

12th Annual Muscle Health Awareness Day Speaker Profiles



Dr. Kristian Gundersen, *University of Oslo, Norway*

Dr. Gundersen was appointed Professor of Physiology at the University of Oslo in 1996. He was previously a research assistant in the Department of Neurophysiology at the University of Oslo (1984-1989). Later he was a postdoctoral fellow at Washington University in Missouri, USA (1990-1992) and a postdoctoral fellow and researcher at the Department of Neurophysiology at the University of Oslo (1993-1996). He was a visiting researcher at Harvard University 2005-2006. Dr. Gundersen works with the neuromuscular system, and his discovery of so-called muscle memory related to building muscle mass was named among the 25 most important science news in 2013 by the American magazine ScienceNews. In 2013, he was elected to the Norwegian Academy of Sciences in the group for cell biology and molecular biology. Gundersen is the President of The Scandinavian Physiological Society.



Dr. Matthijs Hesselink, *Maastricht University, The Netherlands*

Dr. Matthijs Hesselink received his M.Sc. degree in Human Movement Sciences from the Faculty of Health Sciences, Maastricht University. In 1997 he was awarded his Ph.D. for studies towards metabolic and structural plasticity of skeletal muscle tissue. In 2010 he was appointed Professor of Human Movement Sciences. His current research focuses on cellular lipid droplets as dynamic organelles pivotal in the modulation of lipotoxicity, mitochondrial function and insulin resistance. For this research, partly outlined in the project 'Setting fat on fire', he was awarded a prestigious NWO-VIDI grant for innovative research. Within the European Network of Excellence on Nutrigenomics (NuGO) he has chaired a focus team on lipid induced insulin resistance in cultured (human) skeletal muscle cells. Within the NanoNext program on the molecular structure of food he runs a project on the characterization and molecular control of cellular lipid droplets.



Dr. Helga Ellingsgaard, *Centre for Physical Activity Research (CFAS), University of Copenhagen, Denmark.*

Dr. Helga Ellingsgaard is a senior scientist and a group leader at the Centre for Physical Activity Research, Rigshospitalet, University of Copenhagen, Denmark. Her research focus is on human energy metabolism, specifically on the role of interleukin-6 (IL-6) in regulating adipose tissue mass. Her work involves human gain of function (infusion of IL-6) and loss of function (infusion of IL-6 receptor antibody) models and tracer dilution methodology to assess glucose, lipid and amino acid metabolism during resting, exercising and postprandial conditions. Dr. Ellingsgaard has supervised 10 pre-graduate students and 3 PhD students.



Dr. Philip Atherton, *University of Nottingham, UK*

Dr. Atherton has been principal or co-investigator on successful project grants from UK research councils (MRC, BBSRC), the European Union (EUF7), charities (Dunhill Medical Trust) and industrial (Ajinomoto, Abbott Nutrition, Fresenius-Kabi) sources. Since his PhD training was completed in 2005, he has published ~150 peer-reviewed articles and 6 invited book chapters. He has received prestigious early career awards (e.g. American Physiological Society World New investigator 2010) and he is regularly invited to speak at both national (e.g. Physiological Society) and international (e.g. EB, ECSS, ASPEN, ICAAP, A/ESPEN) conferences. His group collaborates nationally and internationally, and his lab is housed at the Royal Derby Hospital postgraduate entry medical school under the auspices of a UK Medical Research Council/Arthritis Research UK Centre of Excellence grant for musculoskeletal ageing research.



Dr. Katrien De Bock, *ETH Zurich, Switzerland*

Dr. Katrien De Bock is Professor for Exercise and Health and a member of the Institute for Human Movement Sciences and Sport at ETH Zürich. She received a PhD in Rehabilitation Sciences in 2007 from the KU Leuven for her work on the metabolic adaptations to exercise in the fasted state. Thereafter, she joined the Vesalius Research Center (VIB, Belgium) where she investigated the metabolic characteristics of endothelial cells as a novel treatment target for anti-angiogenic therapy (2007-2013). After a short research stay in the lab of Prof. Julian Aragonés (2014, AU Madrid, Spain) to study the role of the hypoxia sensing system in metabolism, she became Assistant Professor of Exercise Physiology in Leuven (Belgium). She then left this position to take up the Professorship for Exercise and Health at ETH, which is endowed by the Wilhelm Schulthess-Stiftung. Her lab is studying the metabolic and molecular interaction between nutrient delivery (by blood vessels) and nutrient utilization (by muscle), and its impact on health.



Dr. John Floras, *Mount Sinai Hospital, UHN, Toronto, Canada*

Dr. John Floras, Professor in the Department of Medicine and Canada Research Chair (Tier 1) in Integrative Cardiovascular Biology, is a consultant cardiologist and an internationally recognized expert in autonomic and hormonal regulation of the heart and circulation in health and in heart failure, hypertension, sleep apnea, kidney failure, diabetes, aging and menopause. He received an MD degree (University of Toronto) and a DPhil from Oxford. He is Deputy Physician-in-Chief, Research, Mount Sinai Hospital, Director of Cardiac Research, UHN-MSH Division of Cardiology, and a member of the Toronto General Research Institute, Heart and Stroke/Richard Lewar Centre of Excellence, as well as the Banting and Best Diabetes Centre.

Dr. Jeffery Woods, *University of Illinois at Urbana/Champaign, Illinois, USA*



Dr. Woods received a B.S. degree from the University of Massachusetts at Amherst, M.S. from Springfield College (MA), and a doctorate from the University of South Carolina at Columbia all in kinesiology/exercise science. He also completed a post-doctoral fellowship at the Minneapolis Medical Research Foundation in neuroimmunology. He is currently a Professor of Kinesiology and Community Health at the University of Illinois at Urbana/Champaign. His expertise is in exercise physiology, and more specifically the effects of exercise on the immune system, the gut microbiome, and aging. He has mentored 30 graduate students, 2 post-doctoral fellows, and has received campus recognition for guiding undergraduate research. He has authored over 130 peer-reviewed scientific journal articles and has been a Principal or Co-Investigator on >\$22 million of funded federal and industry sponsored research.

Dr. Melissa Spencer, *UCLA David Geffen School of Medicine, Los Angeles, CA, USA*



Dr. Melissa Spencer is Professor of Neurology and Neuromuscular Program Director in the UCLA David Geffen School of Medicine. Dr. Spencer completed all of her studies, from B.Sc to Postdoctoral Fellow (Immunology), at the University of California. Her lab utilizes advanced genetic engineering technology to develop new treatments for Duchenne and limb girdle muscular dystrophy. These approaches include CRISPR based gene editing platforms as well as gene replacement therapies. The lab is interested in both non-viral and viral delivery approaches for delivering these therapies. The lab is also interested in defining how the immune system promotes muscular dystrophy and as a separate line of inquiry, how immune cells respond to AAV exposure. Understanding this interaction can lead to new therapeutic targets to improve the safety and efficacy of gene therapies that rely on AAV as a delivery vehicle. Dr. Spencer serves on the Scientific Advisory Committee for the Muscular Dystrophy Association, Parent Project Muscular Dystrophy and the Coalition to Cure Calpain 3. She was awarded a Presidential Early Career Award for Scientists and Engineers (PECASE) in 2001.