

SPEAKER BIOGRAPHIES



Martin J. Blaser, MD

Martin J. Blaser, M.D., is the Muriel and George Singer Professor of Medicine, Professor of Microbiology, and Director of the Human Microbiome Program at the NYU School of Medicine. He served as Chair of the Department of Medicine at NYU from 2000-2012. A physician and microbiologist, Dr. Blaser is interested in understanding the relationships we have with our persistently colonizing bacteria. His work over the past 30 years largely focused on *Campylobacter* species and *Helicobacter pylori*, which are important as pathogens, and as model systems for understanding interactions of residential bacteria with their human hosts. Over the last decade, he has been actively studying the relationship of the human microbiome to health and such important diseases as asthma, obesity, diabetes, and allergies. Over the course of his career, Dr. Blaser has served as the advisor for a large number of students, post-doctoral fellows, and junior faculty, and he has been actively involved in national scientific and professional organizations. He served

as President of the Infectious Diseases Society of America, Chair of the Board of Scientific Counselors of the National Cancer Institute, and Chair of the Advisory Board for Clinical Research of the National Institutes of Health. He currently serves on the Scientific Advisory Board of the Doris Duke Charitable Foundation. He was elected to the Institute of Medicine and the American Academy for Arts and Sciences. He holds 24 U.S. patents relating to his research, and has authored over 500 original articles.

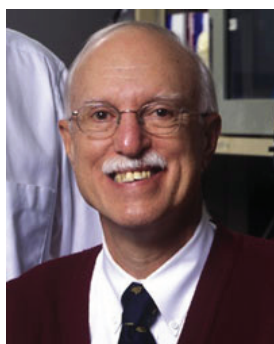


Jonathan Braun, MD, PhD

Jonathan Braun, M.D., Ph.D., is a physician-researcher devoted to the roles of the immune system in resistance and susceptibility to inflammatory bowel disease and cancer. He is a professor at the David Geffen School of Medicine at UCLA, and Chair of the Department of Pathology and Laboratory Medicine, a diverse clinical and academic enterprise including over 100 faculty, 100 trainees, and 1000 staff. His recent national service includes Chair of the National Scientific Advisory Committee of the Crohn's and Colitis Foundation; President of the Clinical Immunology Society; membership on several editorial boards and NIH advisory panels; and, co-founder and President of the Federation of Clinical Immunology Societies, a leading international organization for translational immunology.

A native of Cleveland, Ohio, Dr. Braun was raised in Los Angeles, where he studied violin in the community and modern western history in the public schools, and continues his interests in musical performance, poetry, and endurance running. An undergraduate at Stanford University, he received his bachelor of science in chemistry and biology in 1975. He pursued medical studies and doctoral research at Harvard Medical School and in the laboratory of Emil Unanue; he received his M.D.-Ph.D. in 1981. After residency in Pathology at Brigham and Women's Hospital, and a postdoctoral fellowship with David Baltimore at the Whitehead Institute, he joined the faculty at the UCLA School of Medicine in 1985.

Dr. Braun's research centers on the mechanisms of microbial-immune commensalism in the intestine, and the integration of multi'omic and genetic analysis to advance the diagnosis and treatment of inflammatory bowel disease. His group is also devoted to new strategies in functional immune assessment, including gene targeting and positron-emission tomography for real-time imaging of immune-mediated inflammation. His work on the biochemistry and function of the tetraspan protein EMP-2, and its roles in gynecologic neoplasia have led to biologic therapies now under development. He has published more than 140 primary research studies, 14 issued patents, and co-founder of three biotechnology/pharma companies (www.prometheus-labs.com, www.santarus.com, and Paganini Biopharma).



Richard L. Guerrant, MD

Dr. Guerrant has worked in the Congo, Bangladesh, and Brazil and has his B.S. from Davidson College, his M.D. from the University of Virginia, and his residency in medicine at the Harvard Medical Service/Boston City Hospital. He has held fellowships in Infectious Diseases at NIH, Johns Hopkins, and UVa. Dr. Guerrant edits the major textbook on Tropical Infectious Diseases, among 5 other books, and is author of over 500 scientific articles and reviews. His work is focused on the recognition, diagnosis, pathogenesis, impact, and treatment of enteric infections. With colleagues in Brazil, Guerrant's research documents the effects of and potential solutions for diarrhea and enteric parasitic infections on the long-term physical and cognitive development in malnourished children. As past president of the American Society of Tropical Medicine and Hygiene and recipient of its Walter Reed Medal, Guerrant is an outspoken voice for the urgency of global health. He founded one of the nation's first Trans-University Centers for Global Health at UVa and is recipient

of the Mentor Award of IDSA (2009), of the University's Distinguished Scientist Award (2009) and of its highest honor, the Thomas Jefferson Award in 2010, was Outstanding Scientist of Virginia in 2012 and awarded the Maxwell Finland Award by the National Foundation for Infectious Diseases in 2014. Elected to the Institute of Medicine of the National Academy of Sciences, Guerrant chaired its Board on Global Health from 2007-2013.



Stanley L. Hazen, MD, PhD

Dr. Hazen is an internationally recognized physician investigator whose research program truly spans from bench to bedside, bringing basic chemical biology discoveries to both novel diagnostic and therapeutic interventions. He has been with Cleveland Clinic since 1997, where he currently serves as the Chair of the Department of Cellular & Molecular Medicine, the Vice Chair of Translational Research at the Lerner Research Institute, and the Section Head of Preventive Cardiology & Cardiac Rehabilitation within the Heart and Vascular Institute.

Dr. Hazen has published over 250 peer-reviewed articles, invited reviews, and book chapters in the fields of atherosclerosis, inflammation chemistry, and cardiovascular disease. He has received numerous honors and awards for his research, including election into both the ASCI and the AAP. He is an elected Fellow of the American Association for the Advancement of Science (AAAS). He also currently holds the Leonard Krieger

Chair of Preventive Cardiology.

His recent research interests have included discovery of mechanistic links between intestinal microbiota and cardiovascular disease pathogenesis—which is the topic of his presentation today.



Patricia L. Hibberd, MD, PhD

Patricia Hibberd, MD, PhD is Chief of the Division of Global Health in the Department of Pediatrics at Massachusetts General Hospital and Professor of Pediatrics at Harvard Medical School. As a practicing infectious disease physician and researcher, she is studying ways in which the gastrointestinal and respiratory microbiota may be manipulated by probiotics and other therapies to reduce the risk of infection in children and the elderly (extremes of life). She has published over 120 papers in the field of infectious diseases with a recent focus on the microbiome, probiotics, and the relationship with infection. Dr. Hibberd also has extensive experience in obtaining investigator initiated INDs to support NIH grant funded research and currently holds two INDs—one to study probiotics in children with Cystic Fibrosis and one to study probiotics as an immune adjuvant to the influenza vaccine in the elderly.



Peter R. Holt, MD

Dr. Peter Holt was born in Berlin, Germany, emigrated to the United Kingdom where he received his medical degree at the University of London. After a fellowship in gastroenterology at the Massachusetts General Hospital (Dr. Kurt Isselbacher) he became chief of gastroenterology at St. Luke's Hospital, and then the combined St. Luke's-Roosevelt Hospital Center. He rose to the rank of Professor of Medicine at Columbia University in 1975 and now is Emeritus Professor at that university. He also holds a position of Adjunct Professor at Weill Cornell Medical College.

Dr. Holt's research interest has been centered on the function of epithelial cells of the gastrointestinal tract. His early work focused on mechanisms of lipid and bile salt absorption, and cellular metabolism and he was the first to clarify the physiology of the intestinal absorption of medium chain triglycerides and their application in the management of several gastrointestinal diseases. Later studies showing that colonic

changes in aging resembled those found in the precancerous bowel led to research of biomarkers of risk and potential chemopreventive approaches for colorectal cancer risk reduction. Much of this focus was on effects of calcium and vitamin D (as well as folic acid) on the colon and their mechanism of action.

For the past decade, he has been a Senior Research Scientist at The Rockefeller University using its unique nutritional and metabolic facilities to conduct translational human studies in cancer prevention. In collaboration with investigators at Weill Cornell and Memorial Sloan Kettering Cancer Center, he has been studying how obesity increases the risk and the recurrence of colorectal and breast cancers. These studies focused on the role of inflammation and the potential preventive effects of anti-inflammatory approaches upon adipose tissues, skin, systemic metabolism and intestinal microbiota in obesity.



Elaine Y. Hsiao, PhD

Elaine Hsiao is a Research Assistant Professor in the Division of Biology and Biological Engineering at the California Institute of Technology, where she leads a research group studying interactions between the microbiota and nervous system. Her laboratory is uncovering mechanisms by which microbes modulate host neuroactive molecules, with aims to develop microbe-based therapeutics for nervous system disorders. Elaine received her Ph.D. in Neurobiology from Caltech, studying how immune activation impacts brain and behavior in mouse models of neurodevelopmental disorders. She received her B.S. in Microbiology, Immunology and Molecular Genetics from UCLA. Her work in the area of microbiota-gut-brain interactions has led to several honors, including the NIH Director's Early Independence award and recognition as one of Forbes 30 Under 30 in Science and Healthcare.



Erika Isolauri, MD, D. Med. Sc

Dr Isolauri is Professor of Pediatrics at the University of Turku, and Chief Physician of Department of Paediatrics at Turku University Hospital.

She has received Academic Honours from University of Tampere, Finland; the John Harris Prize from European Society for Paediatric Gastroenterology and Nutrition; the Niilo Hallman price from the Foundation for Paediatric Research, Finland; an award from Institut Candia 1993 (France) and International Award for Modern Nutrition, Swiss Central Nutrition Association. She has given the Marvin L. Dixon Memorial Lecture at Harvard Combined Program in Pediatric GI&Nutrition Unit, Children's Hospital, Massachusetts General Hospital, USA, the Martin Rosenhead Lecture (The Foundation of Allergy Research), Royal Society of Medicine, London, United Kingdom; the Nanna Svartz Lecture, Karolinska Hospital, Stockholm, Sweden; and the Tissier Price Lecture at the Japan Bifidus Foundation. In 2010 she received the

The IDF Elie Metchnikoff Prize 2010 in the category Nutrition and Health (together with Professor Seppo Salminen).

She has supervised 22 doctoral theses (PhD) and acted as Opponent at the University of Helsinki and the University of Tampere, Finland; Université Paris XI, France, Karolinska Institutet, Sweden and Wageningen University, The Netherlands.

Her Major Research Interests are: Gastroenterology, food allergy; Nutrition and Immunology. She is the leader of the Nutrition, Allergy, Mucosal Immunology and Intestinal Microbiota (NAMI) programme. Author of 403 scientific publications, she has written 240 original publications, 101 Review articles/ Chapters in books and 62 Scientific articles in Finnish. In addition she has 140 Invited Lectures in International Academic Meetings.



Ciarán P. Kelly, MD

Ciarán P Kelly, MD, is Professor of Medicine at Harvard Medical School, Director of Gastroenterology Training and Medical Director of the Celiac Center at Beth Israel Deaconess Medical Center, Boston, Massachusetts. Dr. Kelly earned his medical degree from Trinity College in Dublin, Ireland where he was a Foundation Scholar and recipient of numerous academic awards. Dr Kelly has also received post-graduate clinical and research awards from the Crohn's and Colitis Foundation of America, the American Gastroenterological Association and the National Institutes of Health. He is an American Gastroenterology Association Fellow and a Fellow of the American College of Gastroenterology.

Dr Kelly has longstanding clinical and research interests in intestinal infection and inflammation. He has been involved in patient care and research in Clostridium difficile infection for more than 20 years and leads an NIH-funded research program on the immune response to C. difficile infection and on potential C. difficile vaccines and other immune-based treatments. He has studied the effects and mechanisms of action of probiotics for many years particularly as they pertain to antibiotic-associated diarrhea and C. difficile infection. His interest in the pathophysiology, diagnosis and management of celiac disease is also longstanding and, as Medical Director of the Celiac Center at BIDMC, which he founded in 2004, he heads clinical, research and educational programs in celiac disease.

Dr Kelly has served as a committee member of the NIH, Center for Scientific Review as well as FDA, CDC and NIH committees on celiac disease and C. difficile infection. Dr Kelly is the author of numerous clinical and basic research book chapters, invited reviews, and more than 100 peer-reviewed publications appearing in such journals as Gastroenterology, Journal of Biological Chemistry, Journal of Clinical Investigation, New England Journal of Medicine and Lancet.



Samuel Klein, MD

Samuel Klein M.D. is the William H. Danforth Professor of Medicine, Director of the Center for Human Nutrition, Director of the Center for Applied Research Sciences, Chief of the Division of Geriatrics and Nutritional Sciences, and Medical Director of the Weight Management Program at Washington University School of Medicine in St. Louis, Missouri. Dr. Klein received an MD degree from Temple University Medical School in 1979 and an MS Degree in Nutritional Biochemistry and Metabolism from the Massachusetts Institute of Technology in 1984. He completed residency training in Internal Medicine and a Clinical Nutrition fellowship at University Hospital in Boston, a National Institutes of Health Nutrition and Metabolism Research fellowship at Harvard Medical School, and a Gastroenterology fellowship at The Mt. Sinai Hospital in New York. He is board certified in Internal Medicine, Gastroenterology, and Nutrition.

Dr. Klein is past-president of the North American Association for the Study of Obesity and the American Society for Clinical Nutrition, and inaugural chair of the Integrative Physiology of Obesity and Diabetes NIH study section. He was elected to the American Society for Clinical Investigation in 1996 and to the American Association of Physicians in 2008. Dr. Klein has had consistent R01 funding from the NIH since 1990, and has published more than 350 papers in nutrition, metabolism, and obesity. He has received numerous awards for his research, including the American Gastroenterological Association (AGA) Miles and Shirley Fiterman Foundation Award in Nutrition and the AGA Masters Award for Outstanding Achievement in Basic or Clinical Research in Digestive Sciences, the Daniel P. Schuster Distinguished Investigator Award in Clinical and Translational Science from Washington University School of Medicine, The Academy of Science-St. Louis Award for Outstanding Achievement in Science, and The Obesity Society TOPS Research Achievement Award.

Dr. Klein's research activities are focused on understanding the mechanisms responsible for metabolic dysfunction associated with obesity and the therapeutic effects of weight loss.



Omry Koren, PhD

Omry Koren received his M.Sc. and Ph.D. from Tel Aviv University where he was trained in the field of microbial ecology at the laboratory of Prof. Eugene Rosenberg. At that time he was part of the innovative paper "The Coral Probiotic Hypothesis" which has now been expanded to the "Hologenome Theory of Evolution". Dr. Koren then moved to Cornell University to postdoc in the lab of Dr. Ruth Ley. During the postdoc, he was part of the NIH Human Microbiome Project and also led the first study to demonstrate that pregnancy is associated with a profound alteration of the gut microbiota and host metabolism.

Recently, Omry returned to Israel and joined the new Faculty of Medicine at Bar-Ilan University as an Assistant Professor and received the prestigious Marie Curie Career Integration Grant. Omry continues to study the human microbiome and specifically the female microbiome. His lab is very interested in the interplay between the endocrine system and the microbiota.



Emeran A. Mayer, MD

Dr. Emeran Mayer is a Professor in the Departments of Medicine, Physiology and Psychiatry at the David Geffen School of Medicine at UCLA, Executive Director of the Oppenheimer Family Center for Neurobiology of Stress, and Co-director of the CURE: Digestive Diseases Research Center at UCLA.

Dr. Mayer has a career long interest in clinical and neurobiological aspects of how the digestive system and the nervous system interact in health and disease, and his work has been continuously supported by several NIH grants. He has published over 300 peer reviewed articles (average H index 76), including 90 chapters and reviews, co-edited four books, and organized several interdisciplinary symposia in the area of visceral pain and mind body interactions. He has made seminal contributions to the characterization of physiologic alterations in patients with various chronic pain disorders, such as irritable bowel syndrome (IBS), as well as on pharmacological and non-pharmacological treatment approaches to this conditions. He is principal

investigator on several grants from the National Institutes of Health including a NIDDK/ORWH funded center grant on sex-related differences in brain gut interactions, a NIDDK funded consortium grant (Multidisciplinary Approaches to Pelvic Pain, MAPP) in which he also heads a multisite neuroimaging core, and on a NIDDK funded RO1 grant on the role of the immune system and the gut microbiome on brain signatures. His research efforts during the past few years have focused on several new areas of brain gut interactions, in particular on the role of the gut microbiota and their metabolites in influencing brain structure and function, and associated behavior, and on the role of food addiction in obesity, necrotizing enterocolitis.



David A. Mills, PhD

David Mills is a Professor in the Departments of Viticulture & Enology and Food Science & Technology at the University of California at Davis. Dr. Mills studies the molecular biology and ecology of bacteria that play an active role in gut health or fermented foods and beverages. In the last 20 years Dr. Mills has mentored over 30 graduate students and postdocs and published more than 100 papers, including seminal work on lactic acid bacterial and bifidobacterial genomics. At UC Davis, Dr. Mills co-founded the Milk Bioactives Program—a successful multidisciplinary effort to define, investigate and translate the beneficial aspects of human milk and its role in human health. Dr. Mills has served as a Waksman Foundation Lecturer for the American Society for Microbiology and currently serves as an associate editor for the journal Microbiology. In 2010 Dr. Mills was awarded the Cargill Flavor Systems Specialties Award from the American Dairy Science Association and in 2012 he was named the Peter J. Shields Chair in Dairy Food Science. Dr. Mills also serves

on the Science/Research Advisory Boards of several food and health-focused companies and his research has helped launch two start-up companies.



Josef Neu, MD

Dr. Josef Neu, MD, did his medical school training at the University of Wisconsin, was a pediatric resident at Johns Hopkins and a postdoctoral neonatology fellow at Stanford University. He came to the University of Florida as an associate professor in 1984 to continue his research in developmental gastroenterology and neonatal biochemical nutrition. In 1987 he pursued additional research training at the University of Bern (Switzerland) on basic mechanisms affecting intracellular processing of lactase in the intestinal epithelium. He is internationally recognized for his research in developmental gastroenterology and nutrition and has most recently focused his research efforts on the developing intestinal microbiome and host interactions. He is currently NIH RO-1 funded to study the developing microbiome and to discover biomarkers in babies at risk for developing necrotizing enterocolitis. This involves a multicenter evaluation of intestinal microbiota using novel non-culture based technologies. Another project involves evaluation of a novel dipeptide on

the prevention of retinopathy of prematurity and oxygen induced injury to the intestine, lung and brain. He has several patents and patents pending in the area of nutritional supplementation for low birthweight infants.

Dr. Neu maintains an active interest in residency and fellowship training. He has served as director of the neonatology fellowship training program at UF since 1986 and on the Council for the Organization of Neonatal Training Program Directors (ONTPD) for the past three years and is past Chair of the ONTPD. He is on the editorial board of 7 journals, has served on numerous NIH study sections and is also active in international education; as a member of International Postgraduate Organization for Knowledge Transfer Research and Teaching Excellent Students (IPOKRATES), he has organized seminars in neonatal gastroenterology and nutrition in Turkey, Italy, Poland, Georgia, Latvia, Slovenia, Portugal, Mexico United Arab Emirates, and Brazil. He has also lectured in various countries in Europe, China, Japan, Canada, United Arab Emirates, Egypt, Saudi Arabia, Kuwait, and Venezuela. He was the first US pediatrician involved as an external examiner for medical students at the Chinese University of Hong Kong.

Dr. Neu has been involved in the mentorship of over 20 postdoctoral M.D. neonatology fellows, a pediatric gastroenterology fellow, approximately 15 visiting international scholars, 2 Ph.D. postdoctoral fellows, over 20 undergraduate independent study students (the majority of whom have gone on to medical, veterinary or graduate school in the sciences). He has also mentored 15 high school students in his laboratory.



Max Nieuwdorp, MD, PhD

After a residency in Internal Medicine and fellowship in Endocrinology at the AMC-UVA and a postdoctoral fellowship on glycobiology at UC San Diego (Professor Jeff Esko, Department of Cellular and Molecular Medicine), Dr Nieuwdorp is currently working as internist-endocrinologist and head of the department of Experimental Vascular Medicine. He initiated a translational research group (currently 10 PhD students, 1 postdoctoral fellow, 1 technician) focusing on translational research aimed at dissecting the causal role of (small) intestinal bacterial strains to reverse insulin resistance, adipose tissue inflammation and cardiovascular disease.



Paul W. O'Toole, PhD

Following research and academic positions in Sweden, Canada, New Zealand and the US, Paul O'Toole is now Professor of Microbial Genomics at University College Cork, Ireland. His main research focus is on the genomics of gastrointestinal bacteria in humans with emphasis on commensal species, and their host interaction mechanisms. In recent years he has co-ordinated and participated in several major projects that examine the composition and function of the gut microbiota, its reaction to habitual diet, and its relationship to health, functional gastrointestinal disorders, and ageing. The ultimate aim of these investigations is to develop novel therapeutics, foods and food ingredients to programme the intestinal microbiota towards promoting health. Research in his lab is supported by Science Foundation Ireland, the Dept. Agriculture Fisheries and Marine, the European Union (FP7) and the US NIH. He has published over 150 peer-reviewed articles. He co-originates the ELDERMET project (eldermet.ucc.ie) investigating diet-microbiota-health

interactions in 500 subjects over 65 years of age. He is also a principal Investigator in the Alimentary Pharmabiotic Centre in Cork (apc.ucc.ie), where he leads the programme on lactobacillus genomics and host response.



David A. Relman, MD

David A. Relman, M.D., is the Thomas C. and Joan M. Merigan Professor in the Departments of Medicine, and of Microbiology and Immunology at Stanford University, and Chief of Infectious Diseases at the Veterans Affairs Palo Alto Health Care System in Palo Alto, California. He is also Co-Director of the Center for International Security and Cooperation and Senior Fellow at the Freeman Spogli Institute for International Studies at Stanford University.

Dr. Relman's research focus is the human indigenous microbiota, and in particular, the nature and mechanisms of variation in patterns of microbial diversity and function. Key issues addressed by this research include microbial community assembly, stability and resilience. This work relies on phylogenetic, metagenomics, and metabolomics compositional analyses of microbial communities and the host, ecological theory, as well as multi-table approaches for data integration. During the past few decades,

he has also spearheaded the development of new strategies for identifying previously-unrecognized microbial agents of disease. These efforts have revealed novel pathogens and commensals. Previous research has also included studies of mechanism of bacterial pathogenesis. In addition to this research program, he has served as an advisor to a number of agencies and departments within the U.S. Government on matters pertaining to emerging infectious diseases, human-microbe interactions, biotechnology, and biosecurity. He co-chaired a widely-cited 2006 study by the National Academies of Sciences (NAS) on "Globalization, Biosecurity, and the Future of the Life Sciences", and served as vice-chair of a 2011 National Academies study of the science underlying the FBI investigation of the 2001 anthrax mailings. He is Chair of the Forum on Microbial Threats at the Institute of Medicine (NAS) (2007-), and served as President of the Infectious Diseases Society of America (2012-2013).

Dr. Relman received an S.B. (Biology) from MIT (1977), M.D. (magna cum laude) from Harvard Medical School (1982), completed his clinical training in internal medicine and infectious diseases at Massachusetts General Hospital, served as a postdoctoral fellow in microbiology at Stanford University, and joined the faculty at Stanford in 1994. He received an NIH Director's Pioneer Award in 2006 and an NIH Transformative Research Award in 2013. He was elected a Fellow of the American Academy of Microbiology in 2003, a Fellow of the American Association for Advancement of Science in 2010, and a Member of the Institute of Medicine in 2011.



Mary Ellen Sanders, PhD

Mary Ellen Sanders is consultant in the area of probiotic microbiology. She works with food and supplement companies to develop new probiotic products, provides technical support for enhancing existing probiotic product lines and offers perspective on paths to scientific substantiation of probiotic product label claims. Through numerous written, oral and video pieces, including a website, www.usprobiotics.org, she strives to provide objective, evidence-based information on probiotics for consumers and professionals. She has published on efficacy substantiation, microbiology and regulatory issues pertaining to probiotics, coordinated or collaborated on clinical studies to validate probiotic safety and efficacy, served on GRAS determination panels, participated in the working group convened by the FAO/WHO that developed guidelines for probiotics, and served on the World Gastroenterology Organisation Guidelines Committee preparing guidelines for the use of probiotics and prebiotics for gastroenterologists. Dr. Sanders has a volunteer appointment

as a Clinical Instructor in the Department of Family Medicine, University of Colorado at Denver. Dr. Sanders has published over 100 peer-reviewed papers, mostly in the area of probiotics.

Dr. Sanders received her B.S. in Food Science at University of California – Davis, and her M.S. and Ph.D. in Food Science with an emphasis in microbiology at North Carolina State University in Raleigh. From 2002-2006, Dr. Sanders served as the founding president of the International Scientific Association for Probiotics and Prebiotics (ISAPP) and is currently the organization's executive director. This international, non-profit association of academic and industrial scientists is dedicated to advancing the science of probiotics and prebiotics (www.isapp.net).



R. Balfour Sartor, MD

R. Balfour Sartor, M.D., Distinguished Professor of Medicine, Microbiology and Immunology; Director of the UNC Multidisciplinary IBD Center; and a CCFA Chief Medical Advisor, is a board certified gastroenterologist specializing in IBD and a basic scientist, running a large NIH and CCFA-funded laboratory. Research interests: pathogenesis of Crohn's disease and ulcerative colitis, and translating basic science knowledge to improve IBD diagnosis and treatment. Dr. Sartor investigates resident intestinal bacteria in immune mediated intestinal inflammation, has published over 300 research articles and reviews, and edited five books. He directs a large gnotobiotic unit and uses germ-free mice to investigate mechanisms by which resident microbiota initiate, perpetuate and protect against chronic intestinal inflammation.



Erika von Mutius, MD, MSc

Erika von Mutius is Professor of Pediatrics and holds a degree in Epidemiology from Harvard School of Public Health, USA. She is head of the Asthmas and Allergy Clinics at the Dr von Hauner Children's Hospital of Ludwig-Maximilians-Universitaet Munich and the Munich University Asthma and Allergy Research Group (www.asthma-allergy.de). She is member of the Editorial Board of the *New England Journal of Medicine*. Also, since April 2010 she has been Associate Editor of the *Journal of Allergy and Clinical Immunology*. In June 2010 she was awarded the honorary doctorate from University of Helsinki and in March 2013 she received the most important German research prize, the Gottfried Wilhelm Leibniz-Preis. Prof Dr von Mutius' working group has been actively involved in design, implementation and data analysis of many large, Pan-European multicenter and interdisciplinary projects, including birth cohort studies, addressing the potential role of genetic and environmental factors for the development of asthma and allergic diseases.



W. Allan Walker, MD

Allan Walker is the Conrad Taff Professor of Nutrition and Professor of Pediatrics at Harvard Medical School. After completing medical school at Washington University of St. Louis, he trained in Pediatrics and Immunology with Dr. Robert Good at the University of Minnesota before coming to Massachusetts General Hospital (Harvard Medical School) to train in Gastroenterology and Nutrition with Dr. Kurt Isselbacher. Dr. Walker joined the faculty of Pediatrics in 1971 and became Professor in 1982. He established the first Pediatric Gastroenterology Unit at Massachusetts General Hospital in 1973 and became Director of a Combined Program in Pediatric Gastroenterology at Boston Children's Hospital and Massachusetts General Hospital in 1982. He currently is Director of Nutrition at Harvard Medical School and an Investigator in the Mucosal Immunology and Biology Research Center at Massachusetts General Hospital for Children. His research interests include the association between initial bacterial colonization and development of intestinal host defense and the role of breastfeeding and protective nutrients in the ontogeny of intestinal immune homeostasis. He has received numerous honors in recognition of his research including the Shwachman Award from NASPGHAN and the Hugh Butt Award from the AGA for mucosal immunologic research and a R-37 (MERIT) Award from the National Institutes of Health for outstanding investigation in breast milk immunology. Recently, Dr. Walker's laboratory has defined the cellular mechanism of probiotic protection in necrotizing enterocolitis.

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Gary D. Wu, MD

Dr. Wu is the Ferdinand G. Weisbrod Professor in Gastroenterology at the Perelman School of Medicine at the University of Pennsylvania where he is the Associate Chief for Research in the Division of Gastroenterology and is also the Associate Director of the Center for Molecular Studies in Digestive and Liver Disease. He is currently Director and Chair of the Scientific Advisory Board for the American Gastroenterological Association Center for Gut Microbiome Research and Education and is an elected member of both the American Society for Clinical Investigation and the American Association of Physicians. The research programs in the Wu laboratory focus on the mutualistic interactions between the gut microbiota and the host with a particular focus on metabolism. Growing evidence suggests that diet impacts upon both the structure and function of the gut microbiota that, in turn, influences the host in fundamental ways. Current areas of investigation include the effect of diet on the composition of the gut microbiota and its subsequent effect on host metabolism related to nitrogen balance as well as its impact on metabolic pathways in the intestinal epithelium, principally fatty acid oxidation. Through a UH3 roadmap initiative grant, he is helping to direct a project investigating the impact of diet on the composition of the gut microbiome and its relationship to therapeutic responses associated with the treatment of patients with Crohn's disease using an elemental diet. Finally, Dr. Wu is leading a multidisciplinary group of investigators using phosphorescent nanoprobe technology to examine the dynamic oxygen equilibrium between the host and the gut microbiota at the intestinal mucosal interface.

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