IISPV
INSTITUT D'INVESTIGACIÓ SANITÀRIA PERE VIRGILI

DIABETES AND METABOLIC ASSOCIATED DISEASES RESEARCH GROUP

PhD position available in DIAMET group, IISPV, Tarragona, Spain.

The Diabetes and Metabolic Associated Diseases Research Group (DIAMET, www.diamet.org) by **Dr. Sonia Fernandez-Veledo** (Biochemist) and **Dr. Joan Vendrell** (endocrinologist), is a multidisciplinary and dynamic translational research group focused on the study of metabolic derangements associated to obesity such as diabetes and NAFLD. DIAMET belongs to the Pere Virgili Institute (IISPV) and Joan XXIII University Hospital from Tarragona, and is integrated in a nationwide net for the study of diabetes, CIBERDEM, that was initiated in 2008 by the Instituto de Salud Carlos III from Spain. Likewise, the group is recognised as a consolidated group by the Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) from the Generalitat de Catalunya since 2009, housed in the Rovira i Virgili University.

- Are you looking for a great place to combine basic biology and medical need? We are looking for a motivated PhD student to join our team! A fully funded PhD position under the supervision of **Dra. Sonia Fernández-Veledo** is available at the DIAMET group. The candidate will be integrated into the project of the call "*Proyectos de Generación de Conocimiento 2021 Modalidad: Investigación Orientada Tipo B*" entitled "SUCCINATE/SUCNR1 AXIS IN LIVER. FROM THE PHYSIOLOGY TO NAFLD PROGRESSION: BASIC AND CLINICAL APPROACH. SUC-LIVE (PID2021-122480OB-I00)" led by Dra. Sonia Fernández-Veledo

- Why is this important? Succinate/SUCNR1 axis emerges as a novel regulator of glucose homeostasis linking gut microbiota to host metabolism, whose dysregulation may be one of the underlying mechanisms of non-alcoholic fatty liver disease (NAFLD), an emerging non-communicable health epidemic that affects between 25% and 30% of the population of Western countries.

- What is your work going to be about? If you are the selected candidate, you will have the opportunity to gain valuable experience and work with conditional knockout mice and other in vivo models, and also with different types of cell cultures. In addition, you will acquire strong knowledge and experience in different techniques applied to biochemistry, and molecular and cellular biology.

The selected candidate will apply for "*Contratación predoctoral para la formación de personal investigador*" in autumn 2022, and their incorporation will be conditioned to the positive resolution of the call.

REQUIREMENTS OF THE IDEAL CANDIDATE:

- Master's degree in biological sciences, chemistry, biochemistry or medicine.
- Candidate should have a background in medicine or life sciences. Besides academic record, it will be well considered other features such as bioinformatics, statistics, as well as a strong motivation

to pursue a scientific career, an analytical mind, dedication, team spirit and excellent English skills.

- Only those candidates with an academic record of more than 2 will be valued

If you are interested, send your *curriculum vitae*, university certificates, academic record and two letters of recommendation (if it is possible) to;

recruitment@iispv.cat
e-mail subject: candidate for FPI-DIAMET

Latest publications related to the project:

- Huber-Ruano I, Calvo E, Mayneris-Perxachs J, Rodríguez-Peña MM, Ceperuelo-Mallafré V, Cedó L, et al. Orally administered Odoribacter laneus improves glucose control and inflammatory profile in obese mice by depleting circulating succinate. Microbiome. 2022;10(135).

- Monfort-Ferré D, Caro A, Menacho M, Martí M, Espina B, Boronat-Toscano A, et al. The Gut Microbiota Metabolite Succinate Promotes Adipose Tissue Browning in Crohn's Disease. J Crohn's Colitis. 2022;XX:1–13.

- Osuna-Prieto FJ, Martinez-Tellez B, Ortiz-Alvarez L, Di X, Jurado-Fasoli L, Xu H, et al. Elevated plasma succinate levels are linked to higher cardiovascular disease risk factors in young adults. Cardiovasc Diabetol. 2021;20(1):1–10.

- Fernández-Veledo S, Ceperuelo-Mallafré V, Vendrell J. Rethinking succinate: an unexpected hormone-like metabolite in energy homeostasis. Trends Endocrinol Metab. 2021 Sep 1;32(9):680–92.

- Terra X, Ceperuelo-Mallafré V, Merma C, Benaiges E, Bosch R. et al. Succinate Pathway in Head and Neck Squamous Cell Carcinoma: Potential as a Diagnostic and Prognostic Marker. Cancers (Basel). 2021 Apr 1;13(7):1653.

- Astiarraga B, Martínez L, Ceperuelo-Mallafré V, Llauradó G, Terrón-Puig M, Rodríguez MM, et al. Impaired succinate response to a mixed meal in obesity and type 2 diabetes is normalized after metabolic surgery. Diabetes Care. 2020;43(10):2581–7.

- Fernández-Veledo S, Vendrell J. Gut microbiota-derived succinate: Friend or foe in human metabolic diseases? Rev Endocr Metab Disord. 2019;20(4):439–47.

- Ceperuelo-Mallafre V, Llaurado G, Keiran N, Benaiges E, Astiarraga B, Martinez L, et al. Preoperative circulating succinate levels as a biomarker for diabetes remission after bariatric surgery. Diabetes Care. 2019;42(10):1956–65.

- Keiran N, Ceperuelo-Mallafré V, Calvo E, Hernández-Alvarez MI, Ejarque M, Núñez-Roa C, et al. SUCNR1 controls an anti-inflammatory program in macrophages to regulate the metabolic response to obesity. Nat Immunol. 2019;20(5):581–92.

- Serena C, Ceperuelo-Mallafré V, Keiran N, Queipo-Ortuño MI, Bernal R, Gomez-Huelgas R, et al. Elevated circulating levels of succinate in human obesity are linked to specific gut microbiota. ISME J. 2018;12(7):1642–57.