A Note from Mark B. Orringer, M.D.
Section Head of Thoracic Surgery
and Thoracic Surgery Residency Program Director

In my twenty years as Director of the University of Michigan Thoracic Surgery Residency Program, I do not recall a period such as this where there has been such tremendous pressure to change our historic traditional system for cardiothoracic residency education. These are times of change! The 80-hour work week mandate is compressing the time previously available to our residents for operating and honing clinical skills. There is a need to teach Thoracic Surgery better and more efficiently than we have in the past. The reduction in clinical exposure (both in General and Thoracic Surgery) our residents now have has stymied the efforts of some to reduce the overall length of Thoracic Surgery residency training. Uncertainties about the “cardiac surgery job market” have created a “market place force” for those programs which have the clinical volume to “track” residents in General Thoracic Surgery – i.e., provide a more flexible residency experience which allows them to obtain their minimum index case requirements in cardiac surgery while devoting the majority of their Thoracic Surgery residency (12-13 months) to what they intend to do professionally – General Thoracic Surgery. This year, the University of Michigan Thoracic Surgery Residency will “track” one of its three new residents into General Thoracic Surgery, the other two residents focusing upon either Adult or Pediatric Cardiac Surgery.

There has been concern nation-wide that the contracted number of available cardiac surgery jobs will sharply reduce the number of Thoracic Surgery resident applicants. The “upper-echelon” of Thoracic Surgery residency programs, which includes the University of Michigan, will likely be among the last to feel the decline in resident applicants. For the last ten years of the National Thoracic Surgery Residency Match, 75-80 candidates have applied annually for our three residency positions, 20-30 have been invited to interview, and we have never gone below number 10 on our rank order list to fill our positions, our residents typically coming from our top six candidates. The caliber of our residents remains superb. The University of Michigan Thoracic Surgery Residency Program remains among the strongest in the country.

The Section of General Thoracic Surgery has also experienced quite a bit of change. Two of our faculty, both former John Alexander Society residents, Drs. John Yee and Mark Iannettoni, were recruited away to head their own programs at the University of British Columbia in Vancouver and the University of Iowa, respectively. Dr. Andrew Chang (University of Michigan Thoracic Surgery resident – 2000-2002) joined the faculty in 2004. Dr. Allan Pickens (University of Michigan Thoracic Surgery resident – 2002-2004) has just returned to join the faculty after completing a six month fellowship in California in mini-invasive pulmonary resections. Dr. Christine Lau, who is completing her Thoracic Surgery training with Dr. Alec Patterson in St. Louis, will be joining the faculty in July – the first University of Michigan female Thoracic Surgery faculty – to head our Lung Transplant program. Our faculty of four general thoracic surgeons should provide an extraordinarily broad educational experience for our residents. David Beer, Ph.D., Director of our Thoracic Surgery Tumor Biology Program, has made extraordinary contributions to our knowledge of thoracic oncogenesis.

The University of Michigan Thoracic Surgery Residency in general, and the General Thoracic Surgery Program in particular, continue to flourish in Ann Arbor!

A Note from Edward L. Bove, M.D.
Section Head of Cardiac Surgery

As I write this newsletter on a cold and sunny January day, thoughts of spring begin to emerge. The upcoming year promises to bring a number of exciting events for our Section. Construction continues to be on schedule for the Cardiovascular Center building on the old main hospital site with the official opening due in late 2006. This remarkable project will allow us to consolidate all adult cardiovascular care under one roof with dedicated new cardiac OR’s and ICU beds. The kick-off for the new children’s hospital replacement project has also officially begun and planning teams are already active. The hospital will be located on the main medical campus, behind the current Mott Hospital and Taubman parking lot. The congenital heart center will benefit greatly from this project by additional space in a modern, child and family-oriented, facility. Recently, the Section of Cardiac Surgery announced the establishment of The Center for Circulatory Support. Generously supported by a gift from Terumo Cardiovascular Systems, the Center will serve to advance the medical centers leadership role in developing the field of circulatory support from ECMO to the total artificial heart.

In May, we will host a John Alexander Society reunion in Ann Arbor. A scientific session will be held with a number of exciting and novel presentations planned. This event will also allow us to officially acknowledge the remarkable career of Marvin Kirsh, who will retire at the end of the academic year. This unique cardiac surgeon, scientist, and educator has influenced so many of us during our residency years that I’m sure you will all want to come back to honor Marvin. The Helen and Marvin Kirsh Professorship will be inaugurated at this reunion and I am honored to be its first recipient.

I hope to see you all this May in Ann Arbor.
John Alexander, the 17th President of the American Association for Thoracic Surgery, was born in Philadelphia on February 24, 1891. He received his BS, MA and MD degrees from the University of Pennsylvania where he was an outstanding student athlete, achieving multiple academic honors and serving as Captain of the Varsity Crew. Following an internship at the Pennsylvania Hospital, he enlisted with an American unit in the French Army transferring to the United States Army Medical Corps when the United States entered World War I. At the end of the war, he studied at the University of Lyon with Leon Berard where he first became acquainted with the surgical treatment of tuberculosis, a disease which consumed much of his career, both as a patient, and an innovator and advocate of surgical treatment. During his lifetime, Dr. Alexander was hospitalized multiple times for treatment of tuberculosis and its complications.

Following his return to the United States, he served a short period at the University of Pennsylvania and in 1920 joined the faculty of the Department of Surgery at the University of Michigan. Shortly thereafter, complications of tuberculosis required a protracted period at Saranac Lake. Despite the need for a plaster body cast and the support of a Bradford frame, he persevered in writing the first English text on the surgical treatment of pulmonary tuberculosis, for which he received the Samuel D. Gross Prize in 1929.

In 1928, he established a thoracic service and the first entirely to thoracic surgery. In 1926, Dr. Alexander returned to the University of Michigan where he was an outstanding student athlete, achieving multiple academic honors and serving as Captain of the Varsity Crew. Following an internship at the Pennsylvania Hospital, he enlisted with an American unit in the French Army transferring to the United States Army Medical Corps when the United States entered World War I. At the end of the war, he studied at the University of Lyon with Leon Berard where he first became acquainted with the surgical treatment of tuberculosis, a disease which consumed much of his career, both as a patient, and an innovator and advocate of surgical treatment. During his lifetime, Dr. Alexander was hospitalized multiple times for treatment of tuberculosis and its complications.

In addition to employing the then accepted operations for pulmonary tuberculosis, Dr. Alexander was innovative in proposing new procedures. He popularized anterior thoracoplasty and resection of the transverse processes of the vertebrae to improve the thoracoplastic collapse. He early recognized the advantages of resection for pulmonary tuberculosis, but not to the exclusion of collapse therapy measures which he considered advantageous in many cases. He was an early advocate of two-stage lobectomy for bronchiectasis and early recognized the effectiveness of resection of pulmonary metastases in selected cases.

In 1932, Dr. Alexander was named Professor of Surgery. Shortly thereafter, a recurrence of his own disease required hospitalization which afforded the opportunity to complete the authoritative classic text on “The Collapse Therapy of Pulmonary Tuberculosis”. A man of his accomplishments accrued many well deserved honors including the honorary degree of Doctor of Science from the University of Pennsylvania, the Trudeau Medal by the National Tuberculosis Association, the Bruce H. Douglas Award from the Michigan Trudeau Society, the Henry Russell Award and Lectureship from the University of Michigan given to a member of the faculty who has attained the highest distinction in the field of scholarship. Dr. Alexander was President of the American Association for Thoracic Surgery from 1934-1935 and President Elect of the Trudeau Society, an honor he had to relinquish because of recurrence of his illness. He was a member of the American Surgical Association, the Central Surgical Association, The International Society of Surgery, the Society for Clinical Surgery, the American Medical Association, the Michigan State Medical Society, and the National Tuberculosis Association. He was an honorary member of the Society of Thoracic Surgery of Great Britain and Ireland, Detroit Academy of Surgery, Sociedad de Argentian de Cirurjanos, Societe Belge de Chirurgie, Societe Francaise de la Tuberlose, Sociedad Paraguaya de Tisiologia, and the Sociedad Ecutoriana de Tisiologia. He was also a member of Alpha Omega Alpha, Sigma Xi, Phi Kappa Phi, Alpha Mu Pi Omega, Delta Tau Delta and an honorary member of Nu Sigma Nu.

Dr. Alexander has been described as a brilliant scholar and an inspiring teacher. In his later years, he enjoyed gardening and duck hunting with his wife, the former Emma Ward Woolfolk, whom he married in 1936. His contributions to thoracic surgery and especially the inauguration of resident training in thoracic surgery and the many surgeons he trained assured him of a place in the annals of thoracic surgery. His legacy unquestionably is the surgeons he trained whose fondness for him and memories of him are legendary. Thanksgiving dinners for staff and family with turkey carved expertly by Dr. Alexander, the weekly trips to the Michigan State Sanatorium with the resident driving the antique black Buick while Dr. Alexander worked in the back seat, the undaunted courage Dr. Alexander demonstrated in coping with multiple recurrences of his illness necessitating multiple hospitalizations and daily rest periods have left indelible memories with those who knew him. As Dr. John Strieder, one of his earliest residents, wrote about his first meeting with Dr. Alexander, “I had come on a man - as so many did – with not just a talent, but a genius for that rarest and most sensitive of all arts, friendship.”
Save the Date

We are planning the next John Alexander Society Ann Arbor reunion in 2005. As in the past the reunion will include a scientific program, operative clinics, and social events. Coincidentally, Dr. Marvin Kirsh is retiring, an endowed chair in his and Helen’s name has been established, and Dr. Edward Bove will be the first recipient.

The Sections of Cardiac and Thoracic Surgery would like to coordinate the John Alexander Society reunion with the investiture of the Helen and Marvin Kirsh Professorship in Cardiac Surgery.

The Helen and Marvin Kirsh Ceremony will take place Thursday, May 5th and we hope to include the John Alexander Society Scientific session throughout Friday, May 6th.

The ceremony for the investiture of the Helen and Marvin Kirsh Professorship will take place the afternoon of Thursday, May 5, 2005, beginning at 4:00pm. The John Alexander Society Meeting will begin the morning of Friday, May 6th and will end with a social day on Saturday, May 7th.

Please indicate below your interest in returning to Ann Arbor for this reunion of the John Alexander Society.

Yes, I am interested in returning to Ann Arbor in 2005 for the next JAS reunion. My schedule will allow me to attend the following days:

_____ Thursday, May 5th Helen and Marvin Kirsh Professorship Ceremony
_____ Friday, May 6th JAS Reunion _____ Saturday, May 7th JAS Social Day
_____ I will need accommodations for my time in Ann Arbor.* (see note below)
_____ No, I am unable to attend.

Name ________________________ Guest Name __________________________
Address____________________________________________________________
City__________________________ State________________ Zip __________
Phone ________________________ Email_______________________________

WE LOOK FORWARD TO SEEING YOU IN ANN ARBOR – GO BLUE!

If you prefer to email your response please do so to Ann Boyd Stewart, Development and Alumni Relations at aboydst@umich.edu or call toll free 800-588-5844 to let us know you can attend.

To reserve rooms for the reunion please call Campus Inn by 4/5/05 or are subject to availability. Call toll free 800-666-8693.

HELEN & MARVIN KIRSH PROFESSORSHIP CEREMONY
slated for May 5, 2005 beginning 4pm
in Ford Auditorium
Jennifer C. Hirsch was raised in Kalamazoo, Michigan and attended the University of Michigan Honors College and received a Bachelor of Science degree in Biology in 1991. She graduated from Harvard Medical School in 1996 and has been at the University of Michigan Medical Center since 1996. During that time, she completed her General Surgery residency, a Surgical Critical Care fellowship, and an Extracorporeal Life Support fellowship. Upon completing her final year of Thoracic surgery training, Dr. Hirsch will begin a fellowship in Pediatric Cardiothoracic surgery at the University of Michigan.

Sanjeev Aggarwal grew up in Rochester New York and attended the University of Pennsylvania for his undergraduate education and Baylor College of Medicine for his medical degree. He then returned to New York for a general surgery residency at New York University Medical Center. Upon completing his thoracic surgery residency at the University of Michigan, Dr. Aggarwal will returning home for a fellowship in mechanistic assist devices, cardiac transplantation, and minimally invasive surgery at Columbia Presbyterian hospital in New York City.

Jonathan W. Haft grew up in Miami Beach, Florida, and attended the U of Pennsylvania for his undergraduate education. He came north to the University of Michigan for both his general and thoracic surgery residencies. After graduation, he will join the cardiac surgery faculty here and focus upon ICU care and ECMO.

Cardiac Surgery Scholarship Given
Jonathan Green, M1, is the first Cardiac Surgery Medical School Scholarship recipient. Raised in Los Angeles, Jonathan graduated from Yale in 2002 and then spent two years in China teaching English and studying Chinese in Changsha, Hunan, China. He is looking to return to China again this summer to do research and hopes that international work will always be an element of his career. The Cardiac Surgery Scholarship was endowed with $500,000 from the faculty of the Section of Cardiac Surgery and will allow Jonathan a tuition free medical schooling.

Allan Pickens, M.D. joined the University of Michigan, Section of Thoracic Surgery, on January 1, 2005. He is an Alabama native who attended the University of Alabama for his undergraduate studies as well as medical school.

Dr. Pickens did his General Surgery Residency at the University Hospital in Birmingham, Alabama. During residency, his research included molecular biology of lung cancer. His interests in lung cancer and other thoracic diseases led him to the birthplace of thoracic surgery, the University of Michigan.

Dr. Pickens completed his Thoracic Surgery Residency at the University of Michigan in July, 2004. An additional Minimally Invasive Thoracic Surgery Fellowship was completed at Cedar-Sinai Hospital in Los Angeles, California. He has published numerous peer reviewed articles and book chapters. Dr. Pickens returns to Ann Arbor to start a Minimally Invasive Pulmonary Resection Program.

Graduating Residents 1999-2004 and what they are doing today

2004 Graduates - Thoracic Surgery
Sang Lee, M.D. - Private Practice, Fremont, California
Santosh Krishnan, M.D. - Private Practice, Milwaukee, Wisconsin
Allan Pickens, M.D. - Thoracic Surgery Faculty, Univ. of Michigan

2003 Graduates - Thoracic Surgery
David Kulick, M.D. - Private Practice, Austin, Texas
William Lynch, M.D. - Private Practice, Muskegon, Michigan
Kanti Uppal, M.D. - Private Practice, Monterey, California

2002 Graduates - Thoracic Surgery
Shahab Akhter, M.D. - Cardiac Surgery Faculty, University of Cincinnati
Andrew Chang, M.D. - Thoracic Surgery Faculty, University of Michigan
Himanshu Patel, M.D. - Cardiac Surgery Faculty, University of Michigan

2001 Graduates - Thoracic Surgery
Eric Devaney, M.D. - Pediatric Cardiac Surgery Faculty, University of Michigan
Charles Hoopes, M.D. - Cardiothoracic Surgery Faculty, Duke University
Srinivas Kolla, M.D. - Private Practice, Carnegie, Pennsylvania

2000 Graduates - Thoracic Surgery
Michael Eppinger, M.D. - Private Practice, San Antonio, Texas
Kenneth Fox, M.D. - Pediatric Cardiac Surgery, Private Practice, Austin, Texas
David Polidori, M.D. - Fellowship, University of Pennsylvania

1999 Graduates - Thoracic Surgery
Neil Devejian, M.D. - Pediatric Cardiac Surgery, Albany Medical College, New York
Jeffrey Everett, M.D. - Thoracic Surgery Faculty, University of Iowa
Iva Smolens, M.D. - Cardiac Surgery, Private Practice, Detroit, Michigan
**Sloan Professorship Inaugurated**

The Department of Surgery is delighted to announce the inauguration ceremony of the Herbert Sloan Professorship in Cardiac Surgery and installation of G. Michael Deeb, MD, as the first Herbert Sloan Professor on Thursday, May 6th, 2004.

**Crittenton: UM Section of Cardiac Surgery**

The University of Michigan Section of Cardiac Surgery has created a new Cardiac Surgery program at Crittenton Hospital in Rochester, Michigan. Two of our faculty [Drs. Fazzalari and Paone] are full-time surgeons at Crittenton. Dr. Richard Prager is Medical Director for the program.

Frank Fazzalari, MD, FACS, has been appointed as Clinical Assistant Professor in the Section of Cardiac Surgery. He received his MD from the University of Michigan and stayed on for his General Surgery residency here. He completed his Thoracic Surgery residency at Massachusetts General Hospital in Boston. He was in private practice in South Carolina, then joined the faculty of the University of Pittsburgh. He will be Chief of Cardiothoracic Surgery at the new University of Michigan Heart Surgery Program at Crittenton Hospital in Rochester, Michigan.

Gaetano Paone, MD, FACS, has been appointed as Clinical Assistant Professor in the Section of Cardiac Surgery. He received his MD from the New York University School of Medicine, where he also completed his General Surgery residency. He completed his Thoracic Surgery residency at the University of Illinois Hospitals in Chicago. He was an attending surgeon at Boston City Hospital, University Hospital in Boston, and at Henry Ford Hospital in Detroit. He will be part of the Heart Surgery Program at Crittenton Hospital in Rochester, Michigan.

**Cameron Haight Lecture**

The fifth annual Cameron Haight Lecture was delivered by former Michigan resident, Dr. Douglas E. Wood, Head of General Thoracic Surgery at the University of Washington, Seattle. Dr. Wood's lecture titled “Lung Volume Reduction Surgery: Science, Politics, and the future” was given at the Department of Surgery's Grand Rounds on Thursday, January 6, 2005. The Cameron Haight lecture was founded and funded from a gift of the estate of Dr. Joe Morris (UM Thoracic Residency '54) in honor of Dr. Cameron Haight and supported by the Sections of Thoracic and Cardiac Surgery.

**Hearts on Ice**

The 4th Annual Hearts on Ice Hockey Game is upon us again. The Blades, coached by Dr. Ed Bove, will again crush the Pills and coach Dr. Kim Eagle. All are invited to watch cutting edge defense from goalie Pagani and the infamous Pump Line: Ohye, Devaney, Bolling and Spoor.
Dr. Richard S. Hahn, Class of 1955

By Ann Boyd Stewart

Dr. Richard S. Hahn was born in Nebraska as a first generation Korean-American. He grew up in Chicago, Illinois, and knew at an early age that he would be a doctor. "When I was 9 and 10, I spent days at the 1933-34 World’s Fairs on the lakefront. I remember the futuristic Science Museum…captivated by the life-sized clear plastic replica of a human with a beating heart, red and blue fluid circulating in arteries and veins, pulsing lungs and all organs in various colors.”

After graduating with honors from the prestigious Carleton University and medical school at Northwestern University, Dr. Hahn took an appointment with cardiac surgeon Dr. Claude Beck at Western Reserve Hospital in Cleveland. Dr. Beck was already the first surgeon to bring a patient back to life by defibrillation. Dr. Beck at the time was working on a cure for coronary artery disease.

In two years and after 300 operations in both the dog laboratory and hospital, Dr. Hahn went west to California for his general surgery training at Stanford. He then came to Ann Arbor to complete a two-year thoracic surgery residency. The University of Michigan “was—and may still be—the premier Cardiothoracic training center in America. I only wanted the best,” he stated. In the spring of 1955 Dr. Beck spoke with then UM Chairman Frederick A. Coller who urged Dr. Hahn to perform a series of experimental cardiac operations. These operations, called the Beck II, were two stage procedures requiring the patient to undergo a second open-heart operation 2-3 weeks later. Hahn had already performed such procedures in Cleveland in dogs and patients.

These were very exciting and heady times for cardiac surgeons eager to cure the number one disease in the country, (coronary artery disease). Given that the heart lung apparatus was not available for another decade, this was a procedure done on the beating heart. All six patients survived. Moreover, this procedure became the prototype for coronary by-pass operations.

Dr. Hahn reflected that at the conclusion of the first operation, he remembers a soft voice and Dr. Coller’s hand on his shoulder, “Good work, son.” Dr. Hahn said this was the most touching statement and act of kindness he received during his entire medical training. “And I can still feel his hand on my back.”

After graduating from UM, Dr. Hahn practiced in Marin County, California. A decade later, he took up another challenge: “I wanted to accomplish something more than is required of me by the Hippocratic Oath. A physician spends his life learning his practice, and he has to make a business out of it to survive. But it is still possible to return now and then to the original ethic.”

In 1963, he traveled with the second mission of SS Hope to Peru where he left the boat to travel up to remote villages at high altitude to treat patients with tuberculosis. He then made trips to Mexico in 1964 and 1965 to immunize 15,000 children against TB and other deadly diseases. In 1966, he formed the Alliance for Health, a non-profit organization, and completed missions to South Korea, India, Bhutan and China.

He feels strongly that “all young students who enter medical school are motivated by the altruism of healing the world’s wretched sick. The profession offers many diverse ways in which this passion can be accomplished. Unfortunately, there are many obstacles that increase in difficulty as one attempts to achieve the pure goal…the desires and fire begins to be damped from the very first day in medical school.”

In honor of Dr. Frederick Coller, Dr. Hahn has offered to make a gift to the University of Michigan and Department of Surgery for global volunteerism. Dr. Hahn will be inducted as an honorary member of the Frederick A. Coller Surgical Society.

Oddly enough, while in Peru, Dr. Hahn met Dr. Carlos Peschiera (Thoracic Surgery residency 1944) both trained at UM, they drank a toast to John Alexander.

Dr. Hahn with faculty and residents of 1954

Dr. Hahn and Chairman Mulholland standing outside Dr. Hahn’s home overlooking San Francisco.
Esophageal Adenocarcinoma: An Increasing Deadly Problem

The incidence of esophageal adenocarcinoma has increased steadily and dramatically over the past three decades. The development of esophageal adenocarcinoma from Barrett’s mucosa has been investigated in the laboratory through the use of a DNA-based tool called two-dimensional genome scanning. Regions of DNA that are amplified and therefore present in multiple copies often contain potential oncogenes that are involved in the development and progression of cancer. We first identify the chromosomal regions involved, determine the genes that are both amplified at the DNA and overexpressed at the mRNA level and then characterize the potential cancer-related genes (1-5). We have been at the forefront in the identification and characterization of these amplifications in esophageal adenocarcinomas and are now utilizing this information to begin to therapeutically target these alterations in this cancer. For example, we have demonstrated that amplification of the erbB2 oncogene is present in over 20% of esophageal adenocarcinomas (5), a similar frequency to erbB2 gene amplification in breast cancer which is a currently targeted therapy for using drugs that inhibit the tyrosine kinase activity or by antibodies that target the receptor. By targeting this gene and others that are highly expressed in the cancers including those that might be involved in the progression of Barrett’s metaplasia to dysplasia and ultimately to esophageal cancer, we have utilized gene expression profiling using oligonucleotide microarray technology and have identified a set of genes that are significantly associated with aggressive clinical behavior in early stage lung adenocarcinomas. Most importantly, an index based on the expression of this set of genes can also predict the clinical outcome of an independent set of lung adenocarcinomas. The implications are that if we can identify the group of patients with stage I lung tumors that are at risk for metastasis these patients may benefit from adjuvant therapy which is often not provided to these patients. This study was published in Nature Medicine (8) and provided a large amount of publicity for the University of Michigan and Thoracic Surgery. Further, analysis was also performed on the same lung adenocarcinoma samples examined for gene expression at the protein level using two-dimensional protein electrophoresis combined with protein identification with mass spectrometry. As shown for the survival-related genes (8) we also identified a set of 46 proteins that were significantly associated with patient survival (9). This study revealed that there is complementary information provided by the use of the two approaches of mRNA and protein analysis together, and revealed the glycolytic pathway as being significantly increased and associated with the aggressive lung adenocarcinomas. Ongoing studies have greatly expanded the number of tumors that have been gene profiled with 22,000 gene microarrays to now over 340 lung cancers and thus will allow the potential identification of subgroups of tumors and the genes that best predict the biological and clinical behavior of these lesions.

By examining individual genes and proteins that are associated with aggressive lung tumors we are defining the critical changes that may be future targets for therapy as well as potential biomarkers that may be useful for early detection (10-15). Current studies are examining the presence of highly expressed gene and proteins in the serum of the lung cancer patients with the goal of being better able to diagnose cancer early, as well as being able to monitor for potential tumor recurrence in these patients. We are creating tumor specific microarrays that are then probed with the patient’s serum to examine the antibodies each patient produces to specific tumor antigens. These “auto-antibodies” that are produced by the cancer patients own immune system, have the potential to be present significantly earlier than current technology is able to identify lung lesions and thus may provide a window of opportunity for early cancer detection, early treatment and better patient survival.
We are interested in understanding modulation of the multimeric troponin complex by signaling pathways in cardiac muscle. Troponin is located within the thin filament of the contractile apparatus, and it regulates Ca2+-activated contraction in striated muscle. The inhibitory troponin subunit, troponin I (TnI), plays a critical role and acts as a molecular switch during Ca2+-activated muscle contraction. TnI is phosphorylated by several signaling pathways, including the protein kinase C (PKC) pathway, which is activated by a number of endogenous hormones. We are investigating the TnI residues phosphorylated in the intact cell by PKC, and the contribution of phosphorylated TnI to PKC-mediated changes in contractile performance. Advances in molecular biology and viral-mediated gene delivery now allow us to exchange endogenous TnI with TnI containing substitutions at sites phosphorylated by PKC in adult cardiac myocytes. Recent results from our laboratory demonstrated PKC-mediated TnI phosphorylation plays an important role during relaxation, and is necessary to prevent diastolic dysfunction within cardiac myocytes. We are currently in the process of identifying individual phospho-amino acids responsible for this important modulatory influence on relaxation.

Our earlier work also led us to investigate the role of individual PKC isoforms in mediating the contractile response to specific neuro-humoral agonists. The primary PKC isoforms expressed in adult rat myocytes includes the classical a isoform, and the novel d and e isoforms. These isoforms also are expressed in adult human myocardium. The a isoform, as well as PKCb, another classical isoform, both up-regulate during heart failure. Initial studies from our group demonstrated that PKCa directly modulates contractile function, but does not influence TnI phosphorylation. Instead, PKCa modulates contraction by regulating Ca2+ uptake by the sarcoplasmic reticulum via effects on the protein phosphatase I pathway. Interestingly, we observe that PKCa decreases in human patients receiving ventricular assist device therapy. We hope to one day develop gene therapy tools to further reduce PKCa expression and restore ventricular function in patients experiencing heart failure. In ongoing studies, we are also investigating the influence of other PKC isoforms on TnI phosphorylation and contractile function. Ultimately, we hope that knowledge gained from these studies may lead to an improved understanding of the underlying mechanisms responsible for pathophysiological conditions in the heart, and to better treatment of these conditions.

The Section of Cardiac Surgery is pleased to announce a gift of $450,000 from Terumo Cardiovascular for the Center for Circulatory Support. This gift will enhance existing research and clinical programs, establishing education forums and backing other CCS initiatives including training sites for artificial heart implants and minimally invasive cardiac surgery.
We are planning another reception at the AATS in San Francisco. If you are coming to San Francisco, please notify Ann Boyd Stewart either via email at aboydst@umich.edu or call her toll-free 800-588-5844 and let her know your availability in San Francisco. She will be there from April 10-14, 2005.

Marvin Kirsh Personal Recollections
In conjunction with Dr. Kirsh's ceremony, we are interested in gathering letters from colleagues, residents and friends to be bound for the May 6th John Alexander Reunion. If you would like to participate please prepare a letter on your letterhead as well as any photos you would like to pass along for the upcoming San Francisco event, or mail them to Ms. Stewart. She can also make arrangements to pick them up at the host hotel lobby or you could bring them to the planned reception/dinner.

You are Invited...
All John Alexander Society members are invited to join host Dr. Richard Whyte for a dinner at the best Asian restaurant in San Francisco and just off the Embarcadero: The Slanted Door.

The reception will begin at 6:00pm on Monday, April 11, 2005 followed by dinner.

To rsvp please call Ann Boyd Stewart, Alumni Relations and Development, by March 31st, 800-588-5844 toll-free or email aboydst@umich.edu.

Note: If respondents prefer a different evening, another dinner will be arranged.
THORACIC SURGERY HISTORICAL NOTE:
The surrounding images were taken by the late Dr. Joe Morris. They were created by a thoracic surgeon when he was a TB patient at the Trudeau Sanatorium in Saranac Lake, NY. The murals include nine scenes of a T.B.’s Progress and was brought to UM Hospital and hung on the walls of the TB Ward before the hospital was destroyed.

Who painted the murals? Who brought them to UM? Where are the panels now? And, can you name the doctors on the tombstones and when they died?

Answers will be available in the next issue of the John Alexander Society Newsletter.
John Alexander, the Head of Thoracic Surgery at the University of Michigan, started the first formal thoracic surgery training program in the United States at the University of Michigan in 1928. A Venezuelan surgeon, Cesar Rodriguez, was one of Dr. Alexander’s early residents. Returning home, Dr. Rodriguez urged his young cousin, Otto Gago, to consider training in thoracic surgery at the University of Michigan.

Following his cousin’s advice, Dr. Gago began his internship in 1961 at the University of Michigan Hospital and completed his general surgery residency under Dr. William E. Adams at the University of Chicago where he participated in pioneering work of pulmonary and cardiopulmonary transplantation and developed techniques of pulmonary lobar transplantation in the early 60s. He returned to Ann Arbor in 1965 for his thoracic training under Drs. Cameron Haight, Herbert Sloan and Joe Morris.

Well respected and acknowledged as a superior technical surgeon and physician, he returned to his home in Caracas, Venezuela, but acceptance of techniques learned at the University of Michigan were slow in coming. After 2 years, Dr. Gago returned to Ann Arbor to join the Section of Thoracic Surgery at the University of Michigan and in 1972, he moved to St. Joseph Mercy Hospital full time to help Dr. Joe Morris build an Adult Cardiac Service.

"Otto Gago is the role model for the Michigan Tradition; he strives for excellence in medicine through honesty, integrity and hard work. I am very, very grateful Otto was my doctor."

– BO SCHEMBECHLER

Dr. Gago’s brilliance as a cardiac surgeon has enhanced the lives of countless people throughout the Midwest and internationally. He also never forgot his heritage. Nearly every year he returned home to treat the indigent Venezuelans who could never repay him for his skills and compassion, nor were they asked to do so.

It is his generosity of spirit that has earned him long and cherished friendships. From his innumerable friends, to his surgical team in the operating room and hospital, Dr. Gago deeply values his time with people. As his good friend and grateful patient, Bo Schembechler, will attest: “Otto Gago is the role model for the Michigan Tradition; he strives for excellence in medicine through honesty, integrity and hard work. I am very, very grateful Otto was my doctor.”

The University of Michigan is fortunate that Otto Gago, M.D., returned to Ann Arbor. His skills as a surgeon and teacher were utilized at both the University of Michigan and St. Joseph Mercy Hospital and he has remained a committed friend and supporter of the University. The time has come to honor his achievement and legacy with the creation of the Otto Gago, M.D. Professorship in Cardiac Surgery at the University of Michigan Medical School.

Together, we can build an appropriate, enduring legacy to this brilliant and elegant man who has touched so many lives. This professorship will be invested in perpetuity.

Please join us! It is time to embrace a Michigan Champion.

To make a contribution to the Professorship, please contact
Ann Boyd Stewart, Development Officer
Department of Surgery 2101 Taubman Center, 1500 E. Medical Center Dr. • Ann Arbor, MI 48109-0346 • 800-588-5844 • aboydst@med.umich.edu
The University of Michigan has launched unprecedented plans to build upon its already strong foundation of care and take on the nation’s leading killer. Cardiovascular disease kills more Americans than the next five leading causes of death combined. Among all 50 states, Michigan has the nation’s eighth worst coronary death rate. However, U-M has plans to change that by creating the future of cardiovascular care at the new U-M Cardiovascular Center (CVC).

This is a major endeavor that requires major support. U-M has launched the Cardiovascular Center Fundraising Project to raise $50 million. The success of this project will make it possible to create an internationally recognized center...prominent in scientific research and discovery, committed to excellence in education, and known for state-of-the-art, compassionate care that meets and exceeds our patient needs.

**THE MAGNITUDE OF CARDIOVASCULAR DISEASE**

- #1 Cause of death in the U.S.
- 2,600 deaths daily, one every 34 seconds
- Claims more lives than the next five leading causes of death combined
- U.S. cost is approximately $370 billion, representing more than 21% of U.S. total health care costs.
- State of Michigan has the 8th highest coronary death rate in the nation

Source: American Heart Association 2004 Heart and Stroke Statistical Update  www.americanheart.org