



# Precision nutrition and nutriomics



**10.Mar - 12.Mar 2025**

**Cod. 001-25**

**Mod.:**

Streaming

**Edition**

2025

**Activity type**

Workshop

**Date**

10.Mar - 12.Mar 2025

**Location**

Live online

**Languages**

English Spanish

**Academic Validity**

30 hours

**Organising Committee**



## Description

This austral summer course focuses on developing topics in nutrition and health with emphasis on personalized (individualized) and precision (multifactorial) nutrition. Topics will include original presentations of nutrition-related scientific data on topics related to chronic diseases such as obesity, diabetes, cardiometabolic disorders and cancer. In addition, the course program will include a series of keynote presentations on personalized nutrition and nutriomics topics by international scientists and researchers emphasizing the applications of precision nutrition supported by genomic, epigenetic, transcriptomic, metagenomic and metabolomic methods and their bioinformatics integration for their application in the nutrition-health relationship.

### ORGANIZING COMMITTEE

- J. Alfredo Martínez, IMDEA Alimentación
- Lidia Daimiel, IMDEA Alimentación
- Alberto Dávalos, IMDEA Alimentación
- Moisés Laparra, IMDEA Alimentación
- Begoña de Cuevillas, IMDEA Alimentación
- M. Puy Portillo, University of the Basque Country
- Sergio Polakof, University of Clermont-Auvergne
- Louis Pérusse, Laval University
- David M Mutch, University of Guelph
- Rosita Gabbianelli, Università degli Studi di Camerino
- Ana Laura de la Garza, Autonomous University of Nuevo León
- Karina dos Santos, Federal University of Rio de Janeiro
- Fermín Milagro, University of Navarra, Spain
- Silvia Lorente, University of Navarra

**Executive Secretary:** Begoña de Cuevillas

### Objectives

This austral summer course aims to cover the following objectives:

1. Introduction to the applications of omics methodologies (genomics, epigenetics, transcriptomics, metagenomics and metabolomics) for their application for healthy metabolism and precision nutrition.
2. Presentation of precision nutrition and nutriomics research by young researchers, doctoral students and young postdocs.
3. Development of current topics by prestigious nutritionists for their implementation in health maintenance as well as in the prevention and treatment of chronic metabolic diseases.

### Organised by



### In collaboration with



SOCIEDAD ESPAÑOLA DE NUTRICIÓN

Novogene



**IUNS**  
INTERNATIONAL  
UNION OF  
NUTRITIONAL  
SCIENCES

## Directed by



### **J. Alfredo Martínez ---**

IMDEA Alimentación, Universidad de Valladolid y RINN22

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Doctor in Nutrition, as well as a pharmacist and medical degree. He has been Professor of Nutrition at the University of Navarra and currently at the University of Valladolid. He is director of the Precision Nutrition Program at IMDEA Alimentación and has participated in several nutritional trials (12 projects) of reference in the EU, such as DIOGENES, SEAFOODplus, NUGENOB, FOOD4ME, STOP, PREVIEW and SWEET, and in national consortia such as PREDIMED and CIERobn, whose results and conceptual contributions have been published in the most relevant medical and scientific journals, such as NEJM, Lancet, Nature Endocrinology, BMJ, AJCN, Circulation, JAMA, Obesity Reviews, etc. , with more than 35,000 citations. He has supervised more than 90 doctoral theses and has published more than 950 articles in the areas of Obesity, Nutrition and Nutritional Epidemiology, including precision nutritional omics (Factor H > 115). He has been president of the International Union of Nutritional Sciences (IUNS) and has received several major awards, including the Hippocrates and Dupont awards.



### **Maria Puy Portillo Baquedano**

UPV/EHU

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Dr. MP Portillo works as a Professor of Nutrition at the University of the Basque Country (UPV/EHU), where she leads the research group "Nutrition and Obesity". She has participated in 63 national, regional and international research projects (in 39 as main researcher). She is co-author of 250 JCR scientific articles, 34 book chapters, 2 books and 22 Dietary Guidelines books. She has directed 18 Doctoral Theses (3 with Extraordinary Award). She has been Coordinator of the Degree in Human Nutrition and Dietetics and Director of the Master "Nutrition and Health" during the last 15 years. Until 2014 she was Director of the Doctorate Program "Nutrition and Health", date when this program was extinguished to give rise the interuniversity program "Nutrigenomics and personalized Nutrition". Dr. Portillo is the Director of this program at (UPV/EHU). Dr. Portillo was the President of the Spanish Nutrition Society (SEÑ) since 2018 till 2022. She was a member of the Scientific Committee of AESAN (2019-2022) where she participated in the writing of 12 Scientific Reports. She is an Honorary Member of the Spanish Academy of Nutrition and Dietetics. Since 2023 she is the Scientific Director of CIBEROBN (Instituto de Salud Carlos III).

## Teachers



### **Marta Alonso Bernáldez**

ADNTRO GENETICS, NUTRIGENETICS AREA LEAD

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Dietista-nutricionista y doctora en Nutrigenómica y Nutrición Personalizada. Cuenta con un máster en Biomoléculas y es experta universitaria en genética médica y genómica. Ha sido investigadora en el campo de la nutrición de precisión y ciencias ómicas, realizando tanto trabajo de laboratorio aplicando técnicas de biología molecular, como de consulta asistencial de nutrición. También ha trabajado en el diseño de algoritmos de personalización y evaluación de dietas, y en el desarrollo de nuevas formulaciones enfocadas en el síndrome metabólico. Ha participado en proyectos de investigación tanto nacionales (METAINFLAMACION, FACINGLCOVID) como internacionales (PRIMA, PREVENTOMICS). Actualmente lidera el desarrollo del software N-GENE (n-gene.ai), una herramienta diseñada para integrar la genética en la consulta de los profesionales de la salud.



### **Nuria Amigó Grau**

Biosfer Teslab, CEO

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CEO-Co-founder Biosfer Teslab. Biophysicist specializing in the identification of biomarkers for metabolic diseases, NMR metabolomics, and complex data analysis, applying AI techniques in health research. She is the PI of 8 competitive industrialization projects for in vitro diagnostics. Under Amigó's leadership, the company has successfully achieved the industrial development and clinical commercialization of an advanced lipoprotein test (IVD-CE), approved by the AEMPS. ● Elected Member of the European Lipoprotein Club Organizing Committee. ● Member of the Lipoprotein Commission and Vascular Diseases, Sociedad Española de Medicina de laboratorio ● Member of the Innovation Committee of the Health Research Institute Pere Virgili (Spain) since September 2022. ● Early Career Leader, Atheronet Cost Action (CA21153) Working Group Pathophysiological mechanisms in atherosclerosis February 2023. ● Associate Professor: Biostatistics. Faculty of Medicine and Health Sciences, Rovira I Virgili University (SPAIN). ● Dr. Amigó has been recognized in an international business acceleration program, The Big Booster, and has received the Young Academic Talent Award - Gresol (2016) and the National Innovation Award from the Elzaburu Foundation (2019)



### **Elisa María Barrón Cabrera**

UAS

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Elisa María Barrón Cabrera es Doctora en Ciencias en Biología Molecular en Medicina por la Universidad de Guadalajara, y licenciada en Nutrición por la Universidad Autónoma de Sinaloa. Actualmente, es miembro del Sistema Nacional de Investigadores Nivel 1 e Investigadora Honorífica del Sistema Sinaloense de Investigadores y Tecnólogos. La Dra. Barrón Cabrera se ha desempeñado en líneas de investigación en genómica nutricional y respuestas moleculares al ejercicio. Ha realizado estancias de investigación en la Universidad de Navarra, España y en la Universidad de Sao Paulo, Brasil. Ha dirigido tesis a nivel pregrado y posgrado, así como realizado publicaciones en revistas internacionales indexadas y participado en congresos nacionales e internacionales.



### **Ellen Blaak**

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Prof. Ellen Blaak is Professor of Human Biology at the Department of Human Biology since 2007 and is Chair of the Department of Human Biology. Her research focuses on the role of disturbances in fatty acid metabolism and interorgan cross-talk (gut-adipose tissue-muscle metabolism) in the aetiology of obesity and type 2 diabetes mellitus (>350 publ) as well as the impact of nutritional or lifestyle intervention to reverse these changes. She is member of the Nutrition committee of the Dutch Health Council and of several advisory board/grant evaluation committees. She obtained funding from among others the Netherlands Organisation for Scientific research/Dutch Diabetes Research Foundation/EU as a PI for 30 research projects and has supervised more than 30 PhD theses.



### **Metehan Cifdaloz**

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**Gonzalo Colmenarejo**

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**Arnaud Courtois**

Université de Bordeaux

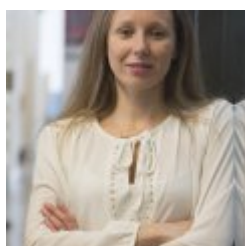
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**Amanda Cuevas**

IMDEA

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**Lidia Daimiel Ruiz**

IMDEA Food

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## **Alberto Davalos**

IMDEA Food Institute

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## **Begoña de Cuevillas García**

IMDEA Alimentación

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Dr. Begoña de Cuevillas García has completed a Bachelor's degree in Human Nutrition and Dietetics (UCM) and a Master's degree in Food, Nutrition, and Metabolism (UNAV). Additionally, she has a PhD in Nutrition, Food Science and Physiology, focusing her research on studying the different risk factors accompanying obesity and associated comorbidities, such as dietary and sleep patterns, physical activity, gut microbiota, and/or quality of life, in both pediatric and adult populations, in order to facilitate the personalization and precise management of overweight and excessive adiposity. Additionally, their participation in projects such as the Childhood Obesity Risk Assessment Longitudinal Study (CORALs) demonstrates a commitment to applied clinical research that can have a direct impact on public health. The originality of their research lies in the exploration of new avenues to address urgent public health issues, such as obesity and its associated complications, using health determinants like intestinal microbiota. Furthermore, the credibility of their research is reflected not only in publication in scientific journals but also in presentations at both national and international conferences.



## **Ana Laura de la Garza Hernández**

Universidad Autónoma de Nuevo León.

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**Baukje De Roos**

University of Aberdeen

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**Alberto Diaz-Ruiz Ruiz**

IMDEA Food, Tenure-Track Position

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**Karina Dos Santos**

Universidade de Rio de Janeiro

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**Capel Frederic**

UCA-INRAE

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**Rosita Gabbianelli**

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**Maria Ikonomopoulou**

IMDEA ALIMENTACION

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**Carmen Ivorra**

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**Moisés Laparra Llopis**

IMDEA Food / VIU, Investigador Senior

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## **Eliane Lopes Rosado**

Universidad Federal de Rio de Janeiro

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## **Silvia Lorente Cebrián**

Universidad de Zaragoza, Profesora Titular

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Graduate in Pharmacy (2004) and PhD in Cell and Molecular Biology (2009) from the University of Navarra. She currently holds Associate Prof. in Human Physiology at University of Zaragoza (2023). She has performed pre-doctoral stays at the University of Liverpool (UK) and Karolinska Institute (Sweden) where later she performed a 4 yr. (2010-2013) post-doctoral research stay at Lipidlaboratory, headed by Dr. Arner (Dpt. Medicine Huddinge). She is research team member of Adipofat group, where she investigates the role of epigenetic factors (microRNAs) in human adipose physiology and their regulatory role in energy balance in obesity and related co-morbidities. She has published >40 articles in international peer-reviewed journals, mostly in Q1, >2000 citations (H index 24) and has three recognised periods of research activity.



## **Laura Judith Marcos Zambrano**

IMDEA Alimentación

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## **Pedro Miguel Mena Parreño**

University of Parma

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**María Begoña Muguerza Marquínez**

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**David M. Mutch Mutch**

University of Guelph, Professor

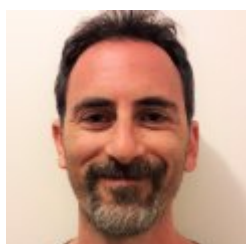
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**Louis Pérusse Perusse**

Université Laval

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**Sergio Polakof**

Human Nutrition Unit - INRAE

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## **Oscar Omar Ramos López**

Universidad Autónoma de Baja California, Profesor

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Dr. Omar Ramos-Lopez is graduated in Nutrition, with a PhD in Molecular Biology in Medicine, and a postdoctoral in Precision Nutrition. At the national level, Dr. Ramos-Lopez is member of the National System of Researchers of Mexico (level 2), member of the Mexican Society of Nutrition and Endocrinology, member of the Mexican Academy of Sciences, and member of the Baja California Academy of Sciences. At the International level, Dr. Ramos-Lopez is member of the American Society for Nutrition, and member of Sigma Xi, The Scientific Research Honor Society. Dr. Ramos-Lopez is currently a full-time research professor at the Autonomous University of Baja California. His scientific production consists of 81 scientific publications in indexed journals, 4 book chapters from highly prestigious publishers (Elsevier), and about 1400 citations, with an H-index of 22 (scopus). He has also served as guest editor of journals such as Nutrients, Frontiers in Endocrinology, Frontiers in Nutrition, Lifestyle Genomics, and Healthcare.



## **ricardo ramos ruiz**

IMDEA Alimentacion

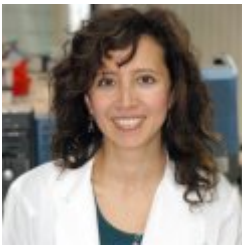
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## **José Luis Santos Martín**

Pontificia Universidad católica de Chile

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### **María Elizabeth Tejero Barrera**

INMEGEN, México

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### **Alberto Valdés**

Instituto de Investigación en Ciencias de la Alimentación (CIAL), Científico Titular

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Dr. Alberto Valdés received his PhD in Biology and Food Sciences from UAM in 2016 (UAM Extraordinary Doctorate award). He was a Post-Doctoral researcher at Uppsala University (Sweden, 2016-2018), the University of Alcalá (Spain, 2018-2020), the NIH West Coast Metabolomics Center at UC Davis (USA, 2019-2020) and the Foodomics Laboratory at CIAL-CSIC (Spain, 2020-2024). Currently, he is a Tenured Scientist at CSIC and co-Director of the Metabolomics Platform at CIAL (UAM+CSIC). He has participated in 13 research projects in competitive calls, being PI of a “Programa Momentum CSIC” (Inteligencia CIAL) and leading the CSIC’s task of a EU-EIC-Pathfinder project (CORENET). He has been involved in 10 research contracts and different teaching tasks at Uppsala University, University of Alcalá and CIAL. His area of expertise combines the fields of Food Science and Technology, Biology, Analytical Chemistry and Bioinformatics/Chemometrics. His research focuses on the development, application and integration of omics technologies and bioinformatics tools to investigate complex biological systems, such as foods, food by-products and samples of human and animal origin. His work has resulted in 62 scientific articles and 12 book chapters.



### **Barbara Vizmanos Lamotte**

Centro Universitario de Ciencias de la Salud, Universidad de Guadalajara, Jalisco, México

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Medical Doctor (University of Barcelona). PhD in Clinical Medicine Research (Universitat Rovira i Virgili). Full Research Professor in Health at the University of Guadalajara, Mexico. National System of Researcher level 3. Member of the Mexican Academy of Sciences. Multiple positions of institutional responsibility. Leader of the consolidated academic group UDG-454 since 2013. Thesis supervisors: 12-doctoral, 13-master, 38-graduate. Several international stays (Spain -URV, UAM, UMu, UVa-, Sweden, France -MNHN-, USA -MIT-). More than 100 scientific articles published (73-Scopus); editor/author of



# Registration fees

<b>REGISTRATION LIVE ONLINE - ZOOM</b>	<b>UNTIL 11-03-2025</b>
General	65,00 EUR
RINN partner	45,00 EUR
SEÑ partner	45,00 EUR
IMDEA partner or Entities with collaboration agreement	45,00 EUR
NuGO partner	45,00 EUR
Speaker participating in CTPIOD session	0 EUR

# Place

## Live online

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