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**Project Title:** *System Analysis of Mouse Models for Sjögren's Syndrome Pathogenesis*

**Abstract:** Primary Sjögren's syndrome (pSS) is a chronic, autoimmune disease affecting 4 million patients in the U.S. Previous studies utilizing human and mouse models have highlighted several components of the immune systems as well as nonimmunologic factors. However, the intersections between humans and mouse models in terms of pathways and key targets remain elusive. The scientific goal of this proposal is to address the crucial question, "can a mouse model predict the outcome of a clinical intervention for pSS?" Therefore, our goal is to use a systems biology approach to develop models for the initiation, pathogenesis and resolution of pSS. The data for the different stages of the disease will be analyzed by Weighted-Gene Co-Expression Network Analysis (WGCNA). The identified molecular pathways and targets will then be validated on mouse models of pSS development and resolution to generate a validated pSS model based on human disease modeling and mouse model validation.