Chronic subjective tinnitus is a brain condition affecting ~10% of people worldwide, where patients experience a constant ringing or buzzing “in the ear.” Although acute tinnitus can be a transient symptom of loud-noise exposure, neurological disease, extreme stress, or other causes, chronic subjective tinnitus is thought to be a special case of maladaptive plasticity within the central nervous system subsequent to peripheral damage. In this talk, I will discuss evidence from MRI studies linking chronic tinnitus to aberrant auditory-system activity, as well as abnormalities in limbic and fronto-striatal networks. I will explore how these studies have influenced current models of tinnitus neuropathophysiology, as well as their implications for neuromodulation therapies for this sometimes debilitating condition.

Amber M. Leaver, PhD
Assistant Professional Researcher
Department of Neurology, UCLA