

medicine | iowa

Winter 2006



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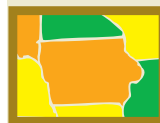
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Calendar - inside back cover

Produced by the UI Office of Health Science Relations, February 2006

Cover: Judith Crossett ('84 MD), associate professor of psychiatry, takes geriatric mental health training and services into the community through partnerships with area care facilities.



Dear alumni and friends:

Many of us will evade cancer, diabetes, neurodegenerative disease and other conditions that become more likely with time, but no one can escape the years. At some point in each of our lives, we grasp the unassailable truth—we are getting older.

This fact lends everyone a stake in aging research, whether it targets the diseases that come with age, the aging process itself, or the social and policy issues that surround aging. Scientists, physicians, ethicists and others may disagree over attempts to extend the human lifespan, but improving the quality of that life is an undisputed goal.

This issue of *Medicine* cites some examples of how UI investigators and programs like the College's Center on Aging advance this goal, which will become only more important as the aging population grows. With one of the nation's highest percentages of people over 65, Iowa is both an ideal place for this work and one of its main beneficiaries.

Iowans understand that research—along with the University's other core missions of education and service—is a worthwhile investment. The phenomenal results of the UI's "Good. Better. Best. Iowa" fund-raising campaign attest to this fact.

The seven-year campaign originally set out to raise \$850 million. In 2004, that goal was raised to \$1 billion. When the books closed on Dec. 31, 2005, the campaign had surpassed this goal by more than \$58 million.

"The fact that we went well past \$1 billion in these past seven years, in spite of all that's happened in the nation and around the globe, is a tribute to the loyalty and generosity of our alumni and friends," said UI President David Skorton, who also thanked campaign co-chairs Mary Louise Petersen and Marvin Pomerantz, and staff at the UI Foundation.

The UI Carver College of Medicine had established a \$232.2 million target for its portion of the campaign. In the end, donors pledged \$259 million—112 percent of our goal.

University-wide, the campaign created 535 new student scholarships, 155 named faculty positions and 127 new research funds. Eleven new and renovated facilities projects were completed during the campaign, which generated eight gift commitments of \$10 million or more and gifts from 128,123 total contributors.

Fewer than 30 public universities nationwide have launched or completed billion-dollar campaigns in recent years. Of these schools, the UI is one of the smallest institutions in terms of enrollment. The campaign was truly unprecedented for the UI and the state of Iowa.

The generous support of private donors make possible projects like the Carver Biomedical Research Building, the 135,000-square-foot facility we will dedicate this spring. The Roy J. Carver Charitable Trust of Muscatine provided essential funding for the building as part of its 2002 gift commitment of \$63 million. The completion of the facility and the close of the UI campaign are historic achievements—for the University, the College and the many committed alumni and friends who support our work.

This shared dedication is essential to understanding and remedying problems that affect human health, whether they stem from rare diseases or universal processes like aging. Each life carries its own unique challenges, its individual mix of heredity, circumstance and choice. The solutions, however, come when we work together.

A handwritten signature in black ink that reads "Jean Robillard". The signature is fluid and cursive, with a large initial "J" and "R".

Jean Robillard, MD ('74 R pediatrics)
Dean of the UI Carver College of Medicine



Carter is ophthalmology head

Keith Carter, MD, has been named head of ophthalmology and visual sciences for the College and UI Hospitals and Clinics following a national search.

Carter's appointment took effect Jan. 1. He succeeds Thomas Weingeist, MD, PhD, department head since 1986, who remains on the ophthalmology faculty.

"Dr. Carter has a first-rate combination of skills and a deep understanding of how research and physician training intersect with delivering the best patient care," said Jean Robillard, MD, dean of the College. "We are pleased and excited that he has accepted this important leadership position in one of the world's great ophthalmology departments."

A UI faculty member since 1988, Carter served as medical director of ophthalmology clinical services and director of the department's residency program. He specializes in oculoplastic surgery and studies Graves' eye disease, inflammatory orbital disease, anophthalmic socket reconstruction and predictive factors for eyelid reconstruction.

The UI Department of Ophthalmology and Visual Sciences is consistently ranked among the nation's best for patient care and physician training. During Weingeist's tenure, the department grew from 15 full-time faculty to more than 30 clinicians and scientists.

Defibrillators in high schools?

More high schools than senior centers have automated external defibrillators (AEDs), despite the fact that cardiac arrests seem to be much less common in schools.

A UI study published in the October issue of *Prehospital Emergency Care* raises questions about where potentially lifesaving devices are placed. The study surveyed 147 high schools and 20 licensed senior centers in Iowa and California during 2001 and 2002.

"It seemed counter-intuitive that defibrillators were being placed in high schools," said Peter Cram, MD, assistant professor of internal medicine, citing press reports on AEDs in schools. "We wanted to find out how common cardiac arrests were in high schools and how available defibrillators were."

During the study period, the investigators found a cardiac arrest rate of about 2 percent per year in high schools, versus 20 percent in senior centers. But 37 percent of high schools reported having one or more AEDs on campus, compared to only 10 percent of senior centers.

"This practice may not be maximizing the number of lives that could be saved," Cram said, adding that the disparity may stem from ignorance of actual cardiac arrest rates or from attitudes that place greater value on the lives of young people.

Cram noted that some state legislatures have mandated AEDs in schools, sometimes without providing the funds to purchase them—about \$2,000 per device. "Where defibrillators should be placed, especially in a time of limited financial resources, involves an important debate," he said.

Skorton named Cornell president

UI President David Skorton will become president of Cornell University in New York effective July 1.

Skorton's wife, Robin Davission, associate professor of anatomy and cell biology, also will join Cornell's faculty.

"We are profoundly grateful for everything you have done to make this University the wonderful, humane place it is," said Skorton in a message to the UI community. "We will miss you, but we know that this excellent university will be sustained by your loyalty and devotion."

Skorton was named the UI's 19th president in January 2003. He joined the UI Carver College of Medicine faculty in 1980, later serving as the University's vice president for research and external relations.

Plans for a search to name Skorton's UI successor are under way.

Faculty chairs and professorships

Three UI Carver College of Medicine faculty members have been appointed to named chairs or professorships established through the UI Foundation.

Mark Anderson, MD, PhD, professor of internal medicine, is the Potter-Lambert Chair in Cardiology, a post established by the Ralph B. Lambert Estate in memory of Lambert's longtime friend Fred Potter. Anderson directs the Division of Cardiology and studies cardiac arrhythmias, particularly the role of signaling protein calmodulin kinase II.

Michael Cohen, MD, professor and head of pathology, becomes the Dr. Richard G. Lynch Chair in Experimental Pathology. The chair honors Richard Lynch, MD, professor emeritus of pathology, who led the department for nearly 20 years. Cohen is an internationally known diagnostic cytopathologist, urologic pathologist and prostate cancer researcher whose work focuses on mechanisms of apoptosis.

William Coryell, MD, professor of psychiatry, was named the George Winokur Professor of Psychiatry. Family, friends and colleagues established the fund that supports the professorship in 1990 to honor former department head Winokur, who died in 1996. Coryell studies the natural course and prognosis of mood disorders, including panic disorder and manic depressive illness.

Cancer Center seed grants

The Holden Comprehensive Cancer Center has presented six UI researchers with \$104,000 in seed grants from the American Cancer Society and cancer center endowment funds. The grants aim to help investigators start cancer research careers or examine new ways to understand, prevent or treat cancer.

UI Carver College of Medicine faculty and staff members receiving the grants included Vladimir Badovinac, PhD, associate research scientist in microbiology, for an immunotherapy study; Bruce Hostager, PhD, assistant professor of pediatrics, for research on tumor necrosis factor receptors; Toshiki Itoh, PhD, assistant professor of pathology, to analyze tumor suppressor functions of the gene p53; and Laura Stunz, PhD, associate research scientist in microbiology, for research on lymphoma in transplant patients.

Also funded were Tannin Fuja, PhD, adjunct assistant professor of speech pathology and audiology, for research on vocal fold stellate cells and laryngeal cancer; and Xiaodong Wu, PhD, assistant professor of electrical and computer engineering, for work on ways to make radiation therapy more precise.

Weinstein earns ortho honor

Stuart Weinstein, MD, the Ignacio V. Ponseti Chair and Professor of Orthopaedic Surgery, received the 2005 Alfred R. Shands Award from the Orthopaedic Research Society and the American Orthopaedic Association.

The annual award goes to a U.S. or Canadian citizen who has made significant contributions to the specialty and furthered knowledge of musculoskeletal disease. Weinstein is a recognized authority on spinal deformity and hip disorders in children, pediatric hip joint mechanics, and the treatment of pediatric orthopaedic conditions.

He currently serves as president of the American Academy of Orthopaedic Surgeons and received the award at the group's annual meeting.

Glucose control cuts cardio risk

Intensive glucose control lowers risk of heart disease and stroke by about 50 percent in people with type 1 diabetes. The finding comes from a 28-site study published in the Dec. 22 *New England Journal of Medicine*.

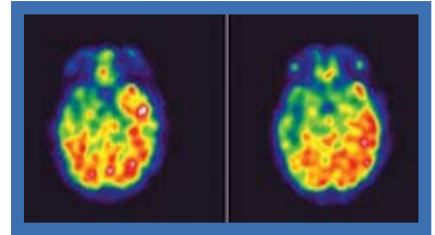
"Maintaining tight control is challenging, but it provides huge benefits in both the short- and long-term," said William Sivitz, MD, professor of internal medicine. "Intensive control should begin as soon as possible and be maintained as long as possible."

The study involved individuals who took part in the Diabetes Control and Complications Trial more than a decade ago. The original trial found that intensive glucose control reduced eye, nerve and kidney complications from diabetes. The follow-up study cites cardiovascular benefits as well.

Tight glucose control lowered risk of a cardiovascular disease (CVD) event by 42 percent, and the risk of a serious CVD event like heart attack or stroke by 58 percent.

The intensive control regimen involved at least three daily insulin injections or an insulin pump. At the end of the original study, patients on the intensive program averaged blood glucose levels of 7 percent, compared to 9 percent in patients who received conventional treatment.

Glucose levels in both groups eventually converged at about 8 percent, but intensive glucose control carried lasting benefits for patients in the study group. Those who received six years of intensive treatment went on to experience less than half the number of CVD events when compared to controls.



Protein might slow Huntington's

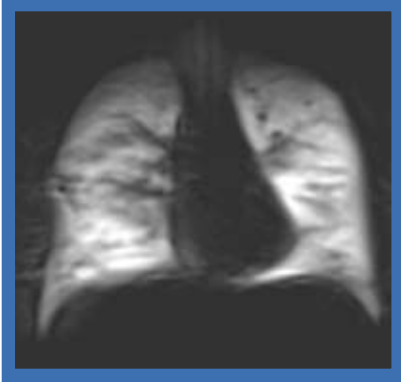
Cells, especially neurons, need a robust quality-control system to maintain healthy function. UI investigators have discovered a protein that links two arms of the quality-control machinery, repairing and removing other damaged proteins and perhaps offering a therapeutic target in disorders like Huntington's disease (HD).

"For all kinds of neurodegenerative diseases, from Alzheimer's to Huntington's—which was the focus of our study—there are problems with protein folding and handling," said Henry Paulson, MD, PhD, associate professor of neurology. He and colleagues identified CHIP (or C-terminal heat shock protein 70-interacting protein), which plays a key role in refolding misshapen proteins or destroying those that are damaged beyond repair.

Working with HD models in mice and zebrafish, the research team found that CHIP could suppress the disease. Mice with only one copy of the CHIP gene developed HD and died more quickly than mice that produced normal CHIP levels.

The study also shows that zebrafish, a common tropical fish, can be a useful model for studying human brain diseases. "For something that looks so unlike a human being, zebrafish share many genetic similarities, including within the brain," Paulson said. They also have several attributes that make them easy to work with in the lab.

The study appears in the Oct. 5 *Journal of Neuroscience*.



\$10.6 M for lung imaging

A \$10.6 million National Institutes of Health grant renewal will help UI investigators keep capturing detailed images of the lung's structure and function.

The renewal builds on a 1999 grant that established the Iowa Comprehensive Lung Imaging Center. "With the first NIH grant we developed the 'gold standard' for comprehensively assessing the lung, and now we want to use this standard to build a large database of lung conditions," said Eric Hoffman, PhD, professor of radiology. "With that knowledge, we can advance early detection of abnormalities."

The center uses faculty expertise and advanced technology to collect images that could not otherwise be captured. Its research includes studies of air and particle flow in the lungs that should shed light on structural variations and disease risk.

"We may learn that a person with asthma is more susceptible to an allergy, or that his or her airway tree accumulates particle deposits in particular areas," Hoffman said. Researchers also will assess techniques to reduce X-ray exposure through mathematical methods, better computed tomography (CT) hardware, and strategies that enhance or replace CT scanning with magnetic resonance imaging.

Murray, Sheffield named to IOM

Jeff Murray, MD, and Val Sheffield, MD, PhD, were elected to the National Academies' Institute of Medicine (IOM).

"This is a great honor for Dr. Murray and Dr. Sheffield, and a tremendous source of pride for The University of Iowa and the Carver College of Medicine," said Jean Robillard, MD, dean of the College. "Both are caring physicians, outstanding scientists, and superb mentors to students and fellows."

Murray, professor of pediatrics, specializes in newborn medicine, care of children with birth defects, and research into birth defects and prematurity. His research team has conducted epidemiologic studies of craniofacial anomalies around the world. Last year, they led an international effort that identified a genetic variation behind 10 to 15 percent of the most common cleft lip and palate cases.

Sheffield, professor of pediatrics and a Howard Hughes Medical Institute investigator, also studies genetics, particularly in cases of hereditary blindness and congenital heart disease. His work has identified genes that cause these conditions, including mutations responsible for Bardet-Biedl syndrome, a hereditary disorder that can lead to mental retardation, obesity, kidney problems, heart defects and blindness.

Established in 1970, the IOM honors achievement in the health sciences and serves as a national resource for independent analysis and recommendations on medical, scientific and health issues.

Birth defects up slightly in IVF

A UI study shows that babies conceived through in vitro fertilization (IVF) have a slightly higher risk of major birth defects—including heart, muscle and skeletal defects—than infants who are conceived naturally.

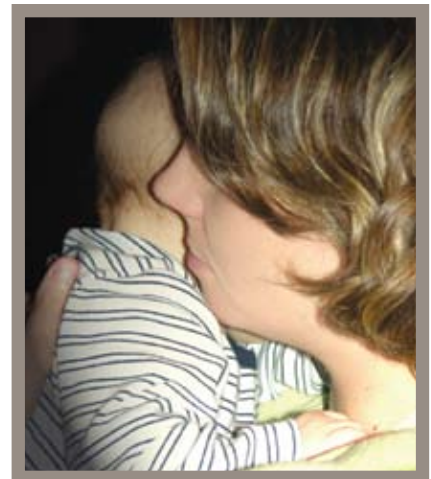
A review of Iowa births from 1989 to 2002 showed a 6.2 percent risk of birth defects for IVF infants, compared to a 4.4 percent risk for other infants. The study is published in November 2005 issue of *Fertility and Sterility*.

"Most IVF-conceived babies appear to be fine, at least up to age 1, which was our study limit," said Brad Van Voorhis, MD, the F.K. "Ted" Chapler Professor of Reproductive Endocrinology. "The question remains whether the slight increased risk for IVF babies is caused by the treatment itself, by factors in infertile couples who seek IVF, or by some combination."

The study echoes results from other countries. It also assessed infants conceived through intrauterine insemination (IUI), finding a 5 percent birth defect rate among this group.

"Had we seen a lower risk for IUI-conceived babies, suggesting that another form of assisted reproduction had no increased risk compared to natural conception, it might have pointed to IVF as a culprit," Van Voorhis said. "Had we seen a higher risk rate for IUI versus IVF, we would have thought there were issues with the couples treated rather than the IVF procedure."

The results don't point to a single cause for different birth defect rates, something that a larger study might reveal. "We are not trying to assign 'blame' for the problem, but rather hoping to pinpoint areas of IVF treatment that could be changed to improve safety for children," Van Voorhis said.



NIH funds lung stem cell study

A \$3.54 million grant will advance UI research on lung development and lung stem cells, and may provide tools to fight cystic fibrosis, asthma, chronic bronchitis and cancer.

John Engelhardt, PhD, Roy J. Carver Chair in Molecular Medicine and professor and interim head of anatomy and cell biology, received a 10-year MERIT award from the National Institute of Diabetes and Digestive Diseases. Such grants provide long-term funding for investigators who have demonstrated outstanding productivity.

Engelhardt and colleagues will use the funds to study how the lung's sub-mucosal glands are formed. These parts of the lung fight infection, help regenerate lung tissue and provide shelter for lung stem cells.

The research team is interested in molecular events that build stem cell niches, particularly the role of a transcription factor that controls stem cell functions and formation of other gland-like structures.

"I suspect as we dissect the regulation of this very important transcription factor in lung biology, similar rules will apply to different organs and their stem cell niches," Engelhardt said.

New neuroscience course

A National Institutes of Health grant will help the College develop a new course on the neurobiology of disease, showing young neuroscientists how their knowledge can be applied to clinical problems.

"One of the longstanding strengths of neuroscience at the UI has been the close relationship between basic neuroscience and its relevant clinical applications," said Daniel Tranel, MD, PhD, professor of neurology and director of the Interdisciplinary Graduate Program in Neuroscience. "This course brings into the academic mainstream the translational strength that has distinguished our program."

Only nine medical schools received grants to create similar courses, which advance the NIH's emphasis on translational medicine. The UI course will become a requirement for neuroscience grad students beginning next fall.



A tribute to Gibson

A Nov. 30 event honored David Gibson, PhD, Edwin B. Green Chair Emeritus in Biocatalysis and Microbiology and professor emeritus of microbiology, who was elected to the National Academy of Sciences in 2005.

Gibson's work has revealed how bacterial enzymes break down environmental pollutants, toxic chemicals and naturally occurring compounds. His pioneering studies have provided an important framework for developments in the fields of bioremediation and biocatalysis.

Jean Robillard, MD, dean of the College, and UI Provost Michael Hogan introduced Gibson, who delivered a lecture titled "Bacterial Oxygen Fixation and the Carbon Cycle."

Engagement grant for milk bank

An initiative from the UI Carver College of Medicine and the Children's Hospital of Iowa is one of 15 projects to receive a Year of Public Engagement Competitive Grant from the University.

The Mother's Milk Bank of Iowa, directed by Jean Drulis and Ekhard Ziegler, MD, professor of pediatrics, provides pasteurized human milk to vulnerable infants whose mothers cannot supply it. The program currently covers infants under the care of UI neonatologists, but the new grant will help it expand statewide.

The grants were created to support programs that demonstrate innovative and sustainable approaches to public engagement. They were awarded as part of the University's "Year of Public Engagement" celebration.

RNAi halts movement disorder

A UI study finds that RNA interference, or RNAi, can silence disease-causing genes and normalize human neural cells, possibly pointing to applications for treating brain diseases.

RNAi can selectively suppress genes and holds promise as a therapy for many diseases. Pedro Gonzalez-Alegre, MD, assistant professor of neurology, tested the method against the movement disorder DYT1 dystonia, in which a mutant gene produces an abnormal version of the protein torsinA.

"DYT1 is a particularly attractive target for RNAi because it is not a neurodegenerative disease—there is no neuronal death," Gonzalez-Alegre said. "If you can correct the genetic problem, you may be able to cure the disease."

In a human neural cell model of DYT1, RNAi eliminated toxic torsinA without affecting the normal gene. The treatment appears to rescue the cells and return them to normal.

The study also showed that the delivery system for the treatment, a feline immunodeficiency virus vector, should prove effective in treating human brain cells without triggering an interferon response. If the technique works against DYT1, which is disabling, but not fatal, it also may counter more deadly disorders, including Huntington's disease.

The study appears in the Nov. 9 *Journal of Neuroscience*.



Radical solutions

With money and will, says **Larry Oberley**, *free radical biology may offer revolutionary cures.*

Larry Oberley ('74 PhD physics) forecasts a scientific sea change. In his view, discoveries from the field of free radical biology hold untold potential for treating intractable diseases. There's just one problem—money.

"I think we're looking at a revolutionary science that explains most of the major diseases of mankind, but it's not getting anywhere near the funding it needs," said Oberley, professor of radiation oncology, deputy director of the Holden Comprehensive Cancer Center and the Center on Aging's associate director for basic science research. "There's an unbelievable opportunity here that gets passed by year after year."

Similar calls for dollars come from all corners of science. But Oberley's complaint concerns not just tight funds for his own field, but the structure of research support, particularly as provided by the National Institutes of Health.

With their individual interests in specific diseases and medical specialties, Oberley said, the institutes can be reluctant to fund work that's not narrowly targeted at a particular problem. "We have an opportunity to cross-fertilize from one disease to another, and that is really very rare," he added.

The role of free radicals and antioxidants in cancer and aging are Oberley's primary research interests, but he's also studying a potential treatment for amyotrophic lateral sclerosis (ALS) and working with colleagues on topics from aneurysm to inflammatory bowel disease. The breadth of projects show how far free radical biology has come since Oberley happened into the field 30 years ago.

As a doctoral student in physics, Oberley had read pioneering free radical research by Irwin Fridovich, PhD, which sealed his interest in the intersection of physics and medicine. Upon joining the UI medical faculty, Oberley became one of a couple dozen American scientists pursuing the elusive free radical.

"In 1975, I was the only person studying free radicals at The University of Iowa," he recalled. "As of last count, there now are 64 faculty members doing free radical research on campus." Their work has implications for many diseases that tend to come with age, as well as for the aging process itself.

Since the 1950s, scientists have postulated a leading role for free radicals in aging. "Just recently very strong support for that theory came out in an article showing that if you over-express one of the major antioxidant proteins, you can expand the lifespan of flies by 50 percent," Oberley said. "That's an enormous increase."

Oberley dismisses talk of aging as a disease, noting that "it comes from the fact that we are run by chemical engines—

we're going to produce some free radicals, and they're going to cause some damage." That said, he advocates research that seeks to extend the human lifespan even as he turns much of his attention on improving quality, versus quantity, of life.

Oberley's work involves various antioxidants, particularly the powerful antioxidant enzyme superoxide dismutase. "There are probably 50 antioxidants that people are actively studying," Oberley said. "Every time you think you know them all, someone will discover a new one."

Harnessing antioxidants as disease fighters requires finding ways to deliver them. Gene therapy can do the job, providing that it targets the proper cells with high enough efficiency. Oberley and colleagues are finding ways to do just that.

Some of his most promising research involves gene therapy to increase production of manganese superoxide dismutase (MnSOD), a technique developed by John Engelhardt, PhD, UI professor and interim head of anatomy and cell biology. Oberley is studying MnSOD in mouse models for ALS, where it may counteract the toxic effects of another mutant SOD linked to the disease.

MnSOD also enhances the action of the anti-cancer agent BCNU in mouse models of breast cancer. Combining the antioxidant with BCNU produces enough hydrogen peroxide to kill cancer cells. "With three doses of our treatment, two weeks apart, we're getting 100 percent of our animals cured," Oberley said.

Testing the treatment in humans will require clinical grade adenovirus, the vector for MnSOD gene therapy. But Oberley's current grants don't cover that expense. He could team with a private company to fund the work, but doing so would require that he give up patent rights and—more important in his view—the right to run the trial at the UI.

Frustrations like these, Oberley said, underscore his argument for greater flexibility in research funding, particularly for basic science projects that may have multiple applications, some of them unforeseen. He also would like to establish a UI free radical center to help researchers share their expertise. "You don't need to continually reinvent the wheel," he said. "Sometimes the wheel is already there."

It's time, he says, to help free radical biology fulfill its promise. "We now have the ability to answer almost any question in this field, but we have to have the will," Oberley explained. "Even if an idea is wrong, we're better off studying it. If it doesn't work, you can eliminate it forever. If it does work, you can save millions of lives."

Staying Balanced

JUDITH CROSSETT HELPS PATIENTS AND PRACTITIONERS
COPE WITH MENTAL ASPECTS OF AGING

The singer-comedian Sophie Tucker once said that the secret to longevity is to keep

breathing.

Judith Crossett ('84 MD), UI associate professor of psychiatry, knows that successful aging requires more than a holding pattern. One of only a handful of Iowa psychiatrists who specialize in geriatrics, she believes the secret to aging well is balancing mental and physical health.

"Good health means adapting to stay as emotionally active as possible," Crossett said. "Older persons with truly good health have learned to adapt their activities to what the physical body can keep up with." For example, she noted that simple tools like larger knitting needles or playing card holders can keep people involved in activities that exercise the mind.

Crossett looks to her past when she thinks about aging. "I was lucky to have amazing grandparents who stayed active and engaged well into their later years," she said. She describes her paternal grandmother as "involved in everything," including civil rights and community causes.

Her other grandparents and her parents were voracious readers who maintained rich intellectual and family lives and valued ongoing education. In fact, her paternal grandmother and father got their college degrees only a year before she did.

"As we age we become more like ourselves," Crossett noted, "and more and more different from anyone else." The very young and the very old share some characteristics, especially in how they react to stressful situations.

"We don't blame babies for not being able to hold themselves together when they're stressed out," Crossett said. "The same sort of behavior appears in the very old, whose brains sometimes function like those of the very young."

Crossett puts this knowledge to work as director of UIHC geriatric psychiatry patient and teaching services and supervisor of the Senior Care Program. This outreach initiative provides direct care to nursing home residents, trains facility staff, and carries out treatment planning and family education. Crossett supervises an advanced practice nurse who works full time with almost 20 area facilities. Twice every month, Crossett visits one of the nursing homes herself.



In addition to providing patient care, the program offers opportunities for medical residents and fellows to broaden their training. Crossett points out that the program's success is rooted in collaboration between residents and fellows from psychiatry, internal medicine and family medicine, local physicians, nurses, and care facility staff. "As an interdisciplinary group we are most effective and able to meet problems and issues head on," Crossett said. "We help each other out a great deal."

Crossett also directs psychiatry's geriatric fellowship program, which offers clinical experience and support for research and teaching. Third- and fourth-year residents can work in the UIHC outpatient clinic or at Windmill Manor in nearby Coralville.

Crossett wishes more students could be exposed to geriatrics earlier in their training. "Geriatrics doesn't sound interesting until you've have a taste of it," she said.

Crossett serves as president-elect of the Iowa Psychiatric Society, the first woman to hold that office, and actively promotes statewide efforts to advance mental and geriatric health. The Iowa legislature recently voted to establish a program that aims to provide guardianship or decision-maker oversight in all 99 counties. Supporters are working on strategies to fund the program.

Another new initiative, the Iowa Mental Health and Aging Coalition, will identify and test best practices for mental health care in older adults. "We want to find ways to get tools in the hands of people who are there giving the care," Crossett said.

As a member of the CCOM Admissions Committee, Crossett remembers her experience as a nontraditional student who came to medical school after completing her PhD in English. Alongside academic accomplishments, she looks for prospective students who have demonstrated an ability to connect with others.

"Ultimately we're here to help each other in whatever form that takes," she said.

Cancer & Aging Pilot Grants

Cancer & Aging Program pilot grants for 2005

- **John Brooks, PhD, associate professor of pharmacy, assesses aggressive treatment for early-stage prostate cancer.**
- **Natalie Denburg, PhD, assistant professor of neurology, investigates the effects of chemotherapy on decision-making in older patients with colon cancer.**
- **Frederick Domann, PhD, associate professor of radiation oncology, studies expression of a protein linked to Alzheimer's disease for its possible role in squamous cell carcinoma.**
- **Al Klingelutz, PhD, associate professor of microbiology, examines telomere shortening, aging and cancer. Telomeres, which guide chromosomal replication and stability, gradually shorten as cells divide, perhaps contributing to the effects of aging and the development of cancer.**
- **Jose Ness, MD, clinical assistant professor of internal medicine, studies the impact of dementia diagnosis on the presentation and treatment of non-Hodgkin's lymphoma.**
- **David Lubaroff, PhD, professor of urology and an investigator with the Veterans Affairs Iowa City Health Care System, leads a Phase II study of an adenovirus vaccine for prostate cancer, assessing how age may affect immune response.**
- **Nancy Thompson, PhD, associate professor of community and behavioral health, investigates health literacy and informed consent among non-Hodgkin's lymphoma patients.**

Cancer & Aging Program

An unexpected finding pushed Rick Domann's research team in a new direction, one that could lead to diagnostic tools or therapies for squamous cell carcinoma. But to get there, the team would need additional funding, and winning those funds would require more data.

So Domann, PhD, an associate professor of radiation oncology, applied for a pilot grant from the UI Cancer and Aging Program (CAP), established in 2003 with one of eight five-year awards from the National Institutes of Health. The program helps researchers develop promising ideas with startup funds and access to core facilities.

"The idea is to provide infrastructure and funding to encourage faculty to work on the interface of cancer and aging," said Robert Wallace, MD, professor of epidemiology in the UI College of Public Health, director of the UI Carver College of Medicine Center on Aging and CAP principal investigator. "The ultimate goal is to get enough scientists together to form a research program in the Holden Comprehensive Cancer Center."

To date, the CAP has awarded 10 pilot grants, with more on the way. The grants tend to focus on three general areas—biology of cancer and aging, effects of comorbidity, and treatment efficacy and tolerance. Researchers who receive the grants agree to seek additional funding as their work progresses.

The CAP is a relatively rare formal effort to bridge disciplines or diseases. Although the NIH has called for more interdisciplinary research, investigators often have to tailor their proposals to suit particular institutes or other funding organizations.

"The compartmentalization of biomedical research by diseases is really the result of political forces," Wallace said. "But on the biological level, you're dealing with one complex set of cell machinery. It's not surprising to find mechanisms that apply to many different diseases—age-related changes that also may lead to cancer, atherosclerosis, renal failure or other conditions."

Domann Takes Research in New Directions

Domann was studying mechanisms behind squamous cell carcinoma, particularly the role of a transcriptional regulatory factor called activator protein 2 (AP2). To his surprise, forcing AP2 expression in skin cells stimulated a gene linked to Alzheimer's disease.

"That observation led to the hypothesis that AP2 was a driving force behind Alzheimer's precursor protein, or APP, in skin cells and possibly in neuronal cells as well," said Domann. "We also wondered what role, if any, APP might play in cancer progression."

The CAP grant allows him to test AP2 and APP expression in both oral mucosa and neuronal cells, perhaps opening avenues to grant money from cancer, Alzheimer's disease or aging groups. The research builds on his previous work and a study by other investigators who observed one form of APP overexpressed in squamous cell carcinomas of the oral cavity.

"We've found that three quarters of the head and neck squamous cell carcinomas we've looked at have unregulated expression of APP compared to normal mucosal cells. At the mRNA level, there is an almost perfect linear correlation—the more AP2 mRNA there is in a tumor, the more APP mRNA we find," Domann said.

"It seems like AP2 could be the underlying cause for APP expression in head and neck cancers," he added. "We think the resulting APP might act as a growth factor that accelerates cell proliferation and forms tumors."

The AP2-APP connection could have implications for brain disease as well. "Our data show that AP2 also can drive expression of APP in neuronally derived cell lines, suggesting that AP2 could be a causal player in late-onset neurodegenerative disease as well as in cancer," Domann said.

CAP grants cover the gamut between basic science, clinical medicine and public health. One of the first pilot projects supported by the UI program assessed quality of life among older cancer survivors, looking especially for

links between cancer history and mobility limitations. To do so, researchers drew on Medicare claims information, the Iowa Cancer Registry and surveys of about 2,500 Iowans over 65.

"We wanted to create a rich database that included not only cancer registry and health claims, but also information about patient health status," said Elizabeth Chrischilles, PhD, professor of epidemiology. "Our idea was to evaluate the trajectory of health status among cancer survivors compared to people who don't have a history of cancer, which we couldn't do without the survey data."

Study participants with mobility limitations are slightly more likely to have had a cancer diagnosis, but so far cancer history seems to have little impact on health status changes. Chrischilles and colleagues have expanded their project to study access to preventive services.

"We do find that mobility status is a major predictor of whether patients receive screening services, regardless of whether they have had cancer," she said. Combining patient surveys with health care records also may shed light on treatment choices made by physicians and older patients, who are less likely to get aggressive treatment for many cancers.

"By bringing in the patient perspective, we can start to understand the reasons behind these decisions and the quality of life consequences," Chrischilles said. "We're finding that quality of life for survivors is not much different than for people without cancer, which is encouraging regardless of age."

Chrischilles's work draws on the CAP Population-Based Cancer Treatment and Outcome Database Core, which she also directs. Raymond Hohl, MD, professor of internal medicine, directs a second CAP core facility, the Analytical Pharmacology Laboratory Core.

The core facilities provide additional tools for investigators, including expertise from colleagues. "The database core is not just a technical

resource, but also a resource for collaborative scientific thinking," Chrischilles said. "We help researchers determine whether there are population databases that might complement the questions coming out of their labs and clinics." For example, Domann's findings could prompt a search for any overlap between dementia and squamous cell carcinoma diagnosis.

The database core includes access to cancer registries from around the country, allowing researchers to compare Iowa with other states. "In my own work, some of our findings aren't necessarily compatible with other published reports," Chrischilles said. "Others have reported that cancer survivors are a vulnerable group not getting enough general preventive services. So far, we have not found this to be the case in our study of older Iowans who have had cancer. It may be that we're just doing a great job in Iowa with our cancer survivors."

Iowa demographics make the state a particularly good site for studying aging and cancer. "We have one of the oldest populations in the country," Wallace said. "But we also are able to look at factors like rural life and its effect on aging trajectories and cancer management. Do rural people get the same level of care as people in bigger cities? Are there rural or environmental exposures that affect cancer incidence?"

As UI cancer and aging experts combine their varied training, methods and outlook to answer questions like these, they'll undoubtedly find new directions for inquiry.

"This is one of the beauties of studying aging," Wallace said. "As you study age-related changes, you go in a number of different directions. It takes you to many interesting places."

HARD CHOICES

For some aging brains, the decisions don't come easy.

Consider for a moment why you are reading this article. Did the title draw you in? Are you interested in the subject? Did the graphic quality of the page spark your interest? Probably without even realizing it, you made a decision to spend time reading this story. How did that happen? What processes occur when we make decisions, and what factors affect those processes?

Researchers are looking for answers to these questions. Decision-making has emerged as a new and growing area of study, and UI neuropsychologist Natalie Denburg, PhD, is looking at a particular aspect of the topic—how aging affects our ability to make good decisions.

Denburg, an assistant professor of neurology, has surveyed both ends of the aging process, as a graduate student studying child psychology and normal aging and later as a clinician treating older patients with dementia. As she moved from a clinical to a research career, her work came to focus on aging and cognition.

“More people are living longer, and more people are surviving cancer and other diseases,” Denburg said. “Researchers now are paying attention to decision-making, an area of science that was relatively neglected compared to the study of memory. Sound reasoning, judgment and decision-making may be particularly important to the older adults, as they often face complex and emotionally challenging issues.”

A 2004 NIH workshop on decision-making and aging noted that older people face a complicated set of choices involving pensions and retirement benefits, portfolio investments, insurance, and health and family decisions. Today more than ever, information overload is a significant risk for anyone dealing with the cognitive challenges that grow more common with age.

“According to the U.S. Department of Health and Human Services Administration on Aging, by 2030 there will 71.5 million elderly persons in this country,”

said Susan Schultz, MD, associate professor of psychiatry and associate director for behavioral research at the UI Center on Aging. “That’s more than double the number in 2000.”

Fortunately, these demographic changes accompany the development of research tools that may offer knowledge about how people age, make decisions and best absorb information.

“We now have new methods to better understand how the brain changes with age, such as functional magnetic resonance imaging,” Schultz said. “This gives us new windows into the brain that will ultimately help us diagnose and treat late-life disorders.”

One of the first steps toward that goal is learning exactly how the aging process affects our brains and their capabilities. That’s where Denburg’s research begins.

To chart how older and younger adults differed in their decision-making approaches and abilities, Denburg turned to the Iowa Gambling Test—a well-received decision-making assessment instrument developed at the UI and now in use worldwide. She studied 80 individuals in all, classified by age into two groups. The younger group included people ages 26 to 55, the older group ages 56 to 85.

Each group took the test, in which participants choose 100 cards from one of four decks. The cards come with monetary rewards of varying amounts, but a participant’s overall gain or loss depends on how he or she chooses.

In the younger group, the majority (93 percent) of the participants ranked as unimpaired. In the older group, only 38 percent ranked as unimpaired.

While the older group as a whole had more trouble with the test, older adults who performed well scored at least as high as the younger adults.

“Many older adults are doing exceedingly well,” Denburg said. “Some of the best performers on the gambling task were older adults. But in general, there’s more cause for concern with someone who is aging. It’s similar to the concern I might have about an adolescent making a poorly-reasoned, impulsive decision.”

The key to why both adolescents and older adults have trouble with decision-making tasks lies in the frontal lobe of the brain, specifically the prefrontal cortex. In an adolescent’s brain, this area isn’t fully mature, and won’t be until sometime in the mid- to late-twenties. Beginning around one’s sixth decade of life, this area of the brain starts to lose volume and deteriorate.

Many researchers believe that as people age, the frontal lobe changes at a faster pace than other brain structures, perhaps even temporal lobe structures like the hippocampus, affecting an older person’s ability to reason and make decisions. Robert West, PhD, a University of Notre Dame psychologist, popularized this idea, known as the frontal lobe hypothesis.

“There’s debate about where in the frontal lobe the changes occur,” Denburg said. She believes the ventromedial prefrontal cortex may be the area most susceptible to the affects of aging, while others believe the changes are more global. “I’m currently writing a grant to examine the structural and functional decline in different prefrontal subregions,” she added.

While researchers know that the brain changes with age, why this happens, exactly how the changes affect our behavior, and why some people seem to handle brain changes better than others remain unknown.

“If the frontal lobe hypothesis is accurate, with age most people would have some volumetric loss in these brain regions,” Denburg said. “Another hypothesis is that it’s possibly a very early form of a degenerative condition. Whether this translates into behavioral changes in everyday life is up for debate. It depends on how bright you are, if you can compensate and any number of other factors.”

Denburg also examined links between autonomic functioning and behavior during the Iowa Gambling Test. She recorded when and how much test participants sweated before making decisions in order to monitor how their autonomic responses compared to their performance.

“The prefrontal cortex is connected to these autonomic responses,” Denburg said. “We’re interested in sweat because it’s a proxy for the integrity of the frontal lobe.”

In Denburg’s study, people who gambled poorly had the same sweat response to both the good and bad decks of cards.

“Our bodily responses may help shape our decisions,” Denburg said. “We know that patients with a frontal lobe lesion who have difficulty making decisions have very little sweat response to both the good and bad decks. Perhaps older adults, like people with frontal lobe lesions, don’t get that bodily feedback on how to approach a decision.”

Participants’ sweat responses also indicated that younger and older adults approach a decision in different ways. The older adults sweated more before making a good choice, while the younger adults sweated more before making a bad choice.

“This finding fits with a growing literature which suggests that older adults might be much more moved by positive stimuli than negative stimuli,” Denburg said. “I think the older adults were just more moved by winning than losing.”

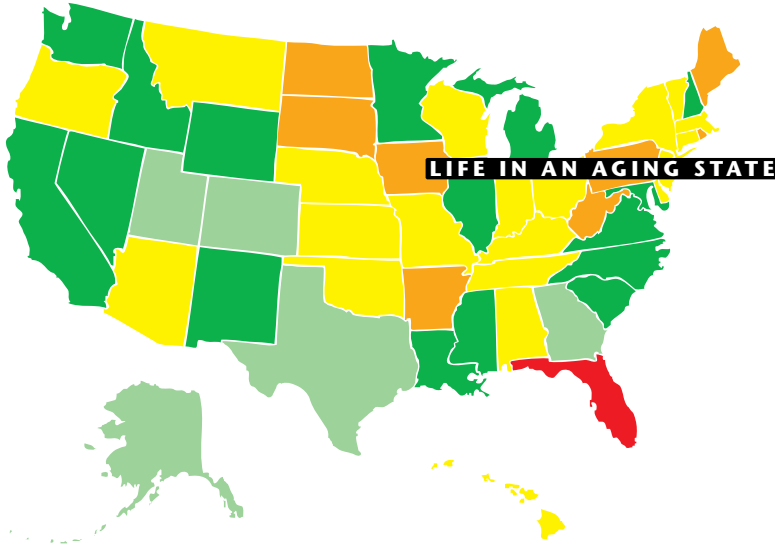
Denburg is interested in applying her findings to real-world situations, perhaps studying older adults as they make decisions about medical or financial matters.

“Some of the most critical decisions we will make in our lifetimes occur when we are older—major medical decisions, treatment decisions, financial decisions,” Denburg said. “If our abilities to make good decisions decline as we age, that’s a concern.”

For Denburg, studying decision-making in older adults isn’t all about the science. Her concern about elderly people targeted by misleading or fraudulent advertising, and the experience of watching her own aging parents process medical information and make health-related decisions, also drives her efforts.

“It’s not just about the outcomes of our decisions,” she said. “There are also dignity issues that go along with our decisions, and those issues really motivate me.”





Iowa suffers from a shortage of affordable alternatives to nursing homes, leaving older residents few choices if their health or physical abilities decline. A practical solution is for the state to invest in more affordable assisted living facilities.

This is just one example of public policy recommendations coming from the UI Carver College of Medicine's Center on Aging (COA). COA faculty and staff come from a mix of fields, and the center's interdisciplinary nature helps it address the wide-ranging challenges of life in an aging state.

Iowa ranks fourth among U.S. states in the proportion of its population that is over 65 and second in the over-85 category. By 2025, the over-65 age bracket is projected to include more than 22 percent of Iowa's population, with one in six Iowans over 85.

While it advances basic and clinical research linked to aging, the COA also plays an active role in developing public policy directions relevant to older Iowans. Through its outreach and policy development component, the center provides state agencies with research findings that help to define alternatives in areas like housing, long-term care and employment.

"A key COA function is to be a resource for state agencies," said Brian Kaskie, PhD, assistant professor of health management and policy in the UI College of Public Health and the COA's associate director for public policy. "We conduct research that focuses on particular issues such as long-term care or work force participation to illuminate different policy-based solutions."

The COA's policy work is an essential adjunct to its research on the science of aging. For individuals and their families, choices about work and retirement, where to live, and whom to turn to for care are inseparable from the medical facts of growing older.

"What we do does not happen in a laboratory or a clinic. We spend a lot of time in front of computers, reading about public policies pertaining to older Iowans and thinking about how these might be improved or preserved," Kaskie said. "We also educate professionals, policy-makers and consumers on policy choices and implementation strategies."

The center both responds to state agencies' requests for research on specific issues and proactively studies policy topics affecting older Iowans. "We do these reports, and our expectation is that state agencies use them to support their policy initiatives," Kaskie said.

Recent COA studies by Kaskie and UI collaborators have analyzed Iowa's long-term care system, the housing situa-

tion for older residents and the role of older Iowans in the workforce. The latter fulfilled a contract with Iowa Workforce Development, the state agency concerned with overseeing labor laws and promoting employment in Iowa.

The workforce study documented the dilemma facing the state as older Iowans retire and leave the labor force, even though Iowa employers have a continuing need for workers. "It's a catch-22," Kaskie said. "On one hand we have an aging workforce wanting to retire, and on the other hand we have this labor force issue. We're a zero-population growth state, so it's a problem."

Part of the solution, according to the study, may lie in encouraging and facilitating the re-entry of retired Iowans into the work force, especially in fields such as health care that are short of workers. Older workers "like these jobs because they're more appealing than working on a farm, in a factory or in some full-time position with little social contact," Kaskie said. "Health care jobs can provide flexible hours and a chance to engage with other people."

Another recent COA study analyzed Iowa's long-term care system, identifying a need for standards to determine if individuals seeking places in skilled nursing facilities truly need that level of care. "You wouldn't want that sort of variability in diabetes care," Kaskie said, "so why would you want it in long-term care?"

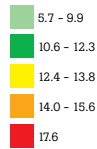
One state official with a close interest in the COA's policy work is Mark Haverland, executive director of the Iowa Department of Elder Affairs.

"The Center on Aging is a very important partner for us," Haverland said. The two organizations have an ongoing relationship that lets the state agency tap COA expertise on an informal basis.

Noting that Elder Affairs also works closely with Iowa State University faculty, Haverland said he was surprised by the variety and level of expertise available through the state universities when he assumed leadership of the agency. "We find both Iowa and Iowa State to be hugely valuable resources, and we value highly the academic contribution to policy studies," he said.

Haverland's agency uses COA studies to develop legislation or implement rules on issues important to older Iowans. Elder Affairs often calls on study authors to testify before legislative committees about their findings and recommendations. The agency also conducts numerous events to inform ordinary Iowans, health care and human services professionals, and others about its programs. "Frequently we rely on the University to help us with these conferences," Haverland said.

Elder Affairs currently is developing legislation to require assessment of persons seeking to enter long-term care facilities to ensure appropriate placement. Kaskie and the COA, Haverland said, are "crucial to this particular initiative."



The housing challenge

The UI Center on Aging study, “Housing for Older Iowans: On the Crest of the Age Wave,” completed in 2003, identified challenges facing Iowa in ensuring adequate and affordable housing for its seniors. The report also has helped the Iowa Finance Authority fashion policies to address these challenges, according to Brian Kaskie, its lead author.

The report draws on data from the 2000 Census, Healthy Iowans 2000, AARP’s Long-Term Care Profiles and other sources. Researchers also interviewed eight housing experts from across the state.

The housing situation for older Iowans is generally good, with more than half of the state’s residents over 65 living in their own homes. Nevertheless, the study identified challenges for Iowa and its seniors in three key areas: affordability, adequacy of physical structures and access to needed services.

Eleven percent of older Iowans who live in single-family homes pay more than 35 percent of their monthly income for housing, highlighting concerns about affordability. Of the one-third of older residents who live in apartments, almost 30 percent pay more than 35 percent of their income in rent.

Six percent of Iowa seniors live in nursing homes at an average annual cost of \$35,000. Many experts, the report says, think Iowa has too many nursing home beds and not enough assisted living units, pushing some seniors to pay for around-the-clock care they may not need.

More than half of the homes occupied by older Iowans are more than 40 years old, and the authors estimate that one in five Iowa seniors lives in a home needing major repairs. Many apartments likely lack modifications that make life easier and prevent falls and other accidents, and Iowa appears to lack programs that help adapt homes for safety and utility.

Health care tops the list of services older adults require, yet many Iowa counties don’t have enough doctors, nurses and home health aides to serve their older populations. At least 30 counties lack a hospital with a critical care unit.

The study offers a variety of policy alternatives to address these challenges. They include helping older Iowans reduce housing costs through home equity conversion programs, sale and lease-back agreements, and life estate transfers; facilitating purchase of long-term care insurance; and targeting federal subsidies to urban areas where growth in the over-65 population is highest.

To help repair and adapt the homes where older Iowans live, the report recommends petitioning the federal government to allow Community Development Block Grants and other programs to pay for such modifications. Access to services could be enhanced by encouraging more seniors to use home health services available through Medicare and adding assisted living services to existing subsidized housing facilities.



More than 250 UI Carver College of Medicine alumni, friends and guests attended an Outback Bowl reception in Tampa, Fla., on Jan. 1, 2006.

1940s

Warren Brooker ('43 BA, '45 MD) of Duluth, Minn., practiced and served as a military flight surgeon after medical school, then completed a urology residency and practiced the specialty until his 1991 retirement. He and wife Marjorie have been married since 1944 and have raised five children.

William Wehrmacher ('43 BA, '45 MD) of Morton Grove, Ill., is an adjunct professor of physiology at Loyola University, where he joined the faculty in 1971.

MD Reunion Class of 1946 Alumni Reunion Weekend, June 9-11, 2006

Hoyt Allen ('46 MD) is retired after 50 years of surgery practice in Fort Dodge, Iowa. He still plays golf, travels, and enjoys good health and activity.

David Carmichael ('46 MD, '49 BA) of La Jolla, Calif., is a clinical professor at the University of California, San Diego. He's also a retired rear admiral in the U.S. Navy, a distinguished fellow and master of the American College of Cardiology, a master, governor and Laureate Award recipient in the American College of Physicians, and a former chief of staff at Scripps Memorial Hospital in La Jolla.

Lawrence Larsen ('43 BA, '46 MD) of Harlan, Iowa, retired in 1984.

Hugh Martin ('42 BA, '46 MD) of Nipomo, Calif., writes he and wife Jean are "fairly healthy and enjoying life."

H.M. Readinger ('43 BA, '46 MD) of New London, Iowa, writes, "I have practiced family medicine for almost 56 years and still spend 10 hours a week at the office." His family includes two other physicians—a son practicing in Mount Pleasant, Iowa, and a grandson currently pursuing a family medicine residency.

Edward Rizk ('46 MD) of Houston, Texas, retired from pediatrics practice in 1985.

1950s

Elwyn Brown ('42 BSChE, '47 MS, '50 MD) of Kansas City, Mo., is a retired anesthesiologist with some 50 publications to his name.

MD Reunion Class of 1951 Alumni Reunion Weekend, June 9-11, 2006

Paul Orcutt ('51 MD) and his wife, Peggy, of Marion, Iowa, have six children, two of whom practice veterinary medicine in Massachusetts, one treating horses, the other exotic animals.

William O'Malley ('51 BA, '52 PT) of Iowa City is retired after 38 years with Mercy Hospital. He writes that his wife, Virginia, died in 2004.

Norman Snyder ('51 MD) has served as city councilor and mayor of West Covina, Calif. He also organized a telephone hotline for challenged youth, was honored for helping to establish a human relations commission in West Covina and is a Paul Harris Fellow with Rotary International.

Robert Anderson ('55 BA and MD) of West Des Moines, Iowa, and Bonita Springs, Fla., is a retired pediatrician and former UI clinical assistant professor. He has two children and six grandchildren.

Russell Anderson ('55 MD) practices ophthalmology in Virginia, Minn.

Allen "Duke" Anneberg ('52 BA, '55 MD) retired from his Carroll, Iowa, ob-gyn practice in 1987 and since has done plenty of hunting and fishing.

John Bailey ('55 BA and MD) of Anamosa, Iowa, retired in 1993. His oldest son, William, teaches family medicine residents in Sioux City, Iowa. Another son installs imaging equipment, and a third is a Web designer.

Richard Caplan ('51 MA, '55 MD) is a retired UI faculty member, but continues to teach continuing education sessions on medical ethics and literature and medicine.



Left to right, Max Palmer, Enfred Linder ('51 MD) and Don Buss met in Florida for the Hawkeyes' Outback Bowl appearance.

Warren DeKraay ('55 MD) practices surgery in Racine, Wis., and volunteers abroad.

Robert Fox ('55 MD) of Phoenix, Ariz., practiced family medicine for 34 years and served as senior vice president for medical affairs at Phoenix Baptist Hospitals and Health System. He retired in 2001.

E. Dwight Jordan ('55 MD) is retired and living in Raleigh, N.C. He has four granddaughters, and his son, Tim, is a pediatric ophthalmologist.

Hal Schedl ('55 MD) of Iowa City is a UI professor emeritus of internal medicine.

Edward Schmiedel ('51 BA, '55 MD), a retired family physician, and wife Verna divide their time between Charles City, Iowa, and Clermont, Fla.

Roger Tutton ('52 BA, '55 MD) of Richmond, Va., retired from his radiology practice in 1996.

MD Reunion Class of 1956 Alumni Reunion Weekend, June 9-11, 2006

Jack Broms ('56 BA and MD, '65 MS and R orthopedic surgery) of Ventura, Calif., was named Physician of the Year Emeritus by the Ventura County Medical Resource Foundation in 2004.

Ken Fawcett ('54 BA, '56 MD), semi-retired and living in Ames, Iowa, has served on the board of governors for the American College of Physicians and as a medical review officer for drug testing.

Gunnar Graudins ('56 MD) of Prospect Heights, Ill., retired two years ago. He's traveled to Latvia and is recovering from recent medical procedures.

Stanley Graven ('56 MD, '60 R) received the 2005 Virginia Apgar Award from the American Academy of Pediatrics. A faculty member at the University of South Florida in Tampa, he was honored for developing regionalized systems for perinatal care, and for enhancing the physical and developmental environment of neonatal intensive care units.

Richard Lindgren ('53 BA, '56 MD) and his wife, Ardeth, have been married 45 years and have seven grandchildren. He retired from full-time practice in 1999, but still does locum tenens work in four states.

Daniel Longnecker ('53 BA, '56 MD, '61 R pathology, '62 MS biochemistry) continues to work part time for Dartmouth Medical School as a professor active emeritus, lecturing and publishing.

William Metge ('53 BA, '56 MD) retired from nuclear medicine in 1996 and divides his time between Indio and Carnelian Bay in California. He and wife Marlene have two children and four grandchildren.

William Schmelzer ('52 BA, '56 MD) of Pinconning, Mich., writes that he retired last fall but plans to remain involved in primary care activities.

Gerald Schultz ('52 BA, '56 MD, '61 R otolaryngology) retired in 1990 and today skis and fly fishes in Colorado several times a year. He also visits Las Vegas regularly, follows the Miami Dolphins—he's held season tickets since 1967—and catches Hawkeye football and basketball on television. He lives in Fort Lauderdale, Fla.

John Thorson ('56 BA and MD, '60 MS and R ophthalmology) is mayor of Sun Valley, Idaho.

Alan Wentworth ('54 BA, '56 MD, '64 R) of Green Bay, Wis., retired after 41 years of U.S. Navy, aviation medicine and neurosurgery practice. He's a volunteer with the United States Power Squadrons, a nonprofit boating organization, and enjoys travel and visits with his four children and eight grandchildren.

George Williams ('56 MD) of Kansas City, Mo., retired in 2004 following 30 years of family medicine practice and a decade as a locum tenens and U.S. Army contract physician. He and his wife, Loretta, have five children and have traveled extensively.

Share your own alumni news...

...by contacting the Office of Alumni and Collegiate Relations by fax: (319) 384-4638; e-mail: medicine-alumni@uiowa.edu; or mail: 5107 Westlawn, UI Carver College of Medicine, University of Iowa, Iowa City, IA 52242.

For more alumni news, features, event photos, reunion and membership information, an alumni e-mail directory, and much more, visit the UI Medicine Alumni Society online at www.medicine.uiowa.edu/alumni.



Fourth-year medical student Keshia Buster with Sarah Morgan ('81 MD, '84 R internal medicine) of Birmingham, Ala., who opened her home to Buster through the College's Help Our Students Travel (HOST) program.

Bill Whitmore ('56 BA and MD, '63 R) of Davenport, Iowa, is a retired orthopaedic surgeon. His daughter is on the UI education faculty, and his sons are UI engineering and law grads.

H. Streeter Shining ('55 BA, '58 MD, '62 R internal medicine) of Rapid City, S.D., retired from practice in 1999 and has four grandchildren.

1960s

Ken Day ('60 MD) of Wausau, Wis., is past president of the Wisconsin Urological Society and Marathon County Medical Society.

MD Reunion Class of 1961 Alumni Reunion Weekend, June 9-11, 2006

William Baumann ('58 BA, '61 MD) is retired from family medicine practice and lives in Fairfield, Iowa.

Darrell Fisher ('61 MD) practiced at the Mason City (Iowa) Clinic until 2000. Today he does locum tenens orthopaedics work. He and wife Susan have been married 46 years and have three children and four grandsons.

George Naifeh Jr. ('57 BA, '61 MD) is a radiologist at the Veterans Affairs Medical Center in Prescott, Ariz.

Marvin Thomas ('58 BA, '61 MD, '67 R, '68 F) of Backlick, Ohio, is a full-time rheumatologist in private practice and affiliated with Ohio State University.

Paul Willis III ('58 BA, '61 MD, '65 R) of Middleburg, Fla., will become a fellow of the American College of Radiology in May.

John Harbison ('59 BA, '62 MD, '66 R) is professor emeritus of neurology at the Medical College of Virginia, where he's held a number of faculty and administrative roles since 1970. His son, John, is a psychiatry faculty member at the University of California, San Francisco. Son Tom is an internist in Portland, Ore.

Chuck Hesse ('62 MD, '70 R) is a longtime Iowa City ob-gyn, a lecturer at the UI, a local Rotarian and a community volunteer. He has four children and 10 grandchildren.

Michael Merchant ('65 MD) of Olympia, Wash., spent a year in Vietnam after graduation, then completed a dermatology residency. He has practiced and taught clinical dermatology for a University of Washington-associated family medicine residency program since 1973.

Richard Waterbury ('65 MD) of Georgetown, Texas, retired in 2000 after a career in anesthesiology that included training and service with the U.S. Navy and practice with Children's Hospital of Minneapolis, where he served as department chair and medical director for Children's West Surgicenter.

MD Reunion Class of 1966 Alumni Reunion Weekend, June 9-11, 2006

Chuck Bendixen ('61 BSME, '66 MD) practiced family medicine until 1984, then shifted to occupational medicine, practicing in Iowa, Ohio and Nebraska. He retired in 2000 and today lives in Flagstaff, Ariz.

Richard Fox ('63 BA, '66 MD) is director of clinics for Samaritan Pacific Health Services in Newport, Ore.

James Merchant ('66 MD), dean of the UI College of Public Health, received a Distinguished Alumnus Award from the University of North Carolina at Chapel Hill.

Roger Murken ('66 MD), now semi-retired, is director of hearing services at Casa Colina Hospital in Pomona, Calif. His daughter is an RN, and his son is completing an orthopaedics residency at the University of Colorado.



HOST volunteer Edwin Wolfgram ('54 BA, '59 MD) and fourth-year medical student Matt Lazio, who stayed at Wolfgram's home while interviewing for an emergency medicine residency in St. Louis, Mo.

Bob Porter ('66 MD) retired from orthopaedic surgery in 2000 and divides his time between Baja California Sur, Mexico, and Idaho.

Stan Smith ('66 MD) is a radiologist in Pellston, Mich. He also has served as chief of radiology at Central Michigan Hospital and Northern Michigan Hospital.

Robert Smits ('66 MD, '72 MS and R otolaryngology) retired in 2000 and moved to Florida. He writes that he and wife Pamela "lived on the beach until a year ago, when we tired of hurricane damage." Today he lives in Lynn Haven, where he enjoys antique car restoration, antiques and collecting pre-Prohibition brewery advertising.

William Sweet ('66 MD) of Wyomissing, Penn., is president of the board for Novus Insurance Company (Risk Retention Group), which provides medical malpractice coverage for bariatric surgeons nationwide.

Kent Johnson ('67 MD) retired from his Flagstaff, Ariz., pediatrics practice after 32 years. He and wife Paula, a labor and delivery nurse working on a master's degree, are restoring their home on the banks of the Verde River. "It's kind of like a holiday every day now," Johnson told a local paper.

1970s

David Bilstrom ('70 MD) of Lake Oswego, Ore., is a fellow of the American College of Allergy, Asthma and Immunology, and past president of the Oregon Allergy Society.

J. Michael Moses ('66 BS, '70 MD, '75 R) was elected secretary of the Pennsylvania Orthopaedic Society and chairman of the executive committee for Physicians Health Programs, a component of the

Pennsylvania Medical Society foundation. He is president of Western Pennsylvania Orthopaedics and Sports Medicine, Inc., and chairman of orthopaedic surgery at Memorial Medical Center in Johnstown.

MD Reunion Class of 1971 Homecoming Weekend, Oct. 6-7, 2006

Jeff Maurus ('74 MD) practices obstetrics and gynecology in Moline, Ill., and was appointed medical director of the family planning program for the Illinois Department of Human Services.

MD Reunion Class of 1976 Homecoming Weekend, Oct. 6-7, 2006

Corrine Mikkelson Ganske ('77 MD) was named director of the family practice residency program at Iowa Lutheran Hospital in Des Moines.

1980s

John Chase ('80 MD) of Maitland, Fla., and his wife, Marian Coppo, have two daughters in college—one at Miami University in Ohio, the other at University of Miami in Florida—and a third in high school.

MD Reunion Class of 1981 Homecoming Weekend, Oct. 6-7, 2006

Kent Kapitan ('81 R) has returned to academic medicine after 16 years of pulmonary and critical care practice in Kansas City, Mo. He is an associate professor of clinical medicine in the pulmonary division at Southern Illinois University in Springfield.



Left to right, Don Buss, Annemarie Stark, Mitch Ruzek and Kimberly Ruzek ('99 MD) at the UI Carver College of Medicine Outback Bowl reception.



Discover Italy

In partnership with the Iowa Voyagers, the UI Carver College of Medicine invites you to spend a few days under the Tuscan sun, Nov. 6-14, 2006.

“Discovery Abroad in Italy: Orvieto and Tuscany” features educational seminars, activities, and day trips to historical and cultural sites.

Visits to Rome, Florence, Perugia and Assisi, and a cooking demonstration with renowned chef Lorenzo Polegri further highlight your Italian cultural experience.

Look for a brochure in your mailbox soon!

For further information, contact the Medicine Alumni Society at medicine-alumni@uiowa.edu, call (877) MEDIOWA, or go online to www.medicine.uiowa.edu/alumni/italy06/index.html.

Elaine Berry ('85 MD) has three children and has practiced in Atlantic, Iowa, for 17 years. She is a board member for the Iowa Medical Society involved in her church, hospice, EMS, bioterrorism preparedness and the Iowa Academy of Family Physicians.

Richard Shields ('85 PT, '92 PhD), UI professor of physical therapy, received a 2005 Mentor Award from the UI Graduate College. The awards honor faculty who have assisted and made a positive impact on graduate students.

Mick Vanden Bosch ('89 MD, '94 R) moved to Sioux Falls, S.D., in January with his wife, Judy, and their three daughters—Michaela, age 12; Anisa, 8; and Ciana, 4. He joins Sioux Valley Ophthalmology as a comprehensive ophthalmologist.

1990s

John Kepros ('87 BSE, '91 MD) of East Lansing, Mich., is medical director at Trauma Sparrow Hospital.

Scott Meyer ('95 MD) practices in LaCrosse, Wis.

**MD Reunion Class of 1996
Homecoming Weekend, Oct. 6-7, 2006**

Javier Sanchez ('96 MD) is director of the urgent care center at Kaiser Fontana Medical Center in Fontana, Calif. He also is president of the Kaiser Permanente Fontana Latino Association and a clinical instructor with the University of Southern California.

Pixie Plummer ('99 MD) is in the second year of a neurodevelopmental disabilities fellowship at Children's Hospital Boston, working with both pediatric and adult patients. "I bring up Iowa at every opportunity," she writes.

Paula Sturgeon ('94 BA, '99 MD) is an assistant professor of pediatrics at Baylor College of Medicine, where she also is chief of the Neonatology Graduate Clinic. She works with the Baylor-Rice University undergraduate minority mentor program each summer.

2000s

**MD Reunion Class of 2001
Homecoming Weekend, Oct. 6-7, 2006**

Daniel Vaena ('01 R) is an assistant clinical professor of hematology and oncology in the UI Department of Internal Medicine.

James Heun ('05 MD) of Madison, Wis., and wife LeAnn welcomed a son, Thomas James, Nov. 15.

|in memoriam|

MD 1931: Ward Ceilly of Brightwaters, N.Y., died Dec. 28, 2000.

MD 1937: Lloyd Mattice of Fayetteville, Ark., died Nov. 11, 2005.

MD 1940, R (surgery) 1949: Paul Skelley Jr. of Joplin, Mo., died Nov. 21, 2005.

MD 1941, R (surgery) 1950: Jess Schwidde of Billings, Mont., died Dec. 9, 2005.

MD 1948: Stanley Biber of Trinidad, Colo., died Jan. 17, 2005.

MD 1950: Jack Morgan of Vashon, Wash., died Aug. 12, 2005.

MD 1953: John Myers of Canby, Minn., died Nov. 20, 2005.

MD 1955: Ralph Scott of Las Vegas, Nev., died June 25, 2005.

MD 1960, R (neurology) 1967: Clifford Danneel of Omaha, Neb., died Dec. 17, 2005.

MD 1960, R (internal medicine) 1964: R. Kent Moeller of Orlando, Fla., died Oct. 20, 2005.

MD 1971, R (pediatrics) 1974: Stanley Levine of New York, N.Y., died Nov. 25, 2005.

MD 1995: Ted Roeder of Metamora, Ill., died Dec. 27, 2005.

MD 2002: Tam Nguyen of Tampa, Fla., died June 27, 2005.

School days, 1890s style



John Fatland (49 MD) with portraits from the Class of 1892, the year his great uncle Oley earned a medical degree from the UI.

Most of us have to rely on the good-natured exaggerations of parents and grandparents for impressions of what school life was like for them, stories that can veer into “walking-barefoot-in-the-snow-uphill-both-ways” territory.

John Fatland (49 MD) is lucky enough to possess a letter written by his great uncle Oley describing medical student life at The University of Iowa in the late 19th century.

“It’s amazing to think how different our experiences at Iowa were even though we were only separated by 60 years or so,” Fatland said. “For example, he writes that it cost him about \$3 per week for room and board. That was a lot of money back then.”

The letter, dated September 28, 1890, offers a rare personal glimpse into medical school at the time. Describing a much smaller university, Oley wrote: “There are over 800 students in the whole university this year, which is considerable (sic) more than had ever been before.”

As for the medical program, Oley added, “There are between 140 and 150 in the medical department, 17 more than there was last year which speaks very well for the school.”

He noted a few details from his training. “We have had a few operations on the eyes since School opened. Some for cross eyedness and one for What is called cataract where they are entirely blind.”

Writing from his room at 914 Iowa Avenue, Oley closes the letter by saying his fingers are so cold he can no longer hold the pen.

Oley earned a medical degree from the University of Iowa in 1892 and went on to practice in Kensett, Iowa, for several years until he died suddenly at age 34. Fatland found the letter among his deceased father’s papers in 1951.

Fatland’s father also attended the UI, graduating from the College of Dentistry in 1918. “The three generations of the Fatland family are grateful to The University of Iowa for our educations and to the many there who helped us along the way,” Fatland said.

Geriatrics from both sides of the bed rail

Ian Smith, MD, professor emeritus of internal medicine, has spent years teaching students and patients about aging. As he recounts here, the personal experience of aging has brought lessons for him as well.

When you start teaching geriatrics to medical students, you must grab their attention. I called my lectures "Aging Begins at 30," the title I also used for a column published on the Web to educate patients. Many of my medical students were 25 or older, so they sat up and took notice.

I was 58 years old then. Today I am 83. How has the reality of aging meshed with the theory I taught? Each of us carries our unique mix of genetics and personal history into old age. In my case, living in a community of physicians—some of them colleagues I've known for decades—also has shaped the experience of aging.



Ian Smith in 1945...

When I began teaching geriatrics, I had just resigned as chair of internal medicine at East Tennessee State University. I had taught, practiced and studied infectious diseases for 20 years and wanted to explore a new field. I chose geriatrics, since I had served as house officer (or intern) to a leading expert in geriatrics years earlier in Scotland.

My health had been good save for a severe depression that recurred once, but has not troubled me for 25 years. It took months to dissipate after my first episode, since there were no treatments then. The second time was very different—I was back to work in a week and soon felt normal provided I took my medicine for the next six months.

My father had a heart attack at 55 and died of stomach cancer at age 64. My mother had pernicious anemia and suffered a stroke at 70. She remained alert and died eight years later after nursing home care. Considering this history, I knew I was at risk for arteriosclerosis, a common disease in the west of Scotland, probably hastened by a high-fat diet.

I had been lecturing in Sweden and Russia, and on my way home had to run to catch a plane. I had an attack of angina—my only one. The next morning I saw a colleague, Ernie, a first-class cardiologist, who told me, "Ian, you need a bypass operation." My wife, also a physician, was with me, and we glanced at each other and nodded. That was all. My friend Nick performed a four-vessel coronary artery bypass, and I have had no angina since. My wife changed my diet, and I thought no more about it.

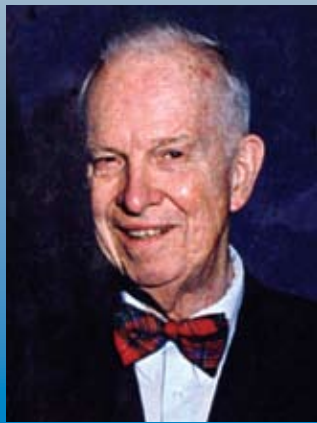
A few years ago, I wondered about stiffness in my hand and told my lunchtime neighbor, Hans, a surgeon, "My hand won't do what I want it to." We agreed I should go to the emergency room. Many tests later, another friend, John, cleaned out and patched my left carotid artery.

By this time I was on daily aspirin. A couple of years later, at age 80, I woke up very dizzy, seeing double, and staggering to the right. I made a new friend, Pat. She diagnosed a minor stroke in the red nucleus. My aspirin changed to Plavix. Our daughter, a physician, mentioned the stroke to a neurologist colleague who remarked, "That's a blind spot and the best kind of stroke you can have. It may leave no mark." And so it has been.

My wife has a familial type of osteoporosis, which prompted us to give up our world travels. I now travel with our son, Scott, who is 6 feet, 3 inches tall. At a mere 6 foot 1 inch, I cannot always match his stride and have developed calf pain that fades after some minutes' rest. I limp like Emperor Claudius, which is why we call this condition intermittent claudication.

Another new friend, Terri, examined me and ordered an MRI from my aorta to my toes. "We have several new treatments to choose from, but I want to watch for two months," she told me, which was fine. Her parting words, however, shook me up: "If you develop gangrene, come see me right away."

I thought about all these travails recently when I read a Danish article titled "There are No Healthy Centenarians, Only Those That Can Cope." Let's change that title to octogenarians or any age group. We are not all lucky to live three blocks from a world-class hospital or to have the training that lets us choose our doctors with precision. But the challenges of aging can be treated, and I encourage you to grab those treatments when you can. And for goodness sake, cope.



...and today

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- March 5** Iowa Dermatological Society Reunion, American Academy of Dermatology meeting, San Francisco, Calif.
- March 16** UI Carver College of Medicine Match Day, Iowa City
- April 3** UI Neurology Reception, American Academy of Neurology meeting, San Diego, Calif.
- April 21–22** Iowa Dermatological Society Spring Meeting, Iowa City
- May 6-7** Iowa Anesthesia Symposium VI, Iowa City
- May 6-10** UI Obstetrics and Gynecology Alumni Reception, American College of Obstetricians and Gynecologists national meeting, Washington, D.C.
- May 12** UI Carver College of Medicine Commencement, Iowa City
- June 9–11** Alumni Reunion Weekend, Iowa City
MD Classes of 1946, 1951, 1956, 1961 and 1966.
- June 15-17** Iowa Eye Association Annual Meeting, Iowa City
- Aug. 11-13** Iowa Dermatological Society Summer Meeting, Dubuque, Iowa
- Aug. 18** UI Carver College of Medicine White Coat Ceremony, Iowa City
- Sept. 8-9** UI Obstetrics and Gynecology Annual Postgraduate Course, Iowa City
- Sept. 29-30** Iowa Urological Society Meeting, Coralville, Iowa
- Oct. 6–7** Homecoming Reunion Weekend
MD Classes of 1971, 1976, 1981, 1986 and 1996.
- Nov. 6–14** UI Carver College of Medicine Italy Trip (see page 18)
- Nov. 13** Iowa Eye Association Alumni Reception, American Academy of Ophthalmology annual meeting, Las Vegas, Nev.

For more information on these and other UI Carver College of Medicine alumni programs, please visit www.medicine.uiowa.edu/alumni, call (319) 335-8886, or e-mail medicine-alumni@uiowa.edu.



Reunions are all about reconnecting with friends

The UI Carver College of Medicine invites the MD classes of 1946, 1951, 1956, 1961 and 1966 back to campus to rekindle friendships during Alumni Reunion Weekend, June 9-11.

If you haven't been back to Iowa City in a while, this a great opportunity to see how things have changed. Check in with old acquaintances, tour new UI Carver College of Medicine facilities and find out how medical education has evolved.

Look for registration materials in the mail this spring. You also can visit our Web site for a complete schedule of events, a list of classmates and a memory book questionnaire.

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