Final Report for Woodcock Institute Research Grant: 
Outcome Processing in Social Interactions in Individuals with Traumatic Brain Injury: An Investigation Using Pupillometry

This report covers activity from 09/01/2017 through 08/31/2018.

Study aim: The current study hypothesized that individuals with TBI would show impairments in processing of immediate outcomes but not delayed outcomes, as reflected by pupil dilation.

Data analysis: 
Preliminary data has been analyzed and showed that participants receiving delayed outcomes in the form of reciprocation during social interaction showed greater pupil dilation to non-reciprocation than to reciprocation, indicating successful outcome processing. Meanwhile, participants receiving immediate reciprocation did not show such differential pupil response, indicating unsuccessful outcome processing. Thus, preliminary results are in line with our original hypothesis that individuals with TBI are more successful at processing delayed outcomes rather than immediate outcomes during social interactions. The study team used the preliminary data collected during the funding period for grant applications submitted to both federal and private funding agencies. Dr. Liu submitted a Mary Switzer Research Fellowship in February 2018 under the title, “Outcome Processing in Social Interactions in Individuals with Traumatic Brain Injury: An Investigation Using Pupillometry and fMRI” (not funded) and Dr. Dobryakova (mentor) submitted a Pilot application in May 2018 to the National MS Society, “Outcome Processing in Social Interactions in Individuals with Multiple Sclerosis: An Investigation using Pupillometry” which was funded to conduct this research project in another clinical population. Data and/or results from this research project have not yet been presented or published in any format.

Problems encountered during the grant period: 
Minimal problems have been encountered. There was a delay in identifying a qualified research assistant and some problems with recruitment of the sample that meets exclusion/inclusion criteria.

The following tasks have been addressed during the grant period

- The study protocol and related materials were submitted to the Institutional Review Board (IRB) at Kessler Foundation and approval was granted.
- We have recruited for and hired a research assistant to screen and recruit individuals with TBI.
- Research Assistant has been trained on the study protocol and was approved through our 3 step approval process to begin recruitment.
- All neuropsychological test stimuli and record forms have been purchased.
• The study team has met multiple times to discuss recruitment strategies beyond internal resources.
• The research assistant called 36 potential participants. 6 participants did not meet exclusion/inclusion criteria. 5 participants were not interested in participation. 15 potential participants did not respond to recruitment efforts.
• 10 potential participants have been scheduled for participation.
• Data from 9 participants have been collected