IUFoST

February 29, 2024
07:30 Eastern Time (US and Canada)

07:30 – 09:00 USA and Canada (GMT-5)
12:30 – 14:00 Central European Time (GMT+1)
18:30 – 20:00 Beijing Time (GMT+8)

Precision Nutrition and Food Science Strategies to Combat Persistent Metabolic Challenges Associated with Long-COVID

Abstract:

SARS-CoV-2, the etiological agent of COVID-19, is devoid of any metabolic capacity; therefore, the viral pathogen must hijack host cellular metabolic machinery for its progeny and propagation. Emerging clinical data suggest that about 25-70% of virus-free COVID-19 survivors continue to sustain viral-induced human metabolic reprogramming dysregulation (HMR/D) and exhibit a wide range of symptoms that are persistent, exacerbated, or new 'onset' clinical manifestations, collectively termed as post-acute sequelae of COVID-19 (PASC) or long COVID. PASC patients experience several debilitating clinical conditions with >200 different and overlapping symptoms that may last for weeks to months. Nutritional intervention is an important aspect of recovery from and management of PASC that often concomitantly presents severe inflammation, malnutrition, and sarcopenia, especially in those with preexisting health conditions, and typically at risk of adverse health events, such as among pediatric populations, the elderly, and women of childbearing age. An adequate food supply and availability of foods that contain an array of potential bioactives may be critical in reducing risks associated with PASC, the ongoing global health crisis.

Session Speakers	Discussion
Introduction by Roger Clemens, DrPH	
 **Narain Naidu, PhD** Mission-COVID, USA	***Metabolomics and Nutrigenomic Signatures of Long-COVID***
 **Pingfan Rao, PhD** Fuzhou University, China	***Oxidative Stress, Hyper-inflammation Associated with Long-COVID***
 **Chin-Kun Wang, PhD** Chung Shan Medical University, Taiwan	***Mitochondrial Dysfunction and Long-COVID***
 **Jailene de Souza Aquino, PhD** Federal University of Paraíba, Brazil	***Nutritional Impact on GI Sequelae Associated with Long-COVID***
 **Jun Nishihira, MD, PhD** Hokkaido Information University, Japan	***Precision Nutrition for Strategic Management of Long-COVID***
 **Roger Clemens, DrPH** USC School of Pharmacy, USA	***Regulatory Dynamics at the Interface of Food Science, Nutrition, and Metabolic Health***

Registration link: https://us06web.zoom.us/webinar/register/WN_KNkva3fjRySbee0fg0r_Bg

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Roger Clemens, DrPH
Dr. Clemens is a part-time faculty within USC's School of Pharmacy where he enjoys adjunct appointments in Pharmacology and Pharmaceutical Sciences and Regulatory and Quality Sciences, an adjunct appointment at Michigan State University, College of Law, and is a project manager for the USDA. Dr. Clemens is an elected Fellow in the American Society for Nutrition, American College of Nutrition (now known as American Nutrition Association), Institute of Food Technologists, and International Academy of Food Science and Technology. Dr. Clemens is a past president of the Institute of Food Technologists (IFT), is a former president of the International Academy of Food Science and Technology, and currently serves on the scientific council for the International Union of Food Science & Technology.

Narain Naidu, PhD
Dr. Naidu is an established medical microbiologist/immunologist and one of the pioneers of molecular medicine. He is globally recognized in Life Sciences as the originator of the 'Bio-Replenishment Theory' and the 'BIOQUAD Principles'. Dr. Naidu started his research career in 1981 at the Directorate of Public Health Services, Government of India. In the 1980's, his ground-breaking discoveries on Staphylococcal Toxic Shock Syndrome and E.coli Hemolytic Syndrome brought him international recognition. Dr. Naidu is a distinguished Fellow of four international scientific societies in the field of biomedical sciences and an Associate Member of 18 professional global organizations.

Pingfan Rao, PhD
Dr. Pingfan Rao is a Professor and Director of the Institute of Biotechnology, at Fuzhou University, China. Dr. Rao's research activities focus on the identification and characterization of bioactive proteins and peptides, gene expression and scale production of industrial enzymes, protein derivatives as the active ingredient of traditional Chinese medicine, and industrialization of traditional Chinese foods. Dr. Rao is vice-president of the Chinese Institute of Food Science and Technology. He was elected as a fellow of the International Academy of Food Science and Technology in 2008, and president (2014-2016) of the International Union of Food Science and Technology.

Chin-Kun Wang, PhD
Dr. Chin-Kun Wang is a distinguished professor at Chung Shan Medical University in Taiwan. He is an expert in metabolism and nutrition, focusing his research on human metabolism and the clinical evaluation of nutritional supplements, nutraceuticals, functional foods, and herbs. Dr. Wang is also a council member of the International Academy of Food Science and Technology and a fellow at both the International Union of Food Science and Technology as well as the International Society for Nutraceuticals and Functional Foods. He has authored and co-authored numerous articles and papers that encompass human metabolism, nutrition, functional foods and nutraceuticals, and human clinical trials.

Jailene de Souza Aquino, PhD
Dr. Jailane de Souza Aquino is a Professor at the Department of Nutrition, Federal University of Paraíba, João Pessoa-Paraíba, Brazil, and serves as the Head Researcher of Experimental Nutrition Laboratory, Department of Nutrition. She is a member of the IFMSA - Score Research Exchange, acting as an advisor to medical students on exchange in Brazil. She is a member of the International Society for Developmental Origins of Health and Disease. She is a Leader of the Research Group on Food, Bioactive and Nutrition with an emphasis on health and disease from pregnancy to senescence (GPABiN). She is a reviewer for 18 national and international journals and Guest Editor of the Journals Microorganisms, Frontiers in Nutrition, and Frontiers in Food Science and Technology. Has experience in the following topics: food analysis, bioactive compounds, and experimentation with rats with an emphasis on nutritional interventions in rats induced with chronic diseases non-communicable diseases, and at different stages of life. She has published more than 85 research papers in national and international journals. In addition, she has edited/authored six books and holds four patents.

Jun Nishihira, MD, PhD
Dr. Jun Nishihira is the president of Hokkaido Information University, professor of the Department of Medical Management and Informatics, and director of the Center of Health Information Science Center, Hokkaido Information University, Hokkaido, Japan. Dr. Nishihira published over 300 peer-reviewed papers relevant to basic research and clinical practices. He contributed to the establishment a clinical trial system for functional foods in Hokkaido. He has been profoundly involved in nutrition and health research in this field, mainly for diabetes, obesity, hypertension, and digestive tract disorders. Currently, he is working on precision nutrition based on the big data collected by clinical trials for foods targeting non-communicable diseases, including mental stress and dementia.

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