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Characterization and Optimization of Thyroid Hormone Metabolites for Type 1 Diabetes Treatment

Dr. Carly Filgueira obtained her Bachelor of Science degree in Chemistry Magna Cum Laude from The George Washington University in Washington, DC and obtained her masters and doctorate degrees in Chemistry from Rice University. Dr. Filgueira joined Houston Methodist in 2011 where she focused on nuclear hormone receptors and small molecule screening using a combination of direct binding and cell based assays. Dr. Filgueira is currently a member of the Department of Nanomedicine with appointments as Assistant Member in the Research Institute, Assistant Professor of Nanomedicine in the Academic Institute, and with the Department of Cardiovascular Surgery.

Abstract: Diabetic patients often also exhibit thyroid dysfunction and individuals with low and low-normal thyroid function are at a higher risk to develop diabetes. In the case of pediatric patients with T1D, hypothyroidism occurs much more than the general pediatric population (3 to 30 % versus 0.1 to 2 %). Clearly, these two endocrine disorders have a complex and intertwined relationship. Our lab is investigating the effects of treatment with thyroid hormone metabolites as a means to improve insulin production. In this talk we discuss the characterization and optimization of thyroid hormone metabolites as a novel approach to treat type 1 diabetes.