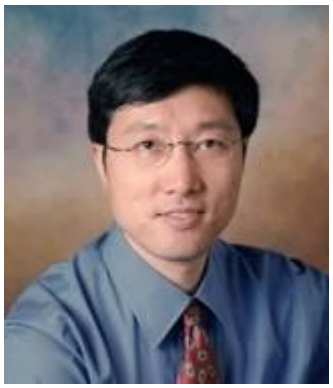
Institute of Molecular and Cell Biology
A*STAR

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof Song Haiwei:

Date: Wednesday, 18 December 2019
Time: 11:00AM – 12:00NN
Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Structural Basis of Molecular Modulation of Human Cannabinoid Receptors



Prof Liu Zhijie
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Abstract

Our recent studies on structures of human CB1/CB2 in complex with different stabilizing ligands will be presented. The structure of the antagonist bound CB1-AM6538 complex reveals an expansive and complicated binding pocket network consisting of multiple sub-pockets and channels to various regions of the receptor. The structures of the agonist bound CB1-AM11542 and CB1-AM841 complexes uncovered significant conformational changes in the overall structure, relative to the antagonist-bound state. In addition, a "twin toggle switch" of Phe2003.36/Trp3566.48 is observed and appears to be essential in receptor activation. The antagonist bound CB2-AM10253 complex reveals an binding pocket with unexpected similarity with agonist bound CB1 structure. Those structures reveal important insights into the activation mechanism of both receptors and provide a molecular basis for predicting the binding modes of Δ9-THC, the endogenous and synthetic cannabinoids. The key findings should inspire the design of chemically diverse ligands with distinct pharmacological properties.

ALL ARE WELCOME *(No registration required)*

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Thank you.