Kelbi Padilla, Class 2024

Campus: Baylor University Medical Center, Dallas, TX
Research Area: Role of miR-17 expression in preeclampsia risk
Mentor: Kayla Bayless, PhD

Kelbi Padilla, a medical student in the School of Medicine, is conducting research under the guidance of Kayla Bayless, PhD Associate Professor in the Department of Molecular and Cellular Medicine at Texas A&M School of Medicine. They are investigating the role of miRNA, specifically miR-17, in the development of preeclampsia (PE), a prevalent condition characterized by hypertension and proteinuria during pregnancy. The etiology of PE is related to a loss of placental surface area for maternal-fetal nutrient exchange due to failure of fetal trophoblasts to invade the decidua. Subsequently, vascular growth and development are reduced. An ongoing collaboration between Drs. Choudhury and Bayless discovered microRNA-17a (miR17a) was upregulated in the first trimester of pregnant women that went on to develop preeclampsia. Thus, the aim of this project is to determine if miR-17 alters epigenetic regulation and cytoskeletal destabilization in developing blood vessels to determine if miR-17 is not only responsible for decreased vascularization in PE but might also accurately predict the onset of PE.