Transcriptional Control Generating Excitatory and Inhibitory Neurons in Somatosensory Circuits

JANE E. JOHNSON, PH.D.
PROFESSOR OF NEUROSCIENCE
SHIRLEY AND WILLIAM S. McINTYRE DISTINGUISHED CHAIR IN NEUROSCIENCE
UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

Research Interests

- Molecular control balancing progenitor cell maintenance with neuronal differentiation in the vertebrate central nervous system—implications for tumor progression in neural and neuroendocrine cancers.
- Generation of neuronal diversity and circuit formation through defining the molecular control of neuronal subtype specification particularly in somatosensation circuitry in the dorsal spinal cord.
- Transcriptional control of these processes through studying the regulation and function of bHLH transcription factors particularly Ascl1 (Mash1), and PRDM factors such as Prdm13.
- Currently using genome wide target analysis of the bHLH and PRDM transcription factors to identify novel target genes functioning in neuronal specification and tumor formation.

Publications

