

1098-34-259

Maria E Markovich* (mm0283@ship.edu) and **Luis Melara** (lamelara@ship.edu). *Modeling the Cellular Dynamics of Multiple Sclerosis*. Preliminary report.

Multiple Sclerosis is an autoimmune disease that targets the central nervous system, specifically the myelin sheath. Symptoms of this disease include loss of muscle control, dizziness, and visual impairment. Because of the autoimmune nature of Multiple Sclerosis, all of the cells involved are self-cells. We develop a simple system of ordinary differential equations describing the interactions of leukocytes, oligodendroglia, and myelin. Our model can yield insight into the deterioration of the myelin sheath. This degradation may eventually result in Multiple Sclerosis. (Received January 27, 2014)