



**Karolinska  
Institutet**

**Michael Ratz, PhD**

Laboratory of Neurogenomics

## **Research opportunities in Ratz lab at Karolinska Institute**

The **Ratz lab** ([www.ratzlab.org](http://www.ratzlab.org)) at **Karolinska Institute** (Stockholm, Sweden) has several openings for Master students, PhD students and postdocs to work at the intersection of neuroscience, synthetic biology, and single-cell (spatial) transcriptomics.

My lab is interested in the **brain wiring problem**: how is genomic information (thousands of genes) translated into neuron-specific connectivity (trillions of synapses)? To answer this fascinating question, we use and develop **novel molecular barcoding and 3D intact-tissue RNA-seq tools** that enable massively parallel neural circuit tracing with molecular detail. We study 1) how synaptic specificity is established amongst dozens of diverse neuron types during brain development and 2) how gene mutations affect neuronal wiring in mouse models of neurodevelopmental disorders such as autism.

Interested candidates with a background in experimental life sciences (e.g., molecular biology, (developmental) neuroscience) and/or data science (e.g., bioinformatics, computer science) are encouraged to apply.

**Karolinska Institute** is one of the world's foremost medical universities. As a university, Karolinska Institute is Sweden's single largest centre of medical academic research and offers the country's widest range of medical courses and programmes. Since 1901 the Nobel Assembly at Karolinska Institute has selected the Nobel laureates in Physiology or Medicine.

If interested, please email your CV and a cover letter to Dr. Michael Ratz: [michael.ratz@ki.se](mailto:michael.ratz@ki.se).