



Fall 2024

**Biochemistry and Molecular Biology
Brown Bag Series**

**Shamvabi Jha
Graduate Student**

*“Effect of ketogenic diet consumption on
human gut microbiota”*

Tuesday, October 29, 2024

11:00 AM

Location 105 Biological Sciences Building

Lab: Oleg Paliy, Ph.D.



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<https://science-math.wright.edu/biochemistry-and-molecular-biology>

Abstract:

The ketogenic diet has become increasingly popular in recent years. It has been a trendy option to lose weight. The ketogenic diet is defined as a diet with one gram of protein per kilogram of body weight, 10-15 grams of carbohydrates per day, and the remaining calories from fat and the aim is to induce ketosis. There are studies that show ketogenic diets improve hyperglycemia, decrease obesity, and are also good for cardiovascular diseases. Still, some studies also show the detrimental effect of this diet on health. We know that health is related to the gut health of the host. In this study, we use an in vitro multivessel simulator system to simulate the conditions of the human colon and evaluate gut microbiome fluctuations when switching from the Western diet to the ketogenic diet. With the change in feeding style with the least carbohydrates and proteins, and high in dietary fats, we want to see the major switch in gut microbiome composition and change in the estimated short-chain fatty acid production seen across all three vessels.