

Mayo  
*Anesthesiology Alumni*  
Newsletter

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*Inside This Issue*

From the Chair

*Dr. Mark Warner*

Editor's Note

*Dr. Peter Southorn*

Vascular Biology Laboratory

*Dr. Zvonimir Katusic*

Gonda Update

*Dr. Mary Ellen Warner*

Residency and Fellowship Programs

*Dr. Steve Rose*

ASA Reception

*Dr. Brian Hall*

Life After Anesthesia: A Second  
Career at Sea

*Dr. John McMichan*

News About People

*Dr. Peter Southorn*

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## From the Chair

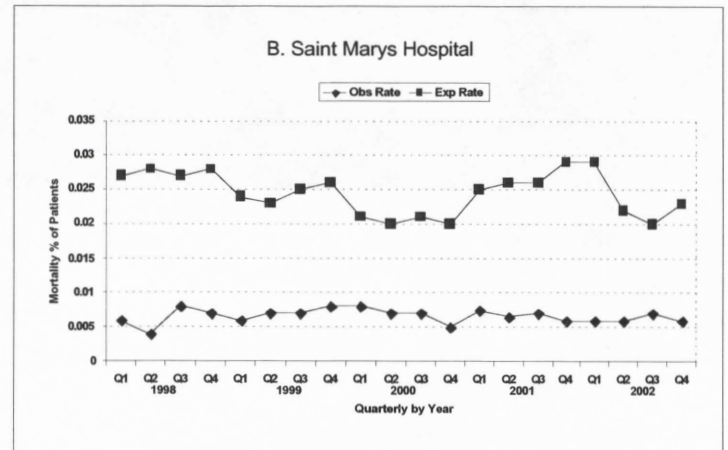
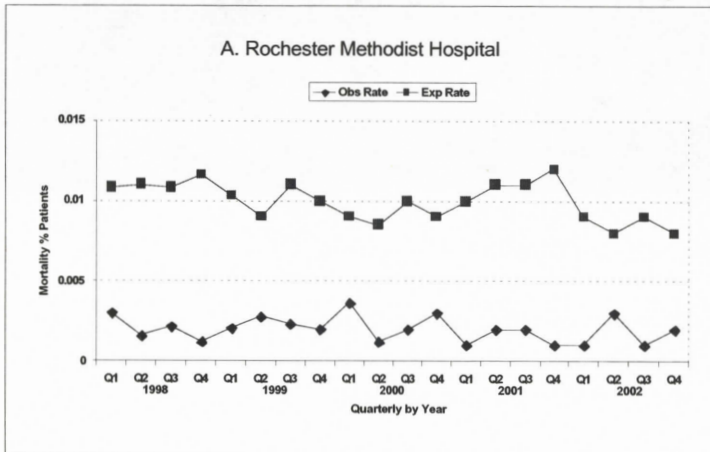
**Mark Warner, M.D.**

Friday, August 1, was a remarkable day for the department. Over 400 patients received anesthesia for various surgeries and diagnostic and therapeutic procedures. Another 60 patients were seen for acute or chronic pain problems. Yet another 65 critically or seriously ill patients received consultation. Thankfully, we aren't this busy every day. However, we anticipate that for the first time our department will provide anesthetics to 90,000 patients in a single year. In total, over 100,000 unique patients will receive care from members of the department in 2003.

Each of you has contributed to the success and high expectations for our department. As alumni, your confidence in the department and your contributions of referral of patients, encouragement of medical students and young physicians to train in anesthesiology at Mayo, and support of Mayo in general have been very gratifying. I believe your trust is well founded. Mayo once again was named one of the top two medical centers by the *U.S. News and World Report*. Furthermore, our perioperative care has been identified as No. 1 for U.S. academic medical centers. Graphs A & B (shown on next page) document the expected (risk adjusted) and true 48-hour surgical mortality rate at Rochester Methodist Hospital and Saint Marys Hospital in Rochester compared to 137 other academic medical centers. For the past three years, our actual mortality rates have been 20% of the expected rate, giving us the best outcomes in the country in this cohort of medical centers.

Our alumni gathering at the ASA annual meeting in San Francisco will take place on Saturday, October 11, this year. If possible, please take this opportunity to visit with old friends and meet some of the dynamic new members of our department. I am sure that you'll find it to be a memorable event.

## Comparison Chart: Performance Measures vs. Risk Adjusted Expectation Patients who die within 2 days of a procedure involving anesthesia



The Academic Healthcare Consortium pools data on surgical patients from 138 U.S. academic medical centers. It subsequently performs risk adjustments for severity of illness, types of procedures, and patient demographics, determines anticipated outcomes for these patients at each institution compared to the others, and releases this information back to each center. Graphs (A) Rochester Methodist Hospital and (B) Saint Marys Hospital show the expected and true 48-hour postoperative mortality. Both hospitals have outcomes five times better than predicted: the best result in the country among these medical centers.

### Editor's Note

**Peter Southorn, M.D.**

Greetings!

Thanks to everyone who has contacted us.

This issue focuses on recent innovations, an essential ingredient for the continued success of our department. We are grateful to Dr. Zvonimir Katusic for describing the research conducted in his laboratory. The work of this lab is exciting, important, and drawing worldwide acclaim. Dr. Mary Ellen Warner, director of the Outpatient Procedure Center, describes our new facility to consolidate this activity at the Mayo Clinic. This is a must-see area if and when you come to Rochester. Our continued success in recruiting outstanding residents is also vital, and Dr. Steve Rose, chair of our education committee, gives us an update

on educational issues. Details of our department's reception on October 11 at the ASA Annual meeting in San Francisco are provided by Dr. Brian Hall. Finally, there is life after retirement! Also included are excerpts from a conversation that I recently had with Dr. John McMichan who has pursued an unusual second career following his retirement: namely, giving talks on ships that sail the high seas.

I hope you enjoy this issue. Please keep us posted on your news.



## Vascular Biology Laboratory

Zvonimir Katusic, M.D., Ph.D.



Left to right—first row: Tongrong He, Leslie Smith, Zvonimir Katusic, Darcy Richardson, and Katherine Blackwell. Second row: Joseph Sorenson, Masahiko Akiyama, Livius d'Uscio, Takuya Matsumoto, and Sean Hynes.

The Vascular Biology Laboratory in the Research Division of the Department of Anesthesiology, directed by Dr. Zvonimir Katusic, was built on the long and rich tradition of cardiovascular research at the Mayo Clinic established by Drs. John Shepherd, Paul Vanhoutte, John Michenfelder, and Duane Rorie. Over the years, the primary focus of our research has been on vascular biology of nitric oxide. Discovery of endothelium-derived-relaxing factor (nitric oxide) in 1980 revolutionized vascular biology, physiology, and pharmacology. During the past decade, molecular cloning of nitric oxide synthase isoforms and characterization of the role of nitric oxide in pathogenesis of vascular disease has provided the basis for development of gene-based therapeutic technologies designed to restore normal biosynthesis of nitric oxide in blood vessel wall. Currently, gene transfer technology is being tested in numerous clinical trials. This research would indicate that genetic manipulation of vascular wall may soon become a routine therapeutic interven-

tion. In close collaboration with our colleagues in the Molecular Medicine Program, as well as the Departments of Medicine and Surgery, our group was able to participate and contribute to these new developments. Recent observations made by the group include:

- 1) Adenovirus-mediated delivery of recombinant endothelial nitric oxide synthase (eNOS) into cerebral circulation increases local production of nitric oxide in arterial wall.
- 2) Over-expression of recombinant eNOS improves vasomotor

function of cerebral arteries exposed to autologous blood during subarachnoid hemorrhage and may prevent development of cerebral vasospasm.

- 3) Vasomotor function of isolated human cerebral arteries can be favorably modified by adenovirus-mediated gene delivery.
- 4) Metabolism of tetrahydrobiopterin, an essential co-factor required for optimal eNOS enzymatic activity, plays a key role in biosynthesis of nitric oxide.
- 5) Increased production of tetrahydrobiopterin via GTP cyclohydrolase I pathway is an important mechanism of vascular protection against oxidative injury.

Over the years, we have trained a number of post-doctoral fellows, graduate students, and medical students from around the world. At the present time, we have fellows from Australia, China, Ireland, Japan, and Switzerland. Research technologists Leslie Smith, Darcy Richardson, and Timothy Peterson support everyday operation of the laboratory. Janet Beckman provides secretarial support. Our program is funded by a number of NIH grants, American Heart Association, and Mayo Foundation.



## Gonda Update

**Mary Ellen Warner, M.D.**

The Gonda Outpatient Sedation Center (a.k.a. Outpatient Procedure Center) opened its doors for operation on June 2, 2003. This facility, structured to accommodate a variety of outpatient procedures, was designed and equipped by the Department of Anesthesiology. The direction, scheduling, and day-to-day operations of the facility are the responsibility of the Department of Anesthesiology. The staff, a "can-do" team of RNs, CRNAs, and anesthesiology assistants, are all members of our department.

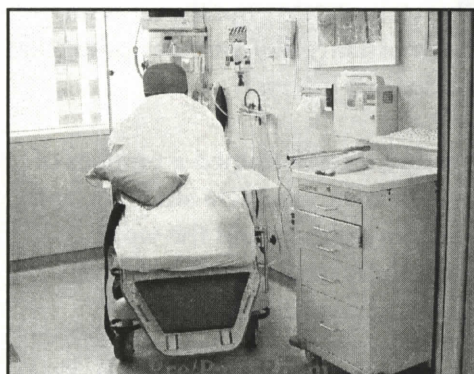
This Center, featuring 20 private pre- and post-procedure rooms, has been highly successful with patient satisfaction as it allows for privacy, confidentiality, and family access during the peri-procedure episode of care. From the proceduralist's perspective, we have been able to attain our goals of a safe, efficient, user-friendly, high quality support area for procedural practices. Our users to date, Ophthalmology, Urology, Hematology, and Oral & Maxillofacial Surgery, have been very complimentary of our facility, team, and care.

The present volume in our procedure rooms averages approximately 45 cases per day. Our goal is to increase these numbers to 80+ per day

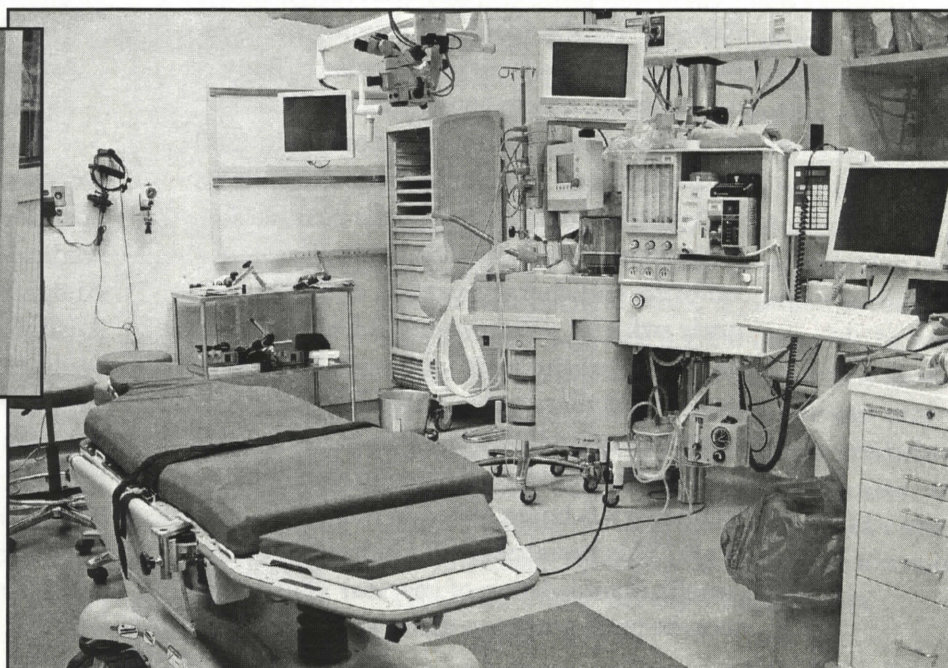
as we incrementally add procedures and staff to our fourth large procedure room and to our remaining nine small procedure rooms. We have been able to provide care ranging from a 2-year-old child requiring general anesthesia for an LP to a 96-year-old man needing general anesthesia for a urologic procedure. Unique Center developments include the use of a paperless environment (no longer do we need to break our backs carrying those 10-packet patient histories) and specially designed boom mounted anesthesia machines.

Kudos need to be given to all members of the Gonda team for a successful opening and first few months of operation. Alumnus Dr. Gary Halma from Sioux Falls was especially helpful in sharing his wealth of knowledge in the outpatient surgical practice. Accolades also need to be bestowed to several individuals who were invaluable in the planning process: Brad Narr, Bob Chantigian, Steve Jorgensen, Marlea Judd, and last, but definitely not least, Steve Osborn.

If you happen to be in the Rochester area, please stop and visit us on Gonda 7 East.



*Pre- and post-procedure room*



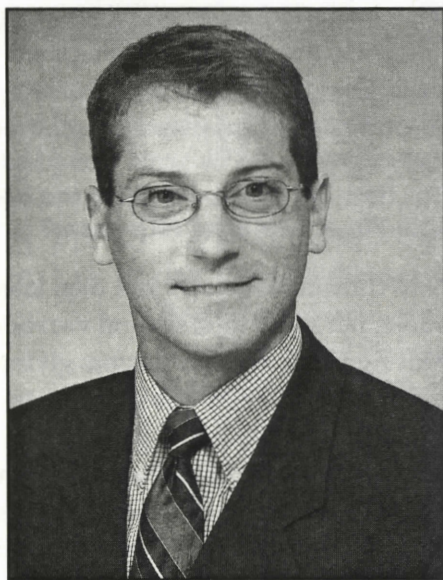
*Large procedure room designed for ophthalmology. The operating microscopes can be seen hanging from the ceiling.*



## Residency and Fellowship Programs

**Steve Rose, M.D.**

We were pleased to welcome residents and fellows initiating training in our department on June 28, 2003. These include 19 anesthesiology residents, 3 fellows in pain medicine, 1 fellow in cardiovascular and thoracic anesthesiology, 7 fellows in critical care medicine, and 1 resident in pediatric anesthesiology at Mayo Clinic Rochester. An additional three residents in anesthesiology, one fellow in cardiovascular and thoracic anesthesiology, and two fellows in pain medicine will begin training at Mayo Clinic Jacksonville, and one fellow in pain medicine starts training at Mayo Clinic Scottsdale.



*Dr. Adam Jacob*

For the second consecutive year, the award presented to the "best intern" by the Mayo Clinic Rochester, Department of Internal Medicine, was received by a first-year anesthesiology resident completing his clinical base year at Mayo. Dr. Adam Jacob received this

award for the 2002-2003 academic year. Congratulations to Adam for this outstanding achievement.

The American Board of Anesthesiology (ABA) recently proposed substantial changes in the structure of anesthesiology residency training. The proposed curriculum would introduce an integrated 48-month curriculum with all four years, including non-anesthesiology rotations, conducted under the direction of the anesthesiology residency program. The curriculum would emphasize perioperative medicine and include a minimum of six months of training in critical care medicine.

As a member of the ABA, Dr. Mark Warner has participated in the design and focus of this revised curriculum. Implementation of these proposed changes would represent the most significant change in residency training in anesthesiology since the length of training in anesthesiology was increased from two to three years (after completion of a clinical base year).

Recruitment for the upcoming year is ongoing. We deeply appreciate the support of our alumni in directing talented medical students to consider training in anesthesiology at Mayo.

## 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 San Francisco. It will be held from 6-10 p.m. on Saturday, October 11, in the

Presidential Suite at the San Francisco Downtown Marriott, 55 Fourth Street between Market and Mission. Please plan to attend this event if you are going to the ASA.



## Life After Anesthesia: A Second Career at Sea

**John McMichan, M.D., Ph.D.**

*Editor's Note: John McMichan is well known among alumni and a personal friend. In Rochester, he was intimately involved in the Critical Care Service for many years, and subsequently, he organized and led our department in Scottsdale. Since retirement from Mayo, he has developed a second career giving talks on ships criss-crossing the oceans. In this second life, he has been a tremendous ambassador for the Mayo Clinic. John and I recently reminisced, and I asked him to describe his life after anesthesia. The following narrative is based on our conversation.*

**PETER: John, what started your interest in ships?**

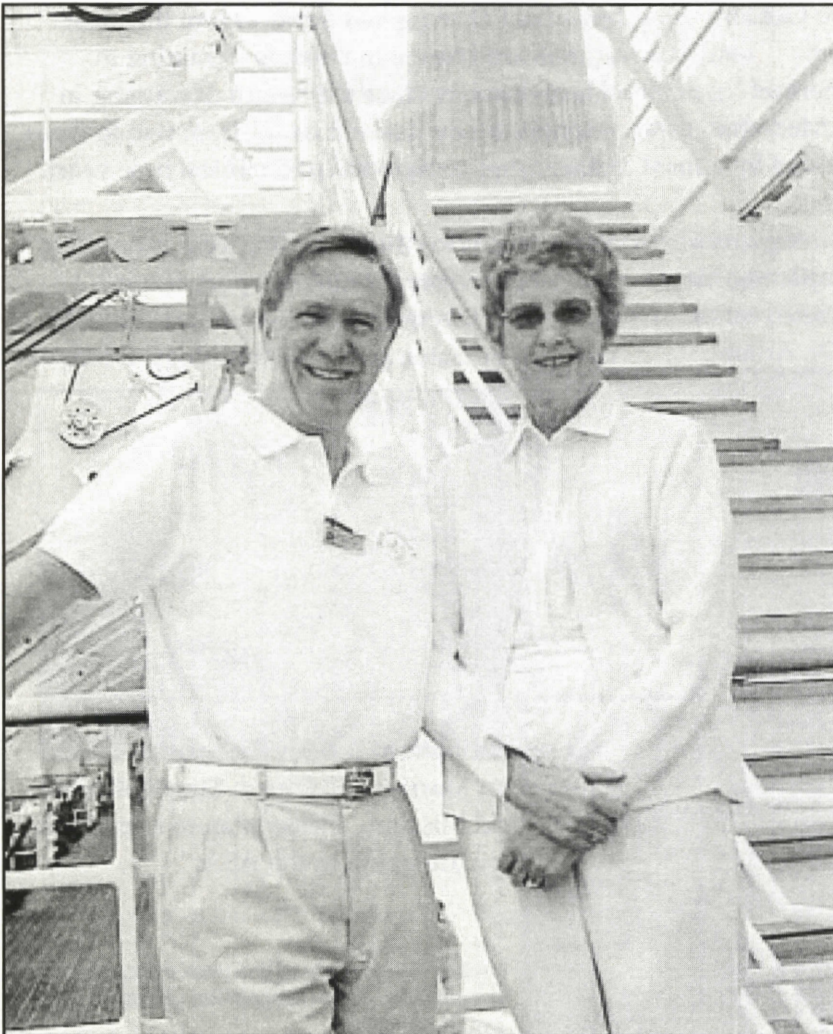
**JOHN:** When I was young, my father would take me to tour ships docked in Melbourne, and there he would reminisce about his sea

travels in the 1920s and 30s. I guess that is how it all started. Our family undertook a short sea voyage when I was 9 years old, and I still remember it well. Subsequently, during a long break while at medical school, I joined a cruise on an Australian ship carrying 100 passengers and cargo to Hong Kong and Japan. On this voyage, I met my wife-to-be, Jan, who was the ship's nurse, librarian, children's nanny, and social hostess. We went on a tour together in Hong Kong on what could be considered our first date. However, we didn't get married until several years later. After medical school and two years of residency, during another long break in my career, I took a job as ship's surgeon on this same ship. Looking back, I was grossly unprepared for the responsibilities the job carried, but I was able to cope and no medical disasters occurred.

**PETER: How did you re-establish the connection with life at sea after retirement?**

**JOHN:** While in Rochester and then later in Scottsdale, Jan and I took several vacations at sea. During them, we met doctors giving health-related lectures to the passengers. These talks seemed to be very much appreciated, and I decided that this might be something attractive to do when I stopped work at the Clinic. In 1999, I retired from Mayo and contacted some 30 shipping companies asking them to consider me as a lecturer. I had to wait almost 12 months before I received an invitation from a Norwegian shipping company that needed a lecturer on one of their vessels sailing from Barbados to Venezuela the next week. I jumped at this opportunity and had a great time. My lectures were apparently well received, because soon afterward, I began to receive numerous other requests. Since then, I have been overwhelmed with similar offers to give talks on cruises. In 2002, I turned down 27 such offers and went on 14 cruises, which turned out to be too many. This year, I have cut the number to ten.

*John and Jan McMichan on the deck of the Queen Elizabeth 2.*





**PETER:** John, I know you spend a lot of time preparing for your lectures. Can you tell me precisely how it works?

**JOHN:** My role on board a cruise ship as a guest lecturer is a bit of an oddity. Lecturers are not on the crew manifest and, therefore, not really members of the staff. In fact, although being non-paying passengers, guest lecturers have all the privileges, services, and benefits of being passengers. However, the passengers view us as staff members, and the company expects us to behave as its representatives and abide by their rules for behavior, dress, and contact with the passengers. I am responsible to give a series of lectures, usually two per week. My talks are about general medical issues, and I try and give them a nautical twist. Each lecture lasts about 45 minutes allowing time for questions. My lectures and those of others are evaluated by the passengers. Fortunately my lectures seem to have been well received because I keep receiving offers to be a guest lecturer on the ships of different companies. I am free to do what I wish during the voyage when I am not lecturing. Due to a habit engrained in me during my days as an anesthesiologist, I tend to rise early in the morning and walk about five miles around the Promenade Deck or use the gym if the weather is bad to counteract all the good food. I then choose my activities for the day. In the morning, I try to attend the lectures given by fellow guest lecturers on board. I have learned to

play bridge and may play it in the afternoon while we are at sea. When the ship arrives at a port, I am often asked to act as a tour escort to help the local tour guide. As a tour escort, I represent the company, deal with any mishaps, and most importantly ensure that no passengers get lost. One of the highlights of being on board these ships is the opportunity to meet some very remarkable people including heads of state, editors of leading newspapers, university professors, bank presidents, Hollywood actors, and playwrights. All in all, life at sea is not stressful but rather very interesting and enjoyable.

**PETER:** John, I know you have been to many remarkable places on these voyages and you have had the opportunity to travel on some premier vessels on the sea these days. Could you tell me about some of your most memorable experiences?

**JOHN:** There are certain harbors that will always stand out in my mind as particularly beautiful and fascinating. Among them are Cape Town in South Africa, San Francisco, New York, Hong Kong, and Sydney. Of the many cruises I have been on, there is one that stands out from all the rest: the trip from Ushuaia in Argentina around Cape Horn across the Drake Passage to the Antarctic mainland. Being down there, away from all commercialization, walking among the seals, birds and tame penguins, watching the whales, and using the Zodiac rubber boats to get around, was the voyage of my lifetime. Running close in terms of beautiful scenery are voyages along the coast of Alaska and the fjords of Norway. In terms of fascination, the trip through the Panama Canal is very interesting. For luxury service, the ships of the Seabourn Cruises and Crystal Cruise Lines are right up there among the best at sea. Personally, I enjoy the classic ships very much, and I like being aboard the only true ocean liner afloat these days, the Queen Elizabeth 2 (soon to be replaced on the transatlantic run by the Queen Mary 2).

All-in-all, this second career of mine has been a fascinating experience, and while I hope it continues, I am also finding more and more that it is also great to be home in Scottsdale.

*On board the Queen Elizabeth 2, John met alumni Drs. Susan Black and Mark Trankina from the University of Alabama.*





## News About People

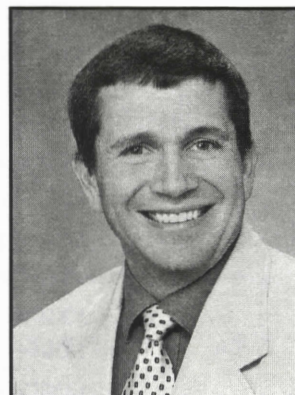
### Peter Southorn, M.D.

We extend our deepest condolences to the family and friends of **Dr. John Cullen**, a fellow in the class of 1971, who passed away last fall.

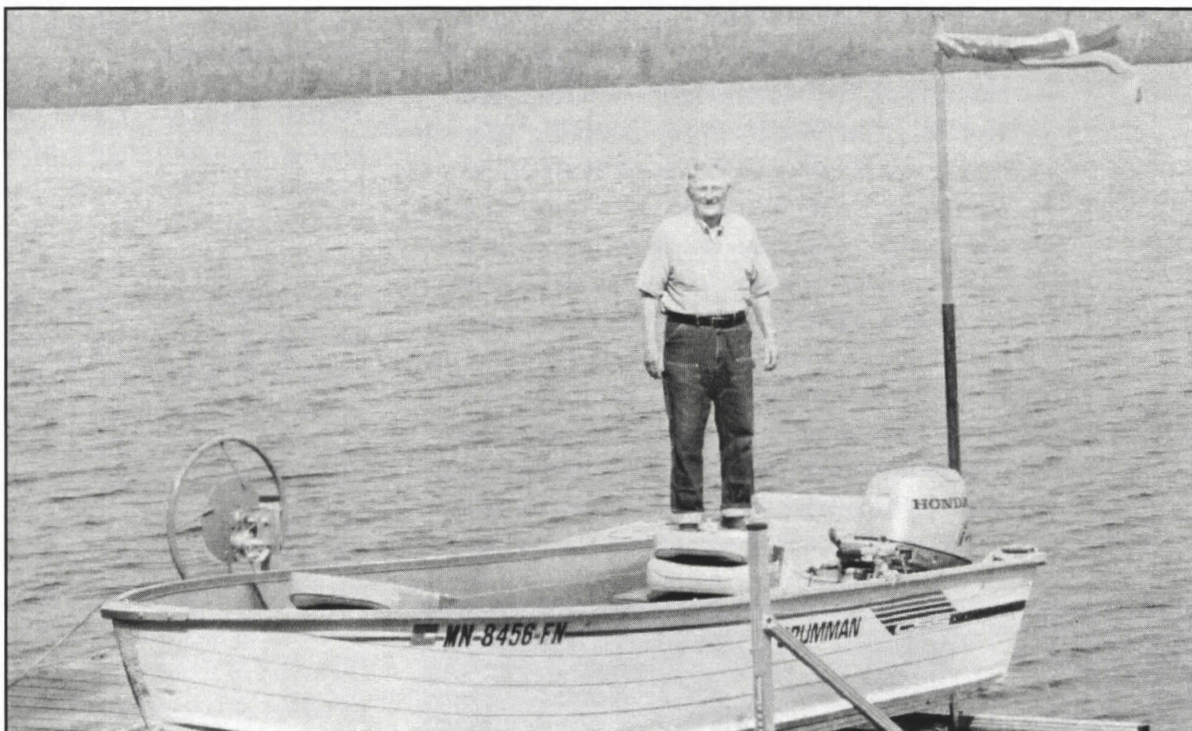
Congratulations to **Dr. Douglas Bacon** for being named Professor of Anesthesiology and History of Medicine in the Mayo Medical School this year and also the new editor of the *ASA Newsletter*.

Congratulations are also due to **Dr. Tom Christopherson** who was named Doctor of the Year at the Sioux Valley Hospital Annual Medical Staff Meeting in Sioux Falls, South Dakota.

**Dr. Larry Perry** is shown below on his boat dock on Gunflint Lake at the top of Minnesota. Canada can be seen in the distance. He sends his regards to everyone.



*Dr. Douglas Bacon*



*Dr. Larry Perry*



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