NIH Award from the National Cancer Institute

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- **Project:** The Role of SNCG in the Carcinogenesis of Uterine Papillary Serous Carcinoma
- **Start Date:** June 8, 2009
- **Total Award Amount:** $186,910

**How the results of this project will benefit society:**
Endometrial cancer is the most common gynecologic malignancy with an estimated 40,100 new cases in the United States in 2008. We hope to lay the groundwork for a new therapeutic approach to the most fatal form of endometrial cancer that may ultimately replace our current approach to treating all endometrial cancers.

**The problem the project is trying to solve:**
Uterine papillary serous carcinoma (UPSC) accounts for about 10 percent of all cases of endometrial cancer, but almost 40 percent of deaths from the disease. We will investigate the mechanism of action of the pro-metastatic oncogene synuclein-3 (SNCG) in UPSC. We believe that SNCG has potential as a biomarker for aggressive behavior in UPSC and may be able to help direct the choices of cancer-killing agents used to treat it. In addition, we will attempt to show that SNCG expression may link UPSC and breast cancer, which would have implications regarding screening and prophylactic surgery in the two patient populations.

**How this project will work:**
We hypothesize that SNCG expression in UPSC is associated with its aggressive tumor phenotype, poor prognosis, and chemoresistance and that inhibition of its expression decreases the invasive and metastatic potential of the tumor and improves its sensitivity to microtubule targeting chemotherapy.

In this study, we will correlate SNCG expression in a series of 300 UPSC tumors and serum specimens with clinical and pathologic prognostic factors, response to chemotherapy, and outcomes in UPSC patients. We will also investigate the differential effect of other chemotherapeutics and targeted agents on the cell lines.

This award is funded under the American Recovery and Reinvestment Act of 2009, NIH Award number: 1R21CA135467-01A109.