



Département de psychiatrie
Centre de neurosciences psychiatriques
Site de Cery
CH-1008 Prilly - Lausanne

Centre de Neurosciences Psychiatriques

CNP SEMINAR

ANNOUNCEMENT

Wednesday, March 11, 2015, 5 p.m.

“Seizure-onset patterns and underlying network activity”

Pr Massimo Avoli, M.D. PhD

Montreal Neurological Institute,
and Depts. of Neurology & Neurosurgery and of Physiology, McGill University
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Invited by Ron Stoop
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(see directions in attached file)

Dr. Massimo Avoli uses electrophysiological and molecular techniques to examine the excitability of forebrain neurons in rats and mice. His work focuses on the interplay of inhibitory and excitatory influences, especially as they relate to the genesis of synchronicity in neuronal networks. These processes are fundamental for understanding the mechanisms underlying the generation of seizures in epileptic patients and for developing new anti-epileptic drugs. In his recent research, Dr. Avoli has worked with a mouse model of Fragile X syndrome to identify the alterations in inhibition that occur in a specific brain structure, the subiculum. This aspect might represent a fundamental mechanism in the pathophysiology of this form of mental retardation.

Selected publications:

Salami P, Lévesque M, Gotman J, Avoli M. Distinct EEG seizure patterns reflect different seizure generation mechanisms. *J Neurophysiol.* 2015 Feb 4;jn.00031.2015.

Avoli M. Mechanisms of epileptiform synchronization in cortical neuronal networks. *Curr Med Chem.* 2014;21(6):653-62. Review

Lévesque M, Salami P, Gotman J, Avoli M. Two seizure-onset types reveal specific patterns of high-frequency oscillations in a model of temporal lobe epilepsy. *J Neurosci.* 2012 Sep 19;32(38):13264-72.

Curia G, Papouin T, Séguéla P, Avoli M. Downregulation of tonic GABAergic inhibition in a mouse model of fragile X syndrome. *Cereb Cortex.* 2009 Jul;19(7):1515-20.