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## Autoimmunity and Lupus



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- Lupus is an autoimmune disease affecting many organs.
- Women are more predisposed than men.
- Multiple genes, UV, EBV infection, environmental factors are involved.
- More common in people of African descent.
- Therapies are untargeted and have side effects.

## Immune Regulation in the Gut

**Research Aims**: 1. Identify the cells making the pathogenic molecules in lupus. 2. Isolate the molecule and use it as a tool to probe stool samples from lupus patients to see what it interacts with.



## How could the gut be related to autoimmunity?

Cells in the intestine can react with bacteria present in the microbiome mounting an immune response. This response could eventually turn into an autoimmune response by reacting against self antigens leading to lupus.



## Ongoing Work and Acknowledgements

- Continue <u>collecting samples</u> from early onset children diagnosed with lupus.
- Refine the strategy, make antibodies and then probe stool samples to <u>target a bacteria</u> that could be leading to cross reactivity.
- Funding provided from Center for Mucosal Immunology in Rheumatic Diseases (CMIR) Pilot Grant (NIH P30 AR079369)
- Thank you to Project Bridge and Legislators for hosting STEM Capitol Poster Day, and Rebecca Keogh for the poster inspiration!



