# City University of Hong Kong Department of Biomedical Sciences

presents a seminar



## "NEURONAL AND RECEPTOR BASIS OF SALICYLATE-INDUCED PHANTOM AUDITORY SENSATION"

by

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Date: 5 August 2016 (Friday) Time: 2:00pm to 3:30pm

Venue: Meeting room 2-130, 1/F, Block 2, To Yuen Building, CityU

#### **Abstract**

Tinnitus is a phantom auditory sensation in the absence of an external sound and is a very prevalent auditory disorder that affects the quality of life of millions of people. A high dose of salicylate, an active metabolite of aspirin, can reliably induce tinnitus in animals and human subjects. Much evidence suggests that salicylate-induced tinnitus has an origin from the central nervous systems. The ongoing research of our laboratory focuses on the neural mechanisms underlying salicylate-induced tinnitus. Specifically, we use brain slices and patch-clamping techniques to explore how salicylate targets the central auditory nuclei at cellular and receptor levels. We found that salicylate has a broad spectrum of pharmacological actions on the neurons and the membrane receptors. More importantly, these actions are brain-region dependent and disturb balance between inhibition and excitation of the neural circuits, which is implicated in the generation of tinnitus from the central areas of the brain.

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### All are welcome