

## **Division of Reproductive Science Research**

The Reproductive Science Research Division in the Department of Obstetrics and Gynecology was established in 2009 and consists of five full time research faculty members and 11 faculty members with joint appointment with other divisions in the department.

Members in the Research Division conducted diverse areas of basic reproductive research:

- Dr. Andrews: Infectious diseases in pregnancy.
- Dr. Borowski: Maternal cholesterol and outcomes of pregnancy and genetic variation in IUGR.
- Dr. Bradley: Female urinary incontinence and other pelvic floor disorders.
- Dr. Dai: Novel prognostic indicator integrating genome sequencing data and tumor evolution history for prediction of endometrial cancer outcome.
- Dr. Goodheart: The role of Lef-1 in endometrial gland formation and cancer. Angiogenic markers in ovarian cancer.
- Dr. Hunter: Non-dietary treatment of mPKU; the vaccine development against GBS; the mechanism and potential treatment of pre-eclampsia.
- Dr. Korovkina: Large conductance  $Ca^{2+}$  and voltage activated  $K^+$  channels regulate proliferation in human breast carcinoma cells.
- Dr. Leslie: The molecular biology of estrogen and progesterone receptors in the treatment of endometrial cancer, and identify molecular targets linked to response in clinical trials.
- Dr. Meng: New prognosis biomarkers and potential therapeutic targets in gynecology; restore progesterone receptor gene expression to improve the efficacy of hormone therapy in endometrial cancer; synthetic lethal studies in gynecology.
- Dr. D. Santillan: Development of a GBS vaccine, Understanding the role of Placental Hematopoietic Stem Cells, Developing a Maternal-Fetal Tissue Bank, Immune Modulators of Preeclampsia.
- Dr. M. Santillan: Investigating the role of immunology in the pathogenesis of preeclampsia, determining molecular mechanisms of vascular function changes in mice and humans throughout pregnancy, development of a prospectively collected Maternal Fetal Tissue Bank and Clinical Database.
- Dr. Sparks: Gamete biology; in vitro fertilization; embryo culture; and gamete/embryo cryopreservation
- Dr. Stegmann: Fertility preservation in cancer patients.
- Dr. Stockdale: Vulvar and lower genital tract disease.
- Dr. Williamson: Development of human ES and iPS cells with genetic

mutations related to muscular dystrophies.

Dr. Yang: Development of mouse iPS cells; the mechanism and potential treatment of salt-sensitive hypertension; IGF-1 signaling regulation by Nedd4 during normal and malignant growth.

***Baoli Yang, MD, PhD  
Division Director, Reproductive  
Science Research***