

Dr. Alberto Díaz-Ruiz

Senior Researcher and Head of Research Line in Aging and Longevity



Alberto Díaz - Ruiz is a M. Sc. Veterinary Medicine specialized in the fields of metabolism, obesity and aging. He received a tenure track position granted by the Madrid Community "Talent Program" competitive call, within the Group of Nutritional Interventions, Precision Nutrition and Aging Program, at IMDEA Food Institute (Madrid). His research focuses on the effects of fasting - mediated nutritional interventions on lifespan and healthspan in mice and humans. By now, he has co - authored 40 articles in the highest journals of the fields (Cell Stem Cell, Aging Cell, Embo Reports or Diabetes). His academic and research education was carried out in Spain and United States. He obtained his PhD in Sciences in 2011 (University of Cordoba). During his pre - doctoral phase, he was also awarded with two research training fellowships at the Center for Basic Neuroscience (University of Dallas) and the Department of Molecular and Cellular Physiology (Stanford University School of Medicine), supervised by Dr. Thomas C. Sudhof, who was awarded with the 2013 - Nobel Prize in Medicine. His PhD studies aimed to understand the molecular mechanisms influencing the control of the secretory pathway in endocrine cells. In

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2012, he obtained a two - years research associated period funded by a highly competitive grant (Proyecto de Excelencia, Junta de Andalucía) under the supervision of Dr. Maria del Mar Malagón. During this period, he successfully applied several proteomic methods for the study of human adipose tissue as an endocrine organ which helped to unveil novel factors and pathways underlying the association between obesity and metabolic disease. In 2014, he obtained a 5 years post - doctoral research fellowship under the supervision of Dr. Rafael de Cabo at the National Institute on Aging (NIA, USA). During this period, he successfully integrated genetic, nutritional, and pharmacological interventions that directly target nutrient sensing pathways, aiming to disclose the relevance of metabolic imbalances and deregulated nutrient sensing influencing aging and worldwide metabolic diseases including obesity and nonalcoholic fatty liver disease. Currently, he is devoted to study how modulation of the daily eating patterns such as the frequency and/or the fasting time, with or without reduction of total intake, influence circulating factors for the control of metabolic pathways, lately influencing health.

Objectives

- Microbiome-based approaches to promote healthy aging.
- Anti-aging interventions in obesity context.
- Inter-tissue identification of molecular signatures of aging.

Project in focus

- Principal Investigator: Alberto Diaz-Ruiz. Project Title: From Aging Biology to Sustainable Interventions: a microbiome-based approach. PID2019-106893RA-I00. Amount: 121.000 €. Start: 2020 Finish: 2024. Awarding Institution: Spanish Ministry of Science, Innovation and Universities.
- Principal Investigator: Alberto Diaz-Ruiz. Project Title: Estrategias alternativas para extender la longevidad y mejorar la calidad de vida: ciclos de ayuno 4:10. 2018 T1/BMD11966. Amount: 200.000 €. Start: 2019. Finish: 2022. Awarding Institution: TALENTO" Project Grant, Comunidad de Madrid.
- Principal Investigator: Alberto Díaz-Ruiz. Project Title: Unraveling the role of several plant extracts as potential treatment against obesity, type 2 diabetes and aging. Amount: 23.000 € Start: 2019 Finish: 2021. Funding Company: Sponsored Research Agreement with private company (Biosabor, Almería, Spain)
- Principal Investigator at IMDEA Food: Alberto Díaz-Ruiz. Project Title: Impact of extracellular matrix remodeling in adipocyte plasticity in human obesity. Amount: 137.011 € Start: 2019 Finish: 2021. Awarding Institution: Junta de Andalucía.
- Principal Investigator: Alberto Díaz-Ruiz. Garantía Juvenil PhD Recruitment Program. PEJD-2019-PRE/BMD-17041. Awarding Institution: Consejería de Educación, Juventud y Deporte de la Comunidad de Madrid. Amount: 25.000 euros/year. Start: 2019 Finish: 2020.
- Principal Investigator: Alberto Díaz-Ruiz. Garantía Juvenil Lab technician Recruitment Program. PEJ-2019-TL/BMD-15706. Awarding Institution: Consejería de Educación, Juventud y Deporte de la Comunidad de Madrid. Amount: 19.000 euros/year. Start: 2019 Finish: 2021.