

## **Research Summary**

Systemic lupus erythematosus (SLE) is a chronic autoimmune disorder characterized by loss of immune tolerance, the production of autoantibodies, and prevalent hypertension. Our laboratory has shown that an established experimental female mouse model of SLE (NZBWF1) develops hypertension and impaired renal hemodynamic function. The overall goal of my research is to understand how the immune system dysfunction in SLE contributes to the development of hypertension.

Recent experiments by our laboratory suggest that B cells and autoantibody production are important in the pathogenesis of hypertension. The majority of autoantibodies are produced by long-lived plasma cells that differentiate from B cells during SLE in both NZBWF1 mice and patients with SLE. Thus, current studies are aimed at targeting plasma cells.