

Rachel Greene and Maya Mosner Receive Accelerator Grants from the Autism Science Foundation (ASF)

The Autism Science Foundation (ASF) has awarded Accelerator Grants to two exceptional projects that will study new treatment mechanisms and improve data collection methods in community settings. Principal Investigators on the projects are CIDD graduate research assistants, Rachel Greene (supervised by CIDD Investigators, Garret Stuber and Gabriel Dichter) and Maya Mosner (supervised by Gabriel Dichter). These studies were the only two awards funded by the ASF in this round of selection. Congratulations on this great distinction!

The Effects of Oxytocin on Functional Neural Connectivity in Autism

Rachel Greene, Principal Investigator with Garret Stuber and Gabriel Dichter, University of North Carolina



Rachel Greene

Recent studies have suggested that intranasal oxytocin administration improves some social behaviors in individuals with an autism diagnosis. Researchers at the University of North Carolina are examining where in the brain oxytocin acts to produce this improvement. Of particular interest are the brain systems involved in reward. While neuroscientists have shown that the areas of the ventral tegmental area (VTA) and nucleus accumbens (NAC) are essential for the rewarding properties of food and drugs of abuse, the role of these brain regions in the rewarding aspects of social interactions and person-to-person connections has been less-studied. This project will build on an existing grant to study the effects of oxytocin on the activity of the VTA and NAC in social reward in adolescents with autism. Ms. Greene will utilize the accelerator grant mechanism to build on the data already collected to understand how this brain region connects with other parts of the brain during different tasks involving social reward, and how oxytocin affects these functional connections. This project will reveal the potential mechanisms of action of a novel ASD therapeutic agent and provide a new neural target by which to evaluate future promising ASD treatments.

Using Experience Sampling to Evaluate the Effects of Social Skills Treatment

Maya Mosner, Principal Investigator with Gabriel Dichter, University of North Carolina



Maya Mosner

Often research studies collect information from individuals at single time points and in settings like clinics or hospitals. These environments may not reflect functioning in real life situations. Recently, researchers outside the field of autism have started to use something called "experience sampling" to study affect and behavior. This method allows people to report back multiple times during the day in contexts in which they live, work or function. This project will piggyback on a trial of a social skills intervention to collect data using experience sampling, where individuals with autism will answer questions about their feelings and emotions during social situations before and after treatment multiple times during the day using a smartphone. The long-term goal of this project is to validate this new, ecologically valid method to evaluate novel social interventions for individuals with autism.

