

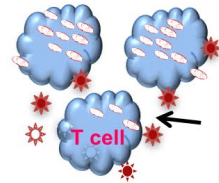
M. Gray Group

Pinpointing Pathogenic B cells in Autoimmunity

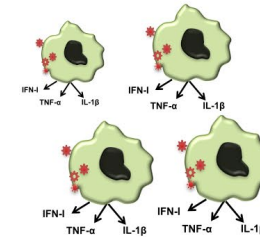
- Autoimmune diseases are reaching epidemic proportions and cost billions of pounds each year to treat
- Biologic therapy targets downstream inflammatory pathways and is ineffective in up to 50% of patients
- We hypothesize that chronic autoimmune inflammation is driven by pathogenic B cells
- To identify these B cells in human autoimmune diseases we are using advanced methods of immune system analysis, bioinformatics and data science.

B cells drive chronic autoimmune inflammation

Presents self antigen and activates T cells



Secretes antibodies that form immune complexes and activates innate immune cells



TNF-α IL-6

Secretes inflammatory cytokines



Inflamed joint

