In the research project entitled Movement Interventions for Young Children with Autism Spectrum Disorder, Dr. MacDonald is attempting to determine and answer a question that is debated by those in the field of Autism Research. It is hypothesized that developmental delays in motor skills may contribute to social deficits seen in children with autism. If true, then a child with autism who is provided special motor skill training may experience a decrease in the severity of their symptoms, specifically social communicative skills. Dr. MacDonald intends to recruit children ages 2-7 years old for a longitudinal study, which involves an initial evaluation, intervention, and two post-intervention follow-ups to determine any increase in motor and/or social skills.

My duties in this study were to observe and videotape the assessments carried out by the graduate students. The URISC funds were put towards my pay for my work on this project. I spent many hours coding video sessions. I coded the incidence of specific social behaviors, including communication, reciprocal social interaction, play, imagination, and stereotyped behaviors, seen in the 10 minute social videos and how the standardized ADOS score related to the frequency of these behaviors. I input data collected from multiple assessments, however, I was primarily concerned with the baseline data (compiled from the initial evaluations of participants). I used the Pearson Product Moment correlation to statistically analyze these different variables present in the baseline data to determine the relationships between them.

When correlations were run the ADOS Social interaction/Communication Score and Reciprocal Social Interaction on Video had a correlation of \(-.943\) (we would expect to see a negative correlation based on the coding systems), and determined to be significant \((p < 0.05)\). So the more reciprocal social interaction a child has the lower their score on the Autism Diagnostic Observation Schedule, which is what we expect to see. This does show that it is the quality of
communication, the reciprocation and interplay between the child and parent which is important. The frequency of play was correlated to a higher score on Imagination and Creativity on the ADOS and was approaching significance. We would expect to see this. The other variables, including Social Imagination, Stereotyped Behaviors, and Communication, were not statistically significant. These results could be due to the small sample size (n= 7).

One of the benefits of the URISC award was that it increased my learning as a student. I was in an abnormal psychology class this term and we spoke about Pervasive Developmental Disorders, under which autism is classified. I had first hand experience in the lab, which contributes to my knowledge of the topic and it was invigorating to see the connection between academic knowledge and real-world situations. This program also gave me an opportunity to develop my professional skills. As a research student I made many phone calls and sent emails during our recruitment process, which increased my communication skills and confidence level. I would see this as a very valuable work experience that I will take with me into my future career.

I learned to collaborate with undergraduate, master, and Ph.D. students as well as the lead professor. I received a lot of mentoring from the graduate level students by just observing their work in the lab as they progressed through their programs. I actually started on this study under the URAP Program last winter term, so the URISC program allowed me to continue participating in this research and even allowed me to focus on a specific area. I believe my URISC Research Question resulted in the first statistical analysis of the data collected in this study, which will lead to better and more refined results in the future. I believe my work will aid Dr. MacDonald when she publishes the results of this study.

Participating in this opportunity greatly increased my background in autism, which will be pertinent to my future career as an Occupational Therapist. This field is increasingly concerned
with the treatment of autism and I believe having experience with research in this area will enable me to be a better practitioner. I will have a greater understanding of how researchers come to their conclusions and the different assessment tools available, which I will probably use in the future with my own patients. I believe my experience coding behaviors in video assessments has developed my observation skills, which are very important for an Occupational Therapist to master.

Please submit the final report electronically to Debbie Delmore, Research Office, at debbie.delmore@oregonstate.edu