Sjögren’s Syndrome is an autoimmune disease in which the body’s defense system attacks moisture-producing glands, causing dry eyes and dry mouth. Many factors contribute to the development of SS, including genetics. In some patients with SS the immune-system attacks blood vessels (vasculitis) and lymphomas (cancer of the immune-system) are more frequent. Stem cells are unique unspecialized cells that can become several different cell types. When stem cells are created artificially from adult cells, it’s called Induced Pluripotent Stem Cells (iPSC).

The goal of this proposal is to analyze the immune-system and to generate iPSC from SS patients. We will characterize the iPSC and use these cells to generate SS specific endothelial (blood vessel) cells, to study the relationship between the immune-system and vasculature. Explaining if SS vascular cells are genetically more vulnerable to immune cells. This will help understand the disease and may lead to new therapies and cure.