IDENTIFYING ASSOCIATIONS AMONG NEUROLOGICAL DISEASES USING BIOINFORMATICS TOOLS Aaron D. Johnson[1] (adjsbi@rit.edu), Elizabeth K. Perry[2] (ekpsrs@rit.edu) and Gary R. Skuse[1*] (grssbi@rit.edu) [1]Monroe Community College and [2]Rochester Institute of Technology

The etiology of many neurological diseases is poorly understood for a number of reasons. Often, associated symptoms are ill defined and difficult to quantify. Multiple genes may be involved in the pathogenesis and progression of the disease so identifying the initial causative mutations is challenging and environmental influences, while likely important, are often bewilderingly complex. One approach to unraveling the associations among neurological diseases and uncovering related features is the application of bioinformatics tools. This project involves the use of many publicly available resources to compile information on diseases including Alzheimer's Disease, autism, Batten Disease, Rhett Syndrome and Schizophrenia among others. Symptoms as well as any identified responsible genes and associations with environmental or nutritional associations were compiled in an effort to identify coincidences among different diseases. To date we have looked at 15 diseases and found, together, more than 178,000 related abstracts. Of those, approximately 160 were relevant to this study and revealed more than 60 potentially responsible genes. Ongoing efforts will identify overlapping symptoms, contributing environmental factors and genetic relationships among this collection of diseases in order to gain a better understanding of any associations among them.