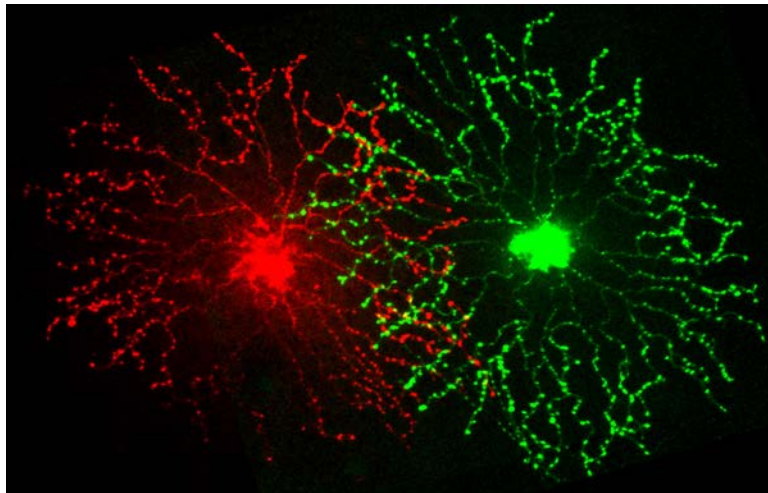




## It's Not YOU, it's ME: Neuron Self/Non-Self Recognition in Neural Circuit Development



In the developing nervous system, billions of neurons are precisely organized into neural circuits. Newly born neurons wire up into circuits through a series of developmental events that establish specific patterns of neuron branching and synaptic connections. My research investigates molecular and cellular mechanisms underlying neural circuit formation, with an emphasis on identifying recognition molecules that shape neurons and their connections. In my postdoctoral work, I identified novel roles for the clustered protocadherins (Pcdhs) in dendrite self-avoidance and self/non-self recognition. Research in my laboratory will begin with elucidating mechanisms of self/non-self recognition in neural patterning. In the long-term, we will seek novel mechanisms of neural circuit assembly and explore how abnormalities in these events contribute to neurodevelopmental disorders.

### **Dr. Julie L. Lefebvre PhD**

Scientist, Program for Neurosciences and Mental Health  
Hospital for Sick Children

**Date:** Monday, May 12<sup>th</sup>

**Time:** 4:00 PM

**Place:** Medical Sciences Building  
1 King's College Circle  
Room 4279