

DBMR Research Conference

Langhans Auditorium, Pathology
Murtenstrasse 31, 3008 Bern

Date: Monday, October 2, 2023, 5 pm – 6 pm

Title: Searching for New Mechanisms of Liver Disease with Therapeutic Potential.
Is Magnesium a New Hepatic Player?

Speaker: Prof. Maria Luz Martinez Chantar, PhD
Professor University of Deusto, School of Medicine, CIC bioGUNE
CIBERehd – Spanish Carlos III Health Institute (ES)

Bio: Professor Maria Luz Martínez Chantar is PhD in Biological Sciences from the Autonomous University of Madrid, Spain. As a post-graduate she worked at the Immunology Department at the Puerta de Hierro Clinic, Madrid, the CSIC Biomedical Research Institute, Madrid, the Biochemie-Zentrum, Heidelberg University, Germany, the University of California, Berkeley (USA), and the Department of Internal Medicine at the University of Navarra (UNAV). In 2005, she joined the Cooperative Research Centre-CIC bioGUNE, Biscay, Spain as a group leader of the Metabolomics Unit. She has an extensive experience in the study of liver biology and disease with a high-level track of productivity in the 1st decile journals like Nature Communications, Cell Metabolism, Hepatology, Journal of Hepatology and Gastroenterology. She has been continuously supported by competitive public and private funding, both national and international, including NIH. She coordinates the Translational Area of the National Institute for the study of Liver & Gastrointestinal Diseases and is in the SAB of the Molecular Medicine Center Nice, IDIVAL and IDIBAPS. She shows extensive participation in different networks (CibereHD, Women in Hepatology: International Consortium, Hepamet Registry, MetaboCancer Excellence Network and diverse EU COST actions). Her contracts with pharmas, as AGIOS, Mitotherapeutix, Takeda or Silence Therapeutics, led to 5 patent applications and 4 licensed products. Her collaboration with OWL Metabolomics led to the development of OWLiver® Care and OWLiver®, non-invasive assays for NASH diagnosis.

Abstract: Mg²⁺ is essential for various cellular processes such as DNA replication and repair, cell proliferation, cell membrane stabilization, blood pressure regulation, and regulation of glucose and insulin metabolism. Perturbations in Mg²⁺ homeostasis are associated with several alterations in the organism, such as mitochondrial dysfunction, inflammation or decrease of the antioxidant capacity. Indeed, various liver diseases are associated with dysregulation of Mg²⁺ homeostasis and correlated with disease severity. Previous research on Mg²⁺ in liver pathologies has shown a protective effect of Mg²⁺ supplementation and revealed Mg²⁺ deficiency in patients with liver cirrhosis or liver cancer. In fact, hypomagnesemia is frequently observed in NASH comorbidities. However, there is still a lack of knowledge about the impact of Mg²⁺ dysregulation on the development of liver diseases, and nothing has been reported about magnesiumotropic proteins and their modulation in the liver.

In this context, CNNM4 appears to be an important regulator of Mg²⁺ homeostasis in hepatocytes and a potential therapeutic target for these pathologies.

Prof. Maria Luz Martinez Chantar, PhD, has been invited by Prof. Annalisa Berzigotti, MD, Systems Biomedicine of Cellular Development and Signalling in Health and Disease, Department for BioMedical Research, University of Bern.

The DBMR Research Conference takes place from 5 pm – 6 pm and will be followed by an apéro.

Next DBMR Research Conference

Monday, November 6, 2023, 5 pm – 6 pm

Speaker: Prof. Jacco van Rheenen, PhD

Title: "Intravital Microscopy of the Fate Cells that carry Mutations in Oncogenic Driver Genes"



Department for BioMedical Research (DBMR)

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The logo of the University of Bern, consisting of a stylized 'u' with a superscript 'b'.

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