Contents

Articles

■ BIOCHEMICAL, MOLECULAR, AND GENETIC MECHANISMS

Butyrate Activates the cAMP-Protein Kinase A-cAMP Response Element-Binding Protein Signaling Pathway in Caco-2 Cells
Aihua Wang, Hongwei Si, Dongmin Liu, and Honglin Jiang 1

■ GENOMICS, PROTEOMICS, AND METABOLOMICS

Dietary Supplementation with the Probiotic Lactobacillus fermentum I5007 and the Antibiotic Aureomycin Differentially Affects the Small Intestinal Proteomes of Weanling Piglets
Xiaoqiu Wang, Fang Yang, Chuang Liu, Huaijun Zhou, Guoyao Wu, Shiyan Qiao, Defa Li, and Junjun Wang 7

Prediction of Skeletal Muscle and Fat Mass in Patients with Advanced Cancer Using a Metabolomic Approach
Cynthia Stretch, Thomas Eastman, Rupasri Mandal, Roman Eisner, David S. Wishart, Marina Mourtzakis, Carla M. M. Prado, Sambasivarao Damaraju, Ronald O. Ball, Russell Greiner, and Vickie E. Baracos 14

■ NUTRIENT PHYSIOLOGY, METABOLISM, AND NUTRIENT-NUTRIENT INTERACTIONS

Marginal Biotin Deficiency Can Be Induced Experimentally in Humans Using a Cost-Effective Outpatient Design
Shawna L. Stratton, Cindy L. Henrich, Nell I. Matthews, Anna Bogusiewicz, Amanda M. Dawson, Thomas D. Horvath, Suzanne N. Owen, Gunnar Boysen, Jeffery H. Moran, and Donald M. Mock 22

Glycemic Index Predicts Individual Glucose Responses after Self-Selected Breakfasts in Free-Living, Abdominally Obese Adults
Angela M. Kochan, Thomas M. S. Wolfever, V. Tony Chetty, Sonia S. Anand, Hertzel C. Gerstein, and Arya M. Sharma 27

Maternal Hepcidin Is Associated with Placental Transfer of Iron Derived from Dietary Heme and Nonheme Sources
Melissa F. Young, Ian Griffin, Eva Pressman, Allison W. McIntyre, Elizabeth Cooper, Thomas McManley, Z. Leah Harris, Mark Westerman, and Kimberly O. O’Brien 33

Daidzein and Genistein Are Converted to Equol and 5-Hydroxy-Equol by Human Intestinal Slackia isoflavoniconvertens in Gnotobiotic Rats
Anastasia Matthies, Gunnar Loh, Michael Blaut, and Annett Braune 40

■ NUTRITION AND DISEASE

Kaempferol Suppresses Eosinophil Infiltration and Airway Inflammation in Airway Epithelial Cells and in Mice with Allergic Asthma
Ju-Hyun Gong, Daekeun Shin, Seon-Young Han, Jung-Lye Kim, and Young-Hee Kang 47
Green Tea Extract Suppresses NF-κB Activation and Inflammatory Responses in Diet-Induced Obese Rats with Nonalcoholic Steatohepatitis
Hea Jin Park, Ji-Young Lee, Min-Yu Chung, Young-Ki Park, Allyson M. Bower, Sung I. Koo, Charles Giardina, and Richard S. Bruno

A Dietary Pattern Including Nopal, Chia Seed, Soy Protein, and Oat Reduces Serum Triglycerides and Glucose Intolerance in Patients with Metabolic Syndrome

NUTRIENT REQUIREMENTS AND OPTIMAL NUTRITION
The Fraction of ω-Linolenic Acid Present in the sn-2 Position of Structured Triacylglycerols Decreases in Lymph Chylomicrons and Plasma Triacylglycerols during the Course of Lipid Absorption in Rats
Leslie Couédélo, Carole Vaysse, Emilie Vaique, Alexandre Guy, Isabelle Gosse, Thierry Durand, Sandra Pinet, Maud Cansell, and Nicole Combe

NUTRITIONAL EPIDEMIOLOGY
Total and Specific Polyphenol Intakes in Midlife Are Associated with Cognitive Function Measured 13 Years Later
Emmanuelle Kesse-Guyot, Léopold Fezeu, Valentina A. Andreeva, Mathilde Touvier, Augustin Scalbert, Serge Hercberg, and Pilar Galan

Stable Nitrogen and Carbon Isotope Ratios Indicate Traditional and Market Food Intake in an Indigenous Circumpolar Population
Sarah H. Nash, Andrea Bersamin, Alan R. Kristal, Scarlett E. Hopkins, Rebecca S. Church, Renee L. Pasker, Bret R. Luick, Gerald V. Mohatt, Bert B. Boyer, and Diane M. O’Brien

Dietary Intakes of Total and Specific Lignans Are Associated with Clinical Breast Tumor Characteristics
Susan E. McCann, Katie C. Hootman, Anne M. Weaver, Lilian U. Thompson, Carl Morrison, Helena Hwang, Stephen B. Edge, Christine B. Ambrosone, Peter J. Horvath, and Swati A. Kulkarni

A Meta-Analysis Shows That Docosahexaenoic Acid from Algal Oil Reduces Serum Triglycerides and Increases HDL-Cholesterol and LDL-Cholesterol in Persons without Coronary Heart Disease
Adam M. Bernstein, Eric L. Ding, Walter C. Willett, and Eric B. Rimm

COMMUNITY AND INTERNATIONAL NUTRITION
Correcting for Inflammation Changes Estimates of Iron Deficiency among Rural Kenyan Preschool Children
Frederick K. E. Grant, Parminder S. Suchdev, Rafael Flores-Ayala, Conrad R. Cole, Usha Ramakrishnan, Laird J. Ruth, and Reynaldo Martorell

Breast Milk Vitamin B-12 Concentrations in Guatemalan Women Are Correlated with Maternal but Not Infant Vitamin B-12 Status at 12 Months Postpartum
Kathleen L. Deegan, Katherine M. Jones, Clara Zuleta, Manuel Ramirez-Zeá, Dorte L. Lildballe, Ebba Nexo, and Lindsay H. Allen

NUTRITIONAL IMMUNOLOGY
Th17 Cell Accumulation Is Decreased during Chronic Experimental Colitis by (n-3) PUFA in Fat-1 Mice
Jennifer M. Monk, Qian Jia, Evelyn Callaway, Brad Weeks, Robert C. Alaniz, David N. McMurray, and Robert S. Chapkin

INGESTIVE BEHAVIOR AND NEUROSCIENCES
Susceptibility to Overeating Affects the Impact of Savory or Sweet Drinks on Satiation, Reward, and Food Intake in Nonobese Women
Graham Finlayson, Isabelle Bordes, Sanne Griffioen-Roose, Cees de Graaf, and John E. Blundell