**Title:** Targeted gene therapy for cancer

**Faculty Mentor Name, Email, Phone Number:** Hazel Levy, hclevy@ufl.edu, 3-8529

**Faculty Mentor Department:** Pediatrics

**Research Project Description:**

**Hypothesis:** rAAV can be used as a gene therapy vector against Medullary Thyroid Carcinoma (MTC).

**Methods:** We will design an Sf9/Baculovirus expression vector (BEV) production system to make a panel of vectors to be screened for MTC targeting in our *in vitro* cell culture model (TT cell line), and our *in vivo* Mouse xenograft model for MTC disease. Methods will include protein purification through chromatography and ultracentrifugation, cell culture of mammalian and insect cell lines, molecular cloning, rAAV infectivity assessment by Green cell counts.

**Role of Medical Student:** The Medical student will participate in the development of the vectors, purification of vectors, as well as in the *in vitro* screening of the vectors.

**Funding:** This work is funded through the Children’s Miracle Network, and through an NIH IRS supplement award.

**Relevant publications**