

生命医科学研究所セミナー RIBS SEMINAR

日時 2023年6月1日(木) 16:30~18:00
場所 生命医科学研究所 2階大講義室

Speaker 1 : Dr. Yingjie Wu

Professor, The Provincial Hospital and College of Experimental Animals of Shandong First Medical University, Director of the International Joint Research Center for Genetically Engineered Model Animals of the Ministry of Science and Technology.

Title : Growth hormone axis mediates liver-adipose inter-organ crosstalk in lipid metabolism

The inter-organ crosstalk between the critical organs of lipid metabolism (e.g., liver and adipose tissue) is crucial to maintain the lipid homeostasis. Growth hormone (GH) plays important roles in maintaining metabolic equilibrium via GH receptor (GHR), illustrated previously by our GHR tissue specific knockout mouse models in either the liver (LKO) or adipose tissue (AKO). To understand the reciprocal inter-organ regulatory routes, we reported the construction of liver/adipose double GHR knockout mouse model (DKO). We found that the lipid accumulation in the adipose tissue of DKO was further aggravated compared to AKO, while the insulin resistance and hepatic steatosis were abolished in DKO, compared to LKO. Metabolomics analysis suggested that GH influences the serum and organ FFA flux through various aspects of lipid metabolism (e.g., lipogenesis, lipolysis and free fatty acid (FFA) uptake), especially the desaturase metabolic processes. Our data indicate that GHR regulates the crosstalk between adipose tissue and liver through fatty acid desaturation. Hence, stearoyl-CoA desaturase-1 (SCD1), as a post-receptor inhibitor of the GH signaling pathway, may be a therapeutical target for the treatment of NAFLD or obesity.

Speaker 2 : Dr. Ling Gao

Professor, The Provincial Hospital, Shandong First Medical University

**Title : A Brief Introduction to Shandong First Medical University
(Shandong Academy of Medical Sciences)**

Shandong First Medical University (SDFMU) (Shandong Academy of Medical Sciences), founded in February 2019, is a key construction university in Shandong Province and the largest medical science research institution in Shandong Province. There are campuses in Jinan and Tai'an, and research institutions in Jinan, Qingdao, Jining and other cities. There are 19,000 faculty members in SDFMU, with 9 academicians of the Chinese Academy of engineering (including 5 academicians with double employment), and more than 310 high-level talents including overseas academicians, talents from national overseas high-level talent program, national high-level talents special support program, Chang Jiang Scholars Program, and experts selected from the Taishan Scholar Series Talent Program. There are 4,300 teachers with senior professional titles and 2,700 teachers with doctoral degrees. There are 25,000 full-time undergraduate and graduate students. The University (Academy) can grant bachelor's, master's and doctoral degrees in science and medicine. SDFMU has 51 undergraduate majors. There are a number of affiliated hospitals, and it has formed a major medical system in SDFMU. It directly serves more than 10 million people per year. Among them, Shandong Provincial Hospital and Shandong Cancer Hospital rank among the top 100 in China. As one of the first universities issuing Shandong provincial government scholarships to overseas students, SDFMU has enrolled undergraduate and graduate from more than 20 countries and regions such as the United States, South Korea and India since 2004, and has a good reputation for running an international school. SDFMU has established collaborations with universities and medical institutions in more than 30 countries and regions.

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