MAYO CLINIC

Mayo
Anesthesiology Alumni
Newsletter

September 2004, Vol 3. No. 3

Peter Southorn, M.D., Editor
Mary Schrandt, Associate Editor; Marie Fuller, Assistant Editor

Inside This Issue

Address correspondence to:
Dr. Peter Southorn, Mayo Clinic,
Department of Anesthesiology,
200 First Street SW,
Rochester, MN 55905
or e-mail: southorn.peter@mayo.edu

The Importance of Anesthesia History

Mark Warner, M.D.

This month marks the beginning of the Mayo Department of Anesthesiology Section on Anesthesia History. Led by Dr. Doug Bacon, this section consists of anesthesiologists, nurse anesthetists, respiratory therapists, and residents. Each of these groups provides unique insights and viewpoints of the department's development as it has grown into one of the most admired academic anesthesia departments in the country.

Why have a section on anesthesia history? In order to improve, it is vital that we understand the history of our specialty and how past events have shaped our current practices, professional organizations, and academic pursuits. The section will provide a common resource to stimulate the development and publication of historical papers on local as well as national and international issues. These, in turn, will provide opportunities for young faculty members to gain initial academic rank and national recognition personally and for the department. The section also will develop displays depicting the history of the Mayo Department of Anesthesiology. Residents, other trainees, guests, and alumni will find these to be interesting and instill a sense of community and pride in our department. Within a short time, I am confident that we will be recognized as the preeminent anesthesia history department in the country.

We owe so much to our alumni for their contributions both at Mayo and elsewhere. Mayo-trained physicians are well known for their outstanding clinical practices and their dedication to improving medical care within their communities. We emphasize both of these points to our residents and strongly encourage them to become valuable, contributing members to their local medical institutions as well as to their communities. Each of you is writing your own history, adding knowingly or unknowingly to the excellence, recognition and lore of our department.

Thank you for representing Mayo and the department so well.

Editor's Note

Peter Southorn, M.D.

A heartfelt "Thank You" to everyone who has contributed to this newsletter. I know the readers will appreciate your contributions. Please keep those letters and e-mails coming.

John S. Hattox Jr., M.D.

Robert Adams, M.D.
Anesthesiologist, Coronado, California

Although his interest in pharmacology and physiology might have been enough to influence John Hattox to specialize in anesthesiology, he recalls two experiences during his third year at the University of Tennessee Medical School in the 1940s that were pivotal in setting his course. First, the professor and chair of surgery devoted an hour lecture to his belief that progress in surgery was tied to the level of anesthetic care and, therefore, would be held back unless physicians began to specialize in anesthesiology. At that time in Tennessee, there were no physicians practicing anesthesiology in the entire state including the university. The consequences of this deficiency were then tragically demonstrated to Dr. Hattox while sitting in a surgical gallery about to observe a thoracotomy. The induction of anesthesia by a nurse practitioner rapidly became an airway management crisis leading to the patient's death. Even with his then limited knowledge of anesthesia, the mismanagement of the anesthesia care was obvious to Dr. Hattox, and he recalls thinking to himself, "There has to be a better way."

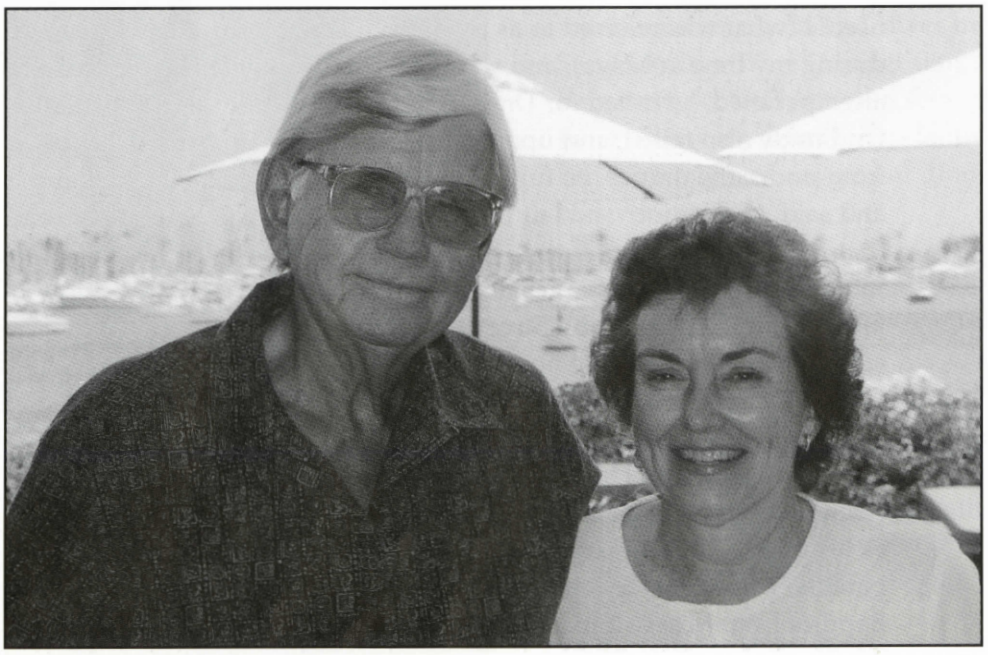
Following graduation from medical school in 1945, Dr. Hattox did his internship at the U.S. Naval Hospital in San Diego. Because of the need to deploy physicians as quickly as possible, the length of military internships was nine months, during which Dr. Hattox had his first hands-on experience in anesthesiology. The acting chief of anesthesiology at U.S.N.H. San Diego was a civilian-trained reservist who gave Dr. Hattox his time and guidance. When World War II ended, internships were extended to twelve months, and Dr. Hattox immediately requested and was granted an additional three months in anesthesia under the same skillful tutelage. In the last month of Dr. Hattox's internship, the acting chief of anesthesiology was released from active duty, and his last official act was to inform Dr. Hattox that he was now the new acting chief of anesthesiology – in a hospital of several thousand beds! A shocked, overwhelmed Dr. Hattox blurted, "But I hardly know anything about anesthesia!" to which his chief responded, "You know more than anybody else here."

The demands and challenges of being an intern chief of anesthesiology were daunting, and Dr. Hattox found himself in the unenviable position of having to take lonely stands for the cause of sound patient care and anesthetic management. The culminating event in that regard came one evening when a naval surgeon, with considerable political influence, scheduled a gastrectomy and insisted that it be done under high spinal anesthesia. Dr. Hattox informed the surgeon that such a technique was unsafe and then held up the case until the chief of surgery arrived. After hearing Dr. Hattox's anesthetic judgment, the chief replied, "Do what you want." The other rebuffed, angry surgeon saw to it that Dr. Hattox's career at U.S.N.H. San Diego ended at completion of his internship, and he was re-assigned to a recruit depot in Los Angeles for the remaining two years of his active duty.

Being a physician assigned to a naval recruit depot at the end of World War II gave Dr. Hattox ample time to stay in touch with the anesthesia practice in Los Angeles, and he recalls visiting Los Angeles County Hospital and Dr. John Dillon, the chair of the department. It was obvious to Dr. Hattox that the program had virtually no supervision, and he began the search for other residencies in anesthesiology. Interestingly, at that time, there were no training programs in anesthesiology in the western half of the United States, and Dr. Hattox concluded that the best programs available were with Dr. Lundy at the Mayo Clinic, Dr. Waters at the University of Wisconsin, Dr. Cullen at the University of Iowa, and Dr. Rovenstine at Bellevue. The reputation of the Mayo Clinic was known to Dr. Hattox both as a physician and from hearing the accounts of patients who had been cared for there. In addition, the one textbook on anesthesia that he owned was Clinical Anesthesia by Dr. John Lundy. In August 1948, Dr. Hattox visited Rochester, was interviewed by Dr. Lundy, and offered a position in the residency starting October 1st.

One of the traditions for new residents at Mayo in those days was to attend a dinner at the Foundation House, which was hosted by Dr. Donald Balfour. Dr. Hattox remembers being profoundly impacted by Dr. Balfour's words, "There is a lot to be learned here, but you will not be spoon-fed." Dr. Hattox's first rotation was at the Kahler Hospital with my father, Dr. Charlie Adams. He fondly remembers my father's kindness to him but also that he was not "spoon-fed." When he was in trouble in a difficult case, he went to my father for help. After hearing the problem, Dr. Hattox told me, "Your father looked at me and said, 'You can manage that,' and I did."

The dominant presence in anesthesiology at Mayo in those days was Dr. John Lundy. He was a superb teacher but also delighted in being a source of terror and humiliation for the residents. To this day, Dr. Hattox thinks that Dr. Lundy never received the credit he deserved for his significant contributions to the specialty outside the operating room, especially in the arena of politics, advancing the cause of anesthesiology, and securing its place in the American Medical Association.



John and Kathryn Hattox at their home on San Diego Bay.

Not surprisingly, Dr. Hattox can recall many memorable events in his time with Dr. Lundy. Late one afternoon at Saint Marys, Dr. Lundy had sent the rest of the staff home so that only he and his first assistant, Dr. Hattox, were covering on-going cases in several operating rooms. In a short time, lights were flashing from various rooms signaling the need for help, and Dr. Hattox was frantically running from room to room to lend a hand and all the while calling for Dr. Lundy, who was nowhere to be found. At great physical and emotional expense, Dr. Hattox managed to put out all the fires whereupon Dr. Lundy casually showed up in the surgical hallway. Dr. Hattox explains, "When I saw him, I almost yelled, 'Dr. Lundy, where in the world have you been?!' All he did was smirk at me, and I knew that his absence was a calculated action to have me act under pressure and acquire a greater sense of responsibility."

On another occasion one of Mayo's renowned surgeons, Dr. Walters, was operating before a full gallery when, Dr. Hattox says, "Suddenly there was blood everywhere." It should be noted that during that time, it was common practice only to start an IV after the induction and then only "if" indicated. Dr. Hattox was under the drapes trying to place a Lewisohn needle (what was referred to as an "introducer" during my time at Mayo), and when his first attempt failed, he called for Dr. Lundy. Dr. Lundy also failed, and upon coming out from under the drapes, he turned to Dr. Hattox and said, "You idiot" and left the room.

In those days, there was a residence for single fellows (located on Second Street across from where the Mayo Building now sits) called the Wilson Club, and it was there that Dr. Hattox shared a room with fellow resident Dr. Bob Devloo. Dr. Devloo had a membership at the Rochester Golf and Country Club and invited, as his guests one weekend, Dr. Hattox and his parents, who were tee-totaling Southern Baptists from Mississippi. Also in the club that evening was Dr. Lundy, who was known on occasion to liberally imbibe. While Dr. Devloo and his guest were seated in the dining room, a highly animated man came running out of the bar, waving a broom, and chasing a bat. Mrs. Hattox asked her son, "Who is that?" and was told, "That's my chief, Dr. Lundy." There was complete silence and no further questions.

Dr. Hattox remembers other Mayo anesthesia staff with great fondness and appreciation, particularly Drs. John "Bill" Pender and Albert Faulconer. Dr. Pender, a tough but excellent mentor who challenged his residents, was the greatest influence on Dr. Hattox, both for the close attention he gave him and for his skill in managing any crisis in the operating room.

It was during his quest for a Master of Science degree through research in spectrometry that Dr. Hattox spent time with Dr. Faulconer. Along with Drs. Arthur Keats and William Hamilton, Dr. Hattox considers Dr. Faulconer the most brilliant anesthesiologist it was his pleasure to have known. On one occasion, Dr. Hattox reached a mathematical roadblock, which no effort on his part could overcome, and at wit's end, he sought Dr. Faulconer's help. Dr. Faulconer went to the large blackboard that he kept in his office, and said, "Let's see what we can do." During the ensuing minutes he proceeded to fill the entire board with a series of calculations and, at the very bottom of the board, arrived at the solution. He turned to Dr. Hattox and in his characteristic understated manner said, "I think that might work."

From the beginning of the anesthesiology residency at the Clinic through Dr. Hattox's time there, residents did not participate in the one-on-one anesthetic care of the patient. The system was for the residents to supervise the nurse anesthetists in the local room where the patient was induced and intubated and then as needed after the patient was taken to the operating room by the anesthetist. Dr. Hattox never liked supervising anesthetic care and

wanted to be assigned an operating room where he could do his own cases. He approached Dr. Roger Ridley, a new staff member, to make this request to Dr. Lundy but Dr. Ridley, still not over being traumatized by Dr. Lundy, refused. Dr. Hattox figured, "Nothing ventured, nothing gained" and arranged for an appointment with Dr. Lundy. After the well-rehearsed presentation and request was completed, Dr. Lundy was silent for a few uncomfortable seconds for Dr. Hattox and then said, "I think that can be arranged." Dr. Hattox was given Room 8 at Saint Marys where he spent a quarter personally managing the anesthetic care for the patients of Drs. Waugh, Gray, and Pemberton. So thoroughly enjoyable was this experience for Dr. Hattox that he was given an additional quarter, and from that moment on, all residents at Mayo received experience in managing their own cases.

Other advances in the field took place during Dr. Hattox's residency. One of his fellow residents, Dr. David Massa, invented the prototype for the peripheral plastic intravenous needle in use to this day. The initial trials at producing the prototype took place in his apartment and involved using his oven. The final design was first produced by Rochester Products and eventually became the Jelco needle.

Dr. Hattox also remembers an evening on call as a first assistant when a patient from the State Hospital was admitted having shoved a needle through her chest wall into the heart. He concluded that the procedure could not be safely done without monitoring the heart and arranged to have what was then a state-of-the-art EKG from the cardiology department – a single lead, paper-writing machine. As far as Dr. Hattox knows, that may have been the first time an EKG monitor was used in the operating suite in Rochester.

Though offered a position on the staff at Mayo at the conclusion of his residency, Dr. Hattox knew that his passion in the specialty was in hands-on anesthetic management of the surgical patient. He accepted a position with Anesthesia Service Medical Group in San Diego, not only because of San Diego's well-known attractions but because of the leadership's commitment to a high level of clinical care and fairness and equality to all members, even the newest joiners. Although the small group had no plans to further expand, the quality of care provided by Dr. Hattox and his colleagues was consistently sought out as more hospitals were built in response to San Diego's rapid growth. The group now has approximately 175 members, and its size and success are in no small way because of Dr. Hattox's leadership.

While maintaining a busy clinical practice, Dr. Hattox became a productive participant on behalf of anesthesiology on several levels. Having become accustomed to the recovery rooms at Mayo, he was dismayed to find on his arrival in San Diego that no such thing existed in any hospital. Patients went directly from surgery back to their hospital rooms where serious complications, including deaths, were known to occur. In the first hospital where he worked, Dr. Hattox presented his plan in sequence to the operating room supervisor, the director of nursing, and the hospital administrator – all of whom provided their enthusiastic support. A storage room became a four-bed unit, the only equipment was a G cylinder oxygen tank, Dr. Hattox trained the nurses, and San Diego had its first recovery room.

Anesthesiology in the early fifties was an emerging specialty fighting for recognition and the ability to control its own destiny. No one appreciated that more than Dr. Hattox. At considerable sacrifice to his clinical work, remuneration, and free time, he increasingly contributed his expertise and resolve in many venues. He was the first anesthesiologist given a position on the Board of Directors at Sharp Hospital. His service to the California Society of Anesthesiologists (CSA) started with committee work, was followed by election to the board of directors, and culminated in his

becoming the president of the CSA in 1967. The CSA honored Dr. Hattox with the Distinguished Service Award. Concurrently his service to the American Society of Anesthesiologists (ASA) was ever expanding: membership and the chair of the Administrative Affairs Committee, the Economics Committee which published the first Relative Value Guide, the director for District 22 (California) and the House of Delegates, the first vice-presidency, and ultimately the presidency of the ASA in 1980. Throughout his work, he increasingly appreciated that his specialty would get no help without its point of view being explained and promoted to lawmakers. Although the ASA had hired its first lobbyist, there was still vital work to be done by its member anesthesiologists. Dr. Hattox recalls that an effort was gathering momentum in Congress to lump radiology, anesthesiology, and pathology into one specialty category, an ominous situation for all specialties. Dr. Hattox had a relationship with Representative Henry Waxman (D-CA) and, thanks to an "in" with his scheduling secretary, was given thirty minutes with Waxman at the end of his scheduled appointments. Dr. Hattox gave a well-honed speech during which Waxman listened without comment or interruption. With the presentation completed, Congressman Waxman said, "I agree with everything you said. This proposal is going nowhere," and it was removed from the committee agenda. Through many such experiences, Dr. Hattox learned that a valid, thoroughly developed point that is respectfully and honestly presented can bring positive results for anesthesiology. His greatest concern for the specialty today is the vital need for the younger generation of anesthesiologists to get involved in medical politics at the state and federal levels. For his own meritorious service to the specialty, the ASA awarded Dr. Hattox with its Distinguished Service Award in 1992.

Dr. Hattox is now happily retired from all phases of his tireless efforts for anesthesiology and resides at a wonderful home on San Diego Bay with his wife Kathryn (Kathy). Though he recently stopped flying his own plane, a passion that spanned more than 40 years, he still enjoys traveling with his "tour director" Kathy. Since it wouldn't be living if he wasn't doing something medical, Dr. Hattox volunteers one afternoon a week performing histories and physicals on military recruits.

On a personal note, I had the distinct privilege and pleasure of many benefits through my friendship and association with John Hattox. He made it possible for me to join Anesthesia Service, and for all my years working in San Diego, he was my role model in every professional endeavor. Even more than his notable professional accomplishments, John is defined by his unwavering sense of honor and responsibility and being a gentleman in every sense of the word. If one were to provide the best example to follow for new physicians coming into the field, I can think of no one better than Dr. John Hattox.

The Clinical Practice of the Division of Cardiovascular and Thoracic Anesthesia

Paul Stensrud, M.D.

The Division of Cardiovascular and Thoracic Anesthesia's current practice encompasses four areas: intraoperative care in the operating rooms, perioperative care in the cardiac catheterization laboratory, postoperative care of pediatric and adult patients in three cardiac surgical intensive care units, and care of patients undergoing electroconvulsive therapy. Additionally, the division provides on-call coverage for cardiac surgical emergencies as well as 24-hour coverage of pediatric and adult congenital patients in the cardiac surgical

Division of Cardiovascular & Thoracic Anesthesia (L to R): Front row: Drs. Niki Dietz, Martin Abel, and Roxann Barnes. Middle row: Drs. Mark Ereth, Roger White, Greg Nuttall, Tom Spackman, and John Abenstein. Back row: Drs. Jim Lynch, David Cook, Mike Johnson, Philippe Housmans, and Paul Stensrud. Missing: Drs. Bill Oliver, Kent Rehfeldt, and Norm Torres.

intensive care unit (ICU). Eleven consultants are needed to cover these clinical areas on a day-to-day basis. Dr. Martin Abel is the division chair.

Twelve regular cardiovascular and thoracic operating rooms exist, and recently an endovascular operating suite with full angiographic capability was added, bringing the operating room total to thirteen. Despite a national decrease in cardiac surgical numbers, cardiac surgery at Mayo Rochester has continued to grow. Cardiac surgical procedures include coronary artery bypass grafting, heart valve surgery, myectomy for hypertrophic cardiomyopathy, and cardiac tumor surgery. The pediatric cardiac surgical practice has been stable and still includes a healthy number of pulmonary atresia and Ebstein's anomaly patients, as well as the gamut of other congenital anomalies. The cardiothoracic transplant program remains active although limited somewhat by the upper Midwestern donor pool. Vascular cases cared for include everything from vein stripping to thoracoabdominal aortic aneurysms. The endovascular room permits percutaneous treatment of selected abdominal and thoracic aneurysms — an impressive development.

The provision of patient care in the cardiovascular and thoracic operating rooms is a cooperative venture on a number of levels. The division remains committed to a care team approach for anesthetic care. Members work very closely with the surgeons and have an increasing role in case allocation and scheduling. They also collaborate closely with the cardiologists, both in the catheterization laboratory and on a consulting basis in preoperative evaluations. Most cardiac surgical patients now have transesophageal echocardiography performed intraoperatively, with cardiology echocardiographers assigned to both adult and pediatric surgical patients. One member of the division, Dr. Kent Rehfeldt, has a co-appointment in the Division of Cardiology and spends one day a week performing echocardiograms, including intraoperative echocardiograms, as well as taking echocardiography call.

Members of the division have developed a number of areas of particular interest, which improve patient care. For example, thoracoabdominal aortic aneurysms are covered primarily by Drs. Norman Torres or Kent Rehfeldt; pediatric patients are cared for by Drs. William Oliver, Roxann Barnes, Paul Stensrud, or James Lynch; and patients with heparin-induced thrombocytopenia who require anticoagulation with hirudin are generally managed by Dr. Gregory Nuttall.

Dr. David Cook has a clinical and research interest in neurologic function and cardiopulmonary bypass. Drs. Abel and Rehfeldt have special expertise in echocardiography. Drs. Philippe Housmans, Mark Ereth, Niki Dietz, and Michael Johnson bring research interests to the operating rooms, and their knowledge improves patient care. Dr. Tom Spackman, division chair from 1988-1996, has been very intrigued by the various processed EEG systems now available. His knowledge of the devices combined with the equipment expertise of Dr. Abenstein has helped in working with these devices in the clinical environment. Dr. Roger White's many interests and contributions have been detailed in a previous alumni newsletter (*Mayo Anesthesiology Alumni Newsletter*, Volume 2, Number 2), although I did promise him that I would point out that he continues to be 38 years old and remains devilishly handsome, facts inexplicably left out of his previous profile. Many other examples of such interests exist within the division. As with many areas of the Mayo practice, if a patient has a problem, an expert in that problem is usually close at hand.

Members of the division also provide care to patients in the cardiac catheterization laboratory. The catheterization laboratory practice continues to grow. Last year, over 10,000 procedures were performed including 137 pediatric procedures. Procedures included "simple" catheterization, angioplasty and stent placement, pacemaker and implantable defibrillator insertion and removal, defibrillator testing, electrophysiology studies and radiofrequency ablation of accessory pathways, placement of occlusive devices to close atrial septal defects, and elective cardioversion.

The ICU practice of the division has evolved over the years. For many years, one consultant cared for ICU patients during weekdays. Responsibilities included ventilator management, line placement, and resuscitation coverage, as well as an advisory role in medical management of these patients. The drive for early extubation of cardiac surgical patients over the past few years has increased our involvement, both in the management of sedation and analgesia, as well as determining suitability of particular patients for extubation.

A need for increased ICU coverage of the pediatric and adult congenital patients was perceived several years ago, and 24-hour coverage of these patients was provided by members of the division, in cooperation with several pediatric anesthesiologists who covered the pediatric ICU. Currently, coverage is provided by the pediatric group with the addition of Dr. Abel and Dr. Gregory Schears, a pediatric intensivist and head of the Mayo ECMO (extracorporeal membrane oxygenation) program. Additionally, the pediatric core group consults with other areas within the department to provide optimal care to patients with congenital cardiac lesions requiring anesthesia for noncardiac procedures.

Participation by staff in resident education remains strong. The anesthesia residents continue to rotate through the division, and many return for a second rotation or for an echocardiography rotation. Dr. Abenstein is the former vice chair of the anesthesiology residency program, Dr. Barnes is the current vice chair, and Dr. Rehfeldt is co-director of the echocardiography educational programs. The Cardiovascular Anesthesia Fellowship continues to be active, and the department currently has three cardiovascular anesthesia fellows: Drs. Shawn Carpenter, Jerome Lemieux, and Gregg Montagna.

The division's comprehensive clinical practice, its cooperative spirit, and the recognized expertise of its members combine to indeed optimize patient care and bring credit to the institution.

Stopping Blood Transfusion: The Systematic Route

Mark Ereth, M.D.

Drs. Greg Nuttall, Bill Oliver, and Mark Ereth

The Transfusion, Coagulation, and Cardiopulmonary Bypass Research Group was established within the Department of Anesthesiology over a decade ago with the goal of reducing blood loss and allogeneic blood transfusion through a multidisciplinary approach. Drs. Mark Ereth, Greg Nuttall, and Bill Oliver are co-directors of the group whose members also include Mayo cardiac surgeons, biochemists, molecular biologists, and transfusion medicine specialists. This multidisciplinary approach provides a broad base upon which a variety of clinical, laboratory, and medical records-based investigations have been conducted. The group was established with seed money from the Department of Anesthesiology and has continued to support itself primarily through industry funding and a number of small extramural grants.

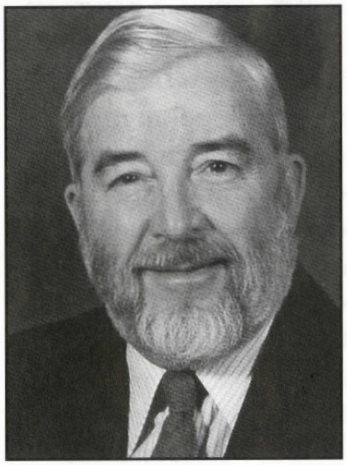
The group has taken a systematic approach to altering transfusion practices, encompassing a variety of techniques. These techniques include the establishment of a standardized surgical blood order system to reduce unnecessary preoperative allogeneic blood crossmatching. This not only decreases the overall workload associated with surgical crossmatching, but it also increases the availability of blood for other patients during acute hemorrhagic episodes. Similarly, the group has established algorithms determining appropriate use of blood products during the perioperative period in an attempt to decrease unnecessary exposure to risks associated with these products. The group has also investigated the judicious use of common perioperative medications in support of their goal. Heparin has been explored through investigations of coated cardiopulmonary bypass circuits and optimized heparin anticoagulation regimens of antifibrinolytics such as tranexamic acid and aprotinin in both adult and pediatric patients. In recent months, many of the investigations pursued by the group are in relation to topical and surgical hemostats, comparing established devices to a newly developed hemostatic device based on a potato starch, Microporous Polysaccharide Hemospheres.

With the assistance of supportive anesthesia and surgical colleagues, the group has been able to make significant changes in institutional practice. The results have been widely published, and the investigators have played an active role in professional organizations such as the American Association of Blood Banks and the Network for Advancement of Transfusion Alternatives. The Transfusion, Coagulation and Cardiopulmonary Bypass Research Group continues to pursue improvements in patient care through the optimization of transfusion practices.

Dr. Emerson Moffitt: A Pioneer in Cardiac Anesthesiology

Peter Southorn, M.D.

Mayo's role in establishing the foundation of modern open-heart surgery is one of the institution's finest accomplishments. In the early 1950s, an extraordinary group of individuals headed up by the cardiac surgeon Dr. John Kirklin and including the cardiologist Dr. Jeremy Swan, physiologists Drs. Earl Wood and David Donald, and anesthesiologist Dr. Robert Patrick perfected the Mayo Gibbon vertical screen oxygenator heart-lung machine and began using it with success repairing congenital cardiac defects.



Dr. Emerson Moffitt

Various other individuals soon joined this superb team to help define its scientific underpinnings. Dr. Emerson Moffitt was one of these. A young Canadian general practitioner from Nova Scotia, he enrolled in the anesthesiology department's residency program in 1956. He soon gravitated into cardiac anesthesia and chose as his Master of Science thesis in anesthesiology, a requirement in those days, to study the physiological changes of patients undergoing cardiopulmonary bypass. By this time Kirklin and his colleagues had performed some 40 open-heart operations on adults and children with congenital heart disease. Under the tutelage and guidance of Jeremy Swan, Emerson set out to document the physiological changes accompanying bypass in the next patients operated on by Dr. Kirklin, comparing the data he obtained with that derived from the patients during their preoperative catheter studies. Figure 1, taken from his thesis, which is in the department's library, shows the equipment he used. This had been designed by Earl Wood and accommodated in a room adjacent to the operating room to provide immediate information to the surgeon and anesthesiologist. The data gathered by Emerson included the patient's cardiac filling pressures, arterial blood pressure, venous and arterial oxy-hemoglobin saturation, temperature, and their EEG and EKG. Based on the results he obtained, he was able to unequivocally demonstrate in both infants and adults that the Mayo Gibbon vertical screen oxygenator heart-lung machine did provide adequate oxygenation to the body tissues. Papers emanating from this thesis and others describing the anesthetic management of patients undergoing open-heart surgery written by Emerson and Dr. Patrick and Dr. Richard Theye, another young anesthesiologist now involved in this endeavor, soon followed.

In 1957, Emerson Moffitt and the renowned cardiac surgeon, Dr. Dwight McGoon, both joined the staff of the Mayo Clinic. They were to remain close working colleagues for the next 15 years. During this period, Emerson became head of anesthesia services at Saint Marys Hospital and headed up a highly productive NIH-funded research lab. With the departures of Drs. Patrick to the Methodist Hospital and Theye to pursue full-time research, Emerson's anesthesiology colleagues in this endeavor became Drs. Robert Devloo, Alan Sessler, and later, Richard Lundborg. Led by Emerson, they and their collaborators published some 75 publications, which helped lay the foundation for modern cardiac anesthesia. In addition to dealing with technical interventions, they defined the optimum perfusates to use during bypass and the management of the patient's electrolytes, acid base status, metabolites, oxygenation, coagulation status, and many other perimeters. Jeremy Swan, head of the cardiac catheterization laboratory, worked with Emerson and his colleagues to also define the most appropriate management of patients undergoing procedures in this laboratory. Truly the significance of this work cannot be over emphasized. Indeed Emerson and his associates first identified many of the problems which currently continue to confront the interest of cardiac anesthesiologists. Both John

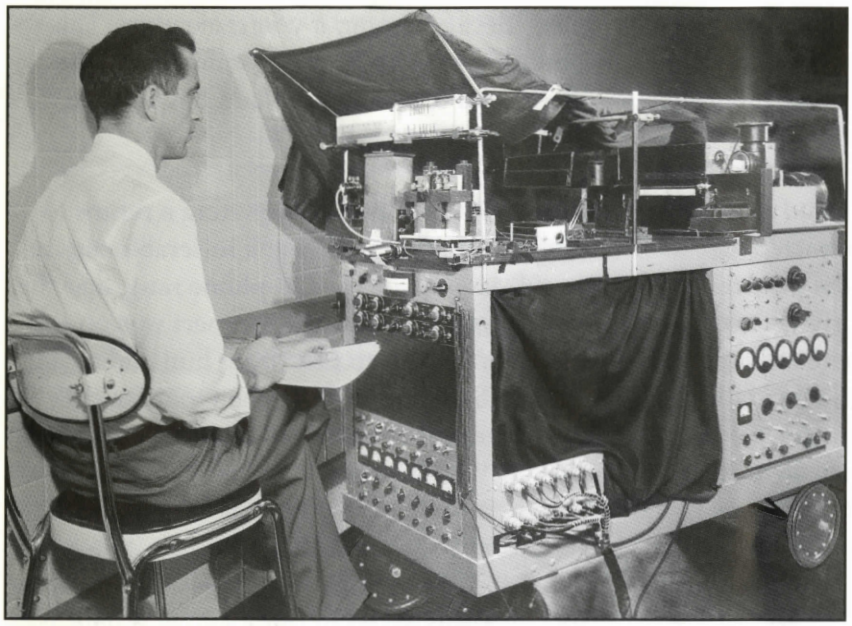


Figure 1. Monitoring equipment used by Dr. Moffitt for his thesis.

Kirklin and Dwight McGoon, in their private correspondence, regarded Emerson, in particular, as an integral, vital colleague in this pioneering field.

In 1972, Emerson was widowed and decided for the sake of his two daughters that he should go back to Canada for them to be near their relatives. He became head of the anesthesiology department at his alma mater, Dalhousie Medical School in Halifax, Nova Scotia. Subsequently, he was to be made Dean of Clinical Affairs at that institution for many years. All the while he continued his commitment to clinical practice, education, and research in patients undergoing cardiac surgery. This research was fostered by a sabbatical with his old friend Jeremy Swan, who by this time had moved from Mayo to the Cedars-Sinai Hospital in Los Angeles. During this sabbatical, he learned how to insert coronary sinus catheters, which permitted him to make measurements of myocardial metabolism during coronary vein bypass surgery. This field was to become his main focus of research.

He retired in 1991 having given cardiac anesthetics for 34 years. During this period, he had produced a total of 224 papers of fundamental importance to the field, surely, a monumental achievement. Now in his 80th year, Emerson remains the same happy, jovial, positive person with a wonderful sense humor he has always been. Both he and we, his colleagues, are rightly proud of his accomplishments in laying the groundwork for cardiac anesthesiology and putting it on the firm footing it has today.

Paradise Lost and Found: Mayo Clinic to Napa Valley

Eric Grigsby, M.D.
Anesthesiologist, Napa Valley, California

"Honey, I have good news! Your daughter and I are going to California, and you're welcome to come along!" Well it wasn't exactly that way, but the message was clear over dinner one cold December night in 1988 that my wife was anxious to go back home to Northern California.

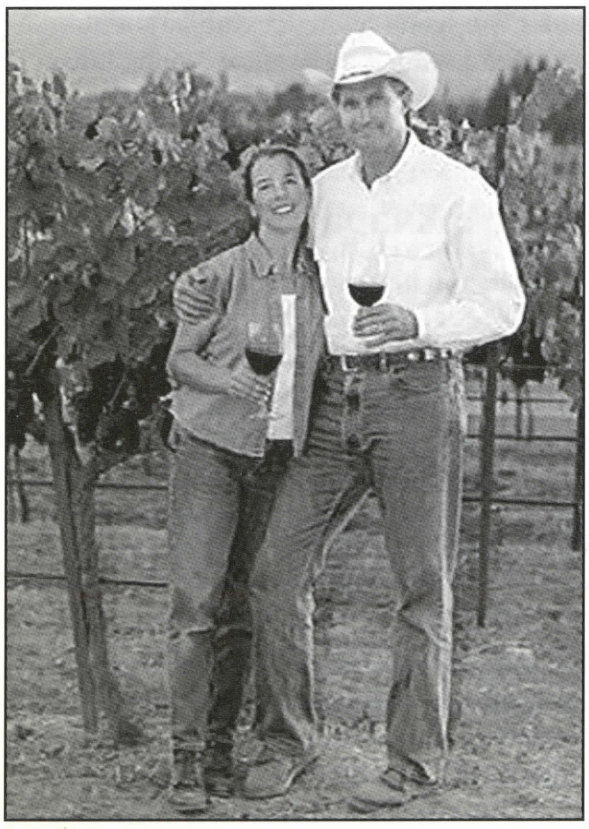
December 1988 was more than cold at our house on 35th Street in Rochester, Minnesota. My wife, Dr. Mary Rocca, enjoyed a prosperous dental practice in Rochester (beside Henry Wellingtons- great hamburgers!), and Joel Larson and I had recently finished our training in anesthesiology. The two of us made up the entire graduating class of 1988. I was fortunate to have been invited to join the staff at Rochester Methodist Hospital with Duane Rorie, Charlie Restall, Brad Narr, Scott Atchison, and many others.

I initially envisioned a long career in academic medicine, but I had an unfulfilled interest in medical business and management. I thought I should at least experience private practice to round out my "medical business education." After some searching, my wife and I settled on Napa, California, as our destination. Napa is

about an hour from Mary's parents (perfect in-law distance), had a high quality medical community and a small town atmosphere and is close to San Francisco.

In January of 1989, the HMO tragedy hadn't hit California fully. I easily contracted for anesthesia services with all of the pertinent insurers and applied for staff privileges at Queen of the Valley Hospital here in Napa. Our local hospital has 125 beds, 5 operating rooms, and 7 anesthesiologists. This setting, with no formal anesthesia group, no teaching, no research, and little cooperation couldn't have been more different from the Mayo practice. In about six months, I thought I had made a major career mistake.

The anesthesia practice in Napa and most of non-Kaiser California at that time was one doctor for one patient--still the predominant model. That is to say, very few CRNAs practice here and, of course, no residents in my hospital. I was not exactly proud of it, but I think I had done about ten start-to-finish cases total at Mayo. I had no idea how long a fem-pop bypass could be without a break for lunch or noon ball (thanks, Narr).



Mary and Eric Grigsby enjoying the fruits of their labor.

About a year before I came to Napa, Jerry Gronert had moved with his NIH grants to the University of California at Davis, 40 miles from Napa. Jerry used to ride his bike from Pine Island to Rochester even in the coldest of winter, if you remember. This training made the 20 mile commute by bike from Davis to Sacramento and the Medical Center nothing for him.

In July 1989, I was contemplating a return to academic medicine during a miserable day in the OR in Napa. The OR phone rang, and the hospital operator said Dr. Gronert was on the line. It was great to hear from him and catch up on Mayo a little. Jerry then told me that UC Davis needed a pain clinic ASAP, because the director they hired had taken their money and gone into private practice. He knew I had done pain work at Mayo (thanks to Peter Wilson) and that I had an interest in medical business. Shortly, I was asked to put together a pain clinic for UC Davis.

I gladly accepted this reprieve from purgatory at my local hospital and spent the next couple of years building a staff, referral network, treatment protocols, and pain fellowship at UC Davis. At the end of my tenure, we had a large clinic with several employees, 2 faculty, 2 residents, a fellow, and about 150 new patients per month. We had been on local and regional television and other media as the field of pain management began to grow.

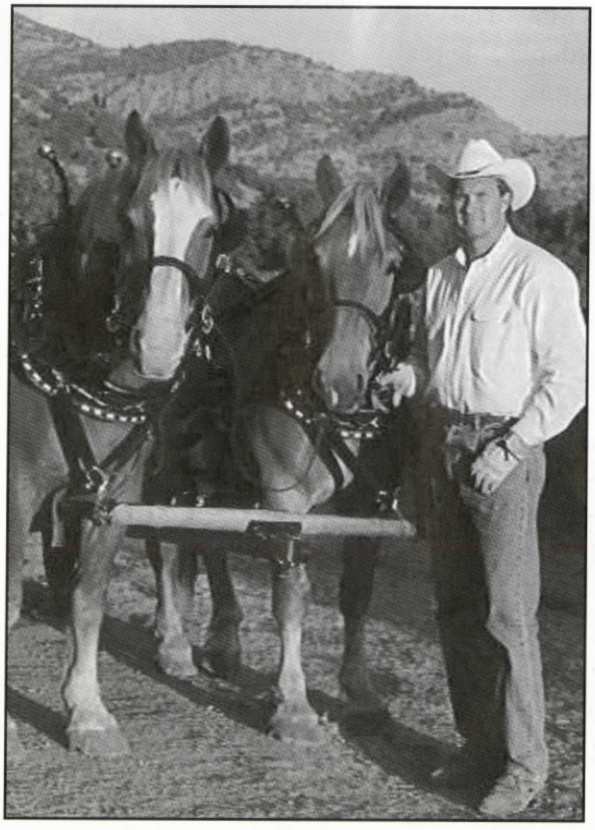
To my utter surprise, I really enjoyed the field of pain management and transitioned to private practice in Napa. By the time I resigned from UC Davis in 1992, I had a busy practice in Napa and had built one of the first single-specialty surgery centers in California, dedicated to pain management.

Perfect timing. Just as I leave the cozy world of academia (again), the HMO revolution hit Napa with family practitioners leading the charge. The next ten years saw the development of IPAs, perpetration of highly unethical capitated contracts for patient care, and the general dissolution of collegiality between California physicians. However, I am proud that my practice has been able to navigate these hostile waters for 12 years and prosper.

Yes, our practice has been very successful, but if I had a notion to retire early, it was put to rest by our plan to enter the wine business in 1999. It is true what they say: "The best way to make a small fortune in the wine business is to start with a large one!" Having neither at the time, we had no business contemplating the purchase of a premium vineyard.

But, since our days in Rochester, with a small house on a few acres of Minnesota bottom-land northeast of town, Mary and I have enjoyed the country life. In Napa, the only agriculture, of course, is grape-growing, so we began looking for a vineyard of the highest quality. Soon, through a patient in my office, we became aware of a vineyard for sale in Yountville, in the heart of the Napa Valley. These parcels rarely come up for sale, never publicly, and we were excited to have the opportunity.

Our first vineyard in Yountville, adjacent to the Stag's Leap District (for the wine geeks reading this) has 15 acres of the finest Cabernet Sauvignon and 5 acres of world class Syrah. We have since added 10 more acres of Cabernet at a second location. Uniquely, we are the only vineyards in Napa to use draft horses for some of our farming.



Draft horses used on the Rocca Family Vineyards.

Soon after purchasing the vineyard, Mary retired from dentistry after 15 years. I lost the flip of the (two-headed) coin to see who could retire to run the winery. Mary has since assembled a fabulous grape-growing and winemaking team. We are most fortunate to have Celia Masczyk ("Machesky") as our winemaker. She has a long resumé of professionalism and fabulous wines, having been the winemaker at Staglin Family Vineyards, Hartwell (for you Cabernet fans), and several other near-cult wine producers.

We named our winery Rocca Family Vineyards, after my beautiful Italian wife. She said "Grigsby" is a better name for scotch. I protested, to no avail, on the logic that my family had been in the liquor (moonshine) business in the hills of Tennessee for generations.

Our first wine, the 1999 Rocca Family Vineyards Syrah, was a great success earning 90 points from the *Wine Spectator* (notoriously stingy in scoring first releases.) Since then we have been flattered by the attention, with our wines receiving gold and silver medals at the San Francisco Wine Competition. They also have been scored highly by several major wine reviewers. Most importantly, they are being bought and enjoyed at dinner tables in seven states!

So much for the 15 years since we left Rochester! Thanks to Peter Southorn for the chance to present this brief history of our California adventures. Mary and I and our four children — Camille, Nate, Marielle, and Giovanna — welcome all of you to see our corner of Napa and hope our paths cross soon!

Anesthesiology Residency News

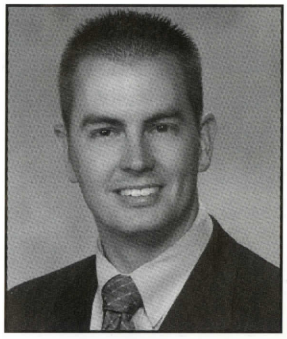
Steve Rose, M.D.

The following is a list of our graduating residents and their plans for the coming year: **Faisal Choudhry** - Private Practice, St. Paul, MN; **Mark Dunn** - Private Practice, Muskegon, MI; **Steven Dunn** - Private Practice, Muskegon, MI; **Gregory Girgenti** - Private Practice, Clearwater, FL; **Barry Hein** - Pain Fellowship, Mayo Clinic Rochester; **Lisa Koenig** - Private Practice, St. Paul, MN; **Andrew Mizerak** - Pain Fellowship, Mayo Clinic Rochester; **Louis Pau** – Private Practice, Pain, Leawood, KS; **Anne Rahman** – Private Practice, Phoenix, AZ; **Jason Ramirez** – Regional Fellowship, University of Florida; **Lori-Anne Tungpalan** – Private Practice, Lima, OH; **Toby Weingarten** – Pain Fellowship, Mayo Clinic Rochester; **Robert Wells** – Private Practice, Flagstaff, AZ; and **Laurie Wright** - Pediatric Anesthesia Fellowship, Nemours Children's Hospital, Jacksonville, FL.

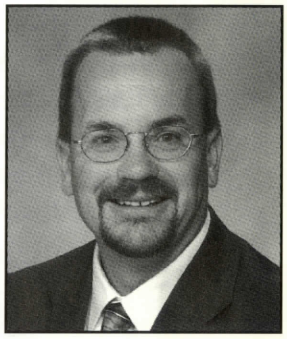
The Third Annual Senior Resident Appreciation Dinner was held in May. The photograph shows the senior residents able to attend. We will miss this stellar group and welcome them as our newest alumni!

Front Row: Drs. Laurie Wright, Lori-Anne Tungpalan, and Lisa Koenig. Back Row: Drs. Jason Ramirez, Toby Weingarten, Barry Hein, Gregory Girgenti, and Robert Wells. Not Pictured: Drs. Faisal Choudhry, Mark Dunn, Steven Dunn, Andrew Mizerak, Louis Pau, and Anne Rahman.

The following individuals completed their fellowship training in anesthesiology: **Gregory Hieb** – Cardiovascular Anesthesiology, Mayo Clinic Rochester; **Sandra Kopp** – Regional Anesthesiology, Mayo Clinic Rochester; **W. Michael Hooten** – Pain Fellowship, Mayo Clinic Rochester; **Mark Hurdle** – Pain Fellowship, Mayo Clinic Rochester; **George Johnston** – Pain Fellowship, Mayo Clinic Rochester; **Jon Obray** – Pain Fellowship, Mayo Clinic Jacksonville; **Jeffrey Tiede** – Pain Fellowship, Mayo Clinic Jacksonville; and **Bruce Beauchamp** – Pain Fellowship, Mayo Clinic Scottsdale.



Dr. Michael Bengough



Dr. Jeffrey Jensen

Congratulations to **Drs. Michael Bengough** and **Jeffrey Jensen**. Michael and Jeffrey completed their Clinical Base Year (PGY 1) training at Mayo in 2003-2004. They shared the Excellence in Internship – Best Preliminary Intern Award from the Department of Internal Medicine. An anesthesiology resident has won this award for three consecutive years. Dr. Bengough also received the Internal Medicine "Attitude, Commitment & Excellence Award."

Anesthesiology residents through the Mayo Fellows Association have selected **Dr. Carlos Mantilla** as the anesthesiology "Teacher of the Year" for 2003/2004. Dr. Mantilla is a superb teacher and role model and an excellent choice to receive this prestigious award.

The department welcomed 19 new residents to the program summer quarter. Although there is considerable change in graduate medical education, much remains the same. Our new residents are mentored by more senior residents and faculty volunteers during the first few weeks of their training, and we still conduct the "Introduction to Anesthesia" course in the afternoon. The annual infusion of talented, intellectually curious, energetic, and enthusiastic new trainees renews those traits in us all.

The 2004 Department of Anesthesiology Award Banquet was conducted June 24, 2004. The format of the banquet had evolved over time. The traditional "roast" is gone but not forgotten! Several awards were presented at the banquet. They are as follows: Awards Selected by Staff were Distinguished Clinicians - **Dr. Bhargavi Gali** and **Dr. Kent Rehfeldt,** Distinguished Educator - **Dr. Christopher Burkle**, and Distinguished Resident - **Dr. Barry Hein.** Awards Selected by Residents were Distinguished Clinician - **Dr. James Munis**, Distinguished Educator - **Dr. Steven Rose,** and Distinguished Resident - **Dr. Laurie Wright.** Award Selected by Surgical Residents were Physician Educator Award - **Dr. Brian McGlinch.** Academic Awards were In-Training Examination Award - **Dr. James Dyer,** Theye Research Award - **Dr. Casey Husser,** and Rorie Research Award - **Dr. Tongrong He.**

Thanks to our alumni for your continued support of our training programs. If you identify talented prospective residents and/or fellows, please let us know!

ASA-Mayo Reception

Brian Hall, M.D.

The Mayo Clinic Alumni Association and the Mayo Clinic Department of Anesthesiology will host a reception at the ASA annual meeting in Las Vegas. It will be held from 6-8 p.m. on Saturday, October 23, in a privately reserved portion of the Voo Doo Lounge atop the Rio Hotel-Casino. After 8 p.m., the lounge will be open to the public. Please plan to attend this event if you are going to the ASA.

News About People

Peter Southorn, M.D.

We were saddened by the death of **Dr. Jack Michenfelder** on May 2, 2004. Jack thought Ronny Faust's description of his numerous achievements in the recent newsletter was "a bit over the top," but he nevertheless enjoyed the article. He was a giant in our specialty, and we will miss him. Our condolences are extended to his wife, Monica, and his family.

Mrs. Mary Jo Theye, widow of Dr. Richard Theye, chair of the department in the early 1970s, died recently. After her husband passed away, Jo remained in touch with the department and had many friends within it. We extend our deep sympathy to her surviving family.

Dr. Roger White will be presented with the 2004 Hans Dahll Award at the Emergency Cardiovascular Care Update meeting in October. This award is given biannually to an individual "for a career of distinguished and exemplary service to the field of emergency cardiac care."

Congratulations to **Dr. Keith (Tony) Jones** for his academic promotion to Professor of Anesthesiology with the Mayo Clinic College of Medicine.

Dr. Denise Wedel has been elected to the Board of Directors of the International Anesthesia Research Society (IARS).

Dr. Jeffrey Pasternak has been appointed an editor of the *Journal of Neurosurgical Anesthesia.*

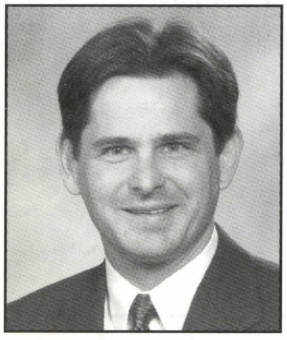
Dr. David Cook has been elected to the Board of the Society of Cardiovascular Anesthesia.

Dr. Gary Vasdev was elected the 2nd Vice-President of the Society of Obstetric Anesthesia and Perinatology (SOAP) at its annual meeting this past spring. He will assume the presidency of this organization in 2007.

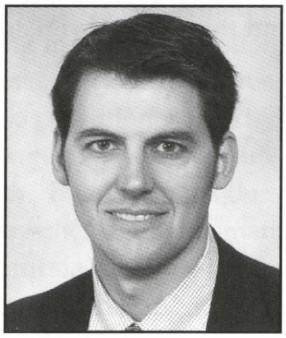
Dr. Christina Pabelick is the recipient of a Foundation for Anesthesia Education and Research (FAER) award for her research protocol "Regulation of sarcoplasmic reticulum calcium stores in airway smooth muscle: The role of cyclic nucleotides." Her advisors are Drs. Gary Sieck and David Warner.

Dr. Gilbert Wong has been awarded the John C. Liebeskind Early Career Scholar Award from the American Pain Society. This award recognizes exceptional accomplishment and promise in pain scholarship.

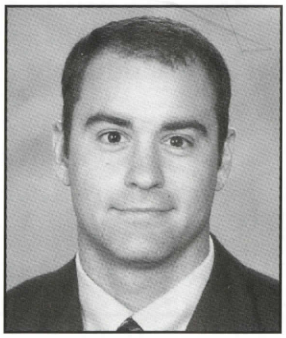
Drs. W. Michael Hooten, Jon Obray and **Jeffrey Tiede** have joined our department in the Division of Pain Medicine. All three have established themselves as outstanding physicians with significant accomplishments. Likewise, **Drs. Sandra Kopp** and **Andrew Chacon** have joined us in the surgical suite. We are delighted to welcome them all.



Dr. W. Michael Hooten

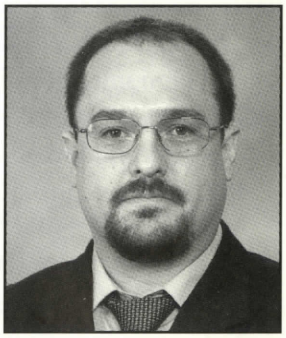


Dr. Jon Obray



Dr. Jeffrey Tiede

Dr. Sandra Kopp



Dr. Andrew Chacon

MAYO CLINIC

200 First Street SW
Rochester, Minnesota 55905
www.mayoclinic.org

MC5223OPrev0904