Goal-directed action is a fundamental organizing principle of behavior and is frequently perturbed across neuropsychiatric disorders. Our lab explores the cellular and circuit-level mechanisms that align motor output with outcome, including the formation of action-outcome associations, the weighing of benefits and costs and the regulation of behavioral variability. Here I will highlight recent work focusing on the functional relevance of striatal interneuron subtypes for action-reward association and the potential role for the synaptic adhesion molecule Neurexin1a in circuits for value-based choice.