



Departmental Seminar Series

A seminar entitled:

"Mechanisms of the Most Powerful Pain Relievers of All...General Anesthetics"

by

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on Monday, August 24, 2009 at 4:30 p.m.

in Seminar Room 1
G/F. Laboratory Block
Faculty of Medicine Building
21 Sassoon Road
Hong Kong

All are welcome

Abstract

Loss of response to painful stimuli, and loss of consciousness, are the most striking characteristics of anesthesia-like states such as concussion, reversible coma, syncope (fainting) and general anesthesia itself. These states also exhibit behavioral suppression, atonia, a shift to delta-wave EEG pattern, and depressed cerebral metabolism. It is generally presumed that this constellation of profound functional changes reflects widely distributed suppression of neuronal excitability and synaptic action due to ubiquitous drug action, or oxygen or nutrient starvation. I will present evidence for a radically different architecture...that a small group of neurons in the mesopontine tegmentum has executive control over the alert status of the entire cerebrum and spinal cord, and can generate loss of pain sensation, and loss of consciousness, through specific neural circuitry.