



**SUSTAINABLE
NUTRITION**
S C I E N T I F I C B O A R D

SUSTAINABLE NUTRITION: A WORLD TOP PRIORITY

2020
16TH WORLD CONGRESS
ON PUBLIC HEALTH



BIOGRAPHIES & RESEARCH ABSTRACT

PANEL SPEAKERS



Professor Arne Astrup
(SNSB, Board President)

Professor, leading Nutrition and Health expert



Professor Stefania Boccia
(SNSB Member)

*Professor of Hygiene and Preventive Medicine,
Epidemiologist and Prevention Expert*



Professor Sebastiano Banni
(Contributing Expert)

*Professor, Molecular Physiology/Human Nutrition &
Physiology, University of Cagliari*

PANEL CHAIRMAN



Professor Olivier Jolliet
(SNSB, Member)

*Professor, Environmental Health Sciences, School of Public Health,
University of Michigan*

PANEL SPEAKERS



Professor Arne Astrup (SNSB President)

Professor, leading Nutrition and Health expert

BIOGRAPHY

Professor Arne Astrup, MD, DMSc served as Head of the University of Copenhagen's Department of Nutrition, Exercise and Sports 2012-20, and is currently Director at the Novo Nordisk Foundation responsible for the establishment of a National Center for Healthy Weight in Denmark. He is also Chief Consultant at the Unit for Clinical Nutrition Research, Bispebjerg Frederiksberg University Hospital.

Previously, Dr. Astrup was Chairman of the State Council for Nutrition, and for international research organisations. Major scientific areas of focus include appetite regulation, treatment of obesity, type 2 diabetes, and cardiovascular disease, as well as diseases where nutrition and physical activity play a role. He is also interested in bridging nutrition, gastronomy and health, and has written a large number of popular diet books, published worldwide. An avid researcher, he publishes frequently in journals such as British Medical Journal, Lancet, Nature and New England Journal of Medicine, being named as one of the most cited researchers in the world by in Clarivate's (Web of Science) list in 2018.

Astrup was created Knight of the Order of Dannebrog in 1999 By The Queen Margrethe II, and Knight of the First Order of Dannebrog in November 2012.

PANEL SPEAKERS



Professor Arne Astrup (SNSB President)

Professor, leading Nutrition and Health expert

RESEARCH ABSTRACT DISCUSSED DURING WORLD CONGRESS ON PUBLIC HEALTH:

The recommendation to limit dietary saturated fatty acid (SFA) intake, including palm oil, has persisted despite mounting evidence to the contrary. Most recent meta-analyses of randomized trials and observational studies found no beneficial effects of reducing SFA intake on cardiovascular disease (CVD) and total mortality, and instead found protective effects against stroke. Although SFAs increase low-density lipoprotein (LDL)-cholesterol, this is not due to increasing levels of the unwanted small, dense LDL particles, but rather larger LDL which are more inert in relation to CVD risk. It is also apparent that the health effects of foods cannot be predicted by their content in any nutrient group, without considering the overall macronutrient distribution. Many foods e.g. whole-fat dairy, unprocessed meat, eggs and dark chocolate are SFA-rich foods with a complex matrix that are not associated with increased risk of CVD. The totality of available evidence does not support further limiting the intake of such foods, and plant based fats and oils are needed to feed the growing population on our planet in a sustainable way.

PANEL SPEAKERS



Professor Stefania Boccia (SNSB Member)

*Professor of Hygiene and Preventive Medicine,
Epidemiologist and Prevention Expert*

BIOGRAPHY

Prof. Stefania Boccia, MSc, PhD, is Professor of Hygiene and Preventive Medicine at the Faculty of Medicine of the Università Cattolica del Sacro Cuore in Rome where she is appointed as Director of the Section on Hygiene. Prof. Boccia is the President of the Public Health Epidemiology Department of the European Public Health Association (EUPHA), and a member of the Ethics Committee of the Policlinico Foundation "A. Gemelli" IRCCS in Rome. In 2016, Prof. Boccia was Adjunct Professor at New York City's Mount Sinai School of Medicine's Oncology Department, the same year when she founded the academic spin-off of the Università Cattolica del Sacro Cuore's "Value in Health Technology Assessment for Leadership and Innovation (VIHTALI)". Prof. Boccia is the author of over 200 scientific papers related to the topics of epidemiology and tumor prevention, epidemiological methodology, health services research, genomics in public health, hospital hygiene, and environmental hygiene, with more than 5500 scholars' citations. Additionally, Prof. Boccia is currently the Scientific Coordinator of a European Commission Horizon 2020 project titled "European Staff Exchange for INtegrating Precision Health into the HealthCare Systems" (ExACT)," which was awarded the RISE (Marie Skłodowska-Curie Actions) grant (2019- 2022).

PANEL SPEAKERS



Professor Stefania Boccia (SNSB Member)

*Professor of Hygiene and Preventive Medicine,
Epidemiologist and Prevention Expert*

RESEARCH ABSTRACT DISCUSSED DURING WORLD CONGRESS ON PUBLIC HEALTH:

The COVID-19 pandemic and other emerging infectious diseases, are reminding us of the close connections between human, animal and environmental health and the urgent need to address them in a holistic manner. The COVID-19 pandemic has also underscored the fact that a high burden of chronic disease had an unfavourable impact in terms of prognosis for COVID-19 patients. Despite the tremendous increase in life expectancy, the latest Eurostat data reports that the average number of years of life lived with some disability in the EU is around 18. The highest burden of disease is represented by cardiovascular diseases and cancer, and the most impacting risk factor include dietary ones. Now more than ever before it is evident that strong public health services are fundamental for the diagnosis and treatment of whatever condition, but in order to keep our healthcare systems sustainable, we need an urgent need to shift from treatment of established disease, to disease prevention and early diagnosis, and we need to rely on the need to engage citizens to take greater responsibility for their health. Given the potential for effective preventive efforts in postponing the onset of disabilities and reducing healthcare costs, the expectation is that the current 'one size fit all' approaches in prevention take advantage of the new technologies in healthcare in order to be targeted at those who need more. At what stage however, personalized prevention that include personalized nutrition is implemented at population level, and on which technologies it is based?

PANEL SPEAKERS



Professor Sebastiano Banni (Contributing Expert)

Professor, Molecular Physiology/Human Nutrition & Physiology, University of Cagliari

BIOGRAPHY

Dr. Sebastiano Banni is a Physiology professor at the University of Cagliari. With a Ph.D. in Molecular and Experimental Pathology, Professor Banni's primary research focus is the physiological role of dietary fat, both from a qualitative and quantitative point of view, and in relation to the other macronutrients, in the control of body composition mediated by lipid and energy metabolic flexibility, taste perception, feeding behavior and brain neuroinflammation.

He is co-author of over 110 publications in peer-reviewed international journals and co-inventor of 4 patents and has obtained several grants, which include American agencies such as National Cattlemen and Beef Association and Dairy Management Inc., from the EU under the concerted action program, and even a triennial EU project within the 5th framework programme Key Action Food, Nutrition and Health.

PANEL SPEAKERS



Professor Sebastiano Banni (Contributing Expert)

Professor, Molecular Physiology/Human Nutrition & Physiology, University of Cagliari

RESEARCH ABSTRACT DISCUSSED DURING WORLD CONGRESS ON PUBLIC HEALTH:

Palmitic acid (PA) has often been negatively depicted for its alleged detrimental health effects, shadowing its multiple crucial physiological activities. PA is the most common saturated fatty acid accounting for 20–30% of total fatty acids in the human body and can be provided in the diet or synthesized endogenously via de novo lipogenesis (DNL). PA tissue content seems to be controlled within a well-defined concentration, and changes in its intake do not influence significantly its tissue concentration because the exogenous source is counterbalanced by PA endogenous biosynthesis. Particular physiological (fetal stage) and pathophysiological (insulin resistance) conditions are characterized by a sustained DNL, resulting in increased tissue content of PA and disrupted homeostatic control of its tissue concentration. The tight homeostatic control of PA tissue concentration is likely related to its fundamental physiological role to guarantee membrane physical properties but also to consent protein palmitoylation, palmitoylethanolamide (PEA) biosynthesis, and in the lung an efficient surfactant activity. In order to maintain membrane phospholipids (PL) balance may be crucial an optimal intake of PA in a certain ratio with unsaturated fatty acids, especially PUFAs of both n-6 and n-3 families. However, in presence of other factors such as positive energy balance, excessive intake of carbohydrates (in particular mono and disaccharides) in individuals with impaired glucose disposal, and a sedentary lifestyle, the mechanisms to maintain a steady state of PA concentration may be disrupted leading to an over accumulation of tissue PA resulting in dyslipidemia, hyperglycemia, increased ectopic fat accumulation and increased inflammatory tone via toll-like receptor 4. It is therefore likely that the controversial data on the association of dietary PA with detrimental health effects, may be related to an excessive imbalance of dietary PA/PUFA ratio which, in certain pathophysiological conditions, and in presence of an enhanced DNL, may further accelerate these deleterious effects.

PANEL CHAIRMAN



Professor Olivier Jolliet (SNSB Member)

Professor, Environmental Health Sciences, School of Public Health, University of Michigan

Dr. Olivier Jolliet is a Professor in life cycle impact and risk modeling at the Department of Environmental Health Sciences in the School of Public Health of the University of Michigan. A founding member of Quantis, Dr. Jolliet co-initiated the Life Cycle Initiative for the United Nations Environmental Program (UNEP) and is presently chairing the development of a Global Life Cycle Impact Assessment Method. His teaching and research mission is to compare the life cycle human health risks and benefits of foods and chemicals in consumer products.



**SUSTAINABLE
NUTRITION**
S C I E N T I F I C B O A R D