**Vocal learning and flexible rhythm pattern perception are linked:  evidence from songbirds**

The ability to detect and predict periodic auditory rhythms is a core feature of music cognition.  Humans readily recognize a rhythmic pattern, such as that of a familiar song, independently of the tempo, indicating that our perception of auditory rhythms is flexible, relying on the relative timing of events, rather than on specific absolute durations.  Neuroimaging studies in humans have shown that auditory rhythm perception strongly engages the motor planning system, including the premotor cortex and basal ganglia, even when the listener is not moving or preparing to move.  I will discuss ideas for the role of motor regions in rhythm perception and describe precent progress using vocal learning songbirds to understand whether specialized auditory-motor forebrain circuits that subserve vocal learning also confer advantages for flexible rhythm pattern perception.  Sex differences in auditory-motor circuitry and the ability to detect isochrony will also be considered.