



Centre de Neurosciences Psychiatriques

CNP SEMINARS

ANNOUNCEMENT

Friday, April 23rd, 2021, 11:00 – 12:00

Metabolomics: Approaches and applications to gain insights into brain metabolism

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In this post-genomic era of biochemistry metabolomics has emerged as a powerful phenotyping technology that allows for the cost-effective measurement of a massive panel of metabolites from diverse biological matrices, from model systems to human populations (1). Direct analysis of metabolite levels provides a readout of metabolic activity instead of postulating the outcomes from gene and protein perspective. Mass spectrometrybased approaches yield the most comprehensive and quantitative analyses that serve to decipher the metabolite function and activity (2). The aim of this seminar is to provide an overview on analytical approaches to facilitate the investigation and prospective modulation of deregulated metabolism (3-5) that underlines complex metabolic diseases, with a focus on ageing and age-related neurodegenerative Alzheimer's disease (6).

Invited by Chin Bin Eap chin.eap@chuv.ch

Related publications

1. H. Gallart-Ayala, T. Teav, J. Ivanisevic, *Metabolomics meets lipidomics: Assessing the small molecule component of metabolism. BioEssays* **42**, e2000052 (2020).
2. C. H. Johnson, J. Ivanisevic, G. Siuzdak, *Metabolomics: beyond biomarkers and towards mechanisms. Nat. Rev. Mol. Cell Biol.* **17**, 451-459 (2016).
3. M. M. Rinschen, J. Ivanisevic, M. Giera, G. Siuzdak, *Identification of bioactive metabolites using activity metabolomics. Nat. Rev. Mol. Cell Biol.*, (2019).
4. C. Gujjas, J. R. Montenegro-Burke, B. Warth, M. E. Spilker, G. Siuzdak, *Metabolomics activity screening for identifying metabolites that modulate phenotype. Nat. Biotechnol.* **36**, 316-320 (2018).
5. B. A. Beyer et al., *Metabolomics-based discovery of a metabolite that enhances oligodendrocyte maturation. Nat. Chem. Biol.* **14**, 22-28 (2018).
6. V. van der Velpen et al., *Systemic and central nervous system metabolic alterations in Alzheimer's disease. Alzheimer's Research & Therapy* **11**, 93 (2019).

This event will take place on a virtual space on **Friday, April 23rd 2021 at 11:00** through the link:

<https://chuv.webex.com/chuv/j.php?MTID=m7cf69ea4675a6c523f6506ba60d09237>