University of Iowa Hospitals & Clinics
University of Iowa Health Care

Department of
ANESTHESIA
The University of Iowa

Spring 2010

Inside This Issue

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NOTES FROM THE Chair

Giving Credit Where Credit Is Due

Faculty like to think that their department chair can "do everything." Sorry - not true. In a department this large, I would be helpless without the skills of a small group of exceptional individuals - the vice chairs. Each is responsible for a critical part of the department and they also serve as my principal advisors. You know most of them, but a "reintroduction" is worthwhile.

Tim Brennan, M.D., Ph.D.
Vice Chair for Research
Tim is one of the world's leaders in the science of acute pain, a busy NIH-funded researcher and Assistant Editor-in-Chief of *Anesthesiology*. He's also a superb clinician. Nevertheless, he takes time to organize our departmental research operation, supervise our research nurses, work with young faculty on their research protocols and IRB applications - and much more. Under his leadership, the number of faculty engaged in basic and clinical research has skyrocketed.

Javier Campos, M.D.
Vice Chair for Clinical Activities
Our clinical operation is the biggest part of our department. The primary responsibility for overseeing this belongs to Javier, who also serves as the Medical Director for the Main Operating Room. Somehow, when he's not wearing his administrative hat, he still manages to keep doing research, writing and speaking on his favorite subject, thoracic anesthesia and lung isolation.

Brad Hindman, M.D.,
Vice Chair for Faculty Development
In a previous newsletter article, I described the huge number of new, young faculty that have joined our department recently. Once upon a time, they would have been left to fend for themselves regarding professional development. No longer. One of Brad's key roles involves a program that he personally developed and initiated - to either personally mentor new faculty or to oversee their interactions with other faculty mentors. It's a huge task, but one that has already caught the eye of the College of Medicine.

Debra Szeluga, Ph.D., M.D.
Residency Program Director
We've been training new anesthesiologists since the early 20th century, and it's key to our mission. Debb started out working with our interns and became Program Director in 2008. She brings a well-appreciated level of enthusiasm and engagement to the position. I think all would agree that under her leadership, the quality of our training program has improved (and continues to improve), as has the cohesiveness of our residency.

I've just skimmed the surface regarding the special areas for which each of these physicians is responsible. You'll hear more from them in future newsletter articles, when they share more details with you.

Michael M. Todd, M.D.
Chair, Department of Anesthesia

L-R: Javier Campos, Timothy Brennan, Michael Todd, Debra Szeluga, Bradley Hindman

ADMINISTRATOR'S Corner

John Stark, M.B.A.
Department Administrator

Take Pride in University of Iowa Health Care

At a time when the economy is impaired and the healthcare industry is challenged, it is easy to get lost in financial details and political dramatics, with concerns of unemployment impacts and proposed health care reform looming. These sorts of issues tend to overshadow many of the good things we do for the people of Iowa and across the world. We need to remind everyone, including ourselves, of how truly special an institution we have at The University of Iowa (UI).

In his December 14, 2009 edition of "VPMA Voice," Jean Robillard, M.D., Vice President for Medical Affairs for The University of Iowa stated:

> "Every day brings milestones in ground-breaking treatment, innovative learning, and world class discoveries at UI Health Care. Results of these outstanding achievements can be seen in the countless stories generated from the extraordinary talents of our people.
>
> Clinically, we witness outstanding patient outcomes that transpire from our commitment to provide world class health care and service. Whether caring for a young Des Moines mother who became the world's first H1N1 patient to be awake and mobile during treatment with an artificial lung called ECMO, restoring sight to an Iowa native blinded by an ammonia tank explosion 48 years ago, or providing hope through a liver transplant to a young girl with cancer, UI Health Care providers are second to none.
>
> Our medical students consistently score higher than the national mean on the U.S. Medical Licensing Examination—just one sign of our commitment to develop outstanding health professionals and scientists using an innovative, humanistic, educational curricula. Meanwhile, our scientists advance discovery through biomedical and health services research, such as the recent find by ophthalmology and visual sciences researchers of a new, rare, inherited retinal disease.
>
> UI Health Care's pathway to 'great outcomes'—from saving lives, to inspiring students, to pioneering new discoveries—is truly interconnected. Thank you for the role you play in supporting this continuous cycle of changing medicine and changing lives."

The UI Department of Anesthesia is proud to be associated with and participating in such excellent patient care, teaching and research.

- Our patients continue to receive the finest anesthesia care in the region, be that in the operating room environment, the Surgical Intensive Care Unit, the Center for Pain Medicine and Regional Anesthesia, or the Jebson Hyperbaric Medicine and Wound Care Clinic.

- Educationally, our resident evaluations of faculty have progressively improved over the past 5 years, to a current mean across all faculty of 4.7 out of 5 (with 5 being "outstanding"). Our medical student externship program continues to be highly regarded throughout the country, as evidenced by inquiries from several other anesthesia departments interested in how to establish such a program. All our graduating externs who have decided on anesthesia have gotten their top three choices of residency programs with the majority getting their first choice. As you will see in Dr. O'Sullivan's article within this newsletter (page 15), our Student Registered Nurse Anesthetist program is also world-class.

- Our research continues to help advance the body of knowledge in the area of pain. For example, Timothy Brennan, M.D., Ph.D., together with the professionals in his laboratory, work on incisional pain mechanisms, and this has resulted in several collaborative projects with pharmaceutical and biotechnology companies. These projects have resulted in the identification of novel analgesic targets for the next generation of clinical trials in postoperative pain.

We are all fortunate to have been a part of this department's ongoing excellence. Take pride in this fact and in the knowledge that it will continue as we move into the future.

John Stark, M.B.A.
Department Administrator

Mark your calendars!

Upcoming Iowa Anesthesia Department CME Conferences

Detail regarding the upcoming conferences can be found on the department's web site at **http://www.anesth.uiowa.edu**. Should you have specific questions regarding a conference, you may e-mail or call the College of Medicine CME office contact, Lori Bailey Raw. She can be reached via e-mail at **lori-bailey@uiowa.edu** or by telephone at **319-335-8599**.

Iowa Anesthesia Symposium X
May 1-2, 2010

Regional Anesthesia Study Center of Iowa (RASCI)
April 17-18, 2010
May 22-23, 2010
October 9-10, 2010
December 4-5, 2010

Operations Research for Surgical Services
August 27-30, 2010

**Other Upcoming Events

The following special events are being planned. Mark the dates on your calendars, as we welcome you to join us. Contact Barb Bewyer via e-mail at **barbara-bewyer@uiowa.edu** or by telephone at **319-353-7559**.

Iowa Society of Anesthesiologists Spring Meeting
Saturday, April 10, 2010
Holiday Inn and Suites, West Des Moines, IA
http://www.iasocanes.org

Iowa Association of Nurse Anesthetists Spring Meeting
April 16-18, 2010
Embassy Suites on the River, Des Moines, IA
http://www.iowacrnas.com

UI College of Medicine MD Class Reunions
Friday-Saturday, June 11-12, 2010
Carver College of Medicine campus, Iowa City, IA
http://www.medicine.uiowa.edu/Alumni/alumni_weekend.html

Resident/Fellow Graduation Luncheon
Sunday, June 27, 2010, 12:00 - 4:00 p.m.
Kinnick Stadium, Outdoor Club, Iowa City, IA

ABA Written Certification Exam
Monday-Tuesday, August 2-3, 2010
http://www.theaba.org

Iowa State Fair
August 12-22, 2010
http://www.iowastatefair.com

Iowa Society of Anesthesiologists Fall Meeting
Monday, September 13, 2010, 6:00 - 9:00 p.m.
E. W. Lehman Ballroom, Hotel Vetro, Iowa City
http://www.iasoanes.org

University of Iowa Homecoming Weekend
Thursday-Sunday, September 30 - October 3, 2010

Thursday:
College of Medicine's Two-day Continuing Medical Education Program

Friday:
College of Medicine CME Program
Homecoming Parade, 5:45 p.m., Downtown
Medicine Alumni Social, 7:30 - 10:00 p.m., Levitt Center for University Advancement
Homecoming Pep Rally, 8:00 p.m., Old Capitol

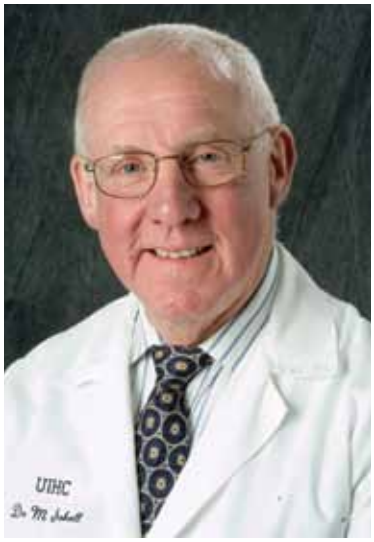
Saturday:
College of Medicine MD Program and Reunion Luncheon, 10:30 a.m - 1:00 p.m., MERF
UI Gross Anatomy Kids Program, 10:30 a.m - 1:00 p.m., MERF
College of Medicine Tailgate Party, 4:30 - 6:30 p.m., MERF
Iowa vs. Penn State Football Game, Kickoff time TBA

Sunday:
Event/s TBA

Alumni Reception during Annual ASA Meeting
Saturday, October 16, 2010
San Diego, CA

Spotlight on

MARTIN D. SOKOLL, M.D.



How did I ever get here? The 14th child of immigrant parents, I was born in 1932 early in the depression. My father, an underground coal miner, attended school to the seventh grade, my mother to the third. I studied hard and had the encouragement of parents who valued education. Good grades rated little comment, but a grade of "C" did. In high school, I had little hope of going to college for financial reasons and had planned to join the Air Force after graduation to be a fighter pilot. The need to start wearing glasses in my junior year torpedoed that. At the end of my senior year in high school, the offer of a number of scholarships made the unattainable now seem possible. Of course, the family helped as they could. One school offered full tuition and I accepted it.

And so it happened. I became the first member of my family to graduate from college, but all wasn't smooth. I started college intending to major in physics but didn't do terribly well in mathematics. An older sister and I were discussing my grades, with me saying that I wasn't terribly happy with them. Her comment was, "Have you thought of medicine?" I replied, "No, but I might." So I applied to a number of schools, but heard nothing except for a rejection from the University of Cincinnati. In early 1954, I received a letter from Ohio State University stating I would be accepted pending successful completion of one last course. In mid-April, I received a letter accepting me to the 1954 entering class at the University of Pittsburgh. I was happy not even considering that this late acceptance indicated that I was an alternate. Acceptance is acceptance.

During my internship I considered orthopedics and neurosurgery, but thought little of anesthesia until an anesthesiologist diagnosed a case that had the internists baffled. Maybe anesthesia is more than just putting "people to sleep," I thought.

So I completed my resident training in anesthesiology with Dr. Francis F. Foldes at Mercy Hospital in Pittsburgh, Pennsylvania. I was accepted at the University of Pennsylvania Hospital where Dr. Robert D. Dripps was then chair, but I declined it because it would mean going further into debt. Their pay was less than the cost of living off the local market. During my internship, I signed on to "The Berry Plan," which meant I committed to go into the armed services at the completion of my training. I felt an obligation to do this as a citizen of the United States. Let me state here that my parents were not Polish-American or German-American (my father was born in Germany). They were AMERICAN. So I joined the air force and was stationed as the anesthesiologist at MacDill Air Force Base Hospital in Tampa, Florida.

At that time, closed chest compression and mouth-to-mouth ventilation had just been introduced. I approached Colonel Hammond, the Hospital Commander, about teaching these techniques to the emergency room corpsmen so they could teach the medics on the flight line. He agreed. As I was completing my active duty, he told me he had received a memo from the Surgeon General suggesting that we do exactly that. I seriously considered staying in the Air Force, but did not. What I really wanted was to teach and do research and I could not be sure that I would be able to do that in the service.

I wrote to the anesthesia departments at The University of Iowa and the University of California, San Francisco about a staff position. The reply letter from Dr. **William Hamilton** (Iowa) was quite welcoming, while that from Dr. **Stuart Cullen** (UCSF) indicated that they weren't looking for staff at that time. So I traveled to Iowa to interview. The weather during the interview was another story! Dr. Francis Foldes, who served as director of the Anesthesia Department at Mercy Hospital in Pittsburgh when I completed my anesthesia education, offered me a position at Montefiore hospital in New York, which I declined. I was tired of big cities. I went back to MacDill Air Force Base and thought about it—long enough that Dr. Hamilton wrote asking if I had drowned in one of the Florida swamps. I agreed to come to Iowa and joined the Department on August 1, 1963.

At that time, Dr. **Willis Warner** was a fellow staff member trying to develop a technique to quantitatively detect curare in the blood. I joined him in this project that failed, as the necessary techniques did not then exist. I did make some acquaintances in the Department of Pharmacology and participated in a study examining the effects of insecticides on hepatic metabolism. At the same time, people in the Department of Agricultural Medicine were studying the effects of herbicides and pesticides in farmers. They were quantitating activity of true and pseudocholinesterases. Phase 2 block with sucinylcholine was still a mystery. I planned a dose response study looking at the development of phase 2 block related to dose and duration. The force displacement transducer was borrowed from Dr. Michael Brody in Pharmacology. Our department couldn't afford one at that time. The people in Agricultural Medicine agreed to do my samples of cholinesterase determinations along with theirs. I published the data in *Anesthesia and Analgesia*, with co-author Dr. **Dennis Bastron**. Three months later, Dr. Ronald Katz published an identical paper in *Anesthesiology*. He gets the credit. Lesson learned.

Looking back, things must have been going well professionally. In early 1966, I wrote an application to the National Institutes of Health for a post-doctoral fellowship to learn microelectrode techniques measuring cellular transmembrane potentials. I learned of it being funded in September 1966, yet the fellowship could

begin as late as September 1967. I felt I had committed myself to the department until summer 1967, so I postponed leaving for Sweden until then. By the next summer, Dr. Hamilton had decided to move to San Francisco, taking Dr. **Wendell Stevens** with him. This left a department composed of Drs. **Jack Moyers**, **Leo DeBacker**, and **Azmy Boutros**. "The well laid plans of mice and men…"

I enjoyed the year in Sweden and returned to Iowa ready to set up the only active microelectrode laboratory in the medial school. My contacts in the Department of Pharmacology paid off, as Dr. John P. Long sent two doctoral students to work in the laboratory. We had a very productive period. We studied the effects of nondepolarizing relaxants and other drugs on the motor nerve terminal and postsynaptic membrane, documenting that curare and other relaxants had definite presynaptic actions. Different drugs were found to have more or less effect pre- or post- synaptically. This led to the use of various combinations of pancuronium and metacurine for the production of surgical relaxation. Most of these publications are in pharmacology journals because that is where the graduate students needed them for their careers. In two successive editions of *The Pharmacological Basis of Therapeutics* by Goodman and Gillman, four or five of our publications were listed as prime references in the sections relating to neuromuscular pharmacology. Working with Drs. John Long, **Sam Gergis** and Ken Dretchen was fun. Sam couldn't actually do the micro-electrode work because it triggered migraine headaches. He contributed essential ideas, and many people thought he was the one doing the actual studies. A number of residents came to the lab for short periods, but then left for private practice. Dr. **Edward Post** gave it the longest try but even he gave up when his 3-year old son asked, "Why don't we see you any more, daddy?" An interesting thing happened while Ed Post was working in the lab. At that time we were doing caffeine contracture tests to determine sensitivity to malignant hyperpyrexia. The real question was how to anesthetize the patient to do the muscle biopsy. Our simple answer was femoral and lateral femoral cutaneous nerve blocks. People laughed when Ed presented this at a meeting, but not later.

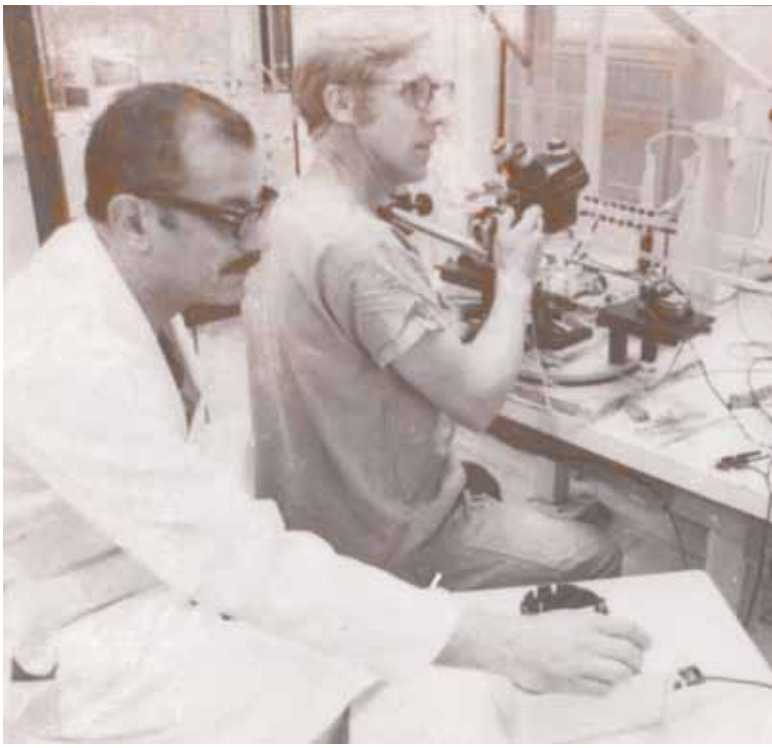
Along with my research and clinical work went the usual things that a senior professor is to do in helping younger faculty progress with their careers: priming for board exams, suggesting projects, including junior faculty in publishable projects. In the mid and late 1970s after I had started doing primarily neurosurgical cases clinically, Dr. **Edward Stullken** and I worked together. We developed a system to create ischemia in the cat brain. It was simple. We put a pediatric orthopedic tourniquet around the cat's neck and inflated it to the pressure in the compressed air line—some 1500 mm Hg. The EEG goes flat in 10-12 seconds. It was published. One day, Dr. Peter Safar, then at the University of Pittsburgh, asked how we did ischemic injury so I told him. Viola, Safar's ischemic monkey brain model.

Following that, my colleagues and I did a number of clinical studies for Burroughs-Wellcome on clinical muscle relaxants. On the first study we did with atracurium, we were instructed to give a set dose. After observing the effect of that dose, we could do whatever we wanted. The first dose in that patient produced no depression of twitch tension. I looked to Sam Gergis and asked, "What do you want to do?" He responded, "Repeat the same dose." Onset of total block was extremely rapid. The "Priming Principle" was born as it was termed by Dr. Francis Foldes.

About that time, Sam accepted administrative responsibilities. Groups who feed off each other's ideas do most research, and it was at that time that Dr. Bula Bhattacharyya and I did some work together. In the early 1990s, I began studying extracellular potentials in the rat hippocampus and worked a little with patch clamping.

I retired from the department on January 1, 1998, but I quickly became bored. The history of the department interested me and, finding as much information as I could, I constructed the current display outside the Cullen Conference room. This still needs an occasional update for which I am responsible. Life was still boring. Fortunately for me, there soon appeared a time when the department was short of staff. Dr. **Michael Todd** and I met in the hall one day and he asked if I might be interested in doing some work in the Anesthesia Presurgical Evaluation Clinic. I was delighted, but didn't tell him that. Useful again! Barb Bewyer and I work together regularly, researching departmental alumni and history. Dr. Todd is very interested in producing a written history of the department. The gray haired ones—you know who you are—need to get this done. Perhaps within the next year.

Martin D. Sokoll, M.D.
Professor Emeritus



Focus On Liver Translant

A CLINICAL SPECIALTY AND DIVISION

Solid organ transplantation in humans is a relatively young medical specialty that originated in 1954 when Dr. Joseph Murray performed the first successful kidney transplantation between identical twins.[1] Dr. Thomas E. Starzl attempted the first human orthotopic liver transplant in 1963 at the University of Colorado.[2] Starzl persisted and performed the first successful orthotopic liver transplant in an infant with a 1-year survival in 1967.[3] Dr. J. Antonio Aldrete first reported his experience in anesthesia for liver transplantation in 1969.[4] Aldrete describes in detail the intraoperative management challenges and concerns during liver transplantation in 25 pediatric and adult recipients at the time, and some of his considerations persist today.

End-stage liver disease is the fourth leading cause of death in the United States for individuals aged 45–54 years; it is surpassed only by cancer, heart disease, and unintentional injury. Among all age groups, liver disease accounted for over 27,000 deaths in 2001, making it the 12th leading cause of death.† As of early 2008, approximately 17,200 patients were on the waiting list for liver transplantation in the United States, and approximately 1,600 to 1,800 patients die each year while awaiting liver transplantation. Nationwide, the 3-year patient survival rate after transplantation is greater than 75%.[5]

Data from the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients showed that adjusted patient survival following deceased donor liver transplant (DDLT) was 94% at three months, 87% at one year, 73% at five years, and 59% at ten years. Adjusted patient survival for living donor liver transplant (LDLT) recipients was 96% at three months, 92% at one year, 78% at five years, and 71% at ten years. The greater survival of living donor transplant recipients likely reflects their better health at transplant (Figure 1).

The care of patients undergoing liver transplantation and major hepatic resections is a tremendous clinical challenge. It requires integrating both knowledge of and technical skills related to the cardiovascular, respiratory, and hepatic pathophysiology of patients with end-stage liver disease and the changes induced by surgery. The challenges include potentially exsanquinating hemorrhage, massive transfusion (in many cases, hyperdynamic states), extreme acid base

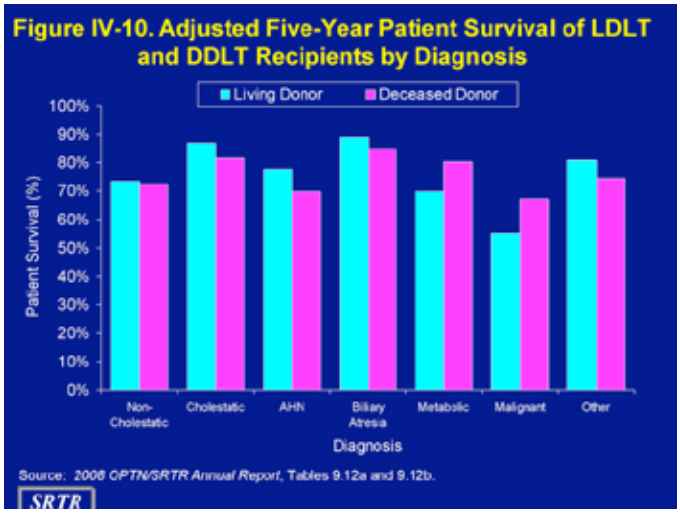


Figure 1

and electrolyte disturbances, the redistribution of organ blood flow, marked vasodilation, portopulmonary hypertension, hypothermia, and severe coagulopathies. Invasive monitoring is standard, including arterial and pulmonary artery catheters. Neurologically, up to 80% of patients with acute liver failure develop cerebral edema and increased intracranial pressure.[6] The cerebral symptoms of chronic liver failure are not believed to be associated with cerebral edema, but increased intracranial pressure can occur.[7,8] The profound cardiovascular changes in patients with end-stage liver disease include a hyperdynamic circulatory status, low systemic vascular resistances, elevated heart rate, and arterial blood pressure being normal or slightly decreased.[9] Two distinct respiratory syndromes can be recognized in patients with end-stage liver disease - the hepatopulmonary syndrome and portopulmonary hypertension syndrome. The hepatorenal syndrome, a functional cause of renal failure, is common in patients with end-stage liver disease. Spontaneous bacterial peritonitis is the most frequent cause of renal failure in patients with cirrhosis,[10] and esophageal varices, portal hypertension, and ascites are common. Gastric emptying is delayed, and drug
metabolism is affected.[11] Various hemostatic abnormalities are found in patients with end-stage liver disease who present for liver transplantation. These changes can be caused by preoperative coagulation disorders or may be related to the procedure itself. Levels of procoagulant factors (II, V, VII, IX, X) and anticoagulant factors (protein C and S, antithrombin III) are frequently decreased in patients with end-stage liver disease.[12,13,14]

† CDC and CDC and the National Center for Injury Prevention and Control. Web-based injury statistics query and reporting system. http://www.cdc.gov/injury/wisqars/index.html. Accessed January 18, 2010.

The pre-anhepatic stage begins with surgical incision and ends with cross-clamping of the portal vein, the suprahepatic inferior vena cava, the infrahepatic inferior vena cava, and the hepatic artery. Hypovolemia typically occurs during this stage. The anhepatic stage begins with the occlusion of vascular inflow to the liver and ends with graft reperfusion. Cross-clamping of the suprahepatic and infrahepatic vena cava decreases venous return by as much as 50%. Despite the absence of hepatic clotting factor production during the anhepatic stage, blood loss is usually limited by vascular clamping of the inflow vessels to the liver. However, fibrinolysis may begin during this stage, due to absence of liver-produced plasminogen activator inhibitor that results in the unopposed action of tissue plasminogen activator. Reperfusion of the new liver through the portal vein begins the neohepatic stage. Reperfusion is associated with abrupt increases in potassium and hydrogen ion concentrations, an increase in preload, as well as a decrease in systemic vascular resistance, blood pressure, and hypothermia. The intensity of intra-operative resources and personnel usage varies widely among liver transplant centers and is influenced by institutional practice, caseload, and personal experience. Standardization of clinical practice has not been fully established for liver transplantation as it has for other procedures.

Liver disease can occur in childhood, with the most common indications for transplant in children being biliary atresia (43%), metabolic disease (13%), and acute hepatic necrosis (11%). In approximately 75% of children with acute liver failure, the etiology is unknown. Liver disease in childhood results in a variety of symptoms affecting a range of children of different ages and sizes from preterm neonates to adolescents. For example, neonatal hemochromatosis is specific to the neonatal period, while extrahepatic biliary atresia conditions are specific to infants. In older pediatric age groups, other conditions such as [alpha]-1 antitrypsin deficiency and autoimmune hepatitis become prevalent. In adolescence, conditions such as Wilson's disease are prevalent.[15]

Anesthesia management for a pediatric liver transplant is different from that of an adult and involves an understanding of the physiologic and metabolic changes that occur with end-stage liver disease and their anesthetic implications. Understanding the particular issues related to each of the three stages of liver transplantation results in an ability to anticipate and manage in a timely manner the derangements that may occur. Communication between the surgical and anesthesia teams is of paramount importance, as in all surgical cases. The anesthetic implications are many: prolonged duration of anesthetic drugs due to impaired metabolism; impaired protein synthesis possibly resulting in high levels of anesthetic drugs that are highly protein-bound; decreased intravascular volume secondary to decreased albumin levels (low serum oncotic pressure) leading to hypotension; decreased glycogen stores and impaired gluconeogenesis possibly resulting in hypoglycemia if supplemental glucose is not provided; decreased synthesis of clotting factors and the resultant coagulopathy leading to large intraoperative blood losses.[16]

The liver transplantation program started at University of Iowa Hospitals and Clinics in the late 1980s. Our institution has weathered periods wherein surgeon and anesthesiologist expertise in this special area were at minimal numbers, resulting in an overload of cases being assigned to only a few individuals.

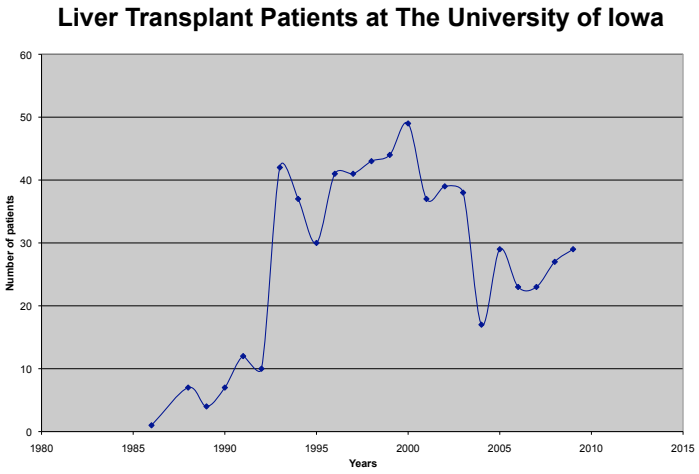


Figure 2

Currently, the surgical and anesthesiology teams work together in unison to manage the 17 to 25 annual liver transplant procedures, and we are fortunate to have faculty with extensive experience in managing these cases (Figure 2).

In many health care settings where liver transplant cases are handled, there is a dedicated team of anesthesiologists for the management of the procedures. Here at the University of Iowa Hospitals and Clinics, we have a seven-member faculty team comprised of physicians trained and experienced in the most challenging of liver transplant cases: Yasser El-Hattab, M.B., Ch.B. (Director), James Bates, Ph.D., M.D., Denisa Haret, M.D., Merete Ibsen, M.D., Yasser Karim, M.B.B.Ch., Mazen Maktabi, M.D., and Sundar Reddy, M.B.B.S., F.R.C.A. (Figure 3) Working together as a team, this group has succeeded in making great strides in the last 18 months. They organized and led the first meeting inclusive of hospital surgeons, nurses, coordinators, perfusionists, and hematologists. With vision, this multidisciplinary team set goals and objectives for updating the future dynamics of the multidisciplinary work. They enhanced collective patient care by reviewing and updating protocols for perioperative management, utilizing evidence-based practice sets. The background of educational wealth and experience this full team possesses allowed for superbly designed protocols as their end products. These are now available to all team members via both electronic and print access. Regular meetings of the anesthesiology team are held to review protocols and policies currently in place, as well as to discuss new methods to provide and improve patient care in this area. These meetings also allow the team opportunities to discuss their experiences with difficult case management. Guidelines for preoperative anesthetic assessment of patients scheduled for liver transplant are now available. These focus on the different pathophysiological considerations in patients with end-stage liver disease, examples being an individual with portopulmonary hypertension and/or hepatopulmonary syndrome. Currently in the development stages is a joint operating room policy to include the disciplines of anesthesiology, surgery, perfusion, patient positioning, and blood bank policy. One goal for such a policy is for use with anesthesia trainees who manage these cases alongside the transplant anesthesiologists.

We now have access to monitor blood coagulation during liver transplantation in real-time. Discussions with the hepatobiliary surgery team provide occasions to evaluate new database capabilities with the introduction of the Epic patient record system, as well as plan for the projected doubling in the number of transplantation cases per year from the current average of 25 to a future of 50.

In April 2009, the multidisciplinary team - which included members of our department's pediatric anesthesia group - participated in performing this institution's first pediatric hepatic liver transplantation procedure in many years. The plan is to continue to have a pediatric anesthesiologist incorporated in the management of pediatric liver transplant cases, side by side with the liver transplant team, to exchange the experience with each other and to enhance our developing program.

With the inception of the Organ Transplant and Hepatobiliary Surgery Center in 2008, the University of Iowa Hospitals & Clinics has taken the care of patients with organ failure and complex liver disease to the next level. Under the direction of Dr. Alan Reed, Director of the Organ Transplant Center, he and surgeon colleagues Drs. Daniel Katz, Thomas Collins, and Zoe Stewart, have enhanced the liver transplant program by implementing many positive changes in the continued pursuit of excellence in the care of patients with liver disease. Over the last two years, as the liver transplant cases have increased in volume, the outcomes exceed the expected survival rates as determined by the United Network for Organ Sharing.

The role of the perfusion team is vital to the success of our program, as they are heavily involved in two areas of the management of liver transplant patients. First, they check, scan, and perfuse the blood products as needed. Second, they are alert and prepared in case there is a need for venovenous bypass should a patient's condition necessitate such. This preparedness is of great benefit to the anesthesia team and precludes the use of level one transfusion equipment. As a result, at UIHC the level one rapid infusion system is no longer in use, as it remains so in many other health care facilities.

L-R: Sundar Reddy, Mazen Maktabi, Merete Ibsen, James Bates,Yasser El-Hattab, Yasser Karim. Denisa Haret inset.

Also contributing to the smooth management of these cases are the operating room scheduling team, the clinical director of the operating rooms, the nursing teams, and the transplant coordinator who alerts the entire team once an organ match has been harvested. As faculty support provider to Dr. El-Hattab, Ms. Carol Galbraith plays a vital role in assisting the anesthesia transplantation team. She assists in the preparation of new and revised standards of practice and other communications and is critical in arranging meetings.

The vision for the future of this team is continually being reevaluated and revised. Currently, we are working to educate faculty and trainees in the use of transesophageal echocardiography for use in those cases that necessitate such. We are increasing use of the Thromboelastograph®, reviewing and improving patient care and monitoring with the availability of a perioperative patient database, and exchanging visits and communications with other centers providing liver transplantation. We continue to recruit and train additional faculty interested in joining the hepatobiliary team, an essential element with the expectation of an increase in the caseload. Our department is also moving forward to establish a structured fellowship training program in anesthesia for liver transplantation.

Yasser El-Hattab, M.B., Ch.B.
Clinical Assistant Professor
Director, Liver Transplant Anesthesia

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A thankful note regarding how well the pediatric and liver transplant service teams combined their efforts for UIHC performing its first pediatric liver transplantation procedure in many years (April 2009) was reported by Alan Reed, M.D. (Professor, Transplant Services), in a message sent to those involved with the case, and copied to both University of Iowa's (UI) Health Care Vice President for Medical Affairs, Jean Robillard, M.D., and the Dean of Roy J. and Lucille A. Carver College of Medicine, Paul Rothman, M.D. Dr. Reed stated, "…Mike Todd and I talked about the ideal situation just the other day, and that is exactly how it came off - as a shared job between pediatric and liver transplant services, each benefiting from the expertise of the other...I am pleased and proud to be part of a team that can function like this…" Dr. Robillard responded with a congratulatory note to all involved health care providers stating, "…This is what we are all about - great physicians with tremendous expertise who are working together and producing the best results for the patient. Alan cannot have said it better. You are the ones making this academic health center one of the best in the world. Again most sincere thanks for all your effort."

ACHIEVEMENTS & Awards

John Laur

New Medical Director of the Ambulatory Surgery Center

John Laur, M.D., Clinical Assistant Professor, has been named medical director of the Ambulatory Surgery Center (ASC). As director of the ASC, he is responsible for managing the clinical and administrative operations, overseeing the activities of all constituents who provide surgical and support services with the ASC, and developing and managing the financial performance of the ASC. Previously, Dr. Laur served as assistant director of the ASC. Dr. Laur replaces Douglas Merrill, M.D., the Center's first medical director, who accepted a position at Dartmouth Hitchcock Medical Center.

Sundar Reddy

New Leadership in the PACU

Sundar Reddy, M.B.B.S., F.R.C.A., Clinical Assistant Professor, has been named new Medical Director of our Post-Anesthesia Care Unit (PACU). This position has been the responsibility of **Debra Szeluga**, Ph.D., M.D., for many years. The growing responsibilities of serving as the Program Director of our Anesthesia Residency have made it difficult for Dr. Szeluga to devote the time she feels is required in PACU management. Her years of work given this area can be evidenced by the improvements made. Dr. Reddy looks forward to opportunities to further improve patient care, resident education, and research within the PACU.

Alan Ross

Fellowship Director Appointment

Alan Ross, M.D., Associate Professor, has been appointed Fellowship Director of Cardiothoracic Anesthesia. Previously, this appointment was held by Javier Campos, M.D., Professor, Vice Chair of Clinical Affairs, Medical Director of the Main Operating Rooms. Dr. Ross will be in charge of current fellows, recruitment of new fellows, and all duties related to the fellowship program. Dr. Ross will be in direct communication with our Fellowship Director of the Department, Richard Rosenquist, M.D.

Michael Todd

Distinguished Service Award

Michael Todd, M.D., Professor and Head, received the Distinguished Service Award from the Society of Neurosurgical Anesthesia & Critical Care (SNACC) during the group's 37th annual meeting held recently in New Orleans, LA. This award is presented to an individual who has made outstanding lifetime contributions to the field of neuroanesthesia and critical care and to the larger anesthesiology community as a whole. The last time this honor was awarded was in 2004.

Calvin Freese

One Very Special Retiree

Many of our alumni will remember **Calvin Freese**, electronic technician in the main anesthesia workroom. The department honors him upon his retirement, official on February 5, 2009. Cal was first employed by The University of Iowa in 1978, 32 years ago. He began his career in the Department of Anesthesia in 1982. He brought with him a military background, having served as a medic in both the U.S. Marines and the National Guard. His duties involved serving in Viet Nam and also in Desert Storm. Cal has seen and worked on it all - from the copper kettle, to the tall stack of EKG monitors previously used in the cardiac operating rooms (lovingly referred to back then as "Big Bertha"), to the high-tech electronic anesthesia machines of today. Cal embraced this advancement from manual to electronic equipment, always welcoming the progress of technology in the operating room equipment.

Cindy Carter, anesthesia workroom supervisor, has worked with Cal for 22 years. She describes him as "a great representative of what a UIHC employee can be." Over the years, Cindy has watched Cal enjoy the puzzles of figuring things out, like the good problem solver that he is. She marvels that so much knowledge is all stored in his head, with rarely anything written down.

Cal has trained many individuals on the appropriate operation and care of the anesthesia machines, from the newest of trainees to the finest of faculty. We suspect he takes with him into retirement many a "good story" about several of these individuals! Our wish for Cal is that he retire knowing how much this department appreciates him and the hard work and dedication he has given. All who have been trained by Cal Freese are better off for it.

of *Special* interest.....

Research News

The period from July 1, 2008 to June 30, 2009 has been a very successful year for grant funding in the Department of Anesthesia. The following is a summary of our awards for this period:

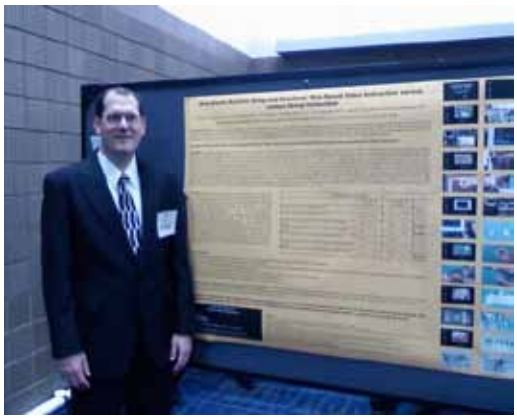
- 9 NIH or other federal proposals totaling $2,513,144
- 6 non-federal grants for a total of $165,000
- 3 industry awards totaling $56,423
- 3 University-sponsored internal awards for $64,000

The Department's total direct external funds for 2008-2009 were $2,734,767 bringing the total funding to $2,798,767. We anticipate the momentum will continue into the future. The department has submitted these new proposals from July 1, 2008 to June 30, 2009:

- 9 NIH and new federal grants
- 6 nonfederal proposals

Our publications in part reflect this outstanding grant activity. From January 1 through December 31, 2009, the Department of Anesthesia published 72 peer-reviewed publications. This was up from 47 peer-reviewed publications during the same period the previous year. We have a good start for this year with 7 in-press articles scheduled for publication in 2010.

In addition, our research representation at the 2009 annual meeting of the American Society of Anesthesiologists was reflective of work involving University of Iowa medical students, summer FAER-sponsored medical students, residents, fellows, faculty, and research scholars.



Phillip Brenchley, M.D., CA-3 resident, at poster presentation during the 2009 ASA meeting

MARC 2010

By the time our readers receive this issue of the department newsletter, our residents and faculty members would have returned from Cincinnati, Ohio, the site of this year's Midwest Anesthesia Resident Conference (MARC). This opportunity is unique to trainees participating in anesthesia residency training programs in the Midwest, and The University of Iowa holds claim to beginning this annual meeting. Mazen Maktabi, M.D., Associate Professor and faculty coordinator for our department's participation in this event, traveled with several other faculty members, residents, and medical students to attend this meeting. In 2010, our department presented nine different studies. Those presenters involved spent many hours writing and practicing their presentations with mentor faculty members, receiving encouragement and suggestive guidance for improvement. We'll bring you follow-up from this year's meeting in our next issue. Preparation for MARC 2011 has already begun since it will be hosted by The University of Iowa in downtown Chicago, Illinois at the Marriott Hotel. Participation is now so large that holding the meeting in Iowa City is impractical. MARC 2011 is now the third largest anesthesia meeting in the nation with participation of 550 residents and 100 faculty members. The meeting co-chairs are Drs. Esther Benedetti, Brent Hadder, and Mazen Maktabi, with secretarial support from Abbey Gilpin.

L to R: Drs. Esther Benedetti, Michael Todd, Brent Hadder, Mazen Maktabi, and Ms. Abbey Gilpin

"Medicine is more than about being a good doctor; it's about being a great person."

Mission Trips

In 2010, our department will proudly send five of its 13 senior residents on three separate international clinical service trips. Traveling with the resident groups will be four current faculty and one alumnus. These physicians will be performing primarily pediatric anesthetics in a variety of relatively remote locales. The residency takes great pride in this on several levels. Firstly, the value of this clinical training is inescapable and will further sharpen the skills of these young anesthesiologists approaching the end of their residencies. Secondly, we believe there are few other residencies with either the logistical ability or the educational commitment to send 40% of the senior residents abroad, each for 2 weeks of overlapping time. This is a triumph of resident education trumping the service needs of clinical workload. This was accomplished in a year when limitations of operating room workforce have been a principal issue for the residency. This success is owed not only to the participants, but also to the entire residency and department at large. This was only accomplished with significant upheavals of many other residents' schedules and a large degree of volunteerism to cover the remaining clinical duties. As usual in our residency, several senior residents stepped forward and sacrificed their own elective time to make these trips possible. Rather than a chore, it was a pleasure for the chief residents to settle these arrangements.

The entire department looks forward to the stories of international adventure and clinical service that will likely return with these 5 senior residents and accompanying faculty.

Editor's Note: An article in an upcoming issue will report on our alumni who have participated in the past, or still do participate, in similar mission trips. Barb requests all alumni for whom this describes to write to her. Send a report of (a) where you have traveled and how many trips, (b) what entity sponsored the trip/s, (c) what you gained personally and professionally - and be sure to send photos!

2010 Mission Trip Participants

Barquisimeto, Venezuela (cosponsored by Rotaplast)	Bucaramanga, Santander, Colombia (cosponsored by Wisconsin Medical Mission)	Quetzeltenango, Guatemala (cosponsored by Iowa Miles of Smiles Team, Rotary Clubs of Iowa City)
Martin Mueller, faculty	Sarah Titler*, faculty	Robert Forbes*, faculty
James Schuh*, former locum tenens	Phillip Brenchley, CA-3	David Swanson*, faculty
Lakshmi Kantemneni, CA-3		Karen Dean, CA-3
Matthew Sunblad*, CA-3		Riley Stringham, CA-3

*Individuals for whom 2010 is not their first mission trip year.

Edward T. Zawada

SICU Welcomes a Bush Fellow

Edward T. Zawada, Jr., M.D., is a 2009-2010 recipient of a Bush Foundation Fellowship. He visits the Surgical Intensive Care Unit intermittently throughout the year as part of a collaborative education program. Dr. Zawada is a medical instructor and practitioner specializing in nephrology, providing care to patients in four states using technology to communicate through a program he supervises at Avera Health and McKennan Hospital in Sioux Falls, South Dakota. Dr. Zawada is board-certified in Internal Medicine, Critical Care, Geriatrics, and Nephrology. The Bush Foundation established the Bush Medical Fellows Program to enhance community health care in Minnesota, North Dakota, South Dakota, and northwestern Wisconsin. Each year, approximately 13 fellowships are awarded, enabling physicians to take a leave of absence from their practices to pursue professional and personal goals that address the health care needs of their communities. Since 1979, the Bush Medical Fellows Program has enabled more than 300 physicians to receive training in special areas and to develop opportunities for personal and professional growth. South Dakota has fewer certified critical care specialists than most of the rest of the country. Dr. Zawada selected University of Iowa Health Care's SICU as the location in which to enhance his education.

Patient Simulator Center News

The department's Patient Simulator Center continues to remain a popular location selected by visitors to our hospital and Carver College of Medicine. Our most recent student group included seven students from Cedar Rapids middle schools, who came to campus for a UI Health Care tour experience which included a tour of the Medical Education and Research facility, a visit with the UI AirCare team, and a stop at our Anesthesia Patient Simulator Center. **Jennifer Smith**, M.D. (CA-3) talked the all girl group through a routine patient induction. There were some astoundingly good questions, interest in what might constitute "not routine induction," where an endotracheal tube would be in a tonsil case, etc. It was a very interested and interesting group.

Student Registered Nurse Anesthetists Program

Update

Warm spring thoughts to one and all from the Anesthesia Nursing Program here at The University of Iowa (a.k.a. the frozen tundra at the time of writing). There have been some changes in the program that I would like share with you.

First, Edward S. Thompson, Ph.D., CRNA, A.R.N.P., F.A.A.N. has flown the Hawks nest. Ed retired from the day-to-day operations in July of 2009 and has since moved to sunny Florida. I think he actually had something to do with the Hawks playing in the Orange Bowl this year, but he won't admit to it. Ed is still teaching some classes online for the College of Nursing, but does that from his beach chair and never has to shovel snow again. During his tenure as director, Dr. Thompson guided the program to a #5 ranking nationally and obtained the maximum accreditation available for a nurse anesthesia program. Our best wishes go out to Ed and Sheila and we hope that they think fondly of us during the winter months.

Second, when Ed retired, I took over the program. I am black and gold to the core having graduated from the U of I twice now. I received my bachelor of science in nursing in 1987 and my doctorate in 2008. In between, I worked as an ICU and ER nurse throughout the United States, obtained my anesthesia education at Ravenswood Hospital and DePaul University in Chicago, IL, and then returned to Iowa City. I served as the associate program director for the UI ANP for the last 10 years. My wife, four children, and I love life in Iowa City and have no intention of leaving unless they move the University to either the Rocky mountains or a warmer climate.

Third, the program is also undergoing some major changes. In 2010, we will graduate a wonderful class of SRNA students. These bright young people have really worked their hearts and tails off for the last 30 months to become the latest group of amazing CRNAs to come out of The University of Iowa. In May of 2010, we will admit our first class of Doctor of Nursing Practice students into our new redesigned curriculum. These SRNA students will take all the same classes plus a few more, complete all the same clinical rotations plus a few more, and graduate three years later with a DNP degree with a specialization in nurse anesthesia. This change has been mandated by the American Association of Colleges of Nursing and the American Association of Nurse Anesthetists and will be implemented in all CRNA programs nationwide by 2020. As always, the U of I is ahead of the game and setting the bar by being one of the first programs in the country to convert its curriculum to a DNP. We will graduate our last MSN class in 2012 and our first DNP class in 2013. The DNP CRNAs will deliver the same high quality anesthesia that our current graduates do, but will also be able to help their hospital, ASC, or healthcare organization in other ways to meet the challenges that the healthcare system of the future will present.

Fourth, the program offices have a new address (C-607 GH, which was the old OR6—open heart room, for those who remember those days), but Sharon Doak is still in charge. Please write to us and let us know how you are doing since graduation. Many of you write or call when you need a reference or a classmate's address. We'd like to have more contact with you than that. Let us know where you are, what you're doing, how the family is, and anything else you might like to share. If you are ever near Iowa City, please stop in. A few years ago, the department started hosting an alumni reunion on homecoming weekend. In 2009, those smart enough to return got to witness the Hawkeyes take down Michigan on their way to their historic 9-0 start to the season. I know many of you would love to come back to town and just need a reason. Give us one and we will be happy to host you. The date for next year's alumni reunion is not yet confirmed but we will let you know. Homecoming is October 2nd against Penn State, who is pretty mad that we beat them the last two years, and most of the Hawkeyes are returning. It should be a good game.

To switch gears now, I'd like to thank all of you graduates out there who enhance the reputation of our program every day through your clinical practice. I can't tell you how rewarding it is to go to meetings and constantly have people tell me how great The University of Iowa CRNAs are. We always knew that, but now everyone else does too. It is equally as satisfying to travel throughout Iowa to our many clinical sites and hear how great our students perform. The program will continue to strive to put out high caliber CRNAs to meet the needs of the ever-changing U.S. healthcare system. Keep up the great anesthesia and keep in contact. GO HAWKS.

Cormac T. O'Sullivan, Ph.D., CRNA, A.R.N.P.
Director, Anesthesia Nursing Program
Alumnus 1987, 2008

Anesthesia Nursing Graduating Class of 2010
Back row: Megan DePoorter, Joel Shaw, Lawrance Merck, John Haak, Christine McNair
Front row: Lyudmyla Lysenko, Dana Coffman, Sara Yoder, Stephanie Klein

A Letter from UI Foundation

A Word from Monica (Foley) Lewis
Department of Anesthesia representative for the UI Foundation

As the department's representative to the UI Foundation, I am here to help you balance philanthropy with the competing life priorities that we all share. We all want to manage our tax bills, live out our lives with a certain level of comfort, and provide for loved ones after we are gone. In the last newsletter, I shared the scenario in which a trainee of the department provided philanthropic support to the department in his lifetime, with his assets passing to his family upon his death. This time, I bring you the story of someone who came to know the satisfaction of meaningful philanthropy and service late in life. In this scenario, the giver first fulfills his priority of providing for his grandchildren's education, and then provides the startup capital to allow others to experience the kind of volunteer work that has given him the most joy.

The Scenario:
After medical school, Dr. Horace Salva came to the United States from the Philippines in 1957 to complete his residency in the University of Iowa Department of Anesthesia. He brought his young family with him, and all were thrilled by the opportunity provided to them. To supplement their income, Dr. Salva's wife, Eunice, worked as a night nurse in the University of Iowa Hospitals. She also provided most of the care for their two young boys while Horace worked long hours. After finishing his residency and then spending three years in private practice, Horace was delighted to be able to join the department's faculty as an assistant professor. Horace stayed as faculty in the department for 27 years, and then began to work part time and look toward retirement. His long tenure had some ups and downs throughout the years, but overall he felt fortunate to be part of a world-class department. He was reluctant to retire, but also looking forward to the next stage of life. The couple began to dream of warmer climes in which to spend their golden years.

When Horace turned 70, he decided to fully retire and the couple moved to Phoenix, Arizona. After living modestly in Iowa City, they bought the retirement house they had always dreamed of. Horace became committed to his golf game, Eunice to a variety of community interests. The couple also began to travel across the world, cruising the Mediterranean, biking across Ireland, even undertaking an African safari. The couple enjoyed good health, three grandchildren, and a nice circle of friends. Still, Horace felt that something was missing. He missed his work and the feeling that he was making a difference in people's lives and health. He decided to respond to an advertisement seeking volunteer medical professionals for cleft palate work in Central America. He loved it! The totally selfless contribution to another human being's healing was the most rewarding thing he had done in life, outside of raising his children. He began to pursue opportunities elsewhere in the world, but became most committed to helping with surgeries for burn victims in Africa.

Horace had always been relatively happy with his work as a faculty member in anesthesia, but this international volunteer work made him joyful. His only regret was that he discovered this passion so late in life. Although he had not previously been philanthropic, he began to think about ways to use his wealth to encourage other medical professionals to have similar experiences. Horace believed that if he had an opportunity as a resident to volunteer in developing nations, he would have done so throughout his career rather than solely in his retirement.

The Solution:
In a personal visit over lunch with Monica Lewis and Barb Bewyer, Horace shared his experiences and his passion for international volunteer work. Since the department always strives to continually enhance resident education, they were pleased to develop a new program that fit their residents' needs and Horace's interests. Recognizing that residents generally face a significant debt load upon completion of their program, and that incurring additional debt may be a hindrance to such endeavors, Horace decided to create a fund that would support resident volunteer experiences abroad by paying for their transportation and related expenses.

Horace felt a deep obligation to ensure that his grandchildren were not burdened with debt for their undergraduate education. The losses he sustained in the market in recent years meant that he could not undertake both expenses simultaneously. Also, the market's volatility has left him more than a bit risk-averse. Monica Lewis worked with Horace and his attorney to set up a charitable remainder annuity trust to fulfill his obligations, suit his preferences, and satisfy his philanthropic intentions.

A charitable remainder trust is a versatile planned giving vehicle which can provide significant financial and tax benefits while fulfilling charitable intentions. It is a great option for givers who have a need for an income stream for themselves or their beneficiaries. The IRS defines a charitable remainder trust as "a trust which provides for a specified distribution, at least annually, to one or more beneficiaries, at least one of which is not a charity, for life or for a term of years with an irrevocable remainder interest to be held for the benefit of, or paid over to, charity." In Horace's case, his grandchildren needed the income stream for their college education. For a period of seven years, at least one of his three grandchildren would be in college, so he required an income stream for that amount of time.

Charitable remainder trusts can be structured to benefit beneficiaries for a specific period of time up to 20 years, or for the remainder of a beneficiary's life. The income stream you can expect is usually between 5% and 7% of the trust assets' value. The payout is determined when the trust is established. Your charitable deduction is based on the expected value of the assets when they are assumed by the charity, so as the payout rate increases, the charitable deduction you can take decreases, and vice versa. Selecting the payout rate is a balance between your need for income, maximizing tax benefits, and protecting the remainder value so that charitable intentions can be actualized.

Charitable remainder trusts can be structured as annuity trusts, which pay a fixed percentage of the assets' value, regardless of market fluctuations, or as a unitrust, which pays a fixed percentage of the assets' changing value. In Horace's case, he felt skittish about the market and preferred to secure a payout of a certain amount to help with his grandkids' tuition. For Horace, a charitable remainder annuity trust was the right structure to fulfill his family obligations and his philanthropic aspirations. This decision has given him both peace of mind and joy. The Department of Anesthesia and the UI Foundation are happy to work with you on a gift that balances your own competing life priorities. We are grateful for your consideration.

Monica Lewis
Assistant Director for Development, Major Gifts
Carver College of Medicine/University Hospital and Clinics
The University of Iowa Foundation
www.uiowafoundation.org

"I have found that among its other benefits, giving liberates the soul of the giver." *Maya Angelou*

Alumni Profile

Pierce Cornelius, M.D.

An Alumnus Who Has Dedicated His Life to Mission Work and Philanthropy

Why would a young man who was born in North Dakota and grew up in Olympia, Washington select The University of Iowa to pursue his higher education? For Dr. Pierce Cornelius, it was because it was the alma mater of his father, Frank Cornelius, a 1923 graduate of Iowa's medical college. Pierce Cornelius earned his BS in 1953 and his MD in 1957. He remembers, "During my senior year of medical school, classmate Francis Thornton and I worked at the VA for room and board, taking care of anesthesia equipment." He goes on to state, "I met up with classmate John Swanson at our 50-year reunion and we still keep in touch today."

Pierce Cornelius also met his wife, Wilene Cooper (BSN '58) in Iowa City. They met while both were on a rotation in obstetrics and gynecology in their respective fields of study. Salinas, California is where the couple headed after graduation, in order for Dr. Cornelius to enter a general practice residency. During those years, he met and worked with an anesthesiologist and became so interested in the specialty that he decided to pursue an additional residency in anesthesia upon completion of his general practice residency.

He and Wilene returned to Iowa City, where he completed his anesthesia residency in 1960. During that first year back in Iowa, **William Hamilton**, M.D., was head of the department, and other faculty members included Drs. **Leo DeBacker**, **Charles Pittinger**, and **Jack Moyers**. During his residency period, ether was still being used in the operating suites, as were precordial stethoscopes and blood pressure cuffs. Dr. Pierce recalls, "The department had one heart monitor, and that was used for very sick patients." During residency, he and Wilene lived in the quonset huts in Finkbine Park, west of the hospital. While they were cold in the winter and hot in the summer, they could step out their front door and see the scoreboard and clock at Kinnick Stadium.

Upon completion of his residency, Pierce and Wilene Cornelius moved to Portland, Oregon, where he worked at Emanuel Hospital from 1960-1974. From there, they went to Bend, Oregon, where he practiced with a group of eight physicians until he retired in 1989. It was soon after retiring that he became interested in mission work, through a friend. In the past two decades, Dr. Cornelius has completed nearly 40 international mission trips through Health Volunteers Oversees and Healing the Children. Wilene has accompanied him on almost all of these trips, working in post-anesthesia recovery areas. Their granddaughter, Mackenzie, accompanied them to Guatemala while a high school sophomore, helping with children who were waiting for an operation. Dr. Cornelius states, "I hope that the patients were as happy receiving their care as we were giving to them."

Shortly after moving to Bend, Oregon Dr. Cornelius read about the half marathon called Big Foot Run and decided to try it. "After running it, I thought I was going to die," he said. However, he started gradually running longer and longer distances. He has now completed many half marathons, marathons, and also has done a fair amount of ultra running, including a 100-mile challenge. Any distance longer than a marathon (26.2 miles) is considered ultra running.

Bicycling is a sport the Cornelius couple both enjoy. Wilene has ridden RAGBRAI with her sister who lived in Iowa at the time. He has completed a couple of cross-country rides, one from San Diego, CA to Charleston, SC - totally 2,850 miles. His group finished the ride in 25 days, averaging 116 miles a day. He's also ridden through the Rocky Mountains, from Kalispell, MT to El Paso, TX. "You get to see some beautiful country," he said.

In between his career, running, and mission work, Pierce and Wilene Cornelius have managed to be quite close with their two children and their families. They credit their daughter, Cindy, as the reason they have a second home in Arizona. She went to graduate school there, and whenever they visited, they liked it so much that they now spend winters in Tucson. Cindy and her daughter and son live in Bend, OR, where she teaches, while their son, Frank, lives in Flagstaff, AZ, working as an engineer at Lowell Observatory.

When asked what changes he saw in the specialty of anesthesiology throughout his career, Dr. Cornelius states that the biggest changes have been in the introduction of new drugs and the monitoring equipment. He feels certain one thing that hasn't changed is the Iowa City weather, remembering when, as a medical student, he walked across the frozen Iowa River to get to the Iowa Memorial Union for meals. The wind in the winter was the worst for him, and he admits that's one thing they don't miss.

For Pierce Cornelius, The University of Iowa was a great place to earn an education, providing a rewarding career and over two decades of international missionary work. He and Wilene have enjoyed a life of service and they've served The University of Iowa well over the years, too. They recently made a generous gift through The University of Iowa Foundation, providing unrestricted support to the Department

"The University of Iowa provided both of us with an excellent education that has allowed us to have wonderful careers and lives of service. . .

It's a great feeling to give back."

of Anesthesia, establishing the "Pierce and Wilene Cornelius Anesthesia Fund." The Cornelius pair view both their ability to serve years on mission trips and their gifting to the department as the culmination of great educational efforts, strong work ethics, and a healthy career and lifestyle. In addition, giving back to the community that made it all happen for Dr. Cornelius was a critical juncture in his life stage. "We're happy to do it. The University of Iowa provided both of us with an excellent education that has allowed us to have wonderful careers and lives of service," he said. "We were advised that the best option for us was to make an outright gift of retirement assets. I highly encourage fellow alumni to consider making a gift. It's a great feeling to give back."

Department of Anesthesia 1961
Back Row: West, Safranek, Updegraff, Wiekel, Beck, Hull, Maciel, Diment
Middle Row: Schlobohm, Spears, Warner, Cornelius, Bates, Barnett, Schuckman, Maungdee
Front Row: Moyers, Pittinger, Hamilton, DeBacker, Jackson

Of Special Mention

We pay tribute to the lives of the following individuals, each an alumnus of our department. We also thank those individuals who have informed us of this information, allowing us to share it with our readers.

Charley F. Gutch, M.D.: Dr. Gutch died July 11, 2009, after a lengthy illness. He received his B.A. (1941), M.D. (1943), and anesthesia residency (1947) training from The University of Iowa. His military service included serving in India and China with SACO, a classified weather data and intelligence gathering effort of the U.S. Navy Group China and the Chinese Nationalist Army. During the Korean conflict, he was recalled briefly to duty at the Naval Hospital, Santa Marguarita Ranch, CA. Dr. Gutch became interested in kidney failure and the new artificial kidney and worked in that medical area for many years. With the development of the four-year medical school in South Dakota, Charley became professor of medicine and chief of the medical service at the VA Hospital. In 1983, he became associate dean for the school of medicine. He retired in 1988 and was named professor emeritus of the South Dakota Medical School.

With co-editors M. H. Stoner and A. E. Corea, Dr. Gutch published a revised 6th edition (1999) of the Mosby text *Review of Hemodialysis for Nurses and Dialysis Personnel*, first published in 1971. He was author or co-author of more than sixty scientific papers. Dr. Gutch was a member of several professional organizations, as well as a Fellow of the American College of Physicians.

He is survived by his wife, Betty; his son, John (Joanna) of Reno, NV; two granddaughters, Wendi (Mike) Connolly of Novato, CA, and Claire (Greg) Mognaga of Castro Valley, CA; five great-grandsons; a sister-in-law, and many nieces and nephews.

James D. Johannes, M.D.: Dr. Johannes, retired captain in the United States military, died in Libertyville, IL on November 24, 2009, at the age of 73. He was a graduate of Sacred Heart School of Waterloo, Loras College of Dubuque, Loyola Medical School of Chicago, and Aerospace Medical Institute of Pensacola, FL. He served his internship at Cook County Hospital, Chicago, and served his residency in anesthesia at The University of Iowa. He served 32 years of service with the Marine Corps and the Navy. His military services included two tours of duty in Vietnam, service at Long Beach Naval Hospital, CA, Naval Hospital, Pensacola, FL, and Great Lakes Naval Hospital. He was an avid reader and collector of books. He is survived by his daughters, Julie Marie (George) Minde of Annandale, Va. and Jean Marie (John) McElvogue of Vernon Hills; his granddaughter, Sophia Marie Minde; sister-in-law, Carolyn O'Hearn Johannes of Albuquerque, N.M.; nieces, Michelle (Doug) Boe, Mary Johannes and Mariah Raventon; and his nephews, Patrick Johannes, Brian Johannes and Miles Raventon.

Margaret S. Emmons, M.D.: Dr. Margaret S. Emmons, 86, of Iowa City, died January 16, 2010. After high school in Ft. Dodge, IA, Margaret graduated from Cornell College in 1944, and The University of Iowa College of Medicine in 1949. She served her internship at St. Louis City Hospital and her residency at the University of Iowa Hospitals & Clinics. In 1947, she married classmate Dr. Richard O. Emmons ('40 DDS, '46 BA, '49 MD, '53 R, internal medicine). They were both in private practice in Clinton, IA from 1954 until the death of her husband in 1981 and her retirement in 1986. She was a member of the Clinton Mercy Hospital staff and also member and one-time president of the Clinton County Medical Society and Jane Lamb Hospital Medical Staff. She worked to establish an Associate Degree Nursing program in Clinton Community College. She served on Mission Committees of First Congregational Church and First United Methodist Church, both of Clinton. She was a member of the Board of Directors of Women's Health Services and the Alverno Healthcare Facility, both of Clinton, and Self Help International of Waverly, IA. She received the Clinton YWCA Women of Action recognition and was honored as a Cornell Distinguished Alumna. Dr. Emmons continued her work for missions with First United Methodist Church of Iowa City. She enjoyed biking, golf, bridge, word games and traveling for a purpose with family and special friends, visited six continents and many countries, as well as all the states. These travels and interest in geography led to supporting international development work and the creating and marketing of geography and card games. She is survived by her children, Kathy Emmons of Pleasanton, California; Sally Myers of Clinton; Susan Emmons (Steve Zorbaugh) of York, Pennsylvania; and Dr. Robert Emmons (Sue) of Duxbury, Vermont; three grandchildren, Benjamin Myers, Brett Myers (Sarah) and Rachel Emmons, daughter of Susan and Steve; great graddaughter, Ellie Myers; three nieces and several cousins.

Michael J. Regan, M.D.: On September 1, 2009, Dr. Regan passed away in Corvallis, OR.

He attended Marquette University and Marquette University School of Medicine, where he graduated at the top of his class and earned the Millman Award. After a period of national service for the Center for Disease Control in Atlanta, he underwent training in anesthesiology at The University of Iowa ('64R) and the University of California Cardiovascular Research Institute. Dr. Regan entered into private practice in Medford, Oregon, where he worked for 33 years and raised a family, which he considered to be his greatest achievement. He loved classical music, especially piano and chamber music, was an avid amateur radio operator, and enjoyed tinkering with electronics and engineering projects. His lifelong ambition of being a pilot was reached ten years ago, when he took aviation lessons. He is survived by his wife, Barbara Zemlicka Regan, children (James Regan, Michael Regan, and MaryNell Regan Rocco), his grandchildren (Rachel, Nicole, Allison, Thomas, and David), and his brother (James).

Monica Lewis and Mark Laughlin
taken during visit to Michigan

Alumni Update

Reflection. Reality. Goals. These three words accurately describe my current state of being. I find myself becoming distracted by a photograph of an alumnus taken during a visit to the department, remembering what a great day that was. I snap back to the reality of the moment, refocusing my thoughts to my work at hand. Before I know it, I'm jotting down notes of new ideas for newsletter stories or worthy department projects. When describing this frustrating pattern to a colleague and friend, I expected her to say, "What's wrong with you?" However, she instead only smiled kindly and said, "I know just what you are talking about, as I find myself experiencing similar scenarios." Wow - what a relief! After giving this more thought, I wonder if there aren't times in the lives of each of us when we feel so concurrently filled with recollection and drive that the "here and now" of it all gets lost somewhere in the middle. Thoughts worth pondering…..

Reflection. The past 6 months have been filled with special events and celebrations. The department enjoyed visits from several alumni, some participating in educational courses we have sponsored and some visiting while traveling through Iowa. Phone calls, e-mails, letters, and even a few trips were made to connect and reconnect with those who used to be in our department daily. Such a pleasure it was to have conversations with these individuals, learning where life has taken them since they left Iowa City, hearing a new fact about department history, and/or listening to someone share a personal story about their family members.

Homecoming weekend was filled with activity, including the annual visit from New Jersey of special alumni, Drs. **Jeanne Jaggard** and **Hal Jaffe**. Dr. **Mike Todd**, Linda Todd, and I enjoyed watching the parade with a significantly large group of alumni at our favorite spot right outside the downtown Java House. Hawkeye fans endured a wet, windy, and cool homecoming weekend, which also included our department picnic (moved indoors and for which those in attendance were most grateful!). The 2009 annual meeting of the American Society of Anesthesiologists was held in New Orleans, LA, and yes, there were several conversations about the 2005 meeting scheduled for New Orleans but instead held in Atlanta, GA, due to Hurricane Katrina. A significant number of our alumni traveled to New Orleans and we greeted them at our annual reception. It's wonderful that I now recognize so many faces, and equally wonderful when I meet people for the first time. One recurring conversation theme of our alumni is how fond the memories are of "their days in Iowa City." Our department welcomed Dr. **Diane Head**, former UI resident and fellow, as a visiting professor in December. She delivered several lectures to our residents and faculty, and it was nice to notice so many department members who recognized and remembered her. These were just a few of the highlights enjoyed over the past several months. There are so many alumni and friends of the department for whom we are grateful for their generosity and commitment to the positive continuation of our many programs. Of course, there are some sad and unfortunate reflections regarding this time period also, especially learning of the loss of alumni and friends so special to our department and our institution.

Reality. There are task lists to be followed, deadlines to be met. What used to lie ahead of me as a goal has now crept its way into the here and now. Amidst that come the achievements reached by so many in our department, and we are proud to take time out to announce them. Our department's Intranet-based calendar requires daily management to broadcast an ever-growing wealth of educational opportunity for all department members certainly, but in particular for our trainees and young faculty. The hiccups in utilizing our institution's newest patient record keeping system, Epic, are fewer than at its implementation. We are on the downhill side of interviewing the anesthesia resident applicants, and it is with enthusiasm that we will await Match Day. Department staff members feel less anxious about the "what's next" with budget cuts incurred by our state and institution. There is, however, definite rumbling in the hallways relating to living in Iowa during the winter months! Then again, we look outside the windows of our hospital at the magic of the season and we appreciate it.

Goals. There is work to do. There is department history to continue gathering and organizing into a document form. There are so many alumni I want to contact. There are day trips to organize and fulfill with our UI Foundation representative, Monica Lewis. There are newsletter articles to invite authors to prepare (warning: that will involve YOU, alumni!). There are enhancements to our department calendar, our alumni database, and our web pages to plan and work with our IT team to build. The June College of Medicine alumni reunions are just a few months away, and we encourage our alumni to consider attending and including the department in your plans.

I could continue sharing more reflections, realities, and goals with you, but I choose to conclude here. My one most desired goal - my dream - is for our readers, our alumni and friends, to write to us. Share your reflections, your realities, and your goals. A goal is nothing more than a dream with a deadline…..

Barb Bewyer
Managing Editor, Department Newsletter

We welcome YOUR news!

Monica Lewis and Donald Hesselschwerdt taken during visit to Michigan

Barb Bewyer and Jack Grucza during department visit by visiting CRNA alumnus

Diane Head and Michael Todd following Dr. Head's lecture to faculty

Christine Carstensen, Phillip Schmidt, Lauri Helmers at ASA reception

Photo Gallery

Jime Lane and Peter Foldes (clean-up crew!)

Samantha and Sophia Spofford

Kevin Watkins

John Laur and Margaret Emmons

ASA 2009 Reception

Susan Han, Kadia Bundu, Carla Madrid

Eldon and Monteen Reed

Stacy Wong, Robin Goldsmith, Frank Dexter

Deborah and Bradley Johnson

Sally Fortner

Marty Sokoll, Dennis Bastron, Eldon Reed, Sebastian Schulz-Stubner

Dennis and Carla Madrid, Marty Sokoll

Blood Drive

Deb Rousch

Donna Merck

Jennifer Smith and Molly Kelly

Joey Odum and Trevor Porte

Airway Symposium

Michael Todd (center) with symposium attendees

Phillip Brenchley, Bradley Hindman, Corey Anderson using patient model to demonstrate to symposium attendees

Robert From (course director) and Ratri Keonin

Jenni Nicholson, Jodi Kazerani, Tara Hata, Mazen Maktabi

Department Potluck

Resident Interview Day Luncheon

Current residents in conversation with applicants

University of Iowa Hospitals and Clinics
Department of Anesthesia
200 Hawkins Drive
Iowa City, IA 52242

Change Service Requested

The University of Iowa
Carver College of Medicine

Iowa Anesthesia Symposium X

Saturday and Sunday
May 1 & 2, 2010

7th Floor Atrium, Roy Carver Pavilion
University of Iowa Hospitals and Clinics
Iowa City, Iowa

Sponsored by: The Department of Anesthesia, University of Iowa
Roy J. and Lucille A. Carver College of Medicine

Highlights:

- Update on thoracic paravertebral blocks
- Fiberoptic bronchoscopy
- Lung separation techniques
- Ultrasonography for the cardiac patient undergoing noncardiac surgery
- Update on obesity and anesthesia implications
- Post-dural puncture headache concepts in the pregnant patient
- Cardiac disease in pregnant patients in labor