butyrophilin, 181

- CACO-2, 92
- Caco-2 cells, 585
- Calcified tissue, 256
- Calcium oxalate, 445
- Calcium uptake, 346
- Camellia sinensis*, 378
- cAMP-dependent protein kinase, 172
- Capsaicin, 397
- Carcinogenesis, 426
- Cardiac myocytes, 490
- Cardiovascular disease, 647
- Carnitine, 68, 147, 265
- Carotene, 364, 623, 652
- β -Carotene bioconversion, 623

- Carotenoids, 364, 681
- Caseinophosphopeptide, 190
- Cat, 79
- Cation transport, 205
- Cell culture, 92
- Ceramide formation, 112
- Cholesterol, 127, 140, 300, 328, 469, 566
- Cholesterol 7 α -hydroxylase, 414
- Cholesterol-lowering activity, 351
- Choline, 68, 603
- Clofibrate, 408
- Colon carcinogenesis, 696
- Colostrum, 603
- Conjugated linoleic acid, 38, 579
- Copper accumulation, 385
- Copper deficiency, 316
- Corn husks, 479
- Corn oil, 140, 275, 566
- CREB, 172
- Cross-linked sodium polyacrylate, 351
- Cuproenzymes, 316
- Curcumin, 397
- Cyclosporin A, 32
- Cytochrome P450A, 579
- Cytokine induction, 25
- Cytosolic fatty acid-binding protein, 548

- Deficiency, 190
- Desaturase, 558
- Diabetes, 44, 228
- Diet, 119
- Dietary fat, 205, 502, 527, 689
- Dietary fiber model, 351
- Dietary habits, 508
- Dietary lipids, 673, 696
- Diets, 566
- Differentiation, 426
- DNA damage, 490
- Docosahexaenoic acid, 408, 438
- Dog, 502
- L*-Dopa, 634
- Dose-rate idiorhythm, 256

- Eicosanoids, 641
- Endothelial cells, 566
- Endurance, 52
- Enteritis, 79
- Epicatechin, 334
- Epicatechin gallate, 334
- Epigallocatechin, 334
- Epigallocatechin gallate, 334
- Epithelium, 426
- Ergogenic aids, 610
- Essential fatty acid-deficient, 558
- Essential fatty acids, 548
- Estradiol, 152
- Estrogen, 426
- Ethanol, 312, 438
- Exercise, 52, 610
- Exercise performance, 52

- Fat absorption, 152
- Fat deposits, 392
- Fat saturation, 414
- Fatigue, 610
- Fatty acid composition, 689
- Fatty acid uptake, 548
- Fatty acids, 152, 527
- Fatty-acid-binding protein, 181
- Feline, 79
- Ferret, 652
- Ferritin, 585
- Fetal alcohol syndrome, 438
- Fetal development, 548
- Fish oil, 408, 472, 518, 558, 619
- 5-Methyl cytosine, 355
- Flavine, 341
- Flavonoids, 647
- Folate, 634
- Food mutagens, 490
- Food processing and storage, 535
- Food protein digestibility, 535
- Food proteins, 535
- Free fatty acid, 548
- Free radical, 385
- Fuel homeostasis, 228

- β -Galactosidase, 378
- Gastrocnemius muscle, 74
- Gastrointestinal peptides, 502
- Gastrointestinal tract, 641
- Gel-type sodium polyacrylate, 351
- Gene expression, 85, 211
- Genistein, 181
- β -Glucan, 497
- β -Glucane, 469
- Gluconeogenesis, 119
- Glucose transport, 322
- Glutathione, 246, 346, 445
- Glutathione monoester, 445
- Glutathione peroxidase, 85, 508
- Glycerol kinase, 312
- Glycerolipid, 312
- Glycerophosphocholine, 603
- Glycogen phosphorylase, 44, 172
- Glycosidases, 378
- Guar-gum, 127
- Guatemala, 623
- Guinea pig, 13, 414, 438, 479

- Health, 300
- Heart damage, 490
- Heterocyclic amines, 490
- High protein diet, 246
- High-oleic sunflower oil, 205, 689
- HMG-CoA reductase, 479
- Homocysteine, 541, 634
- Humans, 74, 265, 681
- Hydrogenated coconut oil, 275
- Hypercholesteremia, 140
- Hyperoxaluria, 32, 445
- Hypertension, 205

- Ileum, 673
 Immune, 300
 Immune cells, 518
 Inflammation, 397
 Interleukin-1 β , 585
 Interleukin-6, 585
 Intestinal adaptation, 673
 Intestinal absorption, 364
 Intestinal permeability, 2
 Intestinal transport, 2
 Intestine, 112
 Intrinsic labeling, 164
 Iron, 190
 Iron absorption, 585
 Iron deficiency, 385
 Isoascorbic acid, 13
 L-Isoaspartyl residue(s), 535
 L-Isoleucine, 592

 Jasmine tea, 334
 Jejunum, 673

 Lactation, 573
 Lactic bacteria, 25
 LDL, 479, 681
 LDL oxidation, 414
 LDL peroxidation, 461
 LDL receptor, 414
 L-Leucine, 592
 Ligand, 190
 Linoleic acid, 38
 α -Linolenic acid, 140
 Linseed oil, 461
 Lipid hydroperoxides, 629
 Lipid metabolism, 228
 Lipid peroxidation, 32, 270, 469, 681, 696
 Lipid peroxide, 385
 Lipids, 2, 461
 Lipoic acid, 660
 Lipoproteins, 461, 566
 Liposynthesis, 312
 Liver, 172, 217, 408, 456
 Liver fatty acid binding protein, 579
 Long-chain polyunsaturated fatty acids, 548
 Low copper diets, 201
 Lung metastasis, 619
 Lymphatic absorption, 38
 Lysophosphatidylcholine, 641
 Lysyl oxidase, 201

 Malnutrition, 119
 Malondialdehyde, 497, 629
 Mammary zinc, 573
 Mass spectrometry, 133
 Membrane cholesterol distribution, 205
 Membrane cholesterol oxidation, 205
 Membrane lipids, 689
 Membrane sulfhydryls, 346
 Menhaden oil, 275
 Metabolic tracers, 52
 Metalloenzymes, 385
 Methionine, 246, 541
 Methotrexate pharmacokinetics, 79
 Methylation, 355

 MFGM, 181
 Milk, 573
 Milk fat globule membrane, 181
 Milk proteins, 190
 Mineral, 164
 Mitochondria, 490, 696
 Mn, 92
 Monounsaturated fatty acids, 205, 689
 Mouse, 328
 mRNA, 85, 408
 Mucosal esterification, 152
 Muramic acid, 25
 Muscle, 300, 610
 Muscle mass, 52
 Myelin, 527

 n-3 fatty acids, 397
 n-6/n-3 polyunsaturated fatty acids, 558
 Nephrotoxicity, vitamin E, 32
 Nervous system, 472
 Neutral lipids, 140
 Nitric oxide, 647
 Nitrogen balance, 52
 Nuclear binding, 592
 Nuclear receptors, 426
 Nutrient, 164
 Nutrient interaction, 68
 Nutrient requirements, 85
 Nutrition, 472

 Oats, 497
 Obesity, 228, 702
 Olive oil, 205, 461, 689
 Omega-3 fatty acids, 518
 Ornithine decarboxylase activity, 579
 Oxygen-binding to HbA_{1c}: Sickling enhan-
 19
 Oyster mushroom, 469

 Pancreatic polypeptide, 502
 Parenteral nutrition infusate, 341
 Peptide YY, 502
 Perchloroethylene, 270
 Performance, 119
 Peroxidation, 497
 Peroxisome proliferator-activated
 receptor, 579
 Phosphatidylcholine, 503
 Phosphocholine, 603
 Phosphocreatine, 610
 Phospholipids, 152, 438, 641
 Photosensitized, 341
 Phytochemical, 164
 Pig, 217, 603
 Pivaloyl-carnitine, 147
 Pivampicillin, 147
 Placenta, 548
 Plasma, 74, 217
 Plasma antioxidants, 508
 Plasma membrane fatty acid-binding
 protein, 548
 Platelet aggregation, 346
 Polyunsaturated fatty acids, 217, 619
 Preschoolers, 623
 Propylthiouracil, 456
 Prostacyclin, 647

 Protein deamidation, 535
 Protein kinase C, 647
 Protein kinases, 181
 Protein methylation, 535
 Protein phosphorylation, 181
 Protein-energy malnutrition, 172
 PUFA, 629
 Purified diet, 79
 Pyridoxal, 19
 Pyridoxal 5'-phosphate, 19
 Pyridoxal phosphate, 211
 Pyruvate metabolism, 275

 Quinolinic acid, 279

 Rat, 68, 85, 112, 127, 246, 346, 451, 456,
 461, 518, 541, 592
 Rat heart, 316
 Rat liver, 211
 Redox, 660
 Reticulocyte, 312
 Retina, 217
 Retinoic acid, 426, 451, 652
 Retinoid X receptor, 456
 Retinol, 623, 652
 Retinyl palmitate, 623

 Selenium, 85
 Selenium status, 508
 Selenoprotein P, 508
 Serine hydroxymethyltransferase, 279
 Serum cholesterol, 351
 Serum cholesterol levels, 351
 Serum peptidylglycine- α -amidating
 monooxygenase, 316
 Sex-dependent differences, 385
 Short-chain fatty acids, 127
 Skeletal muscle, 228, 322
 Slope-ratio assay, 256
 Sphingomyelin digestion, 112
 Stable isotope, 133, 164
 Strength, 52
 Streptozotocin, 44
 Δ^9 -Desaturase, 408
 Supplement, 660
 Supplementation, 68
 Synaptosomes, 527

 Taurine, 270
 Thiols, 660
 Thyroid hormone, 451, 456
 TIBA value, 38
 Tissue distribution, 38
 Tissues, 13
 T-lymphocytes stimulation, 25
 Trace element, 92
 Transferrin, 585
 Transport, 92
 Triglyceride, 328
 Trimethyllysine, 147
 Tryptophan, 119, 279, 341, 592
 25-Hydroxyvitamin D, 195
 2-5A synthetase induction, 25
 Type I fiber, 74
 Tyrosine, 119

Subject Index

L-Valine, 592
Vegetable oil, 472
Viscosity, 127
Vitamin A, 456, 623
Vitamin A deficiency, 451, 456
Vitamin B-6, 44
Vitamin C, 265, 414
Vitamin D, 195

Vitamin E, 74, 270, 392, 518
VLDL, 479

Weanling rat, 256
White adipose tissue, 392
Wine, 647

Xanthophyll, 364
Xanthurenates, 279

Zinc, 573
Zinc availability, 256
Zinc deficiency, 461, 573
Zinc status, 346