

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

# Centre de Neurosciences Psychiatriques CNP SEMINAR

## **ANNOUNCEMENT**

### Wednesday, November 15, 2017, 10:00

## "Involvement of tryptophan metabolism in psychiatric disorders: Focus on Autism and Schizophrenia"

## Dr Edwin Lim, PhD

Department of Biomedical Sciences Faculty of Medicine and Health Sciences Macquarie University, NSW 2109, Australia

> Invited by Kim Do (Kim.Do@chuv.ch)

#### Salle Hirondelle Hôpital Psychiatrique de Cery Site de Cery, CH-1008 Prilly-Lausanne

#### Abstract:

Dr Lim's recent work published in New England Journal of Medicine revealed that NAD deficiency as a result of gene defects in the kynurenine pathway (KP) of the tryptophan metabolism may lead to multiple congenital malformation including vertebral segmentation, cardiac and renal defects. This talk will review several roles of the tryptophan metabolism involve in fetal development of the brain that can have immediate consequences (as outlined above) and also in later life with increased susceptibility to the development of psychiatric disorders.

#### Selected publications:

- Shi H, Enriquez A, Rapadas M, Martin EMMA, Wang R, Moreau J, <u>Lim CK</u>, Szot JO, Hughes J, Sugimoto K, Humphreys D, McInerney-Leo AM, Leo PJ, Maghzal GJ, Halliday J, Smith J, Colley A, Mark PR, Collins F, Sillence DO, Winlaw DS, Ho J, Guillemin GJ, Brown MA, Kikuchi K, Thomas PQ, Stocker R, Giannoulatou E, Chapman G, Duncan EL, Sparrow DB, Dunwoodie SL. (2017) NAD deficiency, congenital malformations and niacin supplementation. *N. Eng J. Med*, 377:544-552
- Lim CK\*, Essa MM, de Paula Martins R, Lovejoy DB, Waly MI, Al-Farsi YM, Al-Sharbati M, Al-Shaffae MA, Guillemin GJ. (2015) Altered kynurenine pathway metabolism in autism: implication for enhanced glutamatergic activity through immune activation. *Autism Research*, 9(6): 621-31. \*Corresponding author
- Zavitsanou K, <u>Lim CK</u>, Purves-Tyson T, Karl T, Kassiou M, Banister SD, Guillemin GJ, Shannon-Weickert C. (2014) Effect of maternal immune activation on the kynurenine pathway in preadolescent rat offspring and on MK-801-induced hyperlocomotion in adulthood: amelioration by COX-2 inhibition. *Brain, Behavior and Immunity*, 41:173-181.



 Erhardt S, <u>Lim CK</u>, Linderholm KR, Janelidze S, Lindqvist D, Samuelsson M, Lundberg K, Postolache TT, Träskman-Bendz L, Guillemin GJ, Brundin L. (2013) Connecting inflammation with glutamate agonism in suicidality. *Neuropsychopharmacology*, 38:743-752.