

Mayo Anesthesiology Alumni Newsletter

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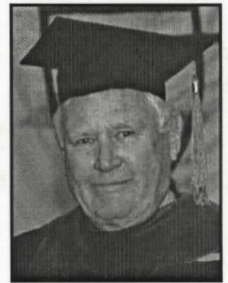
From The Chair

Mark Warner, M.D.

I hope you enjoyed the first edition of this newsletter. We are grateful for the considerable positive feedback we received about it and also your suggestions for future articles. Thank you for your interest. Please feel free to contact us when you have information that you would like to share with your alumni colleagues.

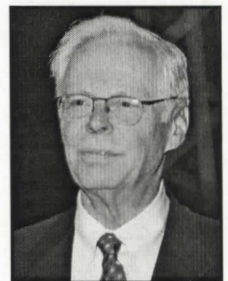
Two particularly noteworthy and honorary alumni events occurred close to home this year:

Kai Rehder, M.D., was named a Mayo Distinguished Alumnus at the medical school graduate ceremonies in May. Kai has the distinction of being one of the original investigators in two separate fields of study. The first, the metabolism of volatile anesthetic agents, fundamentally changed the way anesthetics have been developed and used in the past three decades. The second, gas exchange issues related to general anesthesia and mechanical ventilation, has markedly influenced the way we provide respiratory support for our patients. In recognition of his contributions, several years ago he received the ASA Excellence in Research Award, the society's highest honor for advancing the science of our specialty.



Dr. Kai Rehder

Alan Sessler, M.D., received the ASA's Distinguished Service Award at the October ASA Annual Meeting in Orlando, Florida. Could any one person have done more to advance our specialty professionally and academically? Within ASA, our former chair served as vice-president for Scientific Affairs, a member of its Board of Directors, a founder and current executive director of its Foundation for Anesthesia Education and Research (FAER), and a charter board member of the Anesthesia



Dr. Alan Sessler

Patient Safety Foundation. At Mayo, he has been Dean of the Graduate School of Medicine and a member of our Board of Governors. A strong supporter of education, he has also presided over the American Board of Anesthesiologists and has been a long-term delegate to the American Board of Medical Specialties. He is currently a trustee of the Dartmouth-Hitchcock Medical Center.

Editor's Note

Peter Southorn, M.D.

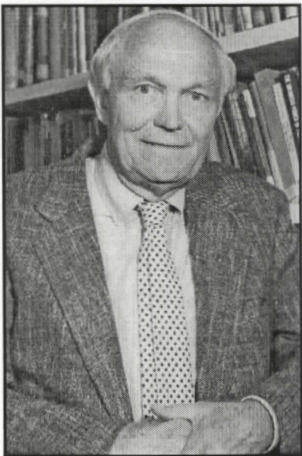
Echoing Dr. Mark Warner, thank you for the positive comments about the newsletter. In this issue, we have begun incorporating some of the ideas we received from you. Please keep

Their selections obviously are well deserved and reflect the tremendous strength and talent within our department. Their achievements have inspired much of the academic vigor and activity that remain so vital to our department today. We owe so much to legacies that they established.

me (southorn.peter@mayo.edu) informed of any newsworthy items about alumni. I hope you enjoy this issue. There is much good news to share on all fronts.

Advanced Airway Laboratory

Chris Burkle, M.D.



Dr. William Dornette

The opening of our Advanced Airway Laboratory highlighted an exciting summer for our department. A significant gift to the Mayo Foundation by Dr. and Mrs. William Dornette from Kensington, Maryland, in honor of Dr. Ronald MacKenzie, who was one of Dr. Dornette's residents at the Cleveland Clinic, enabled this laboratory to be established. We are so grateful to these special people.

The lab functions as both a hands-on style workshop for large groups as well as a set of interactive learning stations conducive to self-tutorial. Each learning station consists of a mannequin, airway equipment, instruction poster, and updated journal references. The beds have been designed to simulate the OR environment and as a result are electrically powered to raise up or down as required for proper airway management technique.

Instructional videos, CD-ROM programs, and airway management books are available as reference material at a

separate station to allow further in-depth study. Perhaps what we are most thrilled with is our advanced airway simulator. Through simulation we are better able to instruct our anesthesia personnel, other personnel, and other residents at the institution on crisis management outside the OR setting.

With the help of a core group of enthusiastic physicians interested in advanced airway management and sharing their knowledge with others, we ran organized workshops for several groups in 2002. Perhaps most importantly, our new residents were instructed with the help of the lab on Day Two of their training. This early experience in airway management allowed them more knowledge and comfort within the OR environment and in turn has hopefully resulted in greater patient safety.

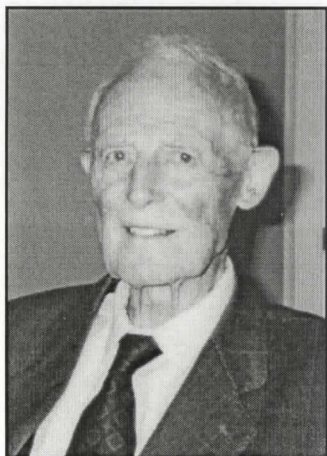
We will be taking our workshop "on the road" in early 2003 as we have been asked to instruct other anesthesiologists at two international meetings. Without the experience gained from the use of our new workshop facility, this task would not have been possible.



Drs. Greg Hieb (left) and Chris Burkle in the Advanced Airway Laboratory

Dr. Robert Devloo: A Pioneer in Cardiac Anesthesia

Peter Southorn, M.D.



Dr. Robert Devloo (photo courtesy of Ms. Marilyn Crawford)

Our department has benefited from its unsung heroes: people who never sought the limelight but who made significant contributions to the specialty. One such person is undoubtedly Dr. Robert Devloo. Today a remarkable, spright 89-year-old gentleman, he retains his inquisitiveness, intellectual curiosity, and delightful self-deprecating sense of humor that was evident during his pivotal career in establishing anesthesia for cardiopulmonary bypass and cardiac surgery and at the Mayo Clinic.

From Belgium, the outbreak of World War II found him as a newly qualified medical doctor doing his national service in the Congo. He promptly joined the exiled Belgium government's army medical corp and saw service with it over the next six years, being decorated several times. His unit was based in the Far East, principally in India and Burma. Becoming interested in improving the quality of anesthesia given to wounded soldiers, he sought and obtained basic training in this field by attending a course put on in Calcutta. Today, he recalls that in the hot climate, diethyl ether was largely useless, and chloroform was far preferable.

After the war, he decided to specialize in anesthesia. To accomplish this, he came to the Mayo Clinic in 1948 as a fellow in anesthesiology. Following his three years of training, he served as a research assistant to Dr. Harry Beecher at the Massachusetts General Hospital for two years and then returned to the Mayo Clinic in 1953. Here he soon joined colleagues Drs. Robert Patrick, Emerson Moffitt, and Richard Theye as part of the pioneering group drawn from multiple disciplines establishing cardiac surgery. The head of this program was cardiac surgeon Dr. John Kirklin; certainly somebody who was authoritarian, appreciated competence, and did not tolerate mistakes. In

Bob, by all accounts, he found his ideal anesthesiologist—bright, self-disciplined, hard working, and totally dedicated. Nobody spent more hours in the operating suite than Dr. Devloo. What little spare time he had was also usually devoted to improving patient care. In this quest, he often employed his lifelong fascination with mathematics, physics, and electronics. To this day, people remember his work at that time quantifying the patient's acid-based changes. He was by nature a perfectionist and expected no less from his residents. Dr. Jack Michenfelder recalls that as a resident, he once requested that he not work with Dr. Devloo given his demanding nature and his practice of never letting anybody take a break. Later residents, such as the author, found that they could get around the latter problem by deliberately spilling a small quantity of blood on their scrubs. Bob hated slovenliness and, on seeing the blood, would immediately send you out of the operating room to get changed. Dr. Devloo has always praised the outstanding work of his CRNA colleagues. Led initially by curly Crofton and Bernie Gillies, they would often spend hours manually ventilating the patient's lungs in the early days when mechanical ventilators in the operating room were not available. The dedication and work of the early perfusionists and monitoring technicians was also critical to the success of the whole team. Today, Dick Finley, head of the monitoring technicians, remembers Dr. Devloo with affection and recalls how Dr. Devloo, having pioneered percutaneous arterial catheterization, taught him how to do the procedure.

When Dr. Devloo retired in 1980, his colleagues honored him by establishing the Devloo Award to be given to the student who graduated top of the nurse anesthesia training program each year. Perversely to what would appear sensible to most of his friends, Bob and his wife, Dr. Anna Blancquaert, Professor of Pediatric Cardiology at the University of Ghent, would

spend their subsequent summers in Belgium and return each winter to Minnesota. They enjoyed art and music and became avid travelers. Whenever in Rochester, Bob continues his advocacy for studying, and the library

remains a good place to find him. Today, his mind is as sharp as ever, and his insightful comments on a paper or article are still very much valued. He is truly an inspiration to all of us.

The First Human Demonstration That Intrathecal Opiates Produce Pain Relief

Peter Southorn, M.D.

In 1979, Anesthesiology's Drs. Josef Wang and Lee Nauss together with Dr. Juergen Thomas from Neurology first reported that morphine injected intrathecally relieved severe incapacitating pain secondary to cancer. The following is an account of the people involved and the events that led to this landmark study.

Lee and Joe joined the department in 1974, and with the encouragement and support of our then chair, Dr. Richard Theye, established the Pain Clinic. To permit Joe to pursue his interest in pain research, Dick Theye prevailed upon Dr. Frederick Kerr who directed Neurosurgical Research to provide Joe with laboratory space. In 1976 Drs. Tony Yaksh and Thomas Rudy in Madison, Wisconsin, reported that opioids injected intrathecally in rats produced pain relief with this being antagonized by naloxone. On a site visit to Madison in 1975, Fred Kerr learned about their studies, began trying to recruit Tony, and encouraged Joe to pursue their line of inquiry here at Mayo. Joe first confirmed their findings including their observation that the intrathecally applied morphine produced no adverse toxicological effect on the spinal cord. Given this, IRB permission was obtained in 1977 to study whether such intrathecally applied morphine could help patients with intractable pain secondary to malignancy involving the lumbosacral plexus. One of the reviewers of the proposed study was Dr. Sheila Muldoon. She was the first to suggest that preservative-free morphine be used for intrathecal injections to reduce the risk of spinal cord injury but such a preparation was unavailable at that time. Juergen Thomas's role in this study was to

examine each patient carefully to ensure that indeed no neurological injury occurred. Patients were enrolled, and they received on a double-blinded crossover basis either 0.5 or 1 mg of morphine intrathecally or a saline placebo control. With the morphine, each patient experienced dramatic pain relief with this lasting on average 20 hours in duration. Lee recalls that he administered the first dose of intrathecal morphine. Apparently, he immediately became unblinded as to the nature of the injection he had given when the patient began to cough vigorously once his pain, which had previously prevented him coughing, disappeared. Dr. Peter Wilson, a resident in the Pain Clinic at that time and still very active in the field, also remembers giving some of the intrathecal injections.

The paper* reporting these findings made the perceptive suggestion that the pain relief achieved by this means could be possibly sustained for long periods if the morphine were administered from a drug reservoir into an implanted intrathecal catheter. It also made the suggestion that the pain relief afforded by this means might find value in treating postoperative pain and that associated with childbirth. We can all be proud that this study emanated from our department. It and a study from Israel showing epidural morphine had a similar efficacious effect, also published in 1979, have had a profound impact on our practice. Of interest, Tony Yaksh did come here to work with Fred Kerr in 1977. While at the Clinic and then subsequently in San Diego, he has continued his groundbreaking basic science studies which have contributed so much to our understanding of the mechanisms of pain and its management.

**Anesthesiology* 50: 149-156, 1979.

Pain Research at Mayo

Gilbert Wong, M.D., and David Warner, M.D.

In recent years, there has been an increasing focus on the appropriate treatment of pain disorders. In fact, Congress has declared that this decade is "The Decade of Pain Control and Research". In response, the Mayo Rochester Department of Anesthesiology has targeted the Division of Pain Medicine as an area of growth and development, both in clinical practice and research. An increasing number of able and interested members in the Mayo Division of Pain Medicine have gained notable momentum in developing a comprehensive pain research program. These research efforts have reflected a complement of diverse pain interests within the division and also the variety of pain disorders encountered in this clinical practice. The majority of research activities have included extensive collaborations from individuals both within and, at times, outside the division or institution.

To date, the pain research has been focused primarily on clinical investigation, though considerable resources have been invested towards basic science efforts which are in the early stages of development. The current clinical pain research activities span many areas of interest including musculoskeletal pain, back pain disorders, neuropathic pain states, complementary and alternative medicine modalities, and cancer pain.



*Division of Pain Medicine: (L to R)
Front row: Drs. Ines Berger, Marc Huntoon (chair),
Lee Nauss (emeritus), and Carlos Mantilla. Back row:
Drs. Gilbert Wong, Paul Carns, David Mauck, and
David Martin. Missing from photo are:
Drs. Michelle Kinney, Rick Rho, and Peter Wilson.*

Musculoskeletal pain research has ranged from evaluation of injection techniques for the management of perineal, hip, and buttock pain, to the testing of different parenteral opioid delivery systems for lower extremity trauma pain. Back pain research has involved the evaluation of possible patterns of pain in correlation to the etiology of the back pain, time of day, and activity associative factors using a neural network technique. Neuropathic pain research includes initial studies for optimal treatment for herpes zoster pain, correlation of low cerebrospinal fluid states in postural headache with impairment of hearing, and observation of symptomatic responses associated with occipital nerve block. There has also been some study with complementary and alternative medicine in the evaluation of acupuncture for the management of fibromyalgia and for radiation-induced xerostomia. Cancer pain research has involved a large clinical trial to evaluate the efficacy of neurolytic celiac plexus block compared to systemic analgesic therapy in the management of pancreatic cancer pain. Other cancer pain clinical trials have included an evaluation of radiofrequency ablation for metastatic bone tumor pain, an efficacy study to evaluate gabapentin for chemotherapy-induced peripheral neuropathy, and multidisciplinary intervention for multiple myeloma pain. Other research areas include a clinical practice initiative to study outcome measures in Mayo Pain Clinic patients in conjunction with functional assessment tools. Lastly, some pharmacologic-based research has included determination of optimal methadone dosing and evaluation of the effect of genetic polymorphisms in the analgesic response to transdermal fentanyl.

Mayo has had a long history of innovation in pain medicine. We are excited about continuing this tradition to translate new understanding of pain pathophysiology into significant advances in clinical pain management.

Mayo Heritage Days

Peter Southorn, M.D.



Dr. David Plevak

The department has many individuals with special talents. Several of our musicians recently participated in the institution's Heritage Days. They were Lea Dacy, secretary in Anesthesia Research, playing the cello; Dr. David Warner on the hammer dulcimer; Mark Horlocker, the son of Dr. Tere Horlocker, playing the piano; Dr. David Plevak singing and playing his guitar; and Tal Spackman on violin with his father, Dr. Thomas Spackman, on piano. I wish you could have been in Rochester to hear their virtuoso performances. They really were magnificent. Shown in the picture is Dave Plevak singing folk songs. Listening and seeing David, it was easy to imagine that he could put Johnny Cash out of business!

Anesthesiology Residency News

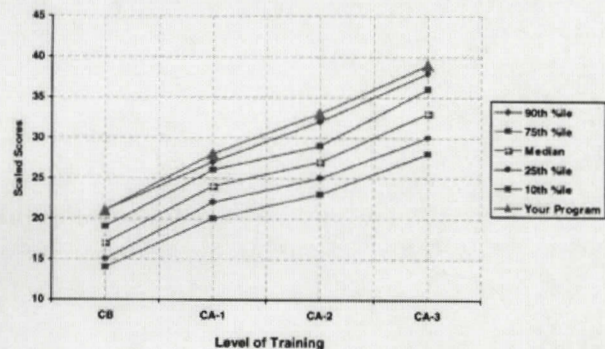
Steve Rose, M.D.

The results of the 2002 ABA/ASA In-Training Examination were recently received. Once again, our CA-3 residents (those who graduated in 2002) performed above the 90th percentile as a group nationally. Group national references are not provided for residents currently in our training program. However, their performance appears to be equally impressive. For example, nearly half our current CA-1 residents performed above the 90th percentile nationally on the exam. Dr. Jeff Tiede will be awarded the In-Training Examination Award next spring. This award is presented to the resident with the highest score who is not taking the examination for credit.

Dr. Brian Hall instituted an in-training examination review course during the 2001-2002 academic year. This course, conducted in a question and answer format, was very well received by our residents and will be repeated in an

2002 ABA/ASA Council Report to Program Directors Growth in Knowledge of CA-3 Residents

Program Name: Mayo Foundation
Program #: 128002



No. of Residents:	19	21	19	21
Avg. Scaled Score:	21	28	33	39
Std. Dev. of Scores:	5	6	6	4

expanded version during this academic year. Drs. Hall and Bob Chantigian, with contributions from several other faculty members, are putting the finishing touches on the third edition of their educational textbook, Anesthesia: A Comprehensive Review. It should be available from the publisher early next year and is an outstanding complement to Dr. Faust's long-running best seller, Anesthesiology Review.

Applications for our residency are being received on a daily basis, and we will conduct over 100 residency interviews between October 28, 2002, and January 2003. The number and quality of applicants appear to be excellent, and there has been a progressive

increase in interest among American medical school graduates since the mid-1990s. Thanks to all our alumni who support our efforts to recruit the most talented residents and fellows. They are greatest strength of any training program.

Mayo Clinic Jacksonville Accredited Anesthesiology Residency Program

Marie De Ruyter, M.D., and Michael Murray, M.D., Ph.D.

The Mayo Clinic Jacksonville Department of Anesthesiology is proud to announce approval of their application for an accredited Anesthesiology Residency Program by the Residency Review Committee for Anesthesiology. Residents may be enrolled as of July 2003, and those participating in the 2003 match may apply for a PGY-2 position in the anesthesiology residency program to begin July 2004. The program is approved for four residents per year.

A long-term goal of the department has been to develop its practice, education, and research in support of an independent residency program at Mayo Clinic Jacksonville. Residents have rotated to Jacksonville since 1988 as part of the Mayo Clinic Rochester integrated program.

The Department of Anesthesiology at Mayo Clinic Jacksonville has grown to include 27 faculty anesthesiologists. Our faculty now includes specialists in obstetrical anesthesia, cardiovascular anesthesia (with a focus on

intraoperative transesophageal echocardiography), transplantation anesthesia (liver, pancreas, kidney, heart, and lung), regional anesthesia, neuroanesthesia, pain medicine, and critical care medicine. Seven faculty members have substantial research expertise in anesthesiology and related sciences.

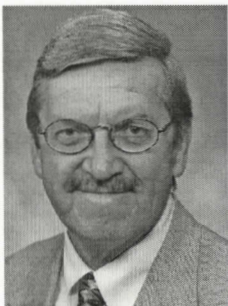
The Griffin Research Building at the Mayo Clinic Jacksonville was completed last year. Through the generosity of a benefactor, the Department of Anesthesiology has established a research laboratory. The department has 25 active clinical protocols and a Department of Defense funded grant.

Our department embarks on the next stage of our academic development with great enthusiasm. We are confident our goal of establishing an outstanding residency program in keeping with the Mayo Clinic tradition of excellence will be accomplished.

Dr. Murray is the program director, and Dr. De Ruyter is the associate program director of the Jacksonville residency program.

News About People

Peter Southorn, M.D.

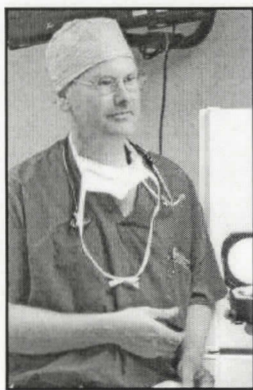


Dr. Roger White

Dr. Roger White's pioneering work to equip squad cars with portable defibrillators and teach emergency response to cardiac arrest was recognized nationally when the Rochester Police Department received an award from the National Center of Early Defibrillation. The chances of surviving a sudden cardiac arrest outside the hospital in Olmsted County are higher than anywhere else in the nation.

Dr. Jeffrey Welna, a long-time consultant at the Mayo Clinic, friend of many, and recognized for his clinical excellence, is relocating to Charlotte, North Carolina.

Dr. John Abenstein was elected vice-president of the ASA House of Delegates at the ASA New Orleans 2002 meeting.



Dr. Thomas Christopherson

We wish to congratulate **Dr. Thomas Christopherson** on being the first recipient of the "Doctor of the Month Award" at Sioux Valley Hospital this summer

Dr. Kirsten Erickson, neuro-anesthesia fellow, won the new investigator award at the Society of Neuro-anesthesia and Critical Care annual meeting this fall. Her award-winning paper was entitled "Anesthetic techniques influence brain temperature independent of core tempera-

ture during craniotomy in cats". She performed her research in Dr. William Lanier's laboratory.

Dr. William Lanier is editor of the *Mayo Clinic Proceedings*. In this capacity, he hosted a national meeting on the news media and medicine which featured many notable speakers including Mr. Ted Koppel from ABC News Nightline. A full account of this important conference will be given in the forthcoming issue of the *Mayo Alumni Magazine*.

Mayo Rochester Academics

We are extraordinarily proud and supportive of our gifted colleagues involved in research. Together they have over 20 funded research

projects, the vast majority being with the National Institutes of Health. We will feature their work in future issues.

ASA Reception

Brian Hall, M.D.

The Mayo Clinic Department of Anesthesiology Alumni Reception was held on October 11, 2002, during the ASA annual meeting and was hosted at the Rosen Centre Hotel in Orlando. The reception was extra special this year because Mayo alumnus and former chair, Alan D. Sessler, M.D., was honored as he received the Distinguished Service Award from the ASA. The festivities Friday night lasted five hours and were extremely well attended by

Mayo alumni as well as Minnesota Society of Anesthesiologists (MSA) members and special guests of Dr. Sessler. In all, 185 guests were able to visit with old friends, make some new ones, congratulate Dr. Sessler, and enjoy food, beverage, and the ambiance of this gala event. Special thanks to Carol Demulling and Linda Van Sickle for their tireless efforts in helping to prepare for this celebration.

Closing Comments

The Mayo Clinic Alumni Association has announced two new awards: The Professional Achievement Award and the Humanitarian Award. Details are given in the Alumni website (www.mayo.edu/alumni/awards.htm). If you know of an anesthesiologist who would merit receiving this award, please nominate her or him.

Finally, please keep supplying us with information for this newsletter. Thank you and all the best in 2003.



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