Title of the talk: **Unraveling the coping functions of the ventral midbrain**

Abstract:

The ventral tegmental area (VTA) and substantia nigra (SN) in the ventral midbrain play some essential roles in motivational behaviors. The afferent and efferent pathways involved, and how the information is mediated to initiate adequate coping responses, have become the impetus for understanding the circuitry mechanisms of the ventral midbrain underlying motivational behaviors. In the past years, I have established a platform in the lab to employ optogenetic approach, activity-dependent targeting approach along with mouse behavioral paradigms to mainly investigate circuitry mechanisms of motivational behaviors. In the present talk, I would like to share the recent studies in the lab that demonstrate how the ventral midbrain is engaged by the information of selective modalities to attend or respond accordingly.