IRCN Seminar

July 1 (Mon), 10:00-11:00

IRCN Seminar Room, 13F Experimental Research Building

"Catecholamines as modulators of social influences on vocal learning"

Speaker: Prof. Jon T. Sakata

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Abstract

Vocal learning is gated by social interactions in a variety of vocal learning species, including songbirds and humans. Despite the importance of social interactions on vocal learning, little is known about the mechanisms underlying social influences on vocal learning. I will discuss a number of experiments that implicate noradrenergic and dopaminergic populations in the social modulation of vocal learning in songbirds. In particular, my experiments reveal that noradrenergic neurons in the locus coeruleus and dopaminergic neurons in the ventral tegmental area are sensitive to social interactions that promote the sensory learning of song during development. In addition, my experiments demonstrate that manipulations of noradrenergic tone in sensory processing areas modulates the degree of sensory learning of song during development. Together, these experiments highlight the importance of catecholaminergic neurons in the processing of social information and in vocal learning.