Summer school in

Obesity

22 – 23 Enero

Biosketch:

Andrew Quest

Andrew Quest got his PhD from the Swiss Federal Institute of Technolgy (ETH) Zuerich, Switzerland and went on to train as a post-doctoral fellow at the University of Washington, Seatlle, WA, USA and then at Duke University, Durham, NC, USA. During this training period he developed a keen interest in mechanisms of protein compartmentalization and particularly, in the case of Protein Kinase C, how interactions with lipids define protein function. He moved on to a position as assistant professor at the University of Lausanne in Switzerland where his focus changed to the membrane-associated scaffolding protein Caveolin-1 (CAV1), and his group then showed that it functions as a tumor suppressor in colon cancer cells. In 1999, he took up a position as Associate Professor in the Department of Cell and Molecular Biology at the Faculty of Medicine, University of Chile. In 2005, he became Full Professor at the same institution. In Chile, he continued working on the role of CAV1 as a tumor suppressor and discovered that the protein modulates the Wnt-signalling pathway and controls -catenin/Tcf-Lef-dependent transcription of the cancer-related genes survivin and cyclo-oxygenase-2, but only does so in cancer cells that still express E-cadherin. His group then turned to studying what CAV1 does in the absence of E-cadherin and showed that the protein promotes metastasis and does so by activating a novel signaling axis linking Rab5 to Rac1 activation. Thus, CAV1 plays a dual role in cancer by promoting metastasis in the absence of E-cadherin, but acting as a tumor suppressor in the presence of E-cadherin. In more recent years, his group has turned to the study of mechanisms by which CAV1 in exosomes promotes metastasis. Also, his group has engaged in studying mechanisms by which infection with the gram negative bacteria Helicobacter pylori contributes to the development of gastric cancer, a leading cause of cancer deaths in the Chilean population. Furthermore, Helicobacter pylori is known to have systemic effects beyond the stomach in humans and his group is now determining how Outer Membrane Vesicles (OMVs) liberated by the bacteria may trigger such effects. Andrew Quest is currently director of the Center for Molecular Studies of the Cell (CEMC) and Principle Investigator of the Advanced Center for Chronic Diseases (ACCDiS). For more details see, https://aqll-lab.cl/

MAGÍSTER EN CIENCIAS BIOMÉDICAS MCBM

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