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## Featured Investigator: Dr. Justin M. Gregory

[Justin M. Gregory, MD](#)

Assistant Professor of Pediatrics

### Research Specialty:

Metabolic dysregulation in type 1 diabetes



### Research Description:

#### [The Use of Hepatopreferential Insulin Analogs to Mitigate Insulin Resistance in Type 1 Diabetes](#)

Dr. Gregory currently studies the mechanisms of insulin resistance in type 1 diabetes, specifically looking at hyperglycemia and self-administered insulin. He is interested in the difference between the two mechanisms in regards to the cause of insulin resistance in those with type 1 diabetes. He has hypothesized that the practice of self-administering insulin is another way the body can instigate insulin resistance and endothelial dysfunction versus hyperglycemia, which has been widely regarded as the main cause of insulin resistance. Dr. Gregory, along with research nurse Jordan Smith, has been analyzing a variety of biological factors in participants with type 1 diabetes, MODY 2 (Maturity Onset Diabetes of the Young), and control patients; Tests include body fat percentage, clamp tests, aerobic tests, rest tests, and insulin sensitivity. He hopes his research will open up new opportunities for therapeutic strategies for those with type 1 diabetes. Dr. Gregory plans to expand on his research in the future to study more on how insulin resistance is closely tied to cardiovascular disease and what treatments can be developed in the future.

## Attachment

 [Gregory\\_detailed\\_project\\_summary.pdf](#) - Added on September 1, 2017 at 7:58 AM by [Jessica Kimber](#)

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