Breast cancer is the leading cause of death among Puerto Rican women. Triple-negative breast cancer (TNBC) is the most aggressive and lethal type of breast cancer (BC) with a high probability of metastasis, and it is characterized by the absence of estrogen and progesterone receptors (ER, PR) and HER2. It accounts for about 20% of all BC cases in the United States and 12% in Puerto Rico. TNBC occurs more often in younger women, and it is more common among Hispanic women compared to white/non-Hispanic white women. Statistics on the Island show that TNBC has a high probability of recurrence in five years. The survival median is 13 months and the probability of surviving a metastatic TNBC is 22%. Because of the absence of specific markers, TNBC lethality lies in the lack of specific molecular targets and targeted therapy. The current clinical approach involves the use of conventional treatments and surgery when no metastasis is present. However, the efficacy of approved chemotherapeutics is limited due to tumor heterogeneity and treatment resistance. Although new research strategies have been undertaken to explain the molecular mechanisms of TNBC development and progression the development of effective therapeutic agents is still a challenge. It is well known that to prevent breast cancer a healthy diet is key. Other factors and actions that can help on lowering the risk of having TNBC are a limited consumption of alcohol and tobacco and the maintenance of a low BMI. Although these factors lower the risk of BC overall, this benefit may be limited to other subtypes of BC. By the discovery of new methods to treat this deadly disease we ensure a higher life expectancy for patients.

To advance the current knowledge of cancer treatment, we developed new research on the molecular distinctiveness of TNBC. In our previous research, we showed that the protein SCAMP3 (secretory carrier-associated membrane protein 3) is highly expressed in TNBC cells. Likewise regulates EGFR and promotes proliferation and migration in TNBC by modulating AKT, ERK, and STAT3 signaling pathways. ERK signaling has a vital role in the progression of breast cancer. Our project is the first one where the role of SCAMP3/ERK will be studied in TNBC. Accordingly, the objective of my thesis work entitled "**The Role of SCAMP3 in Triple-Negative Breast Cancer Progression through the Regulation of ERK.**" is to elucidate the functional role of SCAMP3 in the regulation of the ERK activity in the development and progression of TNBC to enhance the understanding of the ERK pathway in TNBC pathogenesis. Our contribution will increase the understanding of the SCAMP3/ERK regulation mechanism in TNBC. Furthermore, it will enhance the knowledge of the scientific and clinical community to new alternatives for therapeutic approaches that enhance the survival of patients. I am sure that Intellectus Foundation Fellowship will forward my professional career in the cancer field and will help me to reach my goal of contributing to the improvement of the health and quality of life of cancer patients in Puerto Rico.