**TITLE:** Effect of Alpha7 Nicotinic Receptor Ligands on Wound Healing

**FACULTY MENTORS:**
- Gregory Schultz, PhD
  Professor Ob/Gyn
  Email schultzg@ufl.edu
  Phone 273-7560

- William Kem, PhD
  Professor Pharmacology and Therapeutics
  Email wrkem@ufl.edu
  Phone 392-0669

**RESEARCH PROJECT DESCRIPTION:**

Nicotine affects several processes involved in wound healing, including keratinocyte differentiation and migration, and angiogenesis. It has recently been shown to accelerate wound healing in rodents. Since nicotine non-selectively stimulates a variety of nicotinic acetylcholine receptors (nAChRs), it is unclear which subtype(s) is involved in wound healing. This project will primarily assess involvement of the alpha7 subtype, which is expressed in keratinocytes and vascular endothelium cells. The student will become familiar with animal models of wound healing and angiogenesis in this project. Several nAChR agonists and antagonists, particularly those selective for alpha7 receptors, such as DMXBA (Kem et al., 2004), will be tested for their ability to affect skin wound healing using a rat ischemic skin wound model.

**REFERENCES:**


