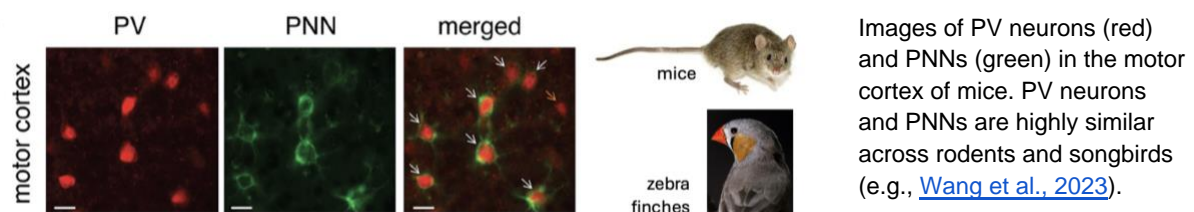


The [Sakata lab](#) at McGill University is looking for motivated graduate (PhD) students and postdoctoral fellows to investigate **the contribution of perineuronal nets (PNNs) and parvalbumin (PV) neurons in motor circuitry to motor performance and learning**. This CIHR-funded research program is comparative, involving experiments in songbirds (zebra finches) and mice, and conducted in collaboration with the labs of **Profs. [Alanna Watt](#) and [Sarah Woolley](#)** (McGill). Because songbirds learn their vocalizations (in ways similar to how humans learn to speak) and possess discrete neural circuits for vocal learning and performance, songbirds are powerful animal models to reveal the neural mechanisms underlying vocal motor learning and control, including the contribution of PNNs and PV neurons to vocal performance and plasticity. Mice are an established model system to reveal locomotor plasticity and control and allow for genetic approaches to understanding PNN function. Experiments will involve behavioral analyses as well as pharmacological, viral, and genetic manipulations of PNN expression in focal brain areas. Collectively, these experiments will provide foundational and novel insights into mechanisms of skill acquisition, sensorimotor integration, neural plasticity, and movement and speech disorders.



PhD students and postdoctoral fellows will be part of an expansive neuroscience community at McGill and can take advantage of resources in the [Department of Biology](#), [Integrated Program in Neuroscience](#), [Advanced Bioimaging Facility](#), and [Centre for Research on Brain, Language, and Music](#). Outside the lab, trainees will be immersed in a diverse and exciting culture and able to live in the vibrant and affordable city of Montreal.

**Those interested in applying should contact Prof. Jon Sakata ([jon.sakata@mcgill.ca](mailto:jon.sakata@mcgill.ca)) and include a description of their research history and research interests and a copy of their CV.** Prospective graduate students should include their university transcripts. For additional information and application resources, please see [this](#) and [this](#).