Alzheimer’s disease — Arizona collaboration focuses on disease-slowing and prevention therapies
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Combining the best of conventional medicine with the best evidence-based therapies from the complementary field has yielded the concept of “integrative medicine.” This emerging integration of the best of all possible practices forms the basis of Mayo Clinic’s Complementary and Integrative Medicine Program.

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In this issue of Mayo Alumni, we have the second of an occasional series about collaborations. This feature looks at the Arizona Alzheimer’s Consortium, in which Mayo Clinic participates. This consortium is a nationally recognized model of statewide collaboration in Alzheimer’s disease research, and a complement to the robust research at all three Mayo Clinic locations.

This issue also explores Mayo Clinic’s Complementary and Integrative Medicine Program. With a focus on treating the patient’s mind, body and spirit, integrative medicine draws on expertise and treatments that stimulate the body’s natural healing potential and promote optimal health and well-being — within a scientific, evidence-based framework. The importance of complementary medicine cannot be underestimated — approximately half of all Americans report using it consistently as part of their health care.

You may have noticed in the last year that we are striving to provide more international story angles in Mayo Alumni — to be more inclusive of alumni around the world. Earlier this year we featured a world map showing where alumni are located. In this issue, you will find a story detailing Dr. Tony Windebank’s fellowship and collaboration in Ireland, a look at Dr. Robin Kinsley’s work in South Africa, and a news item about three alumni who have been honored by the Icelandic Surgical Society. These stories provide a good and, sometimes, much-needed reminder that Mayo Clinic alumni are not just in Rochester, not just in the United States, but around the world.

Best regards,

Eric Edell, M.D.
Secretary-Treasurer
Mayo Clinic Alumni Association

About the Cover
Mayo Clinic in Arizona is part of a nationally recognized model of statewide collaboration to slow and prevent the devastation of Alzheimer’s disease.
Alzheimer’s disease is a strong focus for all three Mayo Clinic locations — Rochester, Jacksonville and Arizona. Each is home to leaders in laboratory and patient-oriented research and clinical practice. These scientists are characterizing the very earliest phases of cognitive impairment that may develop into Alzheimer’s disease, including mild cognitive impairment, the transitional period between the cognitive changes of normal aging and very early Alzheimer’s disease.

Mayo researchers have been active in describing the clinical features of individuals who have mild cognitive impairment and following them longitudinally; and studying the factors that predict which individuals will progress to Alzheimer’s disease at a more rapid rate. Clinical trials to alter this rate of progression are under way. Researchers also are studying potential new therapeutics, including anti-inflammatory agents, lipid-lowering drugs, medications that are designed to alter chemical systems in the brain, and certain vitamins and supplements. This pioneering work gives Mayo patients the opportunity to be involved in cutting edge research in the therapeutics of Alzheimer’s disease.

This issue of Mayo Alumni looks at collaborative efforts in Alzheimer’s disease at Mayo Clinic in Arizona, where joining forces with other institutions in the Arizona Alzheimer’s Consortium demonstrates that the strength of collective work is greater than that of individuals. The deliberate and persistent work of Mayo Clinic in Arizona researchers and clinicians and their partnering universities, community organizations, research institutions and other medical centers illustrates the advantage of learning from others. Building these alliances has required each institution to appreciate each other’s complementary resources, skills and culture. This article, part of an occasional series about collaborations, highlights this important endeavor.
COLLABORATION:
Arizona’s Alzheimer’s disease initiative

Just as the normal brain’s cells, regions and operations work together to orchestrate memory and other cognitive abilities, members of the Arizona Alzheimer’s consortium have arranged a research and clinical ensemble. This approach has led to greater achievements than any solo member likely could have achieved.

A meeting of minds
The Arizona Alzheimer’s Consortium is a nationally recognized model of statewide collaboration in Alzheimer’s disease research. Each institution provides important skills, expertise and facilities to lead the consortium to scientific breakthroughs in understanding and early detection of Alzheimer’s disease. Consortium members are determined to find effective treatments to halve the progression and prevent the onset of Alzheimer’s disease in the next decade.

The consortium, formed in 1998, includes more than 120 researchers and support staff from participating institutions. Researchers include neurologists, psychiatrists, neuropsychologists, patient and family care managers, researchers specializing in clinical trials, and neuropathologists who specialize in the evaluation, care and study of Alzheimer’s disease and related disorders. The consortium also includes experts in brain imaging, genetics, computer science, cognitive and basic neuroscience and biostatistics. This diverse and distinguished group of investigators, technicians and clinicians work independently and collaboratively within the consortium.

Sources of support
In 2007, the consortium received $5 million from the Arizona state legislature — a $3 million increase over the annual appropriation; more than $1 million in matching funds from the seven participating institutions; and more than $1 million from the National Institute on Aging — part of the National Institutes of Health (NIH) — for the core resources (see page 8). Consortium researchers also are supported by contributions from member institutions, competitive research grants and contracts from industry. An annual state accounting audit compares the value of consortium products, such as grants obtained, personnel hired and capital equipment purchased, to the total dollars invested by the state. The most recent audit found that the rate of return on the state’s investment is high, emphasizing the importance of this endeavor to the state of Arizona.
Mayo Clinic in Arizona

- Provides expertise in clinical and cognitive aspects of aging and early Alzheimer’s disease, including effects of the Apo-E gene
- Performs blood tests on samples collected by consortium researchers for a large, valuable database used in other consortium studies

Richard Caselli, M.D., is professor and chair of the Department of Neurology at Mayo Clinic in Arizona and one of the directors of the Arizona Alzheimer’s Disease Center, which involves dementia specialists from six clinical sites. They follow 500 patients and healthy volunteers in numerous studies and a brain donation program.

Dr. Caselli contributes to the consortium expertise in the clinical and cognitive aspects of aging and early Alzheimer’s disease. He has particular expertise in the effects of the geneapolipoprotein E (Apo-E) on aging and Alzheimer’s disease. Every person has two copies of every gene — one from the mother and one from the father. The Apo-E gene has three common forms — e3 is the most common, followed by e4; e2 is the least common. The e4 variation has a known correlation to Alzheimer’s disease. Approximately 20 percent of the population has the e4 form of the gene, and approximately 2 percent have two copies of the e4 form of the gene. This 2 percent will almost inevitably develop Alzheimer’s disease if they live long enough.

Rosa Rademakers, Ph.D., assistant professor of Neuroscience, and other neurobiologists at Mayo Clinic in Jacksonville perform specific blood tests on the samples collected by Dr. Caselli and other consortium researchers. These samples have formed a large and valuable database that is used in other consortium studies and Mayo Jacksonville researchers’ work, including the discovery of the genetic basis (tau and progranulin mutation) for frontotemporal dementia.

One of Dr. Caselli’s major investigations with consortium colleagues is a longitudinal study. He collects DNA and imaging data (magnetic resonance imaging [MRI] and computed tomography [CT]) from a specific group of people over time. This longitudinal study is supported by grants from the National Institutes of Health and the state of Arizona, and is based on a close working relationship with brain-imaging colleagues at the Banner Alzheimer’s Institute.
Arizona State University
• Provides statistical and computational expertise to determine effectiveness of treatment for Alzheimer’s disease
• Researches novel immunization therapies

Arizona State University at Phoenix and in Tempe provides the consortium with statistical and computational expertise. Researchers at the university develop, implement, apply and test image analysis techniques that can help characterize alterations in the brain function and structure of people affected by or at risk for Alzheimer’s disease. This analysis is used to determine the effectiveness of treatment and to halt the progression or prevent the onset of the disease.

Arizona State University also has two research teams working on developing novel immunization therapies to treat Alzheimer’s disease.

Barrow Neurological Institute
• Investigates ways to detect changes in brain structure, connectivity and functioning in Alzheimer’s disease, related disorders and normal aging, including using MRI and cognitive testing
• Contributes to understanding of Alzheimer’s disease neurobiology

Researchers at the Barrow Neurological Institute at St. Joseph’s Hospital and Medical Center are investigating effective ways to detect changes in brain structure, connectivity and functioning in Alzheimer’s disease, related disorders and normal aging. A team of basic neuroscientists is contributing to the understanding of Alzheimer’s disease neurobiology.

Research in the Barrow Neurological Institute neuroimaging laboratory is focused on using magnetic resonance imaging and cognitive testing to distinguish normal changes in memory functioning during aging from brain changes that occur during the early stages of Alzheimer’s disease.

Translational Genomics Research Institute (TGen)
• Provides clinical experts and basic research scientists in neurogenomics who work at cellular and molecular levels to understand the role of gene proteins — the basis for discovering new treatments
• Published the first genome-wide study of Alzheimer’s disease, which found a possible new susceptibility gene

The Translational Genomics Research Institute (TGen) is a nonprofit biomedical research institute whose mission is to make and translate genomic discoveries into advances in human health. TGen’s neurogenomics division has multiple research areas that cover the spectrum of neurologic disease. TGen has a unique mix of clinical experts and basic research scientists in neurogenomics who work at the cellular and molecular levels to understand how gene proteins function. This intensive research, focused entirely at the molecular level in the laboratory, is the basis for discovering new treatments for Alzheimer’s disease.

Researchers in this program recently published the first genome-wide study of Alzheimer’s disease, surveying inherited genetic structures. This study, which included a collaboration with Mayo Clinic researchers in Arizona, Jacksonville and Rochester, found a possible new Alzheimer’s susceptibility gene (GAB2) and suggested how the protein produced by this gene may be related to Alzheimer’s neuropathology.

“We have entered a new era in medical research. Today’s technologies permit us to survey a sufficient number of letters throughout the human genome to provide a clearer picture of how life works and ultimately allow better clinical management of patients. These new, robust tools may eventually allow us to improve our ability to diagnose Alzheimer’s disease, even before it strikes.”

— Dietrich Stephan, Ph.D.
TGen Neurogenomics Division
Sun Health Research Institute

- Provides the largest single group of basic neuroscientists for the study of Alzheimer’s disease and related disorders
- Provides a clinical trials program
- Provides a large deceased donor brain tissue bank from people who were cognitively and neuropathologically normal at the time of death

Located in Sun City, the nation’s first retirement community, the Sun Health Research Institute provides the consortium with the largest single group of basic neuroscientists dedicated to the study of Alzheimer’s disease and related disorders, and a highly productive clinical trials program. It also is home to the Arizona Alzheimer’s Disease Center’s Neuropathology Core, which has an extraordinarily high-quality deceased donor brain tissue bank from a large number of people who were cognitively and neuropathologically normal when they died. This resource, which recently has been extended to include whole body donation, provides neuropathological diagnoses and brain tissue to researchers inside and outside the state.

University of Arizona - Tucson

- Provides leaders in imaging analysis and cognitive neuroscience and the application of these technologies to the study of memory and normal aging. Their work includes brain imaging studies in humans and laboratory animals. The university provides the consortium with facilities in addition to those in Phoenix, Tempe and Scottsdale, which expands the geographic region for patient and subject population on collaborative projects.

Banner Alzheimer’s Institute

- Studies brain images of cognitively normal people at genetic risk for Alzheimer’s disease
- Expertise in testing and image analysis techniques that characterize alterations in brain function
- Early detection, tracking and development of techniques that will rapidly evaluate promising treatments for the primary prevention of this disease

“We hope that this study, along with the genome-wide genetics studies to come, will contribute to the clarification of Alzheimer’s risk factors and disease mechanisms, the discovery of promising new disease-slowing and prevention therapies, and the identification of patients and at-risk people most likely to benefit from those treatments.”

— Eric Reiman, M.D.
Banner Alzheimer’s Institute

The Banner Alzheimer’s Institute was established in 2006 to leverage extremely productive clinical trials, positron emission tomography (PET), MRI and genomics programs. The programs evaluate promising disease-slowing and prevention therapies in a rapid, rigorous and cost-effective setting; establish a new standard of care to better address the patient and family’s medical and nonmedical needs; and continue to forge a model of multi-institutional collaboration in biomedical research.

Home to Eric Reiman, M.D., director of the Arizona Alzheimer’s Consortium and the director of the consortium’s Clinical Therapeutics Core, the Banner Alzheimer’s Institute includes a memory disorders center and programs for family and community services, clinical trials and translational genomics. In partnership with Dr. Caselli and his Mayo colleagues, Banner Alzheimer’s Institute investigators have been conducting an NIH-sponsored longitudinal brain-imaging study of cognitively normal people. Participants in the study represent three levels of genetic risk for Alzheimer’s disease — two copies, one copy or no copies of the Apo-E e4, a common Alzheimer’s disease susceptibility gene. The study aims to help in the early detection and tracking of Alzheimer’s and in the development of a rapid way to evaluate promising treatments for the primary prevention of this disease.
Pre-mild cognitive impairment: identifying a precursor

Mild cognitive impairment (MCI) is thought to be the earliest symptomatic stage of Alzheimer’s disease. Patients with MCI have memory trouble but function well enough to maintain complete independence.

However, studies of healthy people who exhibit no memory loss sometimes show a decline in performance on neuropsychological tests. This stage, termed pre-MCI, suggests that people who exhibit such test decline are at increased risk for clinical symptoms of MCI to emerge within the following two to three years. These people are especially likely to develop symptoms of MCI if their test declines were on memory tests and if they are among the 2 percent of the population that carries two copies of the APOE e4 gene.

Lewy bodies: a link among multiple diseases

Dementia with Lewy bodies is the second-most frequently occurring dementia illness, after Alzheimer’s disease. Lewy bodies are a microscopic abnormality detectable in certain brain cells. Patients who have Parkinson’s disease also have signs of Lewy bodies. Patients who have dementia with Lewy bodies frequently have symptoms of parkinsonism and an unusual sleep disorder called REM Sleep Behavior Disorder in which they act out their dreams.

In a longitudinal study, Mayo researchers are surveying the sleep patterns of individuals who have different dementia-related symptoms and identifying those who have this dream-enactment behavior. Positron emission tomography (PET) scans on a group of these individuals have shown subtle abnormalities that resemble those seen in patients who have dementia with Lewy bodies. In other words, researchers think that PET scans of otherwise completely healthy individuals who act out their dreams when they sleep show that they may be at risk for developing dementia with Lewy bodies.
Within the Arizona Alzheimer’s Consortium is the Arizona Alzheimer’s Disease Core Center, a program supported by the state and the National Institute on Aging. The Arizona Alzheimer’s Disease Core Center is one of 29 such centers in the country that are working to translate research advances into improved diagnosis and care for Alzheimer’s disease patients, and focusing on the long-term goal of the National Institute on Aging — curing and possibly preventing Alzheimer’s disease. Each Alzheimer’s Disease Research Center is unique in approach and area of emphasis, but all enhance Alzheimer’s disease research by providing a network for sharing new ideas and research results. Collaborative studies draw upon the expertise of scientists from many different disciplines.

The Arizona Alzheimer’s Disease Core Center is one of the National Institute on Aging’s most productive Alzheimer’s disease centers in research projects. This center has five designated “cores” that play specific roles in creating smooth, effective research collaboration.

### Administrative Core, Database Management Program Core
The Administrative Core of the Arizona Alzheimer’s Disease Core Center is directed by Dr. Reiman at Banner Alzheimer’s Institute. The Administrative Core provides the scientific leadership, organizational structure and data management and promotes the center’s integration, productivity and growth. The Administrative Core also fosters communication and interaction among investigators, and ensures its scientific and fiscal accountability. Within the Administrative Core is the Database Management Program Core led by Gene Alexander, M.D., at Arizona State University in Tempe. This component focuses on implementing new database programs, features and procedures to expand and enhance the ability to provide a high level of quality control for data.

### Clinical Core
The Clinical Core, under Dr. Caselli’s leadership, is charged with identifying and following patients at all stages of Alzheimer’s disease and dementia-related illnesses. Patients undergo a diagnostic battery of tests that provide demographic, historical, medical, neurological, psychiatric and neuropsychological data and information. The Clinical Core capitalizes on several unique strengths of the collaboration among multiple institutions. These strengths include a patient population from a large area represented by all the major tertiary care referral centers in Arizona, and access to existing groups of dementia patients and their age-matched controls (subjects who do not have dementia) already committed to participation in the brain-bank program. Multiple institutions also provide regional access to Latino and Native American populations through community outreach and educational services. Also available for study from a separately funded, ongoing project are groups of cognitively normal individuals at genetic risk for Alzheimer’s disease due to the e4 genotype.

### Neuropathology Core
The Neuropathology Core provides neuropathologic diagnoses for patients studied by the Clinical Core and provides brain tissue and other specimens for studies by basic scientists. The Neuropathology Core is led by Thomas Beach, M.D., at Sun Health Research Institute, which has had a brain-donation program devoted to Alzheimer’s disease research for more than 12 years. Over this time, more than 800 brains representing the full spectrum of dementia-related disorders have been collected, stored and disbursed to more than 200 Alzheimer’s disease researchers all over the world, and to four Alzheimer’s disease laboratories. An additional 600 people have consented to brain donation.
Consortium accomplishments

The Arizona Alzheimer’s Consortium conducts more than 40 research studies per year, almost all involving collaborations among scientific disciplines and half involving collaborations among consortium members and other participating institutions in the state. The consortium also includes numerous independently funded studies. Consortium researchers continue to make pioneering contributions to scientific understanding, early detection and tracking of Alzheimer’s disease, and to the discovery and evaluation of promising disease-slowing and prevention therapies. The following list is a snapshot of consortium studies and findings:

- Consortium researchers have discovered some of the molecular mechanisms, physiological processes and risk factors that appear to contribute to the development of Alzheimer’s disease — providing targets for new treatments. For example, researchers have suggested how brain inflammation, cholesterol, vascular disease and soluble amyloid contribute to Alzheimer’s pathology. They also have uncovered new ways to treat and prevent the disease and begun to develop several promising immunization therapies.

- Using powerful brain-imaging techniques, consortium experts are moving closer to early detection and tracking of Alzheimer’s disease. Some changes are apparent in young adults almost 50 years before the onset of memory and thinking problems. Researchers also have shown how these predictive techniques can be used to quickly evaluate disease-slowing and prevention therapies.

- Significant progress has been made in understanding how brain cells, brain regions and mental operations work together to orchestrate memory and other thinking abilities, and how certain cells and areas of the brain seem more susceptible to normal aging and Alzheimer’s disease. Consortium experts are using this information to discover new treatments.

- Using powerful genetics tools, researchers have recently discovered genes that account for individual differences in normal human memory — providing targets for memory-enhancing treatments. Consortium institutions have begun to test some of these treatments in aged rats. Consortium researchers are using the same genetics tools to identify genes that contribute approximately 80 percent of Alzheimer’s risk.

- Consortium members have begun to develop an extremely productive Alzheimer’s disease clinical therapeutics program, with the goal of enrolling 1,000 patients and 1,000 Apo-E-genotyped healthy volunteers in clinical trials each year. Researchers also established the brain-imaging infrastructure needed to study the effects of disease-slowing treatments every two years and primary prevention therapies every three years. In this way, researchers intend to find effective disease-slowing and prevention therapies within the next decade.
The Mayo Alzheimer’s Disease Research Center is one of 29 Alzheimer’s disease research centers in the United States designated and funded by the National Institute on Aging, part of the National Institutes of Health. The Mayo Alzheimer’s Disease Research Center is jointly based in Rochester and Jacksonville.

The center has been at the forefront of the research and discovery of neuropathology of non-Alzheimer’s disease dementias, such as frontotemporal dementia, dementia with Lewy bodies and vascular dementia. Investigators in the Alzheimer’s Disease Research Center examine autopsy materials such as brain and organ tissue from individuals followed in the center’s studies to learn about the underlying pathologic causes of disease. The large number of normal elderly subjects who have volunteered for the studies provides researchers with opportunities to learn about the underlying foundation of normal aging changes in the brain and to compare the changes found in these subjects to those of individuals who have dementia diseases.

Mayo Clinic in Jacksonville

Since 1989, scientists at Mayo Clinic in Jacksonville have studied individuals with Alzheimer’s disease and other neurological conditions as part of the NIH-funded Alzheimer’s Disease Research Center. In addition, Mayo Clinic in Jacksonville has a state-designated Memory Disorder Clinic. Such clinics are sponsored in part by Florida’s Department of Elder Affairs and are the state’s focal points for research, training and services directed to residents with symptoms of Alzheimer’s or related dementias. The services are available to all residents of Florida, regardless of their ability to pay.

Mayo Clinic in Jacksonville has recruited and is following a large number of black study participants, providing increased diversity to the study pool. The Mayo Jacksonville research group has a cohort of 200 to 300 normal elderly black individuals and is following this group longitudinally to determine predictors that might lead to Alzheimer’s disease. These studies have resulted in identifying factors involving these participants’ genetics, blood proteins and neuroimaging characteristics that may be useful in developing prediction models.

Laboratories at Mayo Clinic in Jacksonville have been involved in research designed to understand and prevent Alzheimer’s disease and frontotemporal dementia. Several laboratories are involved in studying the protein, amyloid — believed to be a major factor in the development of Alzheimer’s disease. Mayo Jacksonville researchers are among the world’s leaders in this research and have investigated characteristics of the amyloid protein and genetic factors that may predispose individuals to developing this protein. Studies
involving humans and mouse models with Alzheimer’s disease have yielded exciting new potential diagnostic tests for the disease. A blood test that may shed light on an individual’s risk of getting Alzheimer’s disease is in development. Such a blood test could be used as either a diagnostic tool or, possibly, to monitor specific drugs developed to affect the amyloid protein in the body. Recent studies have indicated that a certain genetically driven elevation of this protein may play a major role in the development of typical late-onset Alzheimer’s disease.

Investigators at Mayo Jacksonville also have focused on the identification of novel compounds that may lower the amyloid protein in the brain. By studying many compounds that are already approved by the Food and Drug Administration and are on the market, researchers may gain insight into new therapeutic options. Looking at these approved drugs narrowed down the compounds and has already helped researchers identify a subgroup of drugs with anti-inflammatory action that may have specific action on the amyloid protein. This work has been translated into clinical trials, which are under way, to investigate the potential utility of these new therapeutic agents.

Research also is progressing on a better understanding of the genetics, pathological development and, hopefully, treatment of individuals who have frontotemporal dementia. Mayo Jacksonville researchers were among the first to identify novel genetic mutations in some families that have frontotemporal dementia. This work has led to an animal model of the disorder and a better understanding of the causes of the disease. Work is continuing toward therapeutics for this form of dementia, and a new project focuses on a particular subtype of individuals with frontotemporal dementia who also have features of neurological diseases that affect motor functions.

Mayo Clinic in Rochester

Mayo Clinic in Rochester is home to a National Institute on Aging-funded registry on aging and dementia that serves as a depository for information about patients with aging and dementia-related illnesses. Mayo researchers are using the registry in a longitudinal project to track and measure clinical, epidemiological, genetic, biomarker, imaging and neuropathological aspects of aging and very early cognitive impairment. The researchers are developing models for predicting subsequent cognitive impairment in normal elderly persons. Much of the work has focused on mild cognitive impairment as an intermediate stage between normal aging and Alzheimer’s disease. Recently, Mayo researchers have begun a project in Rochester, funded by Mayo Clinic, investigating why some people age better than others.

Ronald Petersen, M.D., Ph.D., a professor of Neurology at Mayo Clinic and director of the Mayo Alzheimer’s Disease Research Center, was honored with what has been called the Nobel Prize of Neurology. The Potamkin Award was presented to Dr. Petersen by the American Academy of Neurology. The award honors and rewards leading researchers who advance understanding of Alzheimer’s disease and related disorders. The selection committee noted what it called Dr. Petersen’s seminal contributions in establishing the concept of mild cognitive impairment as a bona fide diagnostic category between normal aging and early dementia.

— Trisha Dillon
Robin Kinsley, M.B.B.Ch.

Johannesburg, South Africa
Cardiac Surgery residency, Mayo Clinic, 1972–1973
Director, Walter Sisulu Pediatric Cardiac Centre for Africa,
Sunninghill Hospital

Robin Kinsley, M.B.B.Ch., has had a 38-year career and performed more than 20,000 cardiac operations. But he refers to his residency at Mayo Clinic as the most fulfilling time of his life.

“It was stimulating, exciting and productive, and I connected with the most extraordinary individuals practicing medicine in a true Hippocratic fashion,” he says. “At that time, Mayo was almost a pediatric cardiac surgical hub for the entire world. I recall children visiting from every corner of the world to have corrective cardiac surgery. Concurrently, trainee surgeons from a multitude of countries learned their trade at Mayo and then returned home to establish successful programs. What an impact Mayo and its teachers had on the global development of cardiac surgery — not only by training foreigners but also by engaging in groundbreaking research.

“I knew I would return to the continent of Africa, where I was born,” says Dr. Kinsley. “During my residency, I began to form a vision: Why not have a Mayo for the continent of Africa?”

After practicing Cardiothoracic Surgery at the University of the Witwatersrand for 11 years and in private practice in South Africa for 16 years, Dr. Kinsley brought his vision to life in 2003. He opened the Walter Sisulu Pediatric Cardiac Centre for Africa. Like the Mayo model Dr. Kinsley has tried to replicate, the Walter Sisulu Pediatric Cardiac Centre for Africa is a surgical hub for pediatric cardiac surgical patients in all of Africa. The center also has a training program for surgeons from neighboring countries, particularly those in southern Africa, to ensure there are enough surgeons today and in future years. Like Mayo, the center also engages in clinical research.

Dr. Kinsley and his colleagues operate on approximately 500 children per year. Most patients are from South Africa and have medical insurance. The rest are poverty stricken children predominantly from Africa, whose care is funded by the organization’s foundation.

The center is a nonprofit organization with a trust and registered board of trustees; neither private nor public but, rather, philanthropic. "We have a ‘rob Peter to pay Paul’ system. We use sutures for our private-insurance patients on the condition that they donate sutures for our poor patients," says Dr. Kinsley. The center hopes to garner donor support to increase the number of underprivileged patients it treats annually. "I look forward to the day when patients will not be declined through lack of funds."

Nelson Mandela is the patron of the Walter Sisulu Pediatric Cardiac Centre for Africa. Sisulu, a South African anti-apartheid activist and member of the African National Congress, was Mandela’s mentor. The two men were incarcerated together for 27 years. When Sisulu died in 2003, Mandela, describing him as a hero among heroes, said there should not be a chunk of cement to honor his friend; rather, there should be a living memorial. “Xhamela (Walter Sisulu) is no more. May he live forever! His absence has
A Mayo alumnus and two presidents: Dr. Robin Kinsley, director of the Walter Sisulu Pediatric Cardiac Centre for Africa, with Nelson Mandela, former president of South Africa and patron of the center, and former President Bill Clinton. In 2006, on the occasion of his 88th birthday, President Mandela invited President Clinton to join him in visiting the center. To honor President Mandela, the former U.S. president and his wife, Sen. Hillary Clinton, donated money to save the lives of two pediatric cardiac patients — one from the Democratic Republic of the Congo, the other from Mozambique. The center sends the Clintons regular updates on the progress of “the Clinton children.” President Clinton said the center is a great gift to the continent of Africa.

carved a void. A part of me is gone,” said President Mandela in a tribute to his friend.

“Walter Sisulu had a passion for children, justice and a nonracial, democratic South Africa,” says Dr. Kinsley, who treated Sisulu. “President Mandela said Walter Sisulu helped him understand that his real vocation was to be a servant of the people. I thought, what better way to keep his memory alive than to operate on underprivileged children from South Africa and other African countries so they could return to their homes and truly live Sisulu’s memory through normal lives.”

Where are you from?
I’m from South Africa — born in Pietermaritzburg in the province of Kwa Zulu-Natal.

What led you to Mayo?
I started training in cardiac surgery in 1969, shortly after Dr. Christian Barnard — also from South Africa — performed the first heart transplant. During that period, I was inspired by publications emanating from Mayo Clinic — in particular, the works of Drs. John Kirklin (Cardiovascular Surgery), Gian Rastelli (a research associate in Cardiovascular Surgery) and
Dwight McGoon, who was head of Cardiac Surgery.

I realized that if I wished to become a cardiac surgeon with an interest in pediatrics, I needed to go to the world-famous Mayo Clinic.

I had received various awards in my home country (Medical Graduates Association Prize for best undergraduate student in medicine; Glaxo-Allenbury Prize for Surgeons-in-Training; Jamie Miller Prize for best postgraduate surgical student from the University of the Witwatersrand; Cecil John Adams Travelling Fellowship) that made my residency possible and more affordable.

_What role has Mayo played in your career?_

My mentor and role model was Dr. Dwight McGoon. His humility, intellect, spirituality, surgical dexterity, demeanor and unselfish concern for the welfare of fellow human beings have been a source of continued inspiration to me. I will forever be indebted to this remarkable man for the way he molded my entire career and work ethics. The privilege of associating with him had a profound and enduring influence on my career. Dr. McGoon, together with Drs. Robert Wallace (Cardiovascular Surgery) and Gordon Danielson (Thoracic Surgery), taught me the essential attributes of a pediatric cardiac surgeon — wisdom, guidance, perseverance, persistence, personal integrity and extreme parental trust.

The collegiality and camaraderie at Mayo astounded me. My wife, Thea, and I established many enduring friendships.

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The collegiality and camaraderie at Mayo astounded me. My wife, Thea, and I established many enduring friendships.

_How does Mayo factor into your day-to-day life?_

I believe that wherever one travels in the world, one can recognize a Mayo-trained doctor. My time at Mayo has an effect on every minute of my daily life as I try to incorporate the principles and ethics of medical care that I learned at Mayo Clinic.

Dr. Robin Kinsley has tried to replicate the Mayo model at the Walter Sisulu Pediatric Cardiac Centre for Africa, making it a surgical hub for pediatric cardiac surgical patients in all of Africa, a training location for surgeons from neighboring countries and a clinical research site.
What do you want alumni to know about South Africa?

Pediatric cardiac surgery in Africa is very different. Patients present very late, and there is a high incidence of rheumatic heart disease and endomyocardial fibrosis.

The Walter Sisulu Pediatric Cardiac Centre for Africa is rather unique in the world. It is a first-world unit equal to the best in the world. But we treat first-world, affluent or funded patients; as well as those who are from third-world, impoverished backgrounds who are sponsored by our foundation. We make no distinction between patients but, rather, treat all in a common environment.

“I believe that wherever one travels in the world, one can recognize a Mayo-trained doctor.”

What would others be surprised to know about you?

I am a founding member and on the Governing Council of the recently formed Society of Pediatric and Congenital Heart Surgery, representing the continent of Africa. In May 2007, the society held its first inaugural meeting in Washington, D.C. Its mission is to ensure that every child born anywhere in the world with a congenital heart defect should have access to appropriate medical and surgical care.

— Melissa Abrams

The Doctors Mayo Society

- The Doctors Mayo Society has 1,900 members — 11.5 percent of all Mayo Clinic alumni.

- The Doctors Mayo Society members represent 95 specialties and live in all 50 states and 15 countries.

- Without philanthropy, some of Mayo’s most important programs in education and research could not exist.

For information about
The Doctors Mayo Society,
call Robert Giere,
director of Alumni Philanthropy, 800-297-1185,
e-mail TDMS@mayo.edu or visit www.mayoclinic.org/development (click on “Benefactor Organizations”)

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In the fall of 2004 at a Mayo Alumni Association meeting in Limerick, Ireland, Anthony Windebank, M.D., a Mayo Clinic neurologist and professor of Neurology, was invited to lecture about his spinal cord injury research. Among the attendees was Timothy O’Brien, M.D., Ph.D., a former consultant in Endocrinology at Mayo Clinic in Rochester. Dr. O’Brien had returned to his Irish homeland in 2000 to head the new Regenerative Medicine Institute at the National University of Ireland, Galway (REMEDI) and chair the Department of Medicine at that university.

“Dr. O’Brien attended my lecture and realized that Mayo’s research was complementary to REMEDI’s programs,” says Dr. Windebank. “REMEDI researchers are involved in tissue engineering for cardiovascular, pulmonary and muscular diseases. Tissue engineering involves combinations of cell therapy, gene therapy and materials science used to build new organs. REMEDI researchers were interested in expanding into nervous system regeneration, which strongly relates to my area of interest. At the meeting, Dr. O’Brien and I talked about possible collaboration.”

Dr. O’Brien presented information at the meeting about funding sources from the Science Foundation of Ireland to promote collaboration between Irish and international researchers. One source of funding is the ETS Walton Fellowship that supports leading international scientists while they conduct collaborative research in Ireland for 12 months.

“If the Science Foundation agreed, Dr. O’Brien’s group at REMEDI wanted to collaborate with me to develop models of spinal cord injury that they could then use as a platform for the stem cell technology being developed at REMEDI,” says Dr. Windebank.

It started in Limerick: Dr. Anthony Windebank (left) and Dr. Timothy O’Brien — both Mayo Clinic alumni — met at a Mayo Alumni Association meeting in Limerick, Ireland, and recognized that their research interests were complementary.

The right place at the right time

Mayo Alumni Association meeting in Ireland leads to international collaboration
The collaboration would benefit research in Ireland and would help build the regenerative medicine research efforts at Mayo Clinic by providing access to the most advanced stem cell technologies. Researchers at REMEDI are world leaders in the development of potential clinical applications for adult stem cell technology.

“Adult stem cell research shows a lot of promise for treating various diseases, especially those involving bone, muscle and cartilage,” says Dr. Windebank. “Adult stem cells can be isolated from bone marrow or adipose (fat) tissue and used to deliver specific gene products that would promote regeneration in the nervous system. Embryonic stem cells have the potential for replacing almost any organ in the body, but their use is more complicated because of ethical issues and potential tumor development.”

Dr. Windebank was nominated for the Walton Fellowship by the National University of Ireland. He was one of five researchers from around the world who was awarded a fellowship by the Science Foundation of Ireland in early 2005 to conduct research at an Irish university. The fellowship opportunity came at a perfect time in Dr. Windebank’s career. “I had just completed 14 years of administrative activities as dean of the Mayo Graduate School, then dean of the medical school,” he says. “During that time, I had been able to maintain my research program because of superb colleagues in the laboratory. Spending a year learning new technologies would be an opportunity to move our research to a new level. Since it is unusual for Mayo staff to take sabbaticals, it was important to have support from my department and the institution. There was enthusiastic support from both because of the possibility of building global collaborations in areas that have great potential for developing new treatments for our patients. The fellowship also would be a personal opportunity — I have strong family ties in Ireland.”

The fellowship

During the year, Dr. Windebank brought together 14 researchers from four departments at the National University to collaborate on studies using adult stem cells in the treatment of spinal cord injury. Dr. Windebank gained knowledge about the biology of adult stem cells derived from bone marrow and how these cells could be manipulated by gene modification technology. He also learned how biomedical research is supported, administered and developed in another country. One fellowship requirement was to deliver lectures to the general public about his research. “It is challenging but exciting to give talks to the community about complex biomedical research,” says Dr. Windebank, who gave public lectures in three major Irish cities — Cork, Dublin and Galway. “It is important to communicate concepts without causing confusion by...
overwhelming the audience with scientific details. Involving the community in discussions about the direction for medical research is more advanced in Europe than in the United States.”

During his fellowship, Dr. Windebank was responsible for maintaining his research program in Rochester. He is a co-principal investigator in the spinal cord injury research program along with Michael Yaszemski, M.D., Ph.D., a professor of Biomedical Engineering and Orthopedics at Mayo Clinic. This research team has developed biotechnology that supports nerve regeneration, and completed animal studies that are the first steps showing that tissue engineering technology supports regeneration of nerve fibers in the spinal cord. The team is using cells from the research in Ireland in nerve regeneration and spinal cord injury research at Mayo Clinic.

“I returned to Mayo Clinic monthly to maintain my program,” says Dr. Windebank. “We also had daily Internet-based videoconferences so that I could meet one-on-one with the researchers in my lab in Rochester. Without the right communications technology in place, it would not have been possible. The pace of research in my lab did not slow at all. In fact, we published 14 full-length papers in 2005 and 2006.”

Family ties

During his year in Ireland, Dr. Windebank strengthened his family ties.

“My mother, Mareea, grew up in Ireland and moved to England during World War II, at age 19,” says Dr. Windebank. “She joined the Women’s Auxiliary Air Force and commanded a unit flying barrage balloons. In Scotland, she met my father, Alfred, who was English. She had four sisters; two stayed in Ireland (one is alive and lives in Ireland; the other died about 10 years ago), and there are now six families of cousins in Ireland.”

Dr. Windebank enjoyed getting reacquainted with these relatives whenever possible. A highlight was introducing his wife, Karen, who had never met any of his Irish relatives.

“Before we went to visit my cousins, one called to ask about my wife. He asked, ‘Is she posh?’ He wanted to know if she is highbrow,” says Dr. Windebank. “After we went to visit and all had a wonderful evening together with lots of Irish fun, the cousin came over and said, ‘She’s grand! She’s just like one of us.’”

Four of the Windebanks’ five grown children visited Ireland that year. The fifth stayed in Rochester and presented them with their first grandchild. Dr. Windebank aptly describes the period of his fellowship as “an all-around productive year.”

“Alumni have a unique connection because we already have this common bond of understanding, trust and respect — we’ve all been a part of Mayo. It is as if the doors are already open — and there is nothing to stop you from walking through.”

— Anthony Windebank, M.D.
New programming at home and abroad

Dr. Windebank hopes the strength of the research and the collaboration between REMEDI and Mayo Clinic will lead to new therapies for patients on both sides of the Atlantic.

The fellowship in Ireland has led to other exchanges of talent — Irish researchers coming to Mayo Clinic, and Mayo researchers traveling to Ireland.

“We are directly starting to exchange research trainees,” says Dr. Windebank. “For instance, a resident who has completed his Internal Medicine residency at the National University of Ireland has received a grant from the Irish government to complete a three-year fellowship. During this time, he will complete a Ph.D. degree at the National University and will do a substantial part of his research training at Mayo Clinic. Another person who has just completed her Ph.D. will be coming for a two-year postdoctoral fellowship at Mayo Clinic.”

The exchanges are not limited to the research arena. Dr. O’Brien also is director of the residency training program at the National University of Ireland, Galway. Early in 2007, Dr. O’Brien and the president of the National University visited Mayo Clinic. The first formal exchange of Internal Medicine residents began in the summer of 2007. Ireland is well known for having some of the best clinical training programs in the world, and the partnership has the potential to enhance training in Ireland and at Mayo Clinic.

Dr. Windebank stays in close contact with the National University and colleagues in Ireland. Since his fellowship ended in September 2006, he has returned for eight weeklong visits to continue the collaboration.

“The most rewarding part of the fellowship was the opportunity to learn from each other,” says Dr. Windebank. “Although the Walton Fellowship is intended as a mechanism to bring leading researchers to Ireland to enrich research in Ireland, I learned at least as much from the researchers there as I brought to the country.

“This type of global collaboration is the future of medical research,” he says. “It is clear to me that the fellowship was the catalyst for a significant advance in the application of stem cell technology to potential treatment for patients who have neurodegenerative diseases, such as amyotrophic lateral sclerosis.”

Dr. Windebank also recognizes that the collaboration resulted from a Mayo Clinic Alumni Association meeting.

“These meetings bring people together and give them a forum to discuss their research activities,” he says. “Alumni have a unique connection because we already have this common bond of understanding, trust and respect — we’ve all been a part of Mayo. It is as if the doors are already open — and there is nothing to stop you from walking through.”

— Maren Dale

Anthony Windebank, M.D.

Consultant, Department of Neurology, Mayo Clinic
Professor of Neurology, Mayo Medical School and Mayo Graduate School
Former Dean, Mayo Medical School
Former Dean, Mayo Graduate School
Chair, Interdepartmental Program in Molecular Neuroscience, Mayo Clinic
Past Section Head, Department of Neurology, Mayo Clinic
Joined Mayo Clinic staff in 1980

Fellowship: Neurology, Mayo School of Graduate Medical Education
Residency: Neurology, Mayo School of Graduate Medical Education
Medical school: Oxford University Medical School, Oxford, England
Graduate: Master’s degree, Oxford University
Undergraduate: Oxford University
Native of: Bournemouth, England
Family: Wife, Karen Weavers; five children
Complementary and Integrative Medicine Program

“The myriad claims and promises encompassed in the realm of complementary and alternative medicine can be daunting to a patient who has a serious medical problem. Helping patients to separate the wheat from the chaff means we must study various therapies with the scientific rigor we use to study any other medical treatment. In this manner, we can identify those therapies that truly help, those that do not help and those that cause harm.”

— Brent Bauer, M.D.

Complementary and alternative medicine (CAM) therapies remain a consistent part of health care for approximately half of all Americans. As research and knowledge about these therapies have advanced, it has become increasingly possible to identify those that are safe and beneficial and appropriate to integrate into a comprehensive approach to health care. Combining the best of conventional medicine with the best evidence-based therapies from the complementary field has yielded the concept of “integrative medicine.” This emerging integration of the best of all possible practices forms the basis of Mayo Clinic’s Complementary and Integrative Medicine Program.

With a focus on treating the patient’s mind, body and spirit, integrative medicine draws on expertise and treatments that stimulate the body’s natural healing potential and promote optimal health and well-being. Many CAM therapies are well known; others are somewhat mysterious. The most common CAM therapies integrated into conventional medicine include acupuncture, chiropractic care, massage therapy, homeopathy, stress management and herbal therapy. Treatments growing in popularity include art and music therapy, meditation, and Reiki, a Japanese technique for stress reduction and relaxation.

CAM has grown from a field viewed with skepticism by mainstream medicine a few years ago to a recognized component of today’s health care.

Mayo Clinic’s Complementary and Integrative Medicine Program, established six years ago, meets the growing interest among patients and providers in wellness-promoting activities that are not typically part of conventional medical care. The evidence-based program (therapies that are professionally studied and clinically proven to be effective) provides consultation to Mayo patients and physicians about the use of complementary therapies. The program, which integrates the best of conventional and alternative medicines, is a natural fit for Mayo’s team approach and commitment to treating the whole patient.
The genesis

Brent Bauer, M.D., an Internal Medicine specialist and director of Mayo Clinic’s Complementary and Integrative Medicine Program, noticed the increasing popularity of complementary treatments in 1992 when he practiced at Mayo Clinic in Arizona.

“Patients were asking about alternative treatments and how to integrate them into their care, if they had not done so already,” says Dr. Bauer. “Sometimes, CAM provides options for meeting patient needs that we cannot completely meet with conventional medicine. It was time to integrate the best of complementary treatments with the best of conventional medicine.”

When he moved to Mayo Clinic in Rochester in 2001, Dr. Bauer made the case for an integrative medicine program to the Department of Medicine and to Mayo Administration.

Results of patient surveys in Mayo Clinic’s Department of Oncology and Spine Center showed that more than half of patients used alternative treatments. This finding was similar to national studies which showed that 40 percent to 60 percent of people use some kind of complementary treatment.

Dr. Bauer’s proposal for the Mayo Clinic Complementary and Integrative Medicine Program received the green light, and he was named director. Established as a program within the Division of General Internal Medicine, the program is now offered at all Mayo Clinic departments and locations.

Integrative medicine programs across the rest of Mayo

Mayo Clinic in Arizona is developing a complementary and integrative medicine program, and Mayo Clinic in Jacksonville is collaborating with Mayo Clinic in Rochester colleagues on studies of complementary interventions. Some Mayo Health System organizations, including Franciscan Skemp Healthcare in La Crosse, Wis., have implemented CAM treatments. Last year, Franciscan Skemp opened a Center for Health and Healing in its new regional facility in Onalaska, Wis. The facility has 5,000 square feet of space devoted to complementary and integrative therapies.

In practice

Mayo Clinic in Rochester has the most developed program, with the greatest variety of services from researchers, clinicians, therapists, nurses and other specialists involved in complementary treatments. Mayo Clinic in Rochester also has three physicians who have fellowship training in CAM, five physicians trained in acupuncture, a licensed acupuncturist and two massage therapists. A music therapist volunteers in Mayo’s hospice.

Patients interested in CAM as a part of their treatment see a physician trained in integrative medicine. During consultation, the physician assesses the patient’s needs and develops a treatment plan. Recommendations might include: dietary supplements; mind-body techniques, such as meditation; acupuncture; massage; and alternative medicine systems, such as traditional Chinese medicine or ayurveda (a holistic medicine system from India).

Dr. Bauer explains the need for involvement and guidance by physicians trained in integrative medicine.

“The myriad claims and promises encompassed in the realm of complementary and alternative medicine can be daunting to a patient who has a serious medical problem,” says Dr. Bauer. “Helping patients to separate the wheat from the chaff means we must study various therapies with the scientific rigor we use to study any other medical treatment. In this manner, we can identify those therapies that truly help, those that do not help and those that cause harm.

“To be sure, there are challenges in researching some CAM therapies. For example, how can you create a placebo for acupuncture?” asks Dr. Bauer. “However, for many therapies, research is possible. Only this scientific approach will truly allow us to move to the next step, where we can disregard labels and focus on bringing what is best for the patient to the bedside.”
Several specific efforts have stemmed from Mayo’s progressive Complementary and Integrative Medicine Program. “These examples illustrate how complementary therapies can be valuable additions to conventional medicine in helping patients heal or control symptoms,” says Dr. Bauer.

**Cardiovascular Surgery Healing Enhancement Program**

Mayo Clinic research shows that cardiovascular surgery patients benefit from complementary therapies for pain, tension and anxiety throughout their treatment — preoperative, intraoperative and postoperative. Mayo developed the Cardiovascular Surgery Healing Enhancement Program to provide comprehensive care to heart surgery patients — for the mind, body and spirit. Methods to promote healing, such as massage, music and relaxation therapies, are integrated with medical care.

The Cardiovascular Surgery Healing Enhancement Program is a collaborative effort of the Division of Cardiovascular Surgery, Division of Complementary and Integrative Medicine, Department of Nursing, Department of Surgery and Saint Marys Hospital Auxiliary/Volunteers. The program offers therapies including massage, music, relaxation (guided imagery, stress and wellness classes) and prayer.

**Breast cancer patient research**

Mayo Clinic breast cancer patients are participating in research to evaluate the role of complementary therapy. Many breast cancer patients who have surgery have postsurgical hot flashes due to hormonal changes. Generally, hormone replacement therapy is not an option for these patients. Instead, many patients have tried paced respiration, a slow form of breathing similar to that taught in yoga, to control the hot flashes. With support from the Susan G. Komen Breast Cancer Foundation, Mayo researchers are evaluating the results of paced respiration to determine if widespread use is appropriate.

**Kangaroo care for preemies**

Mayo also uses complementary care with newborns. National studies have shown that kangaroo care — skin-to-
skin contact between parent and baby — provides physical and emotional benefits to parents and babies.

During kangaroo care, the baby is placed on the parent’s bare chest and covered by clothing or a blanket. Skin-to-skin contact simulates the protective, nurturing environment of a kangaroo pouch. Kangaroo care complements medical care by promoting early family bonding. The natural process of attachment is often delayed for preterm infants isolated in incubators in intensive care units. The position of the baby in kangaroo care reduces stress and promotes relaxation, helping to stabilize the infant’s breathing, heart rate and oxygenation levels. The parent’s presence encourages the infant’s deep, regular sleep. For preterm infants, deep sleep is an important aid to growth, maturation and weight gain.

Used primarily in the neonatal intensive care unit for preterm infants (born at 37 weeks gestational age or earlier), kangaroo care may benefit any infant.

Funding enhances credibility

The Complementary and Integrative Medicine Program has received more than $3 million in National Institutes of Health funding and $1 million in private funding, which has helped to cement the program’s credibility and position as a significant force in integrative medicine in the national medical community. Mayo physicians trained in CAM have been published in major medical journals, edited CAM textbooks and published The Mayo Clinic Book of Alternative Medicine.

“The Complementary and Integrative Medicine Program is successful because we have kept it scientific,” says Dr. Bauer. “We evaluate treatments that our patients tell us they use. We study these therapies with the scientific rigor that Mayo brings to any research endeavor. We share results with our colleagues and patients so they can make informed decisions about using complementary therapies. In the near future, I think, we will be able to jettison the names ‘complementary,’ ‘alternative’ and ‘integrative’ and just talk about good medicine — bringing the best of all practices to the bedside for the benefit of our patients.”

“My husband would come in the evenings. It was important to me for him to hold the baby because he couldn’t be with her in the daytime. She would nuzzle in his chest hairs, and you could actually watch her readings on the monitors calm down. The beeping would stop, and she would sleep. Sometimes she would snore!”

— Parent of premature baby

“Because of all the apparatus, it was difficult at times to see the babies as our own children. Kangaroo care made us feel so much closer to them and provided us with a real opportunity to start parenting our children.”

— Parent of premature twins
Creating an optimal environment for healing has long been a part of the Mayo philosophy. As patients know, the arts can affect people in ways that medical teams cannot, contributing to the nurturing environment and optimal healing that make Mayo Clinic unique.

The Mayo Clinic Center for Humanities in Medicine offers patients and their families the opportunity to integrate the humanities — the performing and visual arts, literature, history, ethics and philosophy — into their medical care. Established almost 25 years ago, the Center for Humanities in Medicine builds on Mayo’s strong commitment to a comprehensive approach to patient care, ensuring that the physical, emotional, social and spiritual needs of patients and their families are met.

A call to action

In 2003, the National Endowment for the Arts (NEA) issued a call for greater involvement of the arts in health care. According to Dana Gioia, chairman of the NEA, “The arts have an extraordinary ability to enhance our lives, help us heal and bring comfort in times of stress. We must reconnect the arts with human experience, which includes hospitals, hospices and the end of life.”

The Mayo Clinic Humanities in Medicine Committee responded to this mandate and the growing evidence supporting arts in health care by incorporating Music at the Bedside into Mayo’s strategic plan. Bedside arts add another component to the many ways the arts are already represented on Mayo Clinic campuses. As William J. Mayo, M.D. said in 1930: “We know all too well the necessity for efficient management, but there is a spiritual as well as a material aspect in the care of sick people.”

Music programs at Mayo Clinic in Rochester, Jacksonville and Arizona are a cornerstone of the Center for Humanities in Medicine. These programs contribute to the healing environment and provide opportunities for patients, visitors and staff to break from a hectic day and experience the beauty of music. Combined, Mayo’s music programs include more than 200 performances a year and reach more than 30,000 patients, visitors, staff and friends of Mayo. All Mayo Clinic sites have these music programs:

- Harmony for Mayo, a program of concerts by accomplished musicians for Mayo employees, patients and visitors.
- Music is Good Medicine, a program in which Mayo staff share their musical talents with patients, staff and employees. Staff members are encouraged to participate and share their musical gifts in monthly Music is Good Medicine performances, sponsored by the Officers and Councilors.
- Music at the Bedside programs are being developed at all three sites to bring the arts to frail or bedridden patients at the bedside in their hospital rooms. Some
hospital-based programs around the country — at Mayo Clinic and elsewhere — use professional musicians who go from room to room, playing for patients and small groups. Patients who participate in bedside music programs experience stress relief, improved morale and a better perspective about their illness. Across Mayo Clinic campuses are pianos used for formal music programs. However, some of the most wonderful celebrations of music occur when patients and visitors spontaneously gather around a piano and sing, clap and dance in a musical sing-along. These gatherings draw complete strangers together in carefree, festive musical sessions that are undeniably some of the best medicine of the day.

National studies show that, for some patients, music reduces pain, boosts the immune system, improves mobility for Parkinson’s disease patients and improves quality of life for people who have cancer or Alzheimer’s disease. A recent study of Alzheimer’s patients showed that artwork helps Alzheimer’s patients focus their attention for 30 to 45 minutes, and that completing artwork brings them pleasure and satisfaction.

“We know all too well the necessity for efficient management, but there is a spiritual as well as a material aspect in the care of sick people.”

— William J. Mayo, M.D.

Thoughts from our patients

“It’s clear to me that music is very much in keeping with the healing mission of medicine. Harmony for Mayo offers healing and comfort in a fundamentally human way, reaching out to a common thread that spans the globe, crossing boundaries of age and culture.”

“This is so uplifting. I really needed this today.”

“This was a beautiful, soothing experience.”

“I just got back from a procedure, and this is just what I needed.”

“Music lifts one’s spirit. It is a vital avenue toward healing.”

“The experience was lovely. Keeping one’s mind on art is very inspiring.”

“It made me forget my problems and think about other things totally unrelated to medical problems. It was fun and enjoyable. I am going to make my kids a card and send it to them. They will be surprised that I can draw!”

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Mayo Clinic is conducting research into the specific benefits of music therapy. In Jacksonville, staff and patients are participating in a research project studying the effects of harp music for vascular and thoracic surgery patients. Participants in the study have reported decreased pain and anxiety, and those who listened to harp music during their illness and treatment experienced positive medical changes.

 Patients are not the only benefactors of the arts in medicine. In June 2004, Mayo conducted a survey to determine the effect of music performance on employees. More than 40 percent of Mayo employee respondents requested additional music performances. One employee captured the essence of music therapy’s value: “The extensive use of music throughout the Mayo campuses shows that we view patients above and beyond their medical problems.” There also is evidence that health care facilities that offer bedside music programs benefit in other ways: nurses who work where the programs are offered stay in their jobs longer, have improved general and professional perspective, and fulfill their responsibilities more easily.

In June, Mayo Clinic in Rochester hosted the continuing medical education program “Topics in Complementary and Alternative Medicine.” Physicians from all over the country gathered to learn about complementary treatments, and share knowledge and experience.

Art and healing

A Mayo Clinic study has added to the national literature about the importance of art in healing. Alexandra Wolanskyj, M.D., assistant professor of Medicine in the Division of Hematology, sought to determine if art reduced pain and anxiety and
improved patients’ moods. Twenty hematology patients, including bone marrow transplant patients, volunteered to participate. Patients were offered art projects at their bedside. The patients could participate actively by creating a work of art with watercolors and colored pencils, or passively by watching an art therapist paint or draw. Family members were invited to participate.

Patients experienced a statistically significant decrease in negative mood and anxiety, and an increase in positive mood. In addition, patients reported a 26 percent reduction in pain.

“This is an exciting time for Mayo to be leading the way in complementary treatments,” says Dr. Wolanskyj. “This study will contribute an important dimension to the literature, proving that art and the humanities can play important roles in treating patients.”

How complementary and alternative medicine became part of mainstream health care

Factors that have played a role in complementary and alternative medicine (CAM) becoming a key component of the U.S. health care system include:

- Unprecedented public interest in and media reporting of alternative treatments, ranging from hypnosis to vitamin therapy.
- Third-party payers beginning to cover some alternative medicine treatments in response to demands from patients and employers.
- Financial and intellectual validation for CAM by the federal government, demonstrated by the creation of The National Center for Complementary and Alternative Medicine (NCCAM). NCCAM, a component of the National Institutes of Health (NIH), was established in 1998 to: explore complementary and alternative healing practices in the context of rigorous science; train complementary and alternative medicine researchers; and disseminate authoritative information to the public and professionals.
- Ever-tightening competition among providers, prompting them to respond to the patient’s interest in alternative treatments.
- The challenges of chronic illness, especially as the population ages, prompting the use of less-traditional therapies to control pain and treat conditions noninvasively — supplementing traditional treatments and, in some cases, replacing them.
- Patients’ increasing proactive role in their health care and voluntary use of alternative providers and therapies.

Writing and healing

In addition to art and music, creative writing helps patients heal. Poesía del Sol: Poetry of the Sun is a partnership between Mayo Clinic and Arizona State University to give patients the opportunity to use creative writing in their treatment. An author and a printmaker compose a poem based on conversation with a patient at the bedside. The poem is printed on hand-made paper and matted. The resulting artwork is presented to the patient, celebrating remembered times.

— Trisha Dillon
Mayo Update

News briefs

Mayo Clinic Alumni Association Awards — Humanitarian and Professional Achievement

The Mayo Clinic Alumni Association Humanitarian and Professional Achievement awards honor Mayo Clinic alumni who have made significant contributions to humanity and to the medical profession. Recipients of the awards were honored at the 65th Alumni Meeting in Rochester in October, and full profiles of the recipients will be included in the winter issue of Mayo Alumni.

Humanitarian Award
Eric J. Moore, M.D.
Consultant, Department of Otorhinolaryngology, Mayo Clinic Rochester
Assistant professor of Otolaryngology, Mayo Clinic

For Dr. Moore's work leading mission trips in underserved nations and contributions to the care of military personnel, their families and veterans of the U.S. armed forces.

Professional Achievement Award
John Davis Cantwell, M.D.
Cardiologist, Cardiology of Georgia, P.C., Atlanta
Medical director, Homer Rice Center at Georgia Tech
Director, Preventive Cardiology and Cardiac Rehabilitation, Piedmont Hospital

For Dr. Cantwell's accomplishments in patient care, education and research in preventive cardiology and sports medicine.

Mayo-trained Icelandic surgeons honored

Three Mayo Clinic-trained physicians were honored for their contributions to the surgical profession by the Icelandic Surgical Society as it celebrated its 50th year in 2007.

Sigurdur Thorvaldsson completed a Mayo Clinic residency in Surgery (1970). He also completed a residency in Plastic Surgery (1973) at the University of Michigan, Ann Arbor. He received his medical degree from the University of Iceland and a master of science degree from the University of Minnesota. He was board-certified in the United States. Dr. Thorvaldsson was a plastic surgeon in the Department of Surgery at the former Reykjavik City Hospital — now part of the University of Iceland Hospital — and associate professor of Surgery at the University of Iceland.

Since retiring from the hospital in 2006, he has continued in private practice in Reykjavik. He served as president of the Icelandic Surgical Society from 1975 to 1979 and from 1993 to 1995.

Gunnar Gunnlaugsson completed Mayo Clinic residencies in Surgery (1968) and Thoracic Surgery (1970). He received his medical degree from the University of Iceland and a master of science degree from the University of Minnesota. He was board certified in the United States. Dr. Gunnlaugsson was chief of Surgery at the former Reykjavik City Hospital — now part of the University of Iceland Hospital — and associate professor of Surgery at the University of Iceland. He served as president of the Icelandic Surgical Society from 1981 to 1983. Dr. Gunnlaugsson retired from practice in 2005.

The Icelandic Surgical Society honored these Mayo Clinic alumni for their contributions to the surgical profession: (from left) Dr. Sigurdur Thorvaldsson, Dr. Gunnar Gunnlaugsson and Dr. Kristinn Gudmundsson.
Kristinn Gudmundsson completed a Mayo Clinic residency in Neurosurgery (1971) and received his medical degree from the University of Iceland. Dr. Gudmundsson was the first formally trained neurosurgeon in Iceland and was chief of Neurosurgery at the former Reykjavik City Hospital — now part of the University of Iceland Hospital. He retired in 2005.

Mayo Clinic Board of Trustees honors four awardees of named professorships at its quarterly meeting in August

Charles Erlichman, M.D.
The Peter and Frances Georgeson Professorship in Gastroenterology

This professorship was established in 2006 by Peter and Frances Georgeson in memory of their loved ones who died from cancer. Peter Georgeson is the founder of Scot Forge, a leader in the steel forging industry.

Dr. Erlichman, who joined Mayo Clinic in 1994, is focused on the development of novel therapies in cancer treatment, with emphasis on the malignancies of the gastrointestinal tract. Clinically, he was a leader in developing a chemotherapy regimen that was proven to be effective in the treatment of colon cancers.

Deputy director of clinical affairs in the Mayo Clinic Cancer Center since 2004 and professor of Oncology, Dr. Erlichman also is the leader of an academic medical center consortium, funded by the National Cancer Institute, which is performing Phase II clinical trials of novel agents in patients with cancer.

Bernard Morrey, M.D.
The John and Posy Krehbiel Professor of Orthopedics

John Krehbiel, co-chair of Molex, one of the world’s largest manufacturers of electronic, electrical and fiber-optic interconnection products and systems, established this professorship with his wife in 2007.

Dr. Morrey is the emeritus chair of the Department of Orthopedics at Mayo Clinic and holds the academic rank of professor of Orthopedics. He recently fulfilled an eight-year term on the Board of Governors of Mayo Clinic in Rochester and is involved in Mayo practice optimization efforts, with emphasis on monitoring and improving the cost-effectiveness of the Mayo practice.

Dr. Morrey has served in national leadership roles, including terms as president of the American Academy of Orthopaedic Surgeons, American Orthopaedic Association and American Shoulder and Elbow Surgeons.

Donald Tindall, Ph.D.
The Carl Rosen Professorship in Urology

Carl Rosen, former chair and chief executive officer of Puritan Fashion Corp. and a fashion industry innovator, established this professorship in 1983 as a tribute to David Utz, M.D., an emeritus staff consultant in Urology.

Dr. Tindall is vice chair of Urology research, professor of biochemistry and molecular biology, and a consultant in the Department of Urology. His major research area is the mechanism of androgen action in prostate cancer.

He has served as president of the Society for Basic Urologic Research, chair of the 12 site-visit teams for the National Cancer Institute and co-chair of the Prostate Cancer Review Group for the National Cancer Institute.

Thomas Colby, M.D.
The Geraldine Colby Zeiler Professor of Cytopathology

This professorship was established in 1992 by William Zeiler, M.D., in conjunction with the College of American Pathologists Foundation, in memory of Dr. Zeiler’s wife, Geraldine Colby Zeiler, who trained as a cytology technician at Mayo Clinic in 1950.

Dr. Colby joined the Mayo Clinic staff in 1986. He is chair of Mayo Clinic’s Laboratory Medicine and Pathology in Arizona, a professor of Pathology and a consultant in Surgical Pathology.
In 1992, he received Teacher of the Year for Laboratory Medicine and Pathology and was named chair of Pathology in 2007.

Dr. Colby has served on the editorial boards for peer-reviewed journals including American Journal of Surgical Pathology, Annals of Diagnostic Pathology, American Journal of Clinical Pathology, and Sarcoidosis, Vasculitis and Diffuse Lung Diseases.

Mayo Clinic study finds FDA warning against anti-nausea drug droperidol unnecessary

New Mayo Clinic research questions a U.S. Food and Drug Administration (FDA) black box warning against droperidol — a drug used to control nausea and vomiting during anesthesia for general surgery. The study appeared in the October issue of the journal Anesthesiology.

In response to the FDA warning on droperidol issued in 2001, Mayo Clinic researchers compared 139,932 patients’ reactions to droperidol before the warning was issued and found no proven cases of complications directly attributable to droperidol. In comparison, after the FDA warning, two of 151,256 patients had poor heart rhythm while receiving other, more expensive medication alternatives.

“In our study, we obtained results that were just the opposite of what the FDA action would predict. We actually had fewer complications with droperidol,” says Gregory Nuttall, M.D., the lead Mayo Clinic anesthesiologist on the study. “In our experience, low doses of droperidol used by a skilled team are the safer and more effective agent for controlling nausea and vomiting, which is why we are making plans to resume its low-dose use in select patients in the cardiac intensive care unit.”

The Mayo Clinic team hopes another large controlled study will determine if the Mayo results can be validated. If they are validated, it might then prompt the FDA to revoke the warning against droperidol, according to Dr. Nuttall.

In the meantime, Dr. Nuttall recommends that low-dose droperidol be used with caution in a heart-monitored setting and only with advice from highly trained and experienced anesthesiologists. “Our only interest here is in seeing that patients get the safest and most beneficial treatment,” says Dr. Nuttall.

Clinical trials for diabetes drugs should measure outcomes important to patients, state Mayo Clinic researchers in The Lancet

Most clinical trials for new diabetes drugs do not consider the effect medication will have on a patient’s quality of life or other outcomes that patients deem important, such as the risk of developing complications associated with diabetes.

A Mayo Clinic commentary published in The Lancet in September 2007 states that drug trials too often focus on the effect medication will have on blood sugar levels, without taking into consideration other factors that are important to patients. This may be one reason why some patients who have chronic illnesses, such as diabetes, do not take their medication as prescribed. Also, conducting clinical trials without considering outcomes important to patients often results in smaller, shorter and cheaper trials that lead to more drug choices more quickly, but are not necessarily better or safer for patients, according to the commentary.

“The medical community should insist that we invest the resources needed to do trials that ascertain the effect of interventions on patient-important outcomes,” writes Victor Montori, M.D., an endocrinologist at Mayo Clinic, along with Gunjan Gandhi, M.D., of Mayo Clinic, and Gordon Guyatt, M.D., of McMaster University in Canada. “This policy will prevent the premature dissemination of therapies that ultimately prove harmful, facilitate patients’ participation in decision making, and speed the day when we can confidently offer safe treatments that can provide important benefit to patients with diabetes.”

Only one in five randomized trials in diabetes published in top medical journals measured the effect of drugs on quality of life and on the risk of complications associated with diabetes, such as death, heart attack, stroke, amputation, blindness and dialysis, the authors note.

Dr. Montori and colleagues call for clinical trials that consider and measure the effect of diabetes medications on outcomes that are important to patients.
Professional meetings

Mayo Clinic Alumni Association receptions

American Society of Hematology, Dec. 9, 2007, Atlanta
Society of Thoracic Surgeons, Jan. 28, 2008, Fort Lauderdale, Fla.
U.S. & Canadian Academy of Pathology, March 3, 2008, Denver
American Academy of Orthopedic Surgeons, March 7, 2008, San Francisco
American College of Cardiology, March 30, 2008, Chicago
American Roentgen Ray Society, April 14, 2008, Washington, D.C.
American Academy of Neurology, April 14, 2008, Chicago
Pediatric Academic Societies, May 3, 2008, Honolulu
American Association of Clinical Endocrinologists, May 15, 2008, Orlando
American Thoracic Society, May 18, 2008, Toronto

Postgraduate meetings


Pulmonary Hypertension Update 2007, Dec. 1, 2007, Jacksonville
2nd Annual Practical Course in Dermoscopy & Update on Malignant Melanoma, Dec. 7-9, 2007, Scottsdale
Academic Career Development Workshops, Jan. 15-Dec. 16, 2008, Rochester
Update in EEG, EMG, and Clinical Neurophysiology, Jan 20-26, 2008, Scottsdale
Selected Topics in Internal Medicine, Jan. 21-25, 2008, Kauai, Hawaii
The Interface of Medical Illness and Depression: A Clinical Review for Primary Providers, Jan. 24-26, 2008, Las Croabas, Puerto Rico
Mayo Clinic Hematology Review, Jan. 26, 2008, Minneapolis
Mayo Clinic Spine Surgery Symposium, Jan. 27-31, 2008, Kauai, Hawaii
Tutorials in Diagnostic Radiology, Feb. 3-7, 2008, Maui, Hawaii
Ethical Dilemmas throughout the Medical Spectrum, Feb. 6-8, 2008, Rochester
Robotic Surgery in Gynecology, Feb. 6-9, 2008, TBD

Mayo Clinic Interactive Surgery Symposium, Feb. 10-15, 2008, Hawaii
Molecular Predictive Markers of Breast Cancer: Risk and Benefits of Therapy, Feb. 15, 2008, Jacksonville
33rd Annual Cardiovascular Conference at Snowbird, Feb. 19-23, 2008, Snowbird, Utah
Mayo Clinic Symposium on Anesthesia & Perioperative Medicine, Feb. 20-23, 2008, Phoenix
Gastroenterology and Hepatology Linked to Endoscopy: Mayo Clinic’s 6th Annual Winter Course in Scottsdale, Feb. 25-29, 2008, Scottsdale
Psychiatric Pharmacogenomics, March 2-4, 2008, Kauai, Hawaii
Arrhythmias & the Heart, March 10-13, 2008, Kauai, Hawaii
Advances and Changing Trends in Medicine, March 15-17, 2008, Cancun, Mexico
Mayo Echocardiography Review Course, March 15-18, 2008, Rochester
Clinical Reviews 2008 - A Primary Care and Internal Medicine Update, March 26-29, 2008, Scottsdale

An Overview of Perioperative Medicine, March 27-29, 2008, Rochester

Menopausal Medicine: Care for the Mature Female, March 27-29, 2008, Albuquerque, N.M.

Gynecologic Surgery Update, April 3-5, 2008, Orlando

A Multidisciplinary Update in Pulmonary and Critical Care Medicine, April 10-13, 2008, Scottsdale

17th Annual Urogynecology and Disorders of the Female Pelvic Floor, April 23-26, 2008, Scottsdale

Update in Gastroenterology and Hepatology 2008, April 24-26, 2008, Chicago


Update on Women’s Health, April 26-28, 2008, Phoenix/Scottsdale


Controversies in Cardiovascular Disease, May 3-4, 2008, St. Paul

29th Annual Practice of Internal Medicine, May 5-9, 2008, Rochester

Upper Mississippi Valley Retina Cases Conference, May 17, 2008, Minneapolis

ENT for the Primary Care Provider, May 30, 2008, Rochester

1950s
Harold Browne had the Anatomy Lecture Theatre dedicated and named in his honor by The Royal College of Surgeons in Ireland.

1960s
Salvador Gonzalez is chief consultant in the Neurology section at Alexander Fleming Oncological Institute, Buenos Aires, Argentina.

1970s

1980s
Larry Gray was appointed associate professor in the Department of Molecular Genetics, Biochemistry, and Microbiology at the University of Cincinnati College of Medicine. He also was awarded the Outstanding Contributor to Clinical Microbiology Award by the South Central Association for Clinical Microbiology.

1990s
Charles Crutchfield III was honored as a Health Care Hero by “Twin Cities Business” and Medica. He is medical director of Eagan-based Crutchfield Dermatology and an award-winning professor of Dermatology at the University of Minnesota Medical School.

2000s
Mariana Dangiolo was appointed assistant professor in the Department of Geriatrics at Florida State University School of Medicine.

Albert Mariani was appointed associate medical director of Specialty and Hospital Services of Kaiser Permanente of Hawaii.

Monica Stallworth was appointed chief of staff at Western Maryland Medical Center in Hagerstown, Md.

Robert White was appointed as co-editor of the international journal “Artificial Organs,” focusing on neuroscience and bioethics.

Robert Hendren was appointed to the American Academy of Child and Adolescent Psychiatry as president for a two-year term.

Larry Gray was appointed associate professor in the Department of Molecular Genetics, Biochemistry, and Microbiology at the University of Cincinnati College of Medicine. He also was awarded the Outstanding Contributor to Clinical Microbiology Award by the South Central Association for Clinical Microbiology.

Nadey Hakim was awarded the 2007 J. Wesley Alexander prize for outstanding research in transplantation.

William Stevens was inducted as a fellow in the American College of Radiology.

Aaron Holmgren was recruited as chief medical officer for CentraCare Health System in St. Cloud, Minn.

Shomik Sengupta was awarded the AUA-Astellas prize at the 2007 annual meeting of the American Urological Association.
Jaime Aranda-Michel was appointed president of the American Board of Physician Nutrition.

Richard Caselli was a keynote speaker at the Arizona State University Biodesign Institute.

William Cheshire was named a fellow of the American Neurological Association.

Thomas Colby was named the Geraldine Colby Zeiler Professor of Cytopathology.

Michael Covalciuc was appointed chair of the Division of Preventive, Occupational and Aerospace Medicine, Mayo Clinic in Arizona.

Steven Eckert received the 2007 American College of Prosthodontists’ Clinician/Researcher of the Year Award.

Charles Erlichman received the Peter and Frances Georgeson Professorship in Gastroenterology Cancer Research.

Paul Galardy received the Early Career Award from the Howard Hughes Medical Institute in Chevy Chase, Md.

Morie Gertz received the Robert A. Kyle Award at the IV International Workshop for Waldenström’s Macroglobulinemia.

Peter Gloviczki was elected secretary of the Society for Vascular Surgery.

Christopher Hughes was named the most outstanding collaborative transplant surgeon in the donation service area by LifeQuest Organ Recovery Services. Dr. Hughes also was selected to join the national faculty of the Health Resources and Services Administration Collaborative.

Joseph Hung was selected by the United States Pharmacopeia to serve as a member of the Ad Hoc Advisory Panel.

Edward Laskowski was appointed to The President’s Council on Physical Fitness and Sports.

Jonathan Leighton was appointed chair of the Division of Gastroenterology/Hepatology, Mayo Clinic in Arizona.

Bernard Morrey received the John and Posy Krehbiel Professorship of Orthopedics.

Randall Roenigk was elected as president-elect for 2008 and president for 2009 by the American Board of Dermatology.

Christopher Serago was named a fellow in the American Association of Physicists in Medicine.

Prachi Singh received a postdoctoral fellowship from the Greater Midwest Affiliate Research Committee of the American Heart Association.

Donald Tindall received the Carl Rosen Professorship in Urology.

Sudhakar Venkatesh received the William G. Negendank Young Investigator Prize during the annual scientific meeting of the International Society for Magnetic Resonance in Medicine.

On June 15, 2007, Richard van Praagh, M.D., was honored as “Doctor honoris causa (Dr.h.c.)” from the University of Cologne in Germany. Ernst Keck, M.D., was elected to introduce Dr. van Praagh and deliver the laudatio. This occurred 47 years after the two physicians were trained at Mayo Clinic.

In 1960, Dr. van Praagh and Dr. Keck were fellows in the newly opened Cardiac Catheterization and Angiography Laboratory at Saint Marys Hospital, under the supervision of Harold Swan, M.D.

Dr. van Praagh became professor of Pathology, Children’s Hospital Medical Center, Harvard Medical School, and director of Cardiac Pathology and Embryology, Children’s Hospital Medical Center, Boston (1965–2002).

Dr. Keck became professor and director of the Clinic for Paediatric Cardiology, University Hospital, Hamburg, Germany (1963–1993).
Argentina awaits!
April 2008

The Mayo Clinic Alumni Association International Conference will be held April 9 - 11, 2008, in Buenos Aires, Argentina. The education program will feature an interactive speaker panel and topics including physician leadership and advances in cancer, cardiovascular diseases, genomics, health promotion, infectious diseases, neurology, orthopedics, psychiatry and surgery.

Conference headquarters will be at the Alvear Place Hotel, www.alvearpalace.com, in the historic, exclusive Recoleta area in the heart of Buenos Aires.

Optional tours, professionally managed by Concierge Services, LLC, are available to:

Iguazu Falls
April 6 - 8

Buenos Aires including Opera Pampa and a Carlos Gardel Tango Evening
April 9 - 10

Areas of Argentina including Iguazu and Bariloche
April 12 - 20

Registration and itinerary information will be mailed to alumni. Continuing education credits are pending.

For conference information, contact:
Cindy Cunningham cunningham.cindy@mayo.edu
or 507-266-4454

For tour information and hotel arrangements, contact:
Linda Freeman
freemanL@rconnect.com
or 507-280-9066

Obituaries

1940s
Charles Scheifley, 96, died July 1, 2007, in Winona, Minn. Dr. Scheifley received his medical degree from the University of Minnesota and completed a Mayo Clinic residency in Internal Medicine in 1944. He served in World War II. Dr. Scheifley was in private practice in Park Ridge, Ill., and was with the Veterans Administration until his retirement.

1950s
James Fergeson, 84, died July 11, 2007, in Sarasota, Fla. Dr. Fergeson received his medical degree from the University of Arkansas Medical School and completed a Mayo Clinic residency in Surgery in 1954. He practiced as a surgeon in Sarasota until his retirement. Dr. Fergeson was a member of the American College of Surgeons, Mayo Priestley Society and Mayo Alumni Association.

Robert Henderson, 82, died July 31, 2007, in New Castle, Pa. Dr. Henderson received his medical degree from the University of Pennsylvania Medical School and completed a Mayo Clinic fellowship in Surgery in 1957. He served in the U.S. Navy. Dr. Henderson joined a General Surgery private practice in New Castle and was on staff at Jameson Hospital and the former St. Francis Hospital until his retirement.

James Troup, 79, died July 26, 2007, in Boyce, Va. Dr. Troup received his medical degree from Aberdeen University Medical School, Scotland,
Dr. Witzke was board certified by the American Board of Plastic Surgery and the American Board of Surgery. He was a member of the American Society of Plastic Surgeons, Midwestern Association of Plastic Surgery, American Medical Association, American Burn Association, South Dakota State Medical Association, American Society of Maxillofacial Surgeons, American Cleft Palate Association, International Congress of Plastic and Reconstructive Surgery, International Society of Craniomaxillofacial Surgeons, Mayo Alumni Association, Mayo Priestley Society, American Association of Hand Surgery and American Society of Reconstructive Microsurgery.

1970s

Douglas Johnson, 56, died July 26, 2007, in Rochester, Minn. Dr. Johnson received his medical degree from Mayo Medical School and completed a Mayo Clinic residency in Ophthalmology in 1981. He was a professor at Mayo Medical School. Dr. Johnson was awarded the McMillan Chair of Ophthalmology Research and served as chair of the Scientific Advisory Committee for Glaucoma for the American Health Assistance Foundation, which established the Dr. Douglas H. Johnson Award for Glaucoma Research. Dr. Johnson was a Mayo Clinic staff member in the Department of Ophthalmology when he died.

Bernard Podurgiel, 65, died Feb. 2, 2007, in Norwich, Conn. Dr. Podurgiel received his medical degree from St. Louis University School of Medicine and completed a Mayo Clinic residency in Internal Medicine in 1970 and a fellowship in Gastroenterology in 1972. He served as a commander in the U.S. Navy. Dr. Podurgiel practiced Internal Medicine and Gastroenterology in Norwich and served as chief of the Department of Internal Medicine and the Department of Endoscopy at W.W. Backus Hospital until his retirement.

1980s

Robert Kennedy, 53, died June 23, 2007, in Key Largo, Fla. Dr. Kennedy received his medical degree from Mayo Medical School and completed a Mayo Clinic residency in Ophthalmology in 1986. He was a faculty member at UT Southwestern Medical Center in Dallas prior to co-founding North Texas Ophthalmic Plastic Surgery, Fort Worth. He served in the U.S. Naval Reserve as a commander and head of the Department of Ophthalmology at Fleet Hospital. Dr. Kennedy was an associate examiner for the American Board of Ophthalmology and was president of the American Society of Ophthalmic Plastic and Reconstructive Surgery.

Paul Leibson, 55, died Aug. 6, 2007, in Rochester, Minn. Dr. Leibson received his medical degree from the University of Chicago. He was a former dean of Mayo Graduate School and received the Rose M. and Morris Eisenberg Professorship. Dr. Leibson was on the Mayo Clinic staff in the Department of Immunology when he died.

David Witzke, 56, died Aug. 18, 2007, in Sioux Falls, S.D. Dr. Witzke received his medical degree from Mayo Medical School and completed a Mayo Clinic residency in General Surgery in 1982 and a fellowship in Plastic Surgery in 1984. He was in private practice in Sioux Falls and was medical director of the only burn unit in South Dakota. Dr. Witzke was board certified by the American Board of Plastic Surgery and the American Board of Surgery. He was a member of the American Society of Plastic Surgeons, Midwestern Association of Plastic Surgery, American Medical Association, American Burn Association, South Dakota State Medical Association, American Society of Maxillofacial Surgeons, American Cleft Palate Association, International Congress of Plastic and Reconstructive Surgery, International Society of Craniomaxillofacial Surgeons, Mayo Alumni Association, Mayo Priestley Society, American Association of Hand Surgery and American Society of Reconstructive Microsurgery. He was an associate member of the International Society of Craniofacial Surgery and a clinical instructor at the University of South Dakota Medical School.

1990s

David Schowalter, 47, died Aug. 11, 2007, in Rochester, Minn. Dr. Schowalter received his medical degree from Mayo Medical School and completed a Mayo Clinic residency in Internal Medicine. He was board certified in Internal Medicine and Medical Genetics. He was chair of the Genomics Education Steering Committee, was course director of the Mayo CME Committee and headed the development of the Mayo Biorepository. Dr. Schowalter was on the Mayo Clinic staff in the Department of Medical Genetics when he died.
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Administrator
507-538-0162

E-mail: mayoalumni@mayo.edu

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Debbie Oscarson
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www.mayo.edu/alumni

The Doctors Mayo Society
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800-297-1185

Physician Referral Information
Rochester 800-533-1564
Jacksonville 800-634-1417
Arizona 800-446-2279
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Jacksonville 800-462-9633
Arizona 480-301-4580
www.mayo.edu/cme/

Employment Opportunities

Mayo Clinic Human Resources
For information about employment opportunities at Mayo Clinic visit: www.mayo.edu or e-mail: careers@mayo.edu

You will be asked to specify Rochester, Jacksonville or Arizona for employment opportunities.

Mayo Health System
John Shonyo
507-284-9114
www.mhs.mayo.edu

For Mayo Clinic and health information on the Web:
www.mayo.edu
www.mayoclinic.org
www.mayoclinic.com

Mayo Clinic Resource Central

Resources to help you stay connected with Mayo Clinic and Mayo Clinic Alumni Association
The Mayo Clinic Alumni Association is pleased to offer these fine products for your memorabilia and special gift needs. Orders may be mailed or faxed to the Mayo Clinic Alumni Center. Complete ordering and shipping information is provided on the order form. A flat postage rate of $6.50 is charged for all orders, except those for lamps and chairs, which have shipping and handling charges based on destination.
Memorabilia & Gifts

**Ties**
These fine custom-designed ties are made of 100 percent silk and feature the Mayo Clinic triple-shield logo.  
*Ties, $35. each*

**Pierced Lapel Pin/Tie Tack/Charm**
These beautiful hand-crafted lapel pin/tie tacks and charms provide a striking pierced design around the “Mayo Shields.” The pierced design is especially attractive on a necklace or as an eye-catching lapel pin. (5/8” x 5/8”)

- **14K Gold Pierced Lapel Pin/Tie Tack**  
  $125. each
- **Sterling Silver Pierced Lapel Pin/Tie Tack**  
  $55. each
- **14K Gold Pierced Charm**  
  $125. each
- **Sterling Silver Pierced Charm**  
  $55. each

**Round Lapel Pin/Tie Tack/Charm**
These round lapel pin/tie tacks and charms carry a lifetime guarantee against defects. Each piece is made by hand and is die struck multiple times to insure its luster and clarity. The Mayo lapel pin/tie tacks and charms are hand-polished and individually inspected to assure optimum quality. (1/2” diameter)

- **14K Gold Round Lapel Pin/Tie Tack**  
  $95. each
- **Sterling Silver Round Lapel Pin/Tie Tack**  
  $45. each
- **14K Gold Round Charm**  
  $95. each
- **Sterling Silver Round Charm**  
  $45. each

**Bowties**
*Bowties, $35. each*

**Cuff Links**
These handsome cuff links prominently display a meticulously hand-crafted Mayo logo. Each cuff link carries a lifetime guarantee against defects.  

- **14K Gold**  
  $325. each pair
- **Sterling Silver**  
  $85. each pair

**Key Ring**  
*Sterling Silver, $25. each*

**Alumni Lamp**
The Alumni lamp is made of solid hardrock maple and measures 27” high. The Mayo Clinic Alumni Association seal is engraved on the base, which features a hand-rubbed cherry finish. Personalization is available for an additional charge.  
*Alumni lamp, $200. each, plus shipping and handling*

**Personalization charges:**  

*Please see order form for shipping and handling information and charges.*
### Alumni Chairs

The Alumni captain’s chair, Boston rocker and swivel desk chair are beautifully hand-crafted in the United States from solid hardrock maple. The Mayo Clinic Alumni Association seal is prominently engraved on the crown. Personalization, engraved under seal, is offered as an option for an additional charge.

- **Captain’s chair** (18”D x 23”W x 34”H), $350. each, plus shipping and handling.
- **Boston Rocker** (27”D x 23”W x 40”H), $350. each, plus shipping and handling.
- **Swivel chair** (18”D x 23”W x 34”H), $490. each, plus shipping and handling.


### Mayo Clinic School Ring

These beautiful 10 Karat gold rings have the Mayo Clinic seal and school name on the top, uniquely identifying the wearer as a graduate of a Mayo Clinic school. The year and up to four initials can appear on one shank and up to four initials on the other shank. These rings carry a lifetime warranty against defects. They are hand-crafted and made using the centuries old “lost wax” casting method to assure stunning beauty and clarity for many years of wearing pleasure. Please confirm your ring size with a jeweler prior to ordering. Available in whole and half sizes. Please refer to the order blank for information when ordering a Mayo ring. 14K gold available upon request.

- **Men’s ring**, $604. each
- **Women’s ring**, $455. each

### Luggage Tag

Millennium black top grain leather retractable ID tag with an adjustable attachment cord.

**Tag** $10. each

### Pens

Each classic pen offered is a fine writing instrument and features the Mayo logo.

**Above:**
- Montblanc Fountain, $225. each
- Montblanc Rollerball, $175. each
- Waterman Hemisphere Fountain, $95. each
- Waterman Hemisphere Rollerball, $75. each
- Waterman Mineral Blue Rollerball, $50. each

**Below:**
- Crete oriental pearl, $10. each
- Diplo Matte, $15. each
- Avalon, $15. each

### Scarf

These stylish designs highlight the Mayo Clinic logo. S-1 through S-5 and S-8 are made of 100 percent silk. S-6 and S-7 are made of Pucci material. S-6 through S-8 are CAZ originals, each one uniquely created so slight variations are expected.

- **S-1 through S-7** $35. each
- **S-8** $40. each
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<th>Quantity</th>
<th>Size/Color</th>
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<td>Personalization for ring – $4.10</td>
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**Subtotal**

**Sales tax:** Rochester residents add 7%, Minnesota residents add 6.5%, for all items except ties and scarves.

**Postage:** Add to all U.S. orders, excluding those for lamp and chairs. Please call for foreign delivery postage.

**Furniture shipping and handling:**
Add specified amount for each lamp or chair ordered.
- AZ, CA, CO, ID, MT, NV, NM, OR, TX, UT, WA, WY ............................................................ $39.00
- All other states in the continental U.S. ................................................................. $29.00
- Call for delivery in Alaska, Hawaii and foreign countries.
  Charges dependent on destination.
- Massachusetts residents add 5% sales tax on orders for lamps and chairs.

**Total amount**
(Enclose payment in U.S. dollars drawn on U.S. bank)

**Chair and lamp personalization** (Optional) One, two or three lines, 30 spaces maximum per line
First line – $25, second line – $10, third line – $10.

1st line

2nd line

3rd line

**Mayo Clinic School ring personalization**
Year to appear on left shank:______ Program or initials to appear on left shank (maximum four letters):______
Program or initials to appear on right shank (maximum four letters):______
Personal initials to appear inside the ring for an extra charge of $4.10:______

**Payment:**
Name:_________________________ Daytime phone:_________________________

Please make your check payable to the Mayo Clinic Alumni Association, or charge to: ☐ Visa ☐ MasterCard
Credit Card #:_________________________ Expiration date:_________________________
Cardholder’s name (please print):_________________________
Signature:_________________________

(Signature is required for credit card use)

**Shipping information:** (Please allow 6-8 weeks for delivery.)
Ship to:
Name:_________________________
Street:_________________________
City/State/Zip:_________________________
Phone:_________________________
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Phone: (507) 284-2317
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Mayo Clinic is committed to creating and sustaining an environment that respects
and supports diversity in staff and patient populations.