

"Metabolism from cells to organisms" symposium 2019

Tue 8.10.2019 Biomedicum 1, lecture hall 2

Program:

09:00	Opening of the symposium
09:05-09:45	Riikka Kivelä, <i>University of Helsinki</i> : Angiogenesis regulating tissue metabolism and growth
09:45-10:25	Nicola Vannini, <i>University of Lausanne</i> : Metabolic modulation of hematopoietic stem cell function
10:25-11:05	Jaakko Mattila, <i>University of Helsinki</i> : Stem cell hunger and satiety - decoding nutrient response heterogeneity of the intestinal stem cells of <i>Drosophila melanogaster</i>
11:05-12:00	lunch on own
12:00-12:40	Jorge Ruas, <i>Karolinska Institute</i> : Molecular mechanisms of inter-organ communication: from muscle to brain and back again
12:40-13:20	Anu Wartiovaara, <i>University of Helsinki</i> : Mitochondrial disease physiology: organellar control of systemic metabolism
13:20-13:50	Coffee break
13:50-14:30	Anna-Liisa Levonen, <i>University of Eastern Finland</i> : Nrf2 in metabolism and cancer
14:30-15:10	Markus Perola, <i>National Institute for Health and Welfare and University of Helsinki</i> : Systems biology approaches in metabolism
15:10-15:50	Eriika Savontaus, <i>University of Turku</i> : Neuropeptides in control of body weight and metabolic health
15:50	Closing of the symposium

Please register for the symposium via the e-form <https://elomake.helsinki.fi/lomakkeet/99633/lomake.html> by September 27th.

Get to know our speakers

Academy Research Fellow Riikka Kivelä from Stem Cells and Metabolism Research Program, Faculty of Medicine, University of Helsinki, studies the role of angiogenesis and endothelial cells in the regulation of heart and skeletal muscle growth and metabolism, with special focus on endothelial cell-cardiomyocyte crosstalk. Example of a recent publication:

- Kivelä R et al: *Endothelial Cells Regulate Physiological Cardiomyocyte Growth via VEGFR2 -Mediated Paracrine Signaling. Circulation, 122:1725-1733, 2019.*

Dr Nicola Vannini from Ludwig Institute for Cancer Research, University of Lausanne is focused on identifying the metabolic pathways regulating hematopoietic stem and immune cells function. Example of a recent publication:

- Vannini N et al. *The NAD-Booster Nicotinamide Riboside Potently Stimulates Hematopoiesis through Increased Mitochondrial Clearance. Cell Stem Cell. 2019 24:405-418.*

Academy Research Fellow Jaakko Mattila from Faculty of Biological and Environmental Sciences, University of Helsinki is focused in finding molecular mechanisms linking metabolic and cellular signaling pathways in a biologically meaningful setting, such as in tissue stem cells. Example of recent publication:

- *Mattila J et al: Stem cell intrinsic hexosamine metabolism regulates intestinal adaptation to nutrient content. Dev Cell. 2018 47:112-121.*

Associate Professor Jorge Ruas from Department of Physiology and Pharmacology, Karolinska Institute aims to understand the molecular mechanisms that mediate skeletal muscle adaptations to diverse challenges and their local and systemic consequences. Example of recent publication:

- *Agudelo LZ...Ruas JL: Skeletal muscle PGC-1 α reroutes kynurenine metabolism to increase energy efficiency and fatigue-resistance. Nat Commun. 2019, 10:2767.*

Academy Professor Anu Wartiovaara (Suomalainen in publications) from Stem Cells and Metabolism Research Program, Faculty of Medicine, University of Helsinki, aims to understand the molecular background of mitochondrial disorders, and use that knowledge to develop diagnosis and therapy. Example of a recent publication:

- *Buzkova J...Suomalainen A: Metabolomes of mitochondrial diseases and inclusion body myositis patients: treatment targets and biomarkers. EMBO Mol Med 2018, 10:e9091.*

Professor Anna-Liisa Levonen from University of Eastern Finland aims to elucidate the role of Nrf2 in cancer and cardiometabolic diseases, in order to find new targets for the prevention and treatment of these diseases.

Example of a recent publication:

- *Pölonen P...Levonen AI: Nrf2 and SQSTM1/p62 jointly contribute to mesenchymal transition and invasion in glioblastoma. Oncogene 2019 Aug 23*

Research Professor Markus Perola from National Institute for Health and Welfare and Research Program for Clinical and Molecular Metabolism, Faculty of Medicine, University of Helsinki focuses on the genetics of common disorders and traits utilizing the large population cohorts. Example of a recent publication:

- *Sarin HV...Perola M: Food neophobia associates with poorer dietary quality, metabolic risk factors, and increased disease outcome risk in population-based cohorts in a metabolomics study. Am J Clin Nutr. 2019, Jun 4.*

Assistant Professor Eriika Savontaus from Institute of Biomedicine, University of Turku aims to identify novel means of intervention for obesity. Her main interest is in two neuropeptides, NPY (neuropeptide Y) and POMC (melanocortins) that play key roles in the regulation of body weight. Example of a recent publication:

- *Eerola K...Savontaus E: Hypothalamic γ -melanocyte stimulating hormone gene delivery reduces fat mass in male mice. J Endocrinol. 2018, 239:19-31.*

Organizing committee: Eija Pirinen (eija.pirinen@helsinki.fi), Henna Tynismaa (henna.tynismaa@helsinki.fi), Riikka Kivelä (riikka.kivela@helsinki.fi)