



# IUFoST

31<sup>st</sup> March 2023

07.00 hrs (Eastern Time, USA) – 12.00 hrs (UTC)

**ONLINE SESSION**

## IAFoST/IUFoST Scientific Roundtable Discussion (SRD)

# Millets for Enhancing Agri-economy, Nutrition, Environmental, and Sustainable Development Goals

In this International year of Millets, the first IUFoST Scientific Roundtable of 2023 focuses on Millets for Enhancing Agri-economy, Nutrition, Environmental, and Sustainable Development Goals and is slated for 31 March 2023. The importance of the consumption of varieties of millets in the composite diet for a Sustainable Food System has been emphasized when the International Year was announced at the UN Food Systems Summit, at which IUFoST was one of the invited and leading organizations that gave scientific input. IUFoST experts focused on the role of food science and technology in achieving sustainable and healthy diets across nations.

Millets are grown in more than 130 countries. They represent components of traditional foods consumed by more than 600 million people daily in Asia and Africa. Millets do require less water to grow and therefore are much lower in the carbon and water footprints. Most importantly millets have a good plant-based nutrition profile and are suitable for all strata of the economy in the society. The science and technology of millets suggest these grains are affordable and are used extensively by small and medium industries in Asia and Africa to make ready for consumption using pre-processing methods such as sprouting and drying, roasting, puffing, and flours and even in multigrain dietary patterns.

### READ MORE HERE:

<https://iufost.org/news/announcing-scientific-roundtable-discussion-millets-enhancing-agri-economy-nutrition>

### IUFoST SCIENTIFIC COUNCIL CO-CHAIRS:

**Roger Clemens, DrPH**, University of Southern California, USA

**PG Rao, PhD**, North East Institute of Science and Technology, India

### OPENING REMARKS

**Hongda Chen, PhD** – Scientific Council Chair

**Aman Wirakartakusumah, PhD** – IUFoST President

**Vish Prakash, PhD** – IUFoST Immediate Past President

### SPEAKERS



**1. CV Ratnavathi, PhD**

*Global Perspective on History of Production, Use & Agri-economics of Millet*

Indian Institute of Millets Research

Rajendranagar, Hyderabad, India



**2. Ismahane Elouafi, PhD**

*Role of Millets in a Dynamic Agroecosystem*

FAO Chief Scientist, Rome, Italy



**3. Ruth Oniang'o, PhD**

*Agricultural Diversity of African Millets*

Founder and Director of Rural Outreach Africa, Kenya



**4. John Taylor, PhD**

*Getting Millets into the World's Grocery Food Basket*

University of Pretoria, South Africa



**5. Anoma Chandrasekara, PhD**

*Bioactives and Health Implications of Millet*

Wayamba University of Sri Lanka, Sri Lanka



**6. Peter Pressman, MD**

*Millets - Demystifying Health Claims*

University of Maine, USA



**7. Jay Yadav, PhD**

IUFoST Early Career Scientist Council member and SRD rapporteur

Central University of Rajasthan, Rajasthan, India



To register for this event

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## SPEAKER BIOS

### CV Ratnavathi, PhD

*Global Perspective on History of Production, Use & Agri-economics of Millet*

Indian Institute of Millets Research

Rajendranagar, Hyderabad, India

**Profile:** Dr. CV Ratnavathi, Director (A), ICAR-IIMR, Hyderabad & Principal Scientist (Biochemistry) did her post-graduation, M.Sc and M.Phil at Central University of Hyderabad, Ph D from Osmania University, Hyderabad, and joined Agricultural Research Service, ICAR in 1985 and started her career at CTRI, Rajahmundry. She joined sorghum family at NRCS, now IIMR, Hyderabad in 1989 and has research experience of more than 37 years. Dr. Ratnavathi has significant research contributions to focus sweet sorghum as a bioenergy crop for ethanol production and grain sorghum as a major health cereal and developed many semi-processed and processed foods like flakes and pasta from sorghum. Dr. Ratnavathi published 120 research articles, which include mostly international, 15 book chapters and 8 books. She is recognized as a reviewer for biofuel projects by MNRE and for health foods by DBT. Dr. Ratnavathi has undertaken several projects such as NATP project on value addition, ICAR network project on mycotoxins, NAIP project on millet foods, NFBSFARA (NASF) project on sweet sorghum and two DBT projects on functional foods and fortified millet foods, project on grades and standards under millet mission programme. She has vast experience in food safety research and her work was cited by CODEX committee. She is a resource person for many national and international training programmes and a recognized reviewer for many international journals like Food Chemistry, Journal of Cereal Science and Biomass and Bioenergy. She has also participated in international research programmes at Queensland University, Brisbane, Australia, Purdue University, West Lafayette and Texas A&M University, Texas, USA. She is an expert reviewer for BBSRC, UK funded projects. She is elected as a member of the scientific panel of FSSAI for Cereals, pulses and oil seeds and products including bakery for two terms. She is an elected fellow of AP Akademi of sciences, Guntur and Telangana Academy of Sciences, Hyderabad. She was also the Acting director of ICAR-IIMR from 1st June, 2022 to 15th February, 2023.

### Ismahane Elouafi, PhD

*Role of Millets in a Dynamic Agroecosystem*

FAO Chief Scientist, Rome, Italy

**Profile:** Dr. Ismahane Elouafi is Chief Scientist of the Food and Agriculture Organization (FAO) of the United Nations, and part of FAO's core leadership structure. With nearly two decades of experience in agricultural research and development in Asia, Africa and the Middle East, Dr. Elouafi is a strong advocate for diversifying into neglected and underutilized crops. She is also internationally known for her work on promoting use of non-fresh water in agriculture and empowerment of women in science. Dr. Elouafi has been a member of various strategy expert panels and advisory groups. Her contributions to science and policy have been recognized with a number of prestigious awards and accolades, in particular the Excellence in Science Award from the Global Thinkers Forum.

### Ruth Oniang'o, PhD

*Agricultural Diversity of African Millets*

Founder and Director of Rural Outreach Africa, Kenya

**Profile:** Sasakawa Africa Association Chair Hon. Prof. Ruth Oniang'o received the Lifetime Achievement Award from the International Union of Food Science & Technology (IUFOST). She was honored in 2022 for her contributions to the field of food science and technology for the benefit of all humanity over her career. Hon. Prof. Oniang'o has been the Chair of the Board of the SAA since 2010. She was awarded a PhD in Food Science and Nutrition by the University of Nairobi in 1983 and later became a Professor of Nutrition at Jomo Kenyatta University. Her research focused on food security, nutrition and pregnancy, childhood nutrition, and agricultural processing. In 1992, she founded the Rural Outreach Program to provide small farmers with indigenous soil testing and other resources needed to be productive. Hon. Prof. Oniang'o founded the African Journal of Food, Agriculture, Nutrition and Development in 2001 to highlight relevant academic research in the field. She is currently the editor-in-chief of the journal. She served in the Kenyan Parliament from 2003 to 2007 where she helped pass the Kenya Biosafety Bill and the Nutritionists and Dietetics Bills. In 2005, Hon. Prof. Oniang'o established the Diana Elukhambi Health Centre in Kakamega, with the help of Beyond Borders Organization from Utah. She has been president of IAFOST and is a patron of the Food Science and Technology platform of Kenya.

### John Taylor, PhD

*Getting Millets into the World's Grocery Food Basket*

University of Pretoria, South Africa

**Profile:** John Taylor is a food scientist at the University of Pretoria in South Africa. His specialization is grain science and technology, focusing on the grains and grain-based foods of Africa, particularly sorghum and millets. He also has strong interest in grains for nutrition, especially in food-based approaches to prevent micronutrient malnutrition.

His life mission is to undertake research, development and implementation work into the nutritional quality and processing of African grains with the aim of improving food security and promoting economic development in sub-Saharan Africa. An equally important aspect of this mission is people empowerment.

John is a Past-president and Honorary president of the International Association for Cereal Science and Technology (ICC), and a Fellow of ICC, the Cereals and Grains Association (CGA) and the International Academy of Food Science and Technology. He is recipient of several awards, most recently the CGA's T.B. Osborne Medal and the ICC's Clyde Bailey Medal. He is a Fellow of the International Academy of Food Science and Technology (IAFOST).

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## SPEAKER BIOS

### John Taylor, PhD

*Getting Millets into the World's Grocery Food Basket*  
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### Anoma Chandrasekara, PhD

*Bioactives and Health Implications of Millet*  
Wayamba University of Sri Lanka, Sri Lanka

**Profile:** Dr Anoma Chandrasekara currently serves as the Professor in Food Science & Nutrition of the Department of Applied Nutrition, Wayamba University of Sri Lanka. She received her BSc (Agriculture) and M Phil (Food and Nutrition) from the University of Peradeniya, Sri Lanka, and PhD from the Memorial University of Newfoundland, Canada. She has developed a unique research program for investigating the potential bioactivities and mode of actions of phenolic compounds of underutilized tropical foods of cereals, legumes, roots, tubers, and herbs in wellness and management of diseases. She served on a number of national committees including technical and steering committees on the revision of food-based dietary guidelines for Sri Lankans, and was a past president of Nutrition Society of Sri Lanka. She was ranked among the top 2% of scientists in the world for the years 2019, 2020, and 2021 based on a standardized citation metrics author database by Elsevier BV.

### Peter Pressman, MD

*Millets - Demystifying Health Claims*  
University of Maine, USA

**Profile:** Peter Pressman, MD, MS, FACN is a faculty member of the University of Maine and Curriculum Consultant at the Saba University School of Medicine. He is the Director of Medical Operations at Polyscience Consulting and a Senior Scientist at the Daedalus Foundation. He has published extensively in the areas of medical nutrition and food toxicology, sits on multiple editorial boards, and is a reviewer for Food and Chemical Toxicology, the American Journal of Medicine, Toxicology Research and Application, and others. He was an Associate Director of the Internal Medicine Residency at the University of Southern California Keck School of Medicine, and served as a Naval Medical Officer in Afghanistan and Iraq.

### Jay Yadav, PhD

Central University of Rajasthan  
Rajasthan, India

**Profile:** Dr. Jay Kant Yadav is an Associate Professor and the Head of the Department of Biotechnology, School of Life Sciences, Central University of Rajasthan (India). He holds Ph.D. in Biotechnology and has been a Post-Doctoral Fellow at the Max-Planck Institute and Ulm University, Germany. Dr. Yadav has been a Guest Professor at the Institute of Protein Biochemistry of Ulm University, Germany. His research group examines the fundamental aspects of the structure-function relationship of protein aggregation and the formation of amyloids in various age-related disorders, such as Alzheimer's and Parkinson's diseases. Currently, the group focuses on identifying amyloid-like protein aggregates in different foods and their implications in challenging protein quality and human health. Recent studies from Dr. Yadav's lab have confirmed that many proteins derived from milk, egg, and plant seeds possess high aggregation propensity and are likely to form amyloid-like structures under simulated industrial food-processing conditions. His group aims to decode the crucial factors responsible for protein aggregation and amyloid formation in processed foods and to provide a technological solution to safeguard the nutritional quality of dietary proteins.