CONTENTS

September 1986

Lipids

Effect of Essential Fatty Acid Deficiency on Acyl Group Composition, Membrane Fluidity and Adenylate Cyclase Activity in Plasma Membranes of Rat Submandibular Salivary Glands. Syed Q. Alam and Bassima S. Alam 1620

Effect of an Oral Dose of Vitamin E on the Vitamin E and Cholesterol Content of Tissues of the Vitamin E-Deficient Rat. Hisayuki Kaseki, Edward Y. Kim, Ronald L. Whisler and David G. Cornell 1631

Proteins and Amino Acids
Urea Cycle Activity and Arginine Formation in Rainbow Trout (Salmo gairdneri). Yvonne N. Chiu, Richard E. Austin and Gary L. Rumsey 1640


Effects of Dietary Methionine, Cystine and Potassium Sulfate on Serum Cholesterol and Urinary Ascorbic Acid in Rats Fed PCB. Hiroaki Oda, Shizuko Matsuoka and Akira Yoshida 1660

Prediction of Brain and Serum Free Amino Acid Profiles in Rats Fed Graded Levels of Protein. Jon M. Gustafson, Steven J. Dodds, Roger C. Burgus and L. Preston Mercer 1667

Carbohydrate and Fiber
Intake and Gastric Emptying of Mono- versus Disaccharides by Rats. David L. Trout and Patricia A. Bernstein 1682

Effects of Food Restriction and Starvation-Refeeding on Volatile Fatty Acid Concentrations in the Rat. Richard J. Illman, David L. Topping and Rodney P. Trimble 1694

Minerals and Trace Elements
Deposition of Dietary Organic and Inorganic Selenium in Rat Erythrocyte Proteins. M. A. Beilstein and P. D. Whanger 1701

Chemical Forms of Selenium in Rat Tissues after Administration of Selenite or Selenomethionine. M. A. Beilstein and P. D. Whanger 1711

Heme, Ferritin and Vegetable Iron Absorption in Humans from Meals Denatured of Heme Iron during the Cooking of Beef. Carlos Martinez-Torres, Irene Leets, Peter Taylor, José Ramírez, María del Valle Camacho and Miguel Layrisse 1720

Selenium-Dependent Glutathione Peroxidase Inhibitors Increase Toxicity of Prooxidant Compounds in Chicks. Steven D. Mercurio and Gerald F. Combs, Jr. 1726

Copper Deficiency-Induced Hypercholesterolemia: Effects on HDL Subfractions and Hepatic Lipoprotein Receptor Activity in the Rat. Michael Lefevre, Carl L. Keen, Bo Lönnerdal, Lucille S. Hurley and Barbara O. Schneeman 1735

(Continued on inside back cover)
Contents
(Continued from back cover)

Efficiency of Manganese Absorption in Chicks Fed Corn-Soy and Casein Diets. Kevin M. Halpin, Daniel G. Chausow and David H. Baker 1747

Enhancement of Fluoride Retention by Low Dietary Chloride without Manifestation of Chloride Deficiency in the Rat. Florian L. Cerklewski 1752

Nutrient Interactions

Response of Body Protein and Energy Gain in Growing Chicks to Differences in Energy Intake and Composition of Diet. Masaaki Toyomizu, Yukio Akiba and Masaaki Horiguchi 1756

Zinc-Vitamin A Interaction in Pregnant and Fetal Rats: Supplemental Vitamin A Does Not Prevent Zinc-Deficiency-Induced Teratogenesis. Alice J. Peters, Carl L. Keen, Bo Lönnerdal and Lucille S. Hurley 1765

Nutrient Uptake and Transport

Short-Chain Fatty Acids in Germfree Mice and Rats. Torgeir Høverstad and Tore Midtvedt 1772

Nutrient Requirements

Purified Reference Diets for Weanling Rats: Effects of Biotin and Cellulose. Jeanne I. Rader, Karen A. Wolnik, Cynthia M. Gaston, Fred L. Fricke and M. R. Spivey Fox 1777

Growth Development and Aging

Milk Lipid Synthesis and Secretion during Milk Stasis in the Rat. Murray R. Grigor, Zygmunt Poczwa and Peter G. Arthur 1789

Metabolism and Hormonal Regulation

Circadian Changes in Serum and Liver Metabolites and Liver Lipogenic Enzymes in Ad Libitum- and Meal-Fed, Lean and Obese Zucker Rats. Susan Lanza-Jacoby, Nancy R. Stevenson and Murray L. Kaplan 1798

Effect of Dietary Protein Level on the First Steps of Glucagon Action in Rat Liver Plasma Membranes. Michèle Balage, Jean Grizard, Danièle Hui-Bon-Hoa and Gabriel Rosselin 1810

Relationships among Dietary Protein, Feed Intake and Tissue Protein Turnover in Lactating Rats. R. D. Sainz, C. C. Caltvert and R. L. Baldwin 1820

Nutrition and Immunology

Dietary Fatty Acid Modulation of Murine B-Cell Responsiveness. Kent L. Erickson, Dorothy A. Adams and Robert L. Šcibienski 1830

Nutrition and Physical Activity


Book Review 1853

ISSUES AND OPINIONS IN NUTRITION


Nutritional and Physiological Implications of Fish Oils. T. A. B. Sanders 1857

Is Euthanasia of Rats by Decapitation Inhumane? John B. Allred and Gary G. Berntson 1859

Announcements 1862

Draft Announcement 1863

Erratum 1864