The 28th Annual Meeting of the Academy of Surgical Research
October 4th – October 6th, 2012
Charlotte, NC – Marriott City Center

Program Highlights:

- **Featured presentations:**
  - Dr. Autumn Fiester (University of Pennsylvania – Director of Center for Ethics, Professor of Bioethics) - “Biotechnology, Casuistry, and the Moral Continuum”
  - Dr. John Rogers (University of Illinois Urbana – Director Nano-technologies Program) – “Biology is Curved, Soft and Elastic - Silicon Wafers Are Not”
  - Chief Todd Carnell (Hillsborough County Fire & Rescue, Tampa, Florida; winner of the 2011 Heart Safe Community Award) – “Testing New Devices In the Field”

- **Planned Topics:**
  - Nanotechnologies & Medical Device Implantation
  - Animal Welfare & Refinement Models
  - Diabetes & NHP Models
  - Advanced Anesthesia Topics
  - Veterinary Best Practices Effects on Rodent and Non-Rodent Studies
  - Microsurgical Models
  - Minimally Invasive Surgery & Monitoring
  - Novel Surgical Models
  - Xenotransplantation GLPs & Surgical Research
  - Surgical Techniques Forum
  - Technician Sessions

- **Wet Labs – Oct 4th**
  - **Device Implantation & Intrathecal Catheterization Rodent Lab** (8:00 – 12:00 in OR3)
    Instructors: Dr. Megan Swaab, Heather Bogie, Kimberly White, Marla Wilwol, Dr. Cristina Weiner
    Hands-on surgical training session will demonstrate and teach advanced rodent model implantation procedures. The student training session will include carotid and femoral catheter placement in the rat to demonstrate how to obtain Pulse Wave Velocity, as well as intrathecal cannulation techniques. Experienced instructors will share information on preoperative care, surgical tips and techniques, and on post operative recovery support. Students will learn skills and approaches to these more technically complicated procedures via placement of training devices. Each student will be provided with their own individual surgical station, a small animal instrument set, and appropriate surgical supplies for their session.
  - **Principles of Stereotaxic Surgery** (8:00-12:00 in OR2)
    Instructors: Randy Reed and Eric Adams
    The main goal of this hands-on laboratory experience will be to introduce those who are unfamiliar with stereotaxic procedures to the equipment, basic techniques and nuances of performing stereotaxic surgical approaches in the rat and mouse model as commonly used in an academic or research setting. This lab will also be an opportunity for those with only experience with one species to fine tune their stereotaxic training through exposure to new techniques in both animal models. The following is a basic overview of the laboratory experience. Familiarization with the stereotaxic frame, manipulators, attachments and ear bars (species specific). Short exercise in reading the scales on the manipulators correctly. Basic anatomy and anatomical landmarks used in rodent stereotaxic surgery. Commonly used equipment and hardware in rodent stereotaxic surgery. Correct placement of a rodent in the frame. ICV cannula placement.
- **Experimental Techniques in Swine** – (3 part lab may be taken as an all day lab, or signed up for individually - in OR1)
  Instructor: Tina Gross and David Moddrelle
  - Advanced Anesthesia: (8:00-10:30) This portion of the lab will focus on patient prep (anesthesia selection, induction and intubation), monitoring during complex procedures and adjusting/correcting for complications. Participants will intubate swine, prepare the patient for surgical monitoring, and learn appropriate ventilation techniques.
  - Epicardial Lead Placement/Thoracotomy: (11:00-3:00) This portion of the lab will provide overview of device implantation including appropriate approach and exposure, and proper lead placement in the swine patient.
  - Suture Techniques: (3:30- 5:00) The aim of this workshop is to demonstrate and allow practice of more complex suturing techniques. A variety of suture techniques will be demonstrated during the closure of thoracotomy, sternotomy and laparotomy incisions, as well as closure appropriate following femoral or carotid cut down.

- **Introductory Microsurgical Techniques Using Loupes** (1:00-5:00 in OR2)
  Instructor: Dr. Robert Hoyt, Dr. Jennifer Smith, Tina Weiner, Marla Wilwol, Dr. Cristina Weiner
  This introductory microsurgical training lab will cover basic aspects of microsurgical procedures such as instrumentation, use of a surgical loupes, and micro-suturing. Students will work hands-on utilizing surgical loupes (2.0-2.5x) to learn proper suturing techniques and basic dissections, vessel isolation and cannulation, and closure techniques in the rat. Please note on the registration form the check boxes for indicating the participant will need loupes supplied, or will bring their own.

- **Multi-Species Intubation Lab Rabbits and Rodents** (1:00-5:00 in OR3)
  Instructor: Dr. George Vogler, Erlinda Kirkman, Jon Ehrmann
  Rabbits are anatomically difficult to intubate due to their narrow oropharyngeal opening.
  Instructors will demonstrate use of the laryngeal mask airway (LMA) and the use of endoscope guided intubation, as well as the more traditional laryngoscope and blade approach to visualize. Rodents also pose a unique set of problems when intubating; students will be exposed to techniques that result in quick, efficient and minimally traumatic orotracheal intubation of both mice and rats. Instructors will demonstrate how to use specially designed positioning stands, intubation speculum and endotracheal tube guide wires to ensure successful intubation.

- **Dry Labs (in the Vendor area) Oct 5th**
  - **Laparoscopic Surgery in Rodents**: (Friday 10:15-11:15) This dry lab demonstration will provide hands on experience with rodent laparoscopy/colonoscopy equipment, instruments and techniques using inanimate objects. Visual aids will be available to introduce participants to this technology. Further training will be required to perform these procedures in live rodents.
  - **Electrocautery**: (Friday 11:00-12:00) Bovie Medical will be giving a demonstration on Electrosurgery from the perspective of the functional and safety aspects to be used with most electrosurgical generators (ESU). It will cover the range of general instruments/electrodes that can be used universally with most ESU's and concepts to always kept in mind when using any energy source. It will include a demonstration of generator outputs, power levels, and return electrode functional use. Bovie's new J-Plasma will also be featured with a product demonstration and safety precautions will be explained.
  - **Suture Lab**: (Friday 1:30-2:30) A good suture pattern is only as good as the knots holding them in place. This hour long demonstration will cover the basics of suture selection, knot placement and tying techniques in a variety of suture boards and inanimate objects.
  - **Anesthesia**: (Friday 3:30-5:00) Inhalant anesthesia is a commonly used method to provide general anesthesia. The major component for this technique is an anesthetic machine. The three main functions of an anesthetic machine is to deliver oxygen and anesthetic gas, remove carbon dioxide and waste anesthetics, and provide a means for patient ventilation. A basic understanding of the anesthetic machine is essential for effective anesthetic troubleshooting. This dry lab will provide knowledge aimed at assisting the anesthetist with identifying and correcting various anesthetic-related problems. The workshop will focus on understanding the components of an anesthetic machine, anesthetic circuits, and ventilator settings.

- **Vendors** - Meet with companies developing the cutting-edge technologies used in the surgical research field; including but not limited to surgical monitors, instruments, anesthesia, medical devices, ports, telemetry, lab animal resources and surgical services.