

# “Novel therapeutic targets for treatment of major depression: Galanin and its receptors”

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**Date : 27 March 2019**

**Time: 11:00am – 12:30pm**

**Venue: Room 3508, 3/F, Li Dak Sum Yip Yio Chin Academic Building**

## **Abstract**

The current treatment of major depression disorder is often based on selective serotonin reuptake inhibitors (SSRIs) and/or the selective noradrenalin (NA) reuptake inhibitors (SNRIs). However, they are associated with a number of side-effects. Therefore, there is a strong need for novel targets for development of antidepressants acting via different mechanisms.

Galanin, a neuropeptide which has three receptors named as GALR1-3, co-expresses with NA in locus coeruleus (LC) neurons and with serotonin (5-HT) in dorsal raphe (DR) neurons. Our electrophysiology studies revealed that galanin has an inhibitory action on both NA and 5-HT neurons. Thus, galanin and its receptors are of considerable interest in relation to mood disorders. Our recent studies found that the transcripts of GalR1 were selectively increased in the DR from chronic mild stress (CMS) rats. After knocking down GalR1 in the DR with siRNA, all depression-like behaviors were significantly reversed. Thus, the depression-like behavior in CMS rats is related to an elevated expression of GalR1 in the DR, suggesting that a GalR1 antagonist could have antidepressant effects.

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**All are welcome !**