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**Project Title:** *Sjögren's Antigens and Their Role in Stress Granule Formation, Apoptosis, RNA-release and Their Contribution Towards Autoimmunity*

**Abstract:** Nuclear proteins (NP), major antigens in Sjögren's syndrome (SS), play important roles in RNA-polymerase-III-based noncoding-RNA biogenesis and quality control. Stress-mediated translocation of SS NP into cytoplasmic stress granules may influence their immunogenic potential and / or influence their release from cells, potentially triggering autoimmunity. Aiming to study effects influencing their localization, dynamics and immunogenicity, we will identify SS NP interaction partners by crosslinking and high-throughput RNA sequencing techniques and mass spectroscopy, and compare interactions in patients and healthy controls. Furthermore, we will develop methods to isolate and characterize stress granules, and study their dynamics in live cells using GFP-fusion proteins. Interaction partners of SS NP and isolated components from stress granules will be tested for their immunostimulatory potential using interferon and cytokine activation assays. Genetic variations detected in SS patients may serve as biomarkers, and could provide an enhanced understanding of innate and adaptive immune activation, inflammatory pathways, and regulation of tolerance.