

CONTENTS

GUIDE FOR AUTHORS

| | |
|--|----|
| Guide for Authors (Revised January 1996) | 1 |
| Manuscript Submission and Copyright Release Form | 11 |

CRITICAL REVIEW

| | |
|---|----|
| Plant Wax Components: A New Approach to Estimating Intake and Diet Composition in Herbivores. <i>H. Dove and R. W. Mayes</i> | 13 |
|---|----|

ARTICLES

Biochemical and Molecular Roles of Nutrients

| | |
|---|----|
| Manganese Protects against Heart Mitochondrial Lipid Peroxidation in Rats Fed High Levels of Polyunsaturated Fatty Acids. <i>Elise A. Malecki and J. L. Greger</i> | 27 |
| Dietary Fish Oil Confers Direct Antiarrhythmic Properties on the Myocardium of Rats. <i>Salvatore Pepe and Peter L. McLennan</i> | 34 |
| Soybean Isoflavones Improve Cardiovascular Risk Factors without Affecting the Reproductive System of Peripubertal Rhesus Monkeys. <i>Mary S. Anthony, Thomas B. Clarkson, Claude L. Hughes, Jr., Timothy M. Morgan and Gregory L. Burke</i> | 43 |
| Modulation of Lysyl Oxidase by Dietary Copper in Rats. <i>Robert B. Rucker, Nadia Romero-Chapman, Toniell Wong, Jill Lee, Francene M. Steinberg, Carl McGee, Michael S. Clegg, Karen Reiser, Taru Kosonen, Janet Y. Uriu-Hare, Jerome Murphy and Carl L. Keen</i> | 51 |
| Biotin Deficiency Decreases Ornithine Transcarbamylase Activity and mRNA in Rat Liver. <i>Yuichi Maeda, Sumio Kawata, Yoshiaki Inui, Kazuto Fukuda, Takumi Igura and Yuji Matsuzawa</i> | 61 |
| Methionine Reduces the Valproic Acid-Induced Spina Bifida Rate in Mice without Altering Valproic Acid Kinetics. <i>Katharine Ehlers, Mohamed M. A. Elmazar and Heinz Nau</i> | 67 |
| Higher Postpartum Hepatic Triacylglycerol Concentrations in Dairy Cows with Free rather than Restricted Access to Feed During the Dry Period Are Associated with Lower Activities of Hepatic Glycerolphosphate Acyltransferase. <i>A. Marc Van den Top, Math J. H. Geelen, Theo Wensing, G. Henk Wentink, Arie Th. Van'T Klooster and Anton C. Beynen</i> | 76 |
| Dietary Casein Phosphopeptides Prevent Bone Loss in Aged Ovariectomized Rats. <i>Hiroshi Tsuchita, Toshiyuki Goto, Taki Shimizu, Yoko Yonehara and Tamotsu Kuwata</i> | 86 |
| Vitamin A Deficiency Diminishes the Salivary Immunoglobulin A Response and Enhances the Serum Immunoglobulin G Response to Influenza A Virus Infection in BALB/c Mice. <i>Charles B. Stephensen, Zina Moldoveanu and Nupur N. Gangopadhyay</i> | 94 |

Community and International Nutrition

| | |
|---|-----|
| Low Birth Weight Reduces the Likelihood of Breast-Feeding among Filipino Infants. <i>Linda S. Adair and Barry M. Popkin</i> | 103 |
| Validity of Single-Weight Measurements to Predict Current Malnutrition and Mortality in Children. <i>Jan Van den Broeck, Roger Eeckels and Guy Massa</i> | 113 |
| Plasma Ascorbic Acid Concentrations Are Related to Cardiovascular Risk Factors in African-Americans. <i>Lynn Toohey, Mary A. Harris, Kenneth G. D. Allen and Christopher L. Melby</i> | 121 |

Human and Clinical Nutrition

| | |
|--|-----|
| Human Serum Carotenoid Concentrations Are Related to Physiologic and Lifestyle Factors. <i>William E. Brady, Julie A. Mares-Perlman, Phyllis Bowen and Maria Stacewicz-Sapuntzakis</i> | 129 |
| Selenoprotein P Concentration in Plasma Is an Index of Selenium Status in Selenium-Deficient and Selenium-Supplemented Chinese Subjects. <i>Kristina E. Hill, Yiming Xia, Björn Åkesson, Martha E. Boeglin and Raymond F. Burk</i> | 138 |
| Maternal Underweight Status and Inadequate Rate of Weight Gain During the Third Trimester of Pregnancy Increase the Risk of Preterm Delivery. <i>Anna Maria Siega-Riz, Linda S. Adair and Calvin J. Hobel</i> | 146 |
| Purified Ferritin and Soybean Meal Can be Sources of Iron for Treating Iron Deficiency in Rats. <i>John L. Beard, Joseph W. Burton and Elizabeth C. Theil</i> | 154 |
| Dietary Soybean Protein Prevents Bone Loss in an Ovariectomized Rat Model of Osteoporosis. <i>Bahram H. Arjmandi, Lee Alekel, Bruce W. Hollis, Daxa Amin, Maria Stacewicz-Sapuntzakis, Peilin Guo and Subhash C. Kukreja</i> | 161 |
| Growth Failure and Altered Body Composition Are Established by One Month of Age in Infants with Bronchopulmonary Dysplasia. <i>Raye-Ann O. deRegnier, Theresa W. Guilbert, Marla M. Mills and Michael K. Georgieff</i> | 168 |

Nutrient Metabolism

| | |
|--|-----|
| Absorption and Excretion of the Soy Isoflavone Genistein in Rats. <i>Roger A. King, Jessica L. Broadbent and Richard J. Head</i> | 176 |
| Iron and Copper Interact during Their Uptake and Deposition in the Brain and Other Organs of Developing Rats Exposed to Dietary Excess of the Two Metals. <i>Andrew Crowe and Evan H. Morgan</i> | 183 |
| Maillard Reaction Products in Purified Diets Induce Taurine Depletion in Cats Which Is Reversed by Antibiotics. <i>Seungwook W. Kim, Quinton R. Rogers and James G. Morris</i> | 195 |
| Dietary β -Carotene Elevates Plasma Steady-State and Tissue Concentrations of β -Carotene and Enhances Vitamin A Balance in Preruminant Calves. <i>Peter P. Hoppe, Boon P. Chew, Anton Safer, Ingrid Stegemann and Hans K. Biesalski</i> | 202 |
| Interactions between Ruminant Degradable Nitrogen Intake and In Vitro Addition of Substrates on Patterns of Amino Acid Metabolism in Isolated Ovine Hepatocytes. <i>Timothy Mutsvangwa, Jock G. Buchanan-Smith and Brian W. McBride</i> | 209 |
| The Acrodermatitis Enteropathica Mutation Transiently Affects Zinc Metabolism in Human Fibroblasts. <i>Arthur Grider and Elizabeth M. Young</i> | 219 |
| Absorption and Metabolism of Lipids in Rats Depend on Fatty Acid Isomeric Position. <i>Toshiaki Aoyama, Kensuke Fukui, Kaori Taniguchi, Syuuji Nagaoka, Takashi Yamamoto and Yukio Hashimoto</i> | 225 |
| Methionine-Containing Peptides Can Be Used As Methionine Sources for Protein Accretion in Cultured C ₂ C ₁₂ and MAC-T Cells. <i>Yuanlong Pan, Patrick K. Bender, R. Michael Akers and Kenneth E. Webb, Jr.</i> | 232 |
| Folate Transport Pathways Regulate Urinary Excretion of 5-Methyltetrahydrofolate in Isolated Perfused Rat Kidney. <i>Robert T. Muldoon, Donna M. Ross and Kenneth E. McMartin</i> | 242 |
| The Caco-2 Cell Culture System Can be Used as a Model to Study Food Iron Availability. <i>Maria N. Garcia, Carol Flowers and James D. Cook</i> | 251 |
| Diet-Induced Nephrocalcinosis in Female Rats Is Irreversible and Is Induced Primarily before the Completion of Adolescence. <i>Catherine A. Peterson, David H. Baker and John W. Erdman, Jr.</i> | 259 |
| A High Protein Diet Does Not Improve Protein Synthesis in the Nonweight-Bearing Rat Tibialis Anterior Muscle. <i>Daniel Taillandier, Charles-Yannick Guezennec, Philippe Patureau-Mirand, Xavier Bigard, Maurice Arnal and Didier Attaix</i> | 266 |
| L-Glutamine Supplementation of a High Fat Diet Reduces Body Weight and Attenuates Hyperglycemia and Hyperinsulinemia in C57BL/6J Mice. <i>Emmanuel C. Opara, Ann Petro, Allyson Tevrizian, Mark N. Feinglos and Richard S. Surwit</i> | 273 |
| Lactitol Enhances Short-Chain Fatty Acid and Gas Production by Swine Cecal Microflora to a Greater Extent When Fermenting Low Rather Than High Fiber Diets. <i>Andrea Piva, Andrea Panciroli, Elena Meola and Andrea Formigoni</i> | 280 |

Nutrient Requirements and Interactions

| | |
|---|-----|
| Severe Protein Deficiency and Repletion Alter Body and Brain Composition and Organ Weights in Infant Pigs. <i>Wilson G. Pond, Kenneth J. Ellis, Harry J. Mersmann, Julian P. Heath, Lennart P. Krook, Douglas G. Burrin, Mary A. Dudley and Hwai-Ping Sheng</i> | 290 |
|---|-----|

| | |
|---|-----|
| Wheat Bran Abolishes the Inverse Relationship between Calcium Load Size and Absorption Fraction in Women. <i>Connie M. Weaver, Robert P. Heaney, Dorothy Teegarden and Sharilyn M. Hinders</i> | 303 |
| Hemicellulose Does Not Affect Iron Bioavailability in Chicks. <i>Alyce D. Fly, Gail L. Czarnecki-Maulden, George C. Fahey, Jr. and Evan C. Titgemeyer</i> | 308 |
| Weight Loss Alters Organ Concentrations and Contents of Lead and Some Essential Divalent Metals in Rats Previously Exposed to Lead. <i>Shenggao Han, Xianwen Qiao, Scott Simpson, Pegah Ameri, Francis W. Kemp and John D. Bogden</i> | 317 |
| Response of Rainbow Trout (<i>Oncorhynchus mykiss</i>) Growing from 50 to 200 g to Supplements of Dibasic Sodium Phosphate in a Semipurified Diet. <i>Markus Rodehutschord</i> | 324 |
| Caco-2 Cell Iron Uptake from Meat and Casein Digests Parallels In Vivo Studies: Use of a Novel In Vitro Method for Rapid Estimation of Iron Bioavailability. <i>Raymond P. Glahn, Elizabeth M. Wien, Darrell R. van Campen and Dennis D. Miller</i> | 332 |
| Announcements. | 341 |

SUPPLEMENT

| | |
|---|------|
| Stable Isotopic Tracers in Nutrition and Metabolism. <i>Satish C. Kalhan and Sooja K. Kim</i> | 343S |
|---|------|