DEPARTMENT OF PHYSIOLOGY

Dr. F.C. MacIntosh Lectureship Seminar

GUEST SPEAKER

Dr. Natalie J. Michael

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FRIDAY, DECEMBER 5, 2025
11:00AM

MCINTYRE MEDICAL SCIENCES BUILDING, ROOM 1034

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"Hypothalamic circuits regulating sleep and wakefulness"

Galanin-expressing neurons in the ventrolateral preoptic area ($VLPO^{galanin}$) of the hypothalamus are active during sleep and play an important role regulating non-rapid eye movement (NREM) sleep. It is generally believed that $VLPO^{galanin}$ neurons promote sleep via inhibitory actions in multiple arousal promoting regions of the brain. Histaminergic neurons are a population of wake-active neurons located in the hypothalamus, that receive strong projections from the sleep-active $VLPO^{galanin}$ neurons. However, the ability of galanin to influence the activity of histaminergic neurons has received limited attention. This talk will discuss our research exploring the mechanisms by which galanin influences histaminergic neuron electrical excitability. Our findings are relevant for the understanding of the hypothalamic circuits regulating sleep and wakefulness.