Multiple sclerosis is an autoimmune disease that affects people worldwide. We know that different versions of the histamine receptor, H1R, are directly linked to susceptibility to the disease. Although there are more than forty FDA- approved antihistamines, there are none as of yet that cure autoimmunity. In this project, we developed a novel approach (TAP-tag) to isolate the H1R protein from human cells and study which proteins it interacts with on the inside of the cell. Next we will determine the unique protein “social networks” of susceptible H1R gene variants versus those formed with resistant variants. Once the protein networks are identified, biomedical researchers can further develop drugs that may contribute not only to a cure for multiple sclerosis, but autoimmune disease in general.