119th Abbott Nutrition Research Conference (ANRC)

“Malnutrition, Muscle and Body Composition: Latest Advances and Innovation for the Future”

Conference Guide
Tuesday, June 22, 2021

<table>
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<tr>
<th>Time Zone</th>
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<tbody>
<tr>
<td>5-8 AM PDT Pacific Daylight Time</td>
<td>North America (UTC -7h)</td>
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<tr>
<td>8-11 AM EDT Eastern Daylight Time</td>
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<td>9-12 PM BRT Brasilia Time</td>
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<td>1-4 PM BST British Summer Time</td>
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<td>2-5 PM Central European Summer Time</td>
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<tr>
<td>8-11 PM SGT Singapore Time</td>
<td>Asia (UTC +8h)</td>
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Please adjust for your time zone. Login requested 15 minutes prior to start time.
OBJECTIVES
- Review the current state of malnutrition, muscle loss and body composition changes in adults.
- Identify the prevalence and impact of malnutrition and muscle loss on immune function and outcomes in health and disease.
- Examine innovative body composition assessment tools and nutrition solutions to address muscle loss.

AGENDA: TUESDAY, JUNE 22, 2021

<table>
<thead>
<tr>
<th>TIME in EDT (3-hours total)</th>
<th>TOPIC</th>
<th>SPEAKER(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45 AM – 8:00 AM</td>
<td>Login &amp; Registration</td>
<td>All Participants</td>
</tr>
<tr>
<td>8:00 AM – 8:15 AM</td>
<td>Opening Remarks: Introductions, Review of Agenda &amp; Objectives</td>
<td>Hakim Bouzamondo, MD, MSc, MBA Divisional Vice President, Head of Global Nutrition R &amp; D, Innovation, and Scientific &amp; Medical Affairs USA Carla M. Prado, PhD, RD (Program Chair) Canada</td>
</tr>
<tr>
<td>8:15 AM – 8:35 AM</td>
<td>Current State/Update on Malnutrition, Muscle Loss, and Body Composition in 2021</td>
<td>M. Cristina Gonzalez, MD, PhD Brazil</td>
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<td>8:35 AM – 8:45 AM</td>
<td>Group Discussion</td>
<td>All Participants</td>
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<tr>
<td>8:45 AM – 9:05 AM</td>
<td>Malnutrition and Muscle Loss: Immunity/COVID-19</td>
<td>Francesco Landi, MD, PhD Italy</td>
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<tr>
<td>9:05 AM – 9:25 AM</td>
<td>Malnutrition and Muscle Loss: Healthy Aging, Sarcopenia, and Frailty</td>
<td>Samuel Chew, MB, BCh, BAO, FRCP, FAMS Singapore</td>
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<tr>
<td>9:25 AM – 9:35 AM</td>
<td>Group Discussion</td>
<td>All Participants</td>
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<td>9:35 AM – 9:55 AM</td>
<td>Innovation: The Future of Nutrition Intervention to Address Malnutrition/Muscle Loss</td>
<td>Philip J. Atherton, PhD, AFHEA United Kingdom</td>
</tr>
<tr>
<td>9:55 AM – 10:15 AM</td>
<td>Innovation: The Future of Muscle in Immunity</td>
<td>PD Dr. med. Tobias Ruck, MD Germany</td>
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<td>10:15 AM – 10:35 AM</td>
<td>Innovation: The Future of Body Composition and Muscle Function Testing</td>
<td>Jeroen Molinger, MSc USA</td>
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<td>10:35 AM – 10:50 AM</td>
<td>Group Discussion</td>
<td>All Participants</td>
</tr>
<tr>
<td>10:50 AM – 11:00 AM</td>
<td>Wrap-up</td>
<td>Carla M. Prado, PhD, RD</td>
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This virtual conference will be recorded.
CARLA M. PRADO, PhD, RD
Professor and Campus Alberta Innovate Program (CAIP) Chair in Nutrition, Food and Health
Director, Human Nutrition Research Unit, Division of Human Nutrition
Department of Agricultural, Food and Nutritional Science
Faculty of Agricultural, Life and Environmental Sciences
University of Alberta
Edmonton, Alberta, Canada

Dr. Carla Prado is a professor at the University of Alberta in Canada and a Campus Alberta Innovate Program (CAIP) chair in Nutrition, Food and Health. She is also the director of the Human Nutrition Research Unit. Dr. Prado received her PhD in human nutrition and metabolism from the University of Alberta, Canada, and is a registered dietitian in both Canada and Brazil. Dr. Prado is an expert in assessing nutritional status through the precise measurement of body composition and energy metabolism. The focus of her current research program is to develop targeted nutrition interventions for the prevention and treatment of low muscle mass in patients with diverse conditions. She is the principal investigator for four randomized controlled trials investigating the impact of nutrition intervention on body composition and health. She is currently a member of the GLIM Body Composition Working Group, and the Sarcopenic Obesity Consensus Group (ESPEN/EASO). She is an Associate Editor of Clinical Nutrition and the Journal of Cachexia, Sarcopenia and Muscle.
Current State/Update on Malnutrition, Muscle Loss, and Body Composition in 2021

MARIA CRISTINA GONZALEZ, MD, PhD
Professor
Universidade Católica de Pelotas
Associate Professor
Universidade Federal de Pelotas
Pelotas, Brazil

Dr. Maria Cristina Gonzalez is a Professor at the Universidade Católica de Pelotas in the Postgraduate Program in Health and Behavior and an Associate Professor at Universidade Federal de Pelotas in the Postgraduate Program in Nutrition and Food and the Postgraduate Program in Epidemiology in Brazil. She received her medical degree from Pontifícia Universidade Católica de Campinas and did her postdoctoral work in parenteral and enteral nutrition, endoscopy, and gastroenterology. She then earned a PhD degree in epidemiology from the Universidade Federal de Pelotas in Brazil and completed postdoctoral work at Pennington Biomedical Research Center at Louisiana State University. She recently was designed a Fellow of the American Society for Parenteral and Enteral Nutrition (FASPEN). She is currently a member of the Global Leadership Initiative on Malnutrition (GLIM) Core Leadership Committee and Body Composition Working Group, and the Sarcopenic Obesity Consensus Group (ESPEN/EASO). Her clinical interests focus on body composition assessment, nutritional assessment, bioelectrical impedance analysis, and nutritional support in surgery, oncology, and geriatrics. Professor Gonzalez is a member of the editorial board of the European Journal of Clinical Nutrition. She has published approximately 120 articles in scientific journals and has given more than 250 presentations in her areas of expertise.

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EXPERT SPEAKER BIOGRAPHIES

Malnutrition and Muscle Loss: Immunity/COVID-19

FRANCESCO LANDI, MD, PhD
Professor of Internal Medicine and Geriatrics
Catholic University of the Sacred Heart
Chief, Geriatric Rehabilitation Unit
A. Gemelli University Hospital
Rome, Italy

Dr. Francesco Landi is an professor of internal medicine and geriatrics at Catholic University of the Sacred Heart and chief of the geriatric rehabilitation unit at A. Gemelli University Hospital in Rome, Italy. He received his medical degree from Catholic University of the Sacred Heart and completed a fellowship in geriatrics at A. Gemelli University Hospital. He subsequently earned a PhD in preventive medicine at Catholic University of the Sacred Heart.

Dr Landi’s main research interests include sarcopenia, geriatric assessment, and nutrition. He has acted as the principal investigator in many national and international trials and has published more than 300 peer-reviewed original papers in international medical journals, many of which are in the area of frailty and functional status of older people. He is also a member of national and international expert groups that work on guidelines in the fields of nutrition, sarcopenia, and functionality in older adults.

NOTES
Malnutrition and Muscle Loss: Healthy Aging, Sarcopenia, and Frailty

SAMUEL CHEW, MB, BCh, BAO, FRCP, FAMS
Associate Professor
Senior Consultant Geriatrician, Department of Geriatric Medicine
Changi General Hospital, Singapore Health Services (Simei Campus)
Singapore

Adjunct Associate Professor Samuel Chew is a senior consultant at the Geriatric Medicine Department, Changi General Hospital, Singhealth CGH Campus. He is a tutor for the Centre of Healthcare Simulation at National University of Singapore (NUS) and the Geriatric Medicine Modular Training Program, Academy of Medicine Singapore and Chapter of Geriatrician, College of Physicians Singapore. He is also faculty member for the Singhealth Residency Program in Geriatric Medicine, Internal Medicine and Family Medicine.

He received his medical degree from the Royal College of Surgeons in Ireland in 1997; a Postgraduate Diploma in Health Informatics from University College London in 2007 and specialist training in Internal Medicine and Geriatric Medicine from the Postgraduate Medical Education and Training Board in UK in 2009. He went on to obtain his Fellowship of the Royal College of Physicians of Edinburgh in 2013 and Fellowship of the Academy of Medicine Singapore in 2014. He has been working at Changi General Hospital since October 2010.

He has a deep passion in delivering evidence-based individualised care for geriatric patients, teaching undergraduate students and postgraduate trainees, and the application of health-care technology in the real-world clinical setting. Clinical work includes acute geriatric medicine, geriatric rehabilitation, management of multi-morbidity in the acute and ambulatory setting, pressure injury prevention, management of malnutrition and sarcopenia in older adults. Current research areas include nutritional health, sarcopenia, clinical pharmacology, pressure injury prevention and cognitive impairment in the older population.

NOTES
**Philip J. Atherton, PhD, AFHEA**  
Chair of Clinical, Metabolic, and Molecular Physiology  
School of Medicine, University of Nottingham  
United Kingdom  

Prof. Dr. Philip J. Atherton is Chair of Clinical, Metabolic, and Molecular Physiology at the University of Nottingham in the United Kingdom. He received a 1st Class BSc degree, and a higher PhD degree (in 2005) focusing upon protein metabolism, myogenic signaling, and gene expression regulation in skeletal muscle, from the University of Central Lancashire. His current research involves an expansive combining of detailed pre/clinical molecular physiology with the application of stable isotope methodologies and the integration of OMIC techniques to discover predictors of, the mechanistic basis for, and the means by which to mitigate musculoskeletal declines in aging and myriad related diseases. Prof. Atherton, with a H-index of 57 and ~15000 citations, has published ~150 peer-reviewed articles and 6 invited book chapters. He is a senior editor for *Experimental Physiology, Applied Physiology, Nutrition & Metabolism, and Nutrients*, journals.

**NOTES**
Dr. Tobias Ruck is deputy director of the Department of Neurology at Heinrich Heine University Düsseldorf in Germany, where he is also head of a research group for experimental neuroimmunology. He received his doctor of medicine degree at the University of Würzburg and completed postdoctoral lecture qualification in clinical neurology (habilitation) at the University of Münster. In addition, he is currently pursuing a Master of Health Business Administration degree at Universität Erlangen-Nürnberg. Dr. Ruck’s main research interests include ion channel-mediated regulation of immune cell functions and neuronal and skeletal muscle damage; regulation of immune cell migration into the central and peripheral nervous system; therapeutic translation of immunophysiological concepts; and therapeutically relevant immune signatures instructing personalized medicine. He is an ad hoc reviewer for BMC Neurology, Journal of Neurology, Neurosurgery and Psychiatry, Neurology, Multiple Sclerosis Journal, New England Journal of Medicine, and Nature Reviews Rheumatology, among others, and has authored or coauthored more than 90 publications in peer-reviewed international journals and 2 book chapters.
Dr. Jeroen Molinger is Lead Clinical Medical Exercise Physiologist for the Duke Human Physiology and Pharmacology Lab; Program Director and Lead Senior Clinical Medical Exercise Physiologist for the Duke Heart, Cathlab, Cardiology Transplant, and Advanced Heart Failure Group; Program Director and Lead Senior Clinical Medical Exercise Physiologist for the Department of Anesthesiology, Duke Human Pharmacology and Physiology Laboratory; and the Operational and Program Director of the Duke LEEP-COVID Research Taskforce at Duke University Medical Center in Durham, North Carolina. He has a master’s degree in clinical exercise physiology from Maastricht University in the Netherlands and a master’s degree in advanced studies manual therapy from SOMT University in Amersfoort, the Netherlands; he is currently a PhD candidate and research associate at both Duke University Medical Center and Erasmus University Medical Center in Rotterdam, the Netherlands. His PhD focus is on longitudinal energy expenditure and systemic cardiopulmonary, metabolic, and mitochondrial changes of the phenotype during and after COVID-19 infection. In his various positions at Duke University, he focuses on the study of (pre)hospital-based treatments to improve preparation and recovery from major elective surgery, major illness, bone marrow transplant, chemotherapy and critical care across the aging spectrum; autonomic dysfunction in advanced heart failure; and evaluation of longitudinal cardiometabolic pathophysiology in patients with COVID-19 (LEEP-COVID) to understand, guide, and optimize the cardiometabolic care of these high-risk patients.