



# VITAMIN D:

## Moving Toward Evidence-based Decision Making in Primary Care Conference & Webinar



December 2–3, 2014

NIH, Bethesda, MD

### SPEAKERS



**Demetrius Albanes, M.D.**, is a senior investigator in the Nutritional Epidemiology Branch of the Division of Cancer Epidemiology and Genetics (DCEG) at the National Cancer Institute (NCI), an adjunct associate professor of epidemiology at the Yale School of Public Health, and chair of the National Institutes of Health (NIH) Committee on Scientific Conduct and Ethics. His molecular epidemiologic program is focused on prostate and other cancers, micronutrients (especially vitamins D, E, and A), vitamin supplementation, and growth factors/hormones as well as the biochemistry/metabolites, genetic variants, and biological mechanisms relevant to them. His recent studies include risk assessment of 25(OH)D status and vitamin D polygenic scores and multiple cancer sites, the risk-modulating role of vitamin D binding protein, genome-wide association analyses of circulating vitamins, and metabolomics profiling of prostate cancer and vitamin supplementation. Dr. Albanes is principal investigator of the Alpha-Tocopherol, Beta-Carotene Cancer Prevention (ATBC) Study and he contributes to several large consortium projects of nutritional factors, candidate genes/pathways, and genome-wide association studies (GWAS). He received his B.S. in biology from SUNY Stony Brook and his M.D. from the Medical College of Wisconsin.



**John F. Aloia, M.D.**, is chief academic officer and professor of medicine at Stony Brook School of Medicine, head of Winthrop's Bone Mineral Research Center, and dean of the Winthrop Campus of the Stony Brook School of Medicine. Previously he was chair of the Department of Medicine and its Division of Endocrinology and Metabolism at Winthrop-University Hospital. Previously, Dr. Aloia was a collaborator at Brookhaven National Laboratory, where in vivo neutron activation and whole body counting was used to measure body composition. Through the study of normal, osteoporotic, and endocrine patients, the effect of endocrinopathies and aging on skeletal and muscle mass was elucidated. A five-compartment model for body composition was developed and ethnic differences between Americans of African and European ancestry were described. These studies also led to the description of ethnic differences in serum 25OHD and the calcitrophic hormones. Recent translational interests include the effects of calcium and vitamin D on bone turnover and parathyroid hormone (PTH) and the influence of vitamin D intake on calcium absorption. Dr. Aloia was a member of the Institute of Medicine committee that proposed dietary reference intakes for calcium and vitamin D. He received his M.D. from Creighton University School of Medicine and completed a fellowship in endocrinology at Jefferson Medical College.





**Roger Bouillon, M.D., Ph.D.**, is a professor (emeritus since 2010) of internal medicine at the University and University Hospitals of the Catholic University of Leuven (KU Leuven) in Belgium. He also has been chair of the clinical department of endocrinology of the University Hospitals of KU Leuven and president of several international professional and several major international science organizations. He has extensive experience with science policy and is a member of the board of directors of KU Leuven and its University Hospitals, a member of several European science foundation committees, a member of the European Space Agency Life Science Working Group, a member of the Royal Academy of Medicine in Belgium, and a Fellow of the Royal College of Physicians in London. Dr. Bouillon is coauthor of more than 600 peer-reviewed articles that generated more than 30,000 Institute for Scientific Information (ISI) citations and an H index of 82 as of July 2014. Endocrinology in general and hormonal regulation of bone metabolism and vitamin D remain the primary focus of his research, although the laboratory of endocrinology and endocrine clinic also are involved in many other endocrine diseases. He received his M.D. and Ph.D. from the KU Leuven.



**Patsy M. Brannon, Ph.D., R.D.**, is a member of the steering committee for the International Vitamin D Standardization Project; the Institute of Medicine (IOM) Food and Nutrition Board; the U.S. Department of Agriculture (USDA) National Agriculture Research, Economics, Extension, and Education Advisory Board; and the IOM Women, Infants, and Children (WIC) Food Package Review Committee. She also is the director of the Cornell Dietetic Internship Program and coordinator of the combined Ph.D./R.D. program that emphasizes translational research and evidence-based policy and practice. She teaches maternal and child nutrition and co-teaches translational research and evidence-based policy and practice. Key past service includes the IOM Dietary Reference Intakes for Calcium and Vitamin D Committee and co-chair of the Federal Trans-Agency Vitamin D Working Group as a visiting professor in the National Institutes of Health (NIH) Office of Dietary Supplements (ODS). Dr. Brannon's research and teaching focus on maternal and child nutrition. Her current research examines how maternal nutritional status regulates genes controlling growth and function of the placenta in cell models and vitamin D metabolism in the placenta. She received her Ph.D. in nutritional biochemistry from Cornell University and her B.S. and M.S. in nutrition and food science from Florida State University.



**Alicia Carriquiry, Ph.D.**, is a professor of statistics at Iowa State University, where she teaches a graduate-level course on Bayesian data analysis. Her research interests are Bayesian statistics and general methods. Her recent work focuses on nutrition and dietary assessment as well as on problems in genomics, forensic sciences, and traffic safety. Dr. Carriquiry is an elected member of the International Statistical Institute and a fellow of the American Statistical Association. She serves on the Executive Committee of the Institute of Mathematical Statistics and is a member of the Board of Trustees of the National Institute of Statistical Sciences. She is a member of the Standing Committee on Applied and Theoretical Statistics of the National Research Council; the Committee on Assessing the Feasibility, Accuracy, and Technical Capability of a Ballistics National Database of the National Research Council; and the Committee on Gender Differences in the Careers in Science, Mathematics, and Engineering Faculty of the National Academy of Sciences. She is editor of *Statistical Sciences* and of *Bayesian Analysis* and serves on the editorial boards of several Latin American journals of statistics and mathematics. She is a past president of the International Society for Bayesian Analysis (ISBA) and a past member of the Board of the Plant Sciences Institute at Iowa State University. She received her M.Sc. in animal science from the University of Illinois and her M.Sc. and Ph.D. in statistics and animal genetics from Iowa State University.



**Paul M. Coates, Ph.D.**, is the director of the Office of Dietary Supplements (ODS) at the National Institutes of Health (NIH). He has established ODS as a strong and authoritative voice for rigorous science in dietary supplements and related areas of nutrition. ODS addresses many of the issues in dietary supplements, from evaluation of the literature to supporting and conducting science and translating the results of that work into reliable and effective information for the public. He also is lead editor of the *Encyclopedia of Dietary Supplements*, now in its second edition, and associate editor of the *American Journal of Clinical Nutrition*. Prior to his tenure at ODS, Dr. Coates was deputy director of the Division of Nutrition Research Coordination (DNRC) at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIDDK's program director for the Type 2 Diabetes Research Program, and project officer for the multicenter clinical study known as *Epidemiology of Diabetes Interventions and Complications*. Prior to his career at NIH, Dr. Coates was on the faculty of the Children's Hospital of Philadelphia and the University of Pennsylvania School of Medicine. Dr. Coates received the Conrad A. Elvehjem Award from the American Society for Nutrition for public service in nutrition, is a Fellow of the American Society for Nutrition, and was elected to serve a 2-year term as At-Large Director of the Society. He received his Ph.D. in human genetics from Queen's University in Canada and postdoctoral training in the Department of Human Genetics and Biometry at University College London.



**Bess Dawson-Hughes, M.D.**, directs the Bone Metabolism Laboratory at the Tufts University U.S. Department of Agriculture Human Nutrition Research Center on Aging, is a professor of medicine at Tufts University, and is a member of the Endocrine Division at the Tufts Medical Center. She also is currently the general secretariat (vice president) and a trustee of the International Osteoporosis Foundation. Her current research is directed at examining ways in which vitamin D, calcium, protein, and the acid base balance of the diet influence age-related loss of bone and muscle and risk of fragility fractures. Dr. Dawson-Hughes has published more than 450 peer-reviewed journal articles, book chapters, abstracts, and reviews and has received many awards for her research and scientific leadership. She has served on the councils of several professional organizations, including the American Society for Bone and Mineral Research, the American Society of Clinical Nutrition, and the International Bone and Mineral Society. She was an associate editor of the *Journal of Bone and Mineral Research*; was the principal investigator of the NIH Osteoporosis and Related Bone Diseases Resource Center in Washington, DC; and served on the advisory council of the National Institute of Arthritis, Musculoskeletal, and Skin Diseases. She received her M.D. from Tufts University School of Medicine, completed her house training at Tufts, and completed an endocrine fellowship at Harvard University.



**Edward Giovannucci, M.D., Sc.D.**, is a professor in the Departments of Nutrition and Epidemiology at the Harvard School of Public Health and an associate professor of medicine at the Harvard Medical School. His research focuses on how nutritional, genetic, environmental, and lifestyle factors relate to various malignancies, especially those of the prostate and large bowel. Much of his work is centered on large ongoing cohort studies, including the Nurses' Health Study, the Health Professionals Follow-Up Study, and the Physicians' Health Study. A specific area of interest is the etiologic mechanisms underlying the relation between modifiable factors and cancer risk. His work has included the study of how nutrition and other lifestyle factors impact cancer risk and progression by influencing levels of insulin, insulin-like growth factors, vitamin D metabolites, and steroid hormones. Another area of interest is how nutrients may interact with genetic susceptibilities in determining an individual's risk. Recent publications include investigations of the role of vitamin D levels in myocardial infarction, prostate cancer, and in the survival of patients with colorectal cancer. He received his M.D. from the University of Pittsburgh School of Medicine and did his residency in anatomic pathology at the University of Connecticut. He received his Sc.D. in epidemiology from the Harvard School of Public Health.





**Gordon Guyatt, M.D.**, is a Distinguished Professor in the Department of Clinical Epidemiology and Biostatistics at McMaster University and one of the founders of evidence-based medicine. He has played a key role in more than 30 major clinical studies, including both large-scale observational and randomized trials, and has extensive expertise in study methodology. He has an active lifelong interest in evidence-based decision-making, knowledge synthesis, and translation. As co-founder and co-chair of the Grading, Recommendation, Assessment, Development, and Evaluation (GRADE) working group, he has been intimately involved in the development of the GRADE approach to its current format. He has received many distinguished honors in his career, including the Order of Canada, The Queen Elizabeth II Diamond Jubilee Medal, and the Canadian Institutes of Health Research (CIHR) Researcher of the Year. Dr. Guyatt allocates 60% of his workload to research, 10% to administration duties, 10% to academic duties such as editorial roles, and 20% to teaching and student supervision. He received his M.D. from McMaster University.



**Robert Proulx Heaney, M.D.**, is John A. Creighton University Professor Emeritus and professor of medicine at Creighton University. He has worked for 60 years in the study of osteoporosis, vitamin D, and calcium physiology. He is the author of 3 books and has published more than 400 papers, chapters, and reviews in scientific and educational fields. The major theme of his work has been quantitative physiology, for example, the elucidation of how much vitamin D was necessary to produce the nutrient's canonical effect on calcium absorption, how much vitamin D is metabolized each day, how much vitamin D is synthesized in the skin and the degree to which skin pigmentation modifies that synthesis, and how much vitamin D is stored and the extent to which input levels modify that change. Dr. Heaney's national and international awards include the Frederic C. Bartter Award from the American Society for Bone and Mineral Research, 1994; the E.V. McCollum Award from the American Society for Clinical Nutrition, 2003; the Scientific Prize of the Institut Candià—France, 2003; the McCollum International Lectureship from the American Society of Nutritional Sciences, 2004; the Atwater Award from the U.S. Department of Agriculture's (USDA's) Agricultural Research Service, 2008; and the Legends of Osteoporosis Award from the National Osteoporosis Foundation, 2008. He received his M.D. from Creighton University School of Medicine.



**Michael F. Holick, Ph.D., M.D.**, is a professor of medicine, physiology, and biophysics; director of the General Clinical Research Unit; and director of the Bone Health Care Clinic and the Heliotherapy, Light, and Skin Research Center at Boston University Medical Center. He has made numerous contributions to the field of the biochemistry, physiology, metabolism, and photobiology of vitamin D for human nutrition. He determined the mechanism for how vitamin D is synthesized in the skin and demonstrated the effects of aging, obesity, latitude, seasonal change, sunscreen use, skin pigmentation, and clothing on this vital cutaneous process. Dr. Holick has established global recommendations advising sunlight exposure as an integral source of vitamin D. He also has helped increase awareness in the pediatric and medical communities regarding the vitamin D deficiency pandemic and its role in not only causing metabolic bone disease and osteoporosis in adults but also in increasing the risk of children and adults developing common deadly cancers, autoimmune diseases, and heart disease. Dr. Holick has organized and/or co-chaired several international symposia and is editor-in-chief of the *Journal for Clinical Laboratories and Laboratories Related to Blood Transfusion* and associate editor of *Dermato-Endocrinology*. He has authored more than 500 peer-reviewed publications and book chapters, written more than 250 review articles, and acted as editor and/or co-editor on 13 books. He received his Ph.D. in biochemistry and his M.D. and completed a research postdoctoral fellowship at the University of Wisconsin, Madison, and completed a residency in medicine at the Massachusetts General Hospital in Boston.



**Andrew Hoofnagle, M.D., Ph.D.**, is the head of the Division of Clinical Chemistry in the Department of Laboratory Medicine at the University of Washington. He also is the director of the Nutrition and Obesity Research Center Analytical Core and a member of the Accuracy-Based Committee of the College of American Pathologists. His clinical focus is on the analytical and pre-analytical factors that determine the quality of clinical chemistry measurements in the care of patients, and his laboratory develops mass spectrometric assays for the quantification of clinically important biomarkers. His research program centers around the use of mass spectrometry and other analytical chemistry techniques in the study of cancer and cardiovascular disease: (1) the importance of mass spectrometric assays in the follow-up of patients treated for differentiated thyroid cancer; (2) the role of vitamin D in cardiovascular disease, particularly in large clinical cohorts and in patients with chronic kidney disease; (3) the function of high-density lipoproteins in protecting the endothelium from atherosclerosis; and (4) calibration, standardization, and validation of targeted proteomic assays in pre-clinical research. He received his undergraduate education at Cornell University and his M.D. and Ph.D. from the University of Colorado. He completed a residency in clinical pathology at the University of Washington.



**Barnett S. Kramer, M.D., M.P.H.**, is the director of the Division of Cancer Prevention at the National Cancer Institute (NCI), the editor-in-chief of the Physician Data Query (PDQ) Screening and Prevention Editorial Board, and a member of the PDQ Treatment Editorial Board. He has extensive experience in primary cancer prevention studies as well as clinical screening trials of lung, ovarian, breast, and prostate cancers. He served as an investigator and was on the steering committee for two large cancer screening trials sponsored by the NCI: the Prostate, Lung, Colorectal, Ovarian (PLCO) Trial and the National Lung Screening Trial (NLST). His research interests also include the investigation of screening-detected cancers that are so indolent that they have little or no lethal potential for the person in whom they are detected (a phenomenon known as cancer overdiagnosis). He has a strong interest in weighing and reporting the strength of medical evidence and created a Medicine in the Media workshop to help working journalists develop methods of reporting medical evidence. Dr. Kramer often serves as a media contact for stories on cancer prevention, screening, cancer overdiagnosis, and the critical evaluation of the literature. He received his M.D. from the University of Maryland Medical School and his M.P.H. from the Johns Hopkins University Bloomberg School of Public Health.



**Michael LeFevre, M.D.**, is Future of Family Medicine Professor and vice chair of the Department of Family and Community Medicine at the University of Missouri (MU) School of Medicine and chair of the U.S. Preventive Services Task Force. An independent volunteer panel of 16 experts in prevention and primary care, the task force works to improve the health of all Americans by making evidence-based recommendations on clinical preventive services such as screenings, counseling services, and preventive medications. As medical director for the Department of Family Medicine, he has administrative oversight of practices in 6 locations with more than 110,000 annual visits. He teaches residents and medical students in the inpatient and outpatient settings and maintains an active practice across the full breadth of family medicine including inpatient work and, through 2012, obstetrics. He served as chief medical information officer for MU Health Care and directed the implementation of the electronic medical record across the system. Much of his academic effort has been in the area of evidence-based medicine and clinical policies. Dr. LeFevre has served on several key national committees, task forces, and panels, including the Eighth Joint National Conference on Prevention, Detection, and Treatment of Hypertension, sponsored by the National Institutes of Health to update recommendations for treatment of high blood pressure. He received his B.S.E.E., M.D., and M.S.P.H. from the University of Missouri.



**Susan T. Mayne, Ph.D., F.A.C.E.**, is C.-E.A. Winslow Professor of Epidemiology with tenure and chair of the Department of Chronic Disease Epidemiology at the Yale School of Public Health. She also is the associate director of the Yale Comprehensive Cancer Center, responsible for Population Sciences. She is a fellow of the American College of Epidemiology and of the Executive Leadership in Academic Medicine (ELAM) Program for Women. Her research emphasizes lifestyle determinants of human cancer risk, especially diet/nutritional factors. She has authored or co-authored more than 200 articles/book chapters and has served on several editorial boards, including the *Journal of Nutrition*; *Cancer Epidemiology, Biomarkers and Prevention*; *Cancer Prevention Research*; *Annual Review of Nutrition*; and *Nature Reviews Clinical Oncology*. In addition to her research, she does extensive service work such as serving on several National Academy of Sciences committees including the Committee on Dietary Reference Intakes for Vitamin D and Calcium, serving two terms on the U.S. Food and Nutrition Board, and serving a 5-year term on the Board of Scientific Counselors for the U.S. National Cancer Institute. She has received national recognition for excellence in research, service, and education/mentoring/training. She received her B.A. in chemistry from the University of Colorado and her Ph.D. in nutritional biochemistry, with minors in biochemistry and toxicology, from Cornell University.



**Peter Millard, M.D., Ph.D.**, is a family physician and epidemiologist. He practices at Seaport Community Health Center and is an adjunct professor of public health at the University of New England. After he finished his clinical training, he worked for 3 years in a hospital in rural Zimbabwe, where he became interested in public health. He then worked for the Centers for Disease Control and Prevention (CDC) in their Epidemic Intelligence Service. Subsequently, he taught family medicine at Eastern Maine Medical Center and taught epidemiology at Husson College and the University of Maine. He recently returned from 5 years of teaching epidemiology, running the medical school teaching clinic, and doing research at the Catholic University of Mozambique in Beira. He received his M.D. from the University of Vermont and his Ph.D. in epidemiology from the University of North Carolina.





**Victor M. Montori, M.D.**, is a professor of medicine at the Mayo Clinic and works in the Mayo Clinic's Knowledge and Evaluation Research (KER) Unit, to advance person-centered care for patients with diabetes and other chronic conditions. Dr. Montori is interested in how knowledge is produced, disseminated and taken up in practice and how this leads to optimal health care delivery and patient outcomes. He also is the director of Community Engagement in Research at the Mayo Center for Clinical and Translational Science and a member of the National Advisory Council of the Agency for Healthcare Research and Quality and the Editorial Advisory Board for the BMJ. Dr. Montori is the author of more than 400 peer-reviewed publications and editor of 2 books of evidence-based endocrinology. In 2014, he was identified as one of the 320 researchers in clinical medicine worldwide with more highly cited papers published in the past decade. He is a recognized expert in evidence-based medicine and shared decision making and developer of the concept of minimally disruptive medicine. He received his M.D. from the Universidad Peruana Cayetano Heredia.



**Mary P. Nix, M.S., P.M.P.**, has both clinical and research experience. In the clinical world, she was a managerial level medical technologist at major academic medical centers. She transitioned to health services research, applying the analytic skills used for success in clinical pathology to systematic evidence review for the primary purpose of evidence-based clinical practice guideline abstraction. She has certifications in biomedical informatics from the National Library of Medicine (NLM) and project management from the Project Management Institute. Ms. Nix has combined all of this to lead multi-million dollar, national projects for the Agency for Healthcare Research and Quality's (AHRQ's) Center for Evidence and Practice Improvement (previously, Center for Outcomes and Evidence); these are projects that use data meeting explicit criteria, informatics, technology, and design to disseminate evidence-based clinical practice guidelines, health care quality measures, and service and policy innovations and affect their implementation by practitioners, providers, purchasers, and policy makers. As inaugural co-chair of the Department of Health and Human Services (HHS) Innovation Council, Mary led the establishment of an enterprise-wide innovations awards program. Participating in HHS and Centers for Disease Control and Prevention (CDC) groups related to evidence-based practice and quality measurement, Mary's knowledge and skills have influenced decisions of others. Her passion is innovation and she seeks to foster its application in her work and life.



**Clifford J. Rosen, M.D.**, is the director of Clinical and Translational Research and a senior scientist at Maine Medical Center's Research Institute, a professor of medicine at Tufts University School of Medicine, the editor-in-chief of *The Primer in Metabolic Bone Diseases*, and the associate editor for *New England Journal of Medicine*. He is a member of the Food and Drug Administration (FDA) Advisory Panel on Endocrinologic and Metabolic Drugs and a former chairperson of that committee and is the current chair of the Clinical Trials Review Panel for the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS). Dr. Rosen's research interests include the genetic regulation of insulin-like growth factor 1 (IGF-I), skeletal metabolism and stem cell fate, parathyroid hormone (PTH) as an anabolic therapy, and the relationship between marrow adipogenesis and osteoblastogenesis. He has overseen numerous phase II and III clinical trials, funded both privately and through the National Institutes of Health (NIH). He also has served on two Institute of Medicine committees and was chair of the NIH Review Panel for Skeletal Biology and Bone Diseases. He was a previous member of the NIAMS Scientific Advisory Board and served as president of the American Society for Bone and Mineral Research. Dr. Rosen was the first editor-in-chief of the *Journal of Clinical Densitometry*, and his publications include more than 369 peer-reviewed manuscripts, covering both clinical and basic bone biology. He received his M.D. from the Upstate Medical Center (SUNY-Syracuse).



**Sylvia B. Rowe** is president of SR Strategy, pursuing communications and issues management consulting on a broad range of health, nutrition, food safety, and risk issues. She also is an adjunct professor at the University of Massachusetts Amherst and Tufts Friedman School of Nutrition Science and Policy. Ms. Rowe is a member of the Institute of Medicine's (IOM's) Food Forum and IOM's Obesity Roundtable and is a contributing editor of *Nutrition Today*. She also is a member of the International Women's Leadership Forum and the National Press Club. Previously she served as president and chief executive officer of the International Food Information Council (IFIC) and IFIC Foundation in Washington, DC, nonprofit organizations that communicate science-based information on food safety and nutrition issues to health professionals, journalists, government officials, educators, and consumers. She has served on many boards and advisory committees, including the American Heart Association; Obesity Society; Food Allergy and Anaphylaxis Network; American Society for Nutrition; Washington, DC, Mayor's Commission on Food, Nutrition, and Health; University of Massachusetts Amherst Food Science Policy Program; Tufts University School of Nutrition Science and Policy Graduate Program in Nutrition Communication; University of Rochester Medical Center; Society for Nutrition Education Foundation; and Maryland Title IX Commission. Ms. Rowe received her B.A. from Wellesley College and her M.A. from Harvard University, both with honors.



**J. Sanford Schwartz, M.D.**, is Leon Hess Professor of Medicine and Health Management and Economics at the School of Medicine and The Wharton School, senior fellow at the Leonard Davis Institute of Health Policy and Economics, and senior scholar at the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania. He is a clinically oriented health services researcher focusing on assessment of medical interventions and practices (with an emphasis on cost-quality tradeoffs and health care disparities), medical decision making, and the adoption and diffusion of medical innovation. Dr. Schwartz has served as advisor and consultant to a wide range of public and private sector groups, including federal and international agencies; nonprofit groups; pharmaceutical, insurance, and managed care organizations; and several state health departments and regulatory agencies. He was founding director of the American College of Physicians' Clinical Efficacy Assessment Project (the medical profession's first evidence-based guideline program), president of the American Federation of Clinical Research and the Society for Medical Decision Making, founding editor of the American Journal of Managed Care, associate editor of the Journal of General Internal Medicine, and on the editorial board of Medical Decision Making. He received his M.D. from the University of Pennsylvania.



**Sue Shapses, Ph.D.**, is a professor in the Department of Nutritional Sciences and the acting chair of Exercise Sciences and Sport Studies at Rutgers University. She serves as the team leader of the N.J. Obesity Group and served as chair of the N.J. Interagency Council on Osteoporosis. The major focus in her laboratory is to determine how obesity and endocrine factors affect body weight and contribute to the risk of osteoporosis. Evidence shows that subjects who diet and lose weight also lose bone. Her goal is to determine mechanisms that regulate the rate of bone turnover and bone loss during caloric restriction and the role of specific nutrients such as vitamin D, protein, and calcium. Calcium absorption, using stable isotopes and mass spectrometry, is examined during moderate and severe weight reduction. In addition to clinical trials, she uses rodent models to better understand how diet and environmental estrogens regulate bone microstructural and biomechanical properties. She has studied how glycemic control and hormones regulate bone turnover in insulin-dependent patients with diabetes. She currently is studying how three doses of vitamin D affect bone quality, insulin resistance, and cognition. In addition, the influence of dietary lipids on intestinal calcium absorption and the endocrine regulation of bone and adiposity are ongoing interests in her laboratory. Dr. Shapses received her M.S. and Ph.D. from Columbia University followed by postdoctoral training at Albert Einstein College of Medicine.



**Bonny Specker, Ph.D.**, is the director and chair of the E.A. Martin Program in Human Nutrition at South Dakota State University (SDSU). Previously she was a professor of pediatrics in the Division of Neonatology at the University of Cincinnati/Cincinnati Children's Hospital Medical Center. Her research areas are vitamin D and mineral metabolism in pregnancy and lactation, pediatric nutrition, and infant growth and body composition. She has been actively involved in numerous National Institutes of Health (NIH) training and research grants as well as program project grants on perinatal and neonatal outcomes. She has been the principal investigator (PI) on NIH and United States Department of Agriculture (USDA) researcher-initiated grants as well as the PI of the SDSU Vanguard Center of the National Children's Study. She has published extensively in the area of bone, calcium, and vitamin D metabolism, with more than 180 peer-reviewed papers and book chapters. Dr. Specker is a member of the Society for Pediatric Research, American Society for Nutrition, and the American Society for Bone and Mineral Research and serves on the editorial board for *Nutrition Today* and the *Journal of Musculoskeletal and Neuronal Interactions*. She received her M.S. in epidemiology and biostatistics and her Ph.D. in epidemiology from the University of Cincinnati College of Medicine.



**Valerie Tarasuk, Ph.D.**, is a professor in the Department of Nutritional Sciences at the University of Toronto. Much of her research is focused on food insecurity, elucidating the scope and nature of this problem in Canada and examining policy and programmatic responses. Paralleling this work is an ongoing research interest in Canadian food policy and population health. Dr. Tarasuk's recent work in this area includes a series of studies to examine the population health implications of voluntary (manufacturer-driven) food fortification, a broad-based study of nutrition-related food marketing in Canadian supermarkets, and an examination of nutrition inequities in Canada.



**Christine Lewis Taylor, Ph.D.**, is a consultant at the National Institutes of Health's (NIH's) Office of Dietary Supplements (ODS). She has held a number of nutrition science, policy, and management positions in Washington, DC, and overseas, including scholar in the Institute of Medicine at The National Academies in Washington, DC. She was the study director for four projects including an evaluation of the process for setting dietary reference intakes, consensus recommendations for the standards for school lunch, identification of strategies for reducing sodium in the diet, and an evaluation of the recommended intakes for vitamin D and calcium. Prior to that, she worked in the foods area for more than 20 years at the U.S. Food and Drug Administration (FDA). She served as the director of FDA's Office of Nutritional Products, Labeling and Dietary Supplements. Dr. Taylor has led international efforts to integrate nutrition science into public health policy. In 2004 she was appointed senior advisor to the Commissioner of Food and Drugs on International Nutrition Policy and she spent 2 years with the



World Health Organization in Geneva, Switzerland. She also has served as a visiting expert for the United Nations' Food and Agriculture Organization and headed the U.S. delegation to the Codex Committee on Food Labeling, an international organization responsible for setting food labeling standards. She received her Ph.D. in nutrition science from Penn State University.



**Ravi Thadhani, M.D., M.P.H.**, is a professor of Medicine at Harvard Medical School and chief of the Division of Nephrology at Massachusetts General Hospital. He has two major areas of interest: medical complications of pregnancy and dialysis mortality. His focus is to bring novel diagnostics and therapies to patients with kidney disease in hopes of improving outcomes. Regarding kidney disease, he is focused on the cardiovascular and infectious consequences of defective vitamin D signaling in subjects with renal failure. His team has performed several hypothesis-generating observational studies suggesting that therapy with activated vitamin D sterols is associated with improved survival among patients with renal failure. He has collaborated with basic scientists to move these hypotheses forward and is currently performing randomized trials to formally test these hypotheses in humans. Dr. Thadhani has mentored several fellows and junior faculty members, all of whom have had a strong record of publications and grant support and many of whom are on faculty at leading institutions around the country. He has served as a reviewer for and has published in several journals including *New Engl J Med*, *Lancet*, *J Am Soc Nephrol*, *Kidney Int*, and *J Clin Endocrinol Metab*. In 2008 he was inducted into the American Society of Clinical Investigation and the American Epidemiology Society. He received his M.D. from the University of Pennsylvania School of Medicine.



**Ian Young** is a professor of medicine and the director of the Centre for Public Health at Queen's University Belfast. In addition, he is the associate medical director of Research and Development at Belfast Health and Social Care Trust and the director of the Northern Ireland Clinical Research Network. He is a member of the U.K. Scientific Advisory Committee on Nutrition and chairs the Department of Health, Social Services and Public Safety (DHSSPS) Obesity Prevention Steering Group. He also is the chair of the Scientific Division of the International Federation for Clinical Chemistry and Laboratory Medicine. Professor Young's main clinical and research interests are in nutrition and its effects on disease risk, particularly in relation to the prevention of cardiovascular disease. He is an author of more than 300 published research papers and is on the editorial boards of a number of leading international journals.