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Lecture:

“Analysis of human gut microbiota and associations with weight loss, insulin resistance and dietary patterns in the framework of a large clinical trial”

Lecture will be focused in presenting the results of three scientific papers led by Dr. Alessandro Atzeni in the field of human gut microbiome analysis.

The studies were conducted within the frame of a large Spanish multicentric clinical trial aiming to assess the effects of a lifestyle intervention based on Mediterranean diet in an elderly population with overweight obesity and metabolic syndrome.

- The aim of the first study was to explore the association between gut microbiota taxonomic signatures, body mass index and weight loss after 12-month of lifestyle intervention in a cohort of participants from the above-mentioned clinical trial.
- The aim of the second study was to explore the association between gut microbiota taxonomic and pathway-related signatures and insulin resistance in non-diabetic participants from the same cohort.
- The aim of the third study was to explore the association between ultra-processed food consumption and gut microbiota taxonomic signatures from a larger subsample of participants belonging to the same clinical trial.

BioSketch

Alessandro Atzeni, PhD is a biomedical scientist from Sardinia, Italy. He has completed his bachelor's degree in Biomedical Laboratory Techniques at Università degli Studi di Cagliari (Italy) and his master's degree in Bioinformatics and Medical Biotechnologies at Università degli Studi di Verona (Italy). He started to develop his professional scientific background as next generation sequencing data analyst and then as multi-omics data analyst during some years of stay in the UK after graduation. In 2018 he obtained a Marie Curie fellowship to develop his PhD thesis in Nutrition and Metabolism at the Human Nutrition Unit, Department of Biochemistry and Biotechnology, Rovira i Virgili University (Spain), specifically related to the study of human gut metagenome within the frame of a large clinical trial based on

Mediterranean diet. Currently he is post-doctoral researcher in the same research group, exploring the associations between human gut microbiota, diabetes, cognitive decline, and different dietary patterns. He has recently obtained a post-doctoral fellowship to conduct research in the field of microbiota-gut-brain axis in aging at the at the Life Sciences Center, Vilnius University.