

**Summary of Research Program:**

My lab uses rat and mouse models to investigate stress and addiction mechanisms. The lab is unusual because we pursue a very broad range of methods, including molecular, cellular, neuroanatomical, and behavioral levels of organization. We have focused on serotonin receptors historically but increasingly we are using novel molecular and genetic tools to dissect the involvement of key neural circuits in behavioral models of stress and/or addiction.

The main strategies include a range of behavioral models, intersectional transgenic and viral-mediated gene transfer manipulations of gene expression, neuropharmacology, engineered receptors (DREADDs), primary neuronal culture, and gene expression analysis from discrete neuron populations (using RiboTag pull-down). We are trying to push the envelope in developing and using methods that allow us very precise manipulations or readouts from specific pathways such as the projections from nucleus accumbens to ventral tegmentum or lateral habenula to dorsal raphe nucleus.



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[Lab Website](#)

[Faculty Profile](#)