



**The 26th Annual Meeting
of the
Academy of Surgical Research**
September 30 - October 2, 2010
Clearwater Beach, FL – Sandpearl Resort

Program Highlights:

- **Keynote Speaker** (2010 Jacob Markowitz Award recipient) - **Dr. Steven Arnoczky**
“Repairing the Injured Knee: The science behind the surgery”. A lecture reviewing the surgical research that has helped develop the procedures and techniques used to treat ligamentous and meniscal injuries in human knees.
- **Featured presentation** - **Lennox Hoyte, MD**
“Robotic Surgery in Gynecology in Pelvic Floor Disorders”. This lecture will review robotic approaches to the management of the common gynecologic and pelvic floor disorders in women.
- **Planned Topics** (Tentative, Select Presentation Titles):
 - **Medical Device/Orthopedic Models**
 - *Optimizing Animal Models for Medical Device Research and Development: Three Case Studies*
 - *The Human Proxy: Preclinical Medical Device Surgical Models*
 - **Organ Transplant Surgery**
 - *Working versus "Non-working" Heterotopic Heart Transplantation*
 - *Lessons learned during implementation of an experimental model of liver transplantation*
 - **Minimally Invasive Surgery**
 - *Rat laparoscopy – refinement for rat model development; renal, testicular and hepatic laparoscopic implantation of neoplastic cells*
 - *Minimally Invasive Surgical Techniques: Single Port Laparoscopic Liver Biopsy in the Dog and Non-Human Primate and Laparoscopic Assisted Ovariohysterectomy in the Dog*
 - *Rat laparoscopic biopsies lead to decreased postoperative pain*
 - **Surgical Research /Surgical Models**
 - *The respective places of minipig and dog models in oral bone regeneration research*
 - *Ovine Aortic Aneurysm Model for Endoluminal Graft Evaluations*
 - *Intestinal surgical models - an appraisal in large animals and poultry*
 - *Development of a clinically relevant survival model of polytrauma and hemorrhagic shock in swine*
 - *The Art and Science of Electrosurgery*
 - *Effect of Small-diameter Proximal Splenorenal Shunt in the Treatment of Portal Hypertension: Experience from 176 cases*
 - **Long-term Vascular Access/Infusion**
 - *Experience with a novel implanted vascular access port and catheter for continuous infusion in nonhuman primates*
 - *Jugular vein and carotid artery catheterization in the mouse*
 - *Pathology of Intravenous Catheterized Rats on Infusion Studies*
 - *Rodent Catheter Options and Surgical Services*
 - **Cardiovascular/Catheterization**
 - *Internal Aortic Annuloplasty: A Novel Model and Valve Sparing Surgical Repair of Valvular Insufficiency*
 - *A Left Thoracotomy Approach for Consistent Epicardial P wave Acquisition via Telemetry in the Primate*
 - *Recommended Surgical Technique for Placement of a Pressure Sensing Catheter to Record Chronic Left Ventricular Pressure in Rodents*
 - *Novel Method for Surgical Placement of Respiratory Impedance Leads for the DSI D70- PCTR Telemetry Device in Non-Human Primates*

- Technician Session – ASR Certification Prep (Session Titles)
 - *Analgesia and Pain Assessment*
 - *Anesthesia*
 - *Pre-, Peri-, and Post-Operative Care*
 - *Emergency Procedures*
 - *Aseptic Procedures*
 - *Wound Healing and Suture*

- **Wet Labs** (All wet labs will occur on September 30, 2010)
 - Minimally Invasive Surgery – Laparoscopic surgery in rodents.

This workshop is designed for scientists, veterinary technicians, veterinarians and technical support staff who wish to learn the basic principles of rat laparoscopy. Information presented in this workshop will introduce participants to skills necessary to perform rodent laparoscopic biopsy and injection procedures. Instrument handling and all techniques from patient preparation to patient abdominal closure, will be demonstrated and participants will have an opportunity to handle rodent appropriate laparoscopic instrumentation and equipment, and learn intra-abdominal organ biopsy and injection techniques while working with anesthetized rats.
 - Advanced Telemetry Techniques

The teaching goals for this workshop are to increase knowledge and awareness of telemetry and the surgical procedures associated with telemetry. Instruction will be provided for the proper techniques necessary to conduct scientific studies with a focus on the reduction in animal numbers and a more humane way of monitoring and collecting vital data. Students will be learning techniques they can employ in their own facility.

 - Rodent – EEG implant
 - Rabbit – Blood Pressure/ECG/Temp implant (Intubation, pre-/intra-/post- anesthesia monitoring covered)
 - Interventional Radiology – Swine Cath-lab

Minimally invasive and ‘least invasive’ procedures continue to be developed in lieu of more invasive, open cavity procedures. One rapidly developing area of least invasive procedures includes interventional radiology procedures in which guide wires and catheters are used to gain access to various organs. Familiarity with various guide wires and catheters is necessary for safe and effective access to areas such as the kidney, liver, pancreas, intestine, heart and peripheral vessels. This hands-on workshop will provide basic knowledge of various guide wires and catheter types that can be used in these procedures. In addition, the workshop will include a discussion and demonstration of various devices used for interventional treatment and model development such as angioplasty balloons, intravascular stents and embolization coils.
 - Advanced Suture Techniques Laboratory

The aim of this workshop is to demonstrate and allow practice of, more complex suturing techniques. The following types of suture techniques will be performed in swine:

 - Hand ties (one handed)
 - Hand ties (two handed)
 - Inverting suture patterns - hollow organs (Cushing vs. Connell)
 - Oversew patterns (Lembert, Halsted and Parker- Kerr)
 - Purse- string (circular version of Lembert)
 - Tension sutures – Muscle - Horizontal, vertical mattress
 - Tension sutures – Tendons – interlocking loop and three loop pulley
 - Deep hand ties in the thoracic and abdominal cavity
 - Computer Assisted Surgery: *Getting a Grip on Robotic Surgery*

This didactic and laboratory session will demonstrate intra-operative robotic surgical techniques. This workshop is designed to expose participants to the *da Vinci*® Surgical System. Each participant will engage in hands-on experience necessary to obtain a firm understanding of the aspects involved in using the *da Vinci*® Surgical system. The workshop will introduce the *da Vinci*® System and address, OR Set-up, positioning of equipment, port placement, manipulation skills, dissection and suturing techniques (non-animal workshop).

- **Meet the 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.

- **Application is pending for this program to be approved by the American Association of Veterinary State Boards (AAVSB) through RACE (Registry of Approved Continuing Education).**

Questions? Visit www.surgicalresearch.org or e-mail cody.resendez@mpiresearch.com.