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The First Year of Study
Learning & Living
Reeve Visits St. Louis  Actor and activist Christopher Reeve visited Washington University Medical Center on Nov. 20 to meet with School of Medicine students and researchers and to tour the Barnes-Jewish Hospital Spinal Cord Injury Unit. He found time to talk with outpatient Dany Baker, left, a high school golf coach and consultant involved in the design of golf carts for people with disabilities. Reeve was in St. Louis to raise money and awareness for spinal cord injury research, and while here presented the Research for Freedom award to John W. McDonald III, MD, PhD, center, assistant professor of neurology and of neurological surgery. The award is sponsored by Gateway to a Cure, a charitable organization that funds spinal cord injury research.
Outlook

Your Tax-Wise OPTION
The Washington University Charitable Gift Annuity
See page 36

Class Notes

Update Yourself!
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2000!
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see page 36

Washington University in St. Louis
School of Medicine

Class Notes
Update Yourself!
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Washington University in St. Louis
School of Medicine
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COVER Second-year medical student Sarah Cook with mentor Joseph W. St. Gerne, MD, associate professor of molecular microbiology and of pediatrics. St. Gerne's assistance was invaluable to Cook and fellow students in the preparation of an immunization drive held at Mathews-Dickey Boys Club. For more on this story, turn to page 12.

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Holloszy brings home the Olympic gold

JOHN O. HOLLOSZY, MD, returned from Sydney, Australia in September with Olympic gold.

The International Olympic Committee (IOC) Medical Commission honored Holloszy, professor of medicine, with the 2000 IOC Olympic Prize in Sport Sciences as part of the 2000 Olympic Games in Sydney.

He received the award in recognition of his contributions to the science behind enhanced athletic performance and disease state management. The award includes a $500,000 prize, endowed by Pfizer, which Holloszy plans to use to further his research.

Like the athletes themselves, Holloszy had global competition — he was selected from a list of candidates from four continents by an independent committee made up of some of the world's most accomplished physicians and scientists. The Olympic Prize in Sport Sciences is considered the highest honor in the field of movement, exercise and sport science. Holloszy is the fourth recipient of the award, which is presented every two years during the Olympic Games.

Holloszy is chief of the division of geriatrics and gerontology and director of the section of applied physiology. He is a pioneer in understanding the impact of exercise training on athletic performance and on the quality of life for the elderly, and has devoted 40 years to the study of movement, exercise and sport. This research has led to significant breakthroughs in preventive medicine for heart disease, diabetes and obesity.

CHILDREN'S HEALTH

Study finds that unsafe sleep practices endanger infants

A new study finds that bedsharing can increase the risk of infant death. Placing babies to sleep in places other than cribs also can be deadly.

"The public ought to be aware of these avoidable health hazards," says Bradley T. Thach, MD, professor of pediatrics.

Thach is a co-author of a report in this month's Pediatrics electronic pages (www.aap.org), the online journal of the American Academy of Pediatrics. James S. Kemp, MD, assistant professor of pediatrics at Saint Louis University, is lead author.

Researchers from the School of Medicine, Saint Louis University School of Medicine and the medical examiners' offices of St. Louis City and County reviewed death-scene information from 119 infant deaths that occurred between 1994 and 1997 in and around St. Louis. Eighty-eight of the babies had died from Sudden Infant Death Syndrome (SIDS), 16 from accidental suffocation and 15 from undetermined causes.

Ten infants asphyxiated after being entrapped by a bed or other sleep surface. Seven others were entrapped by the body of a bedmate. The incidence of entrapment by a bedmate is probably higher than reported because people may not realize they were lying on the baby at the time of death, or they may be reluctant to report entrapment.

The researchers also learned that 75 percent of the babies died on sleep surfaces not designed for infants, such as adult beds, sofas or chairs. More than 60 percent were lying on their stomachs. Almost half were sharing a sleep surface, while 30 percent had bedding over the head or face.

The researchers conclude that shared sleep surfaces are unsafe for infants in the United States and that a crib is the safest place for a baby to sleep. "In other countries and cultures where sleep surfaces may be safer, bedsharing may be less dangerous to babies," Kemp says.

The study stresses the need for public health campaigns warning parents and care providers about these dangers.
Dustin receives young researcher award

Michael L. Dustin, PhD, was one of 59 recipients of the fifth annual Presidential Early Career Award for Scientists and Engineers (PECASE). The award is the highest honor bestowed by the U.S. government on young professionals early in their research careers.

Dustin is an associate professor of pathology and assistant professor of biomedical engineering. The National Institutes of Health nominated him for the honor in recognition of his work in immunology.

Since joining the School of Medicine faculty in 1993, Dustin has worked closely with others in the department of pathology to explore how cells in the immune system respond to foreign invaders. Together they have begun to unravel the mystery of how the immune system decides which cells to attack.

President Clinton established the Presidential Early Career Award in February 1996 in an effort to maintain the leadership position of the United States in science. Recipients were honored at a ceremony at the White House on Oct. 24 and will receive up to a five-year research grant to further their efforts.

Peck accepts honorary degree

William A. Peck, MD, executive vice chancellor for medical affairs and dean of the School of Medicine, received an honorary doctor of science degree Oct. 12 from the University of Rochester Medical Center. The presentation took place during the University of Rochester Medical Center’s Dean’s Investiture ceremonies.

Peck is an internationally recognized expert on bone metabolism and disorders. He also is considered one of the nation’s leading authorities on medical education. He currently is vice chair of Research America and is the immediate past chair of the American Association of Medical Colleges, which represents 125 American and 16 Canadian medical schools, more than 400 major teaching hospitals and health systems, nearly 90 academic and professional societies and the nation’s medical students and residents.

Patients over age 80 can benefit from aortic valve replacement, School of Medicine researchers have determined. They reported their findings in the Sept. 19 issue of the surgical supplement of Circulation.

Many people of that age develop problems with the aortic valve, the “door” to the blood vessel that transports blood away from the heart. As a result, they are prone to fatal complications such as congestive heart failure or sudden death.

Surgical replacement of the aortic valve is a relatively common procedure for younger patients. Physicians hesitate to recommend surgical replacement of the aortic valve for patients over 80, however. According to Thoralf M. Sundt III, MD, many cardiologists fear that elderly individuals will not survive surgery or that the trauma of surgery will degrade their quality of life.

Sundt is first author of the Circulation paper and an associate professor of surgery.

This concern is valid, he says, because surgery is more risky for the elderly. But his study suggests that the benefits might outweigh the risks.

Sundt and his colleagues examined data from 133 patients over age 80 who had their aortic valves replaced at the medical school during a five-year period. Eleven percent of the patients had died within 30 days of the operation, 80 percent had survived for one year, and 55 percent had survived for at least five years. Quality-of-life scores were roughly the same as those estimated for the general population over 75 years of age. Patients who previously had suffered a stroke and patients with chronic obstructive pulmonary disease fared less well than the others.

"Although the risks and costs are higher, these people do benefit," says Sundt. Costs are higher because very elderly people often have longer hospital stays than younger patients.

The researchers now are collecting quality-of-life information from elderly patients both before and after surgery. However, Sundt feels the current publication provides sufficient evidence that the procedure should be offered to patients, regardless of age.
The St. Louis Board of Education and Washington University Medical Center broke ground Oct. 18 for Adams Elementary School and Community Center at 1311 Tower Grove Ave. The renovated Adams Elementary School, closed since 1993, is scheduled to reopen in fall 2001. More than 400 students (pre-kindergarten through 5th grade) will attend the school. The connecting Adams Park Community Center will provide a gathering place for neighborhood activities and social events.

Two new pediatric professorships established through joint program

Two new professorships, supported by $3 million of dedicated endowment, have been established as part of the St. Louis Children's Hospital/Washington University School of Medicine Joint Program in Pediatric Chairs.

The two recipients and the named professorships they will hold are: Jonathan D. Gitlin, MD, the Helene B. Roberson Professor of Pediatrics; and David M. Jaffe, MD, the Dana Brown/St. Louis Children's Hospital Professor of Pediatrics.

The new appointments are the fifth and sixth chairs of the program. Its goal is to solidify an already strong relationship between the medical school and hospital and, through a combined effort, establish 12 new pediatric professorships at the medical center by the year 2008. Named professorships provide perpetual funding to help conduct research, support teaching and attract and retain the best and brightest physician/scientists.

Gitlin is professor of pediatrics and pathology and head of the division of pediatric immunology and rheumatology at the medical school. He also is the program director of the Child Health Research Center in the medical school's Department of Pediatrics and a staff physician at St. Louis Children's Hospital. Gitlin is a leading authority on the role of copper and iron in human biology. In 1993, he and two other groups discovered the gene for Wilson's disease, an inherited metabolic disorder that causes copper to build up in the brain and other organs, leading to brain degeneration and cirrhosis of the liver. Two years later, Gitlin and his colleagues identified aceruloplasmenemia, which causes a rare form of Parkinson's disease. This inherited disorder results in iron accumulation in the brain's basal ganglia region, causing tremors, gait abnormalities and eventual death.

Jaffe, professor of pediatrics and director of the division of emergency medicine, is also the medical director of Emergency Services at St. Louis Children's Hospital. His research interests are in medical decision making and fever and occult bacteremia and head and neck injuries in children. He also studies management of pain and anxiety in children with emergencies.

The joint program in pediatric chairs is the brain-child of Alan L. Schwartz, PhD, MD, the Harriet B. Spohrer Professor and head of pediatrics at the School of Medicine and pediatrician-in-chief at St. Louis Children's Hospital; and Ted W. Frey, president of St. Louis Children's Hospital and senior executive officer for BJC HealthCare.
Choi elected to Institute of Medicine, will study health policy issues

DENNIS W. CHOI, MD, PHD, the Andrew B. and Gretchen P. Jones Professor and head of neurology at Washington University School of Medicine in St. Louis, has been elected to the Institute of Medicine, one of the highest honors bestowed on American medical scientists. Choi was selected in recognition of his professional achievements and leadership in neuroscience.

He is one of 60 active members elected to the Institute this year, raising the total active membership to 613. By accepting the honor, Choi commits himself to devoting a significant amount of time on committees engaged in a broad range of studies on health policy issues.

Choi, who came to Washington University in 1991, also directs the Center for the Study of Nervous System Injury and the McDonnell Center for Cellular and Molecular Neuroscience. He is the 16th faculty member from the School of Medicine currently active at the Institute.

SCIENTISTS ARE ONE STEP CLOSER to determining how we remember what we see and hear.

In the Sept. 26 issue of Proceedings of the National Academy of Sciences, they report that some areas of the brain involved in looking at pictures and listening to sounds are also involved in remembering them.

If someone asks what your dog looks like or how your mother sounds, you typically conjure up an image or voice. One of the fundamental challenges behind understanding memory is to determine how the brain reconstructs these experiences and uses them to remember the actual image or sound.

An approach to brain imaging recently developed in part by Washington University researcher Randy L. Buckner, PhD, a Howard Hughes Medical Institute Investigator, allows researchers to separate images of brain activity during rapid experimental trials.

Mark E. Wheeler, a graduate student in Buckner’s lab, used the new technique to explore the mechanisms behind memory. He asked participants to memorize a group of pictures and a collection of sounds. Each item had a written label. For example, the word “lighthouse” appeared next to a picture of a lighthouse, and the participants saw the word “dog” while hearing a dog bark.

Researchers then obtained functional magnetic resonance images of the brain while the same participants completed two different tasks. First, the volunteers saw and heard the same pictures and sounds as on the previous day. At the same time, they saw the label for each item. They pressed one button if they saw a picture and a different button if they heard a sound. Next, they viewed only the written labels but were asked to remember the associated sounds or pictures.

Wheeler and Buckner, who is an assistant professor of psychology, radiology and of anatomy and neurobiology, confirmed that certain areas of the brain are active when people see pictures, and other areas are active when they hear sounds. But they also found that some, but not all, of these areas are also active when people vividly remember these pictures and sounds.

The group hopes to use this approach to explore how the memory process breaks down in aging and Alzheimer’s disease.
Celebrating a lifetime of achievement

LEONARD BERG, MD, professor emeritus of neurology and founder and former director of the Alzheimer's Disease Research Center (ADRC) at the School of Medicine, received the Lifetime Achievement Award for distinguished research in Alzheimer's disease from the 7th International Alzheimer's Disease and Related Disorders Conference.

One of five award recipients, Berg was honored in recognition of his impact on international Alzheimer's research. Among his noted accomplishments is the Clinical Dementia Rating System, which he developed to distinguish between different stages of Alzheimer's disease and normal aging.

In 1979, Berg began a multidisciplinary Memory and Aging Project at the university, serving as its director until 1992. In 1985, he was awarded a grant from the National Institute on Aging (NIA) to establish the Alzheimer's Disease Research Center. The NIA has continuously supported the center.

Berg has received many awards and honors, including the Alzheimer's Association Public Service Award and the Peter H. Raven Lifetime Award. A 1945 graduate of Washington University and a 1949 graduate of the School of Medicine, the St. Louis native joined the medical school faculty in 1955.

McCartney named associate vice chancellor

DENISE A. MCCARTNEY, MBA, has been named associate vice chancellor for research. She will be responsible for administrative and support activities related to sponsored research at the medical and Hilltop campuses.

In fiscal year 2000, researchers at Washington University received 1,651 grants totaling an estimated $364 million. Increasing emphasis on interdisciplinary approaches has opened a wealth of opportunities to the university. At the same time, regulatory agencies are monitoring research institutions more strictly. These activities have challenged the existing administrative support system.

"Denise's leadership in the recent Research Support Services Assessment Project gave her a unique understanding of the problems and opportunities we face regarding research administration at both campuses," says Theodore J. Cicero, PhD, vice chancellor for research.

McCartney will build on efforts identified during the project to enhance research administration responsiveness to principal investigators' needs in such areas as applying for grants, managing funding, assisting with information technology support and ensuring compliance.
Ci echano ver garners top scientific honor

Aaron J. Ciechanover, MD, DSc, a visiting professor of pediatrics since 1987, received the 2000 Albert Lasker Basic Medical Research Award in September in New York.

The Lasker award—one of the nation's top honors in science—was first given in 1946. Each year, the Albert and Mary Lasker Foundation in New York recognizes scientists who have made significant contributions to medical research.

“The award of the Lasker prize to Aaron Ciechanover and his colleagues for the discovery of and elucidation of the mechanisms of intracellular protein breakdown is both fitting and timely,” says Alan L. Schwartz, PhD, MD, the Harriet B. Spoehrer Professor and head of the Department of Pediatrics. “The importance of this discovery is underscored by its crucial role in control of the cell cycle as well as many forms of cancer and immune defense.”

Ciechanover, who also is director of the Rappaport Family Institute for Research in the Medical Sciences and professor of biochemistry at the Technion-Israel Institute of Technology, shares the award with two other scientists, Avram Hershko, MD, PhD, professor of biochemistry at the Technion-Israel Institute of Technology, and Alexander Varshavsky, PhD, the Smits Professor of Cell Biology at the California Institute of Technology.

The three discovered and recognized the broad significance of the body's mechanism for destroying proteins. This process, called the ubiquitin-mediated proteolytic pathway, regulates cell growth and division, playing key roles in immunity, inflammation and cancer. Ubiquitin, a small protein that targets proteins for destruction, is at the heart of the pathway.

The discovery of the ubiquitin system has revolutionized the concept of intracellular protein degradation. Early ideas centered on an unregulated protein incinerator inside the cell. But scientists now know that protein destruction is a highly complex, temporally controlled and tightly regulated process that plays important roles in a broad array of basic cellular events. And when it malfunctions, it can cause disease.

New Editor, Art Director for Outlook

Outlook, the School of Medicine's quarterly magazine, has named a new editor and a new art director. Holly Edmiston, a senior editor in the office of medical public affairs, assumes stewardship of the magazine. Eric Young takes the reins as art director.

Kleila Carlson, Outlook's editor for the past four years, joins the University of Kansas Medical Center, where she will edit the quarterly magazine KU Med, and also will serve as assistant director of university relations.

“Outlook has undergone a number of exciting changes over the last several years, setting a high standard,” says Edmiston. “I plan to emulate that, and to ensure that the magazine continues to meet readers' needs by showcasing Washington University's ongoing commitment to patient care, teaching and research.”

Edmiston has more than 10 years' experience as a writer and editor. She received a bachelor's degree in English from Webster University, joining the division of medical publications in 1994. Young, who has a bachelor's degree in visual communication from Kansas University, joins medical public affairs from the Hilltop campus publications office, where he has worked since 1991.

Baranski receives Culpeper Scholarship

Thomas J. Baranski, MD, PhD, assistant professor of medicine and of molecular biology and pharmacology, has received the Rockefeller Brothers Fund Charles E. Culpeper Scholarship in Medical Science for the Year 2000. Baranski will receive $100,000 a year for up to three years to fund his research.

Baranski studies signal transduction by G protein-coupled receptors, a superfamily of heptahelical transmembrane proteins. He hopes to learn how the receptors act as on/off switches for signaling systems in cells—work that will provide insight into how mutations in these receptors cause disease and how they might be better controlled with new therapies.
The Center for Infertility and Reproductive Medicine uses the latest therapies to make mommies’ and daddies’ dreams come true

BY CANDACE O’CONNOR
Somehow, Kathy Kulig just knew that she would one day have a baby. Even a bout with breast cancer at age 29 did not discourage her. Neither did four surgical procedures, followed by a failed attempt at \textit{in vitro} fertilization (IVF). Finally, a second IVF try yielded two tiny embryos, which doctors implanted in her uterus.

Then Kathy and her husband, Matthew, sat back and held their breath.

The outcome of that attempt is visible throughout their Millstadt, IL home: in the diapers and baby carriers, in the changing table and cheerful play area. Today, Kathy is the mother of picture-book twin daughters, 11-month-old Kelly and Melanie—a double miracle made possible by Kathy's persistence and the medical skill of the School of Medicine's Center for Infertility and Reproductive Medicine.

The center treats couples who are struggling with infertility or recurrent miscarriage due to various underlying problems: polycystic ovary syndrome, endometriosis, pelvic adhesions or tubal disease in women; varicoceles, blocked vas deferens or low sperm count in men. To all of them, the center offers the latest therapies, some still in clinical trial, delivered with sensitivity to their emotional needs.

"In this hectic time, it is rare for busy medical personnel to sit down to listen and construct an individualized treatment plan. Our center strives to offer the most successful infertility care available, while remembering that this is a highly personal issue to all our patients," says Randall R. Odem, MD, associate professor of obstetrics and gynecology and director of the division of reproductive endocrinology and infertility.

In 1995, Kathy Kulig needed that kind of personal attention. Diagnosed with early-stage breast cancer, she had just undergone surgery at Barnes-Jewish Hospital when doctors discovered a pelvic problem. It was not ovarian cancer as they had feared but a bad case of endometriosis—abnormal tissue growth in the pelvic area—a fertility-impairing condition that would worsen as she took post-cancer hormone therapy.

"In the midst of all this, Matt asked me to marry him," says Kathy, who was then a school...
drug-prevention coordinator. “We knew we wanted children, and I even suggested forgoing the cancer treatment so I could have them right away—but I also wanted to be around to raise them.”

Referred to the center, she had a series of procedures to remove the adhesions, but they always grew back. Before the third surgery, her endometrial mass had grown to the size of a grapefruit. Then Valerie S. Ratts, MD, assistant professor of obstetrics and gynecology and one of four reproductive endocrinologists on staff, advised Kulig that IVF—the retrieval of her eggs and their fertilization in the laboratory with her husband’s sperm—was her best hope for achieving pregnancy.

That test came back positive; the next day, a second did too. So Kathy went in early for her blood test, which showed surprisingly strong hormone levels. “Do you think it could be twins?” she ventured...

I can sum up the reason for our success in two words: our lab,” says Daniel B. Williams, MD, associate professor of obstetrics and gynecology and director of the IVF program since 1995. “The embryology lab is the cornerstone of any IVF program, and ours is especially adept at handling embryos and doing micro-manipulation procedures. We also use blastocyst transfer—culturing embryos for five days instead of the usual two or three—to observe them longer and select the hardiest for implantation.”

While the center’s rates are impressive, a few infertility centers publish statistics that look, on paper, even higher. But patients may wish to take a closer look, cautions Williams. Some programs can potentially increase success rates by screening out those who are not ideal candidates—while the center here treats even the most challenging patient cases.

Kulig, herself an avid Internet researcher, shopped around and found two programs with sky-high IVF success rates. She even sent her blood work to one, which quickly
turned her down. "The doctor called and said, 'You can't come into our program and, quite frankly, I don't think you will ever have children of your own,'" she says.

So Kulig returned to the School of Medicine, where she had her first in vitro cycle in July 1998. The treatment did not succeed: She produced just two eggs, and only one achieved fertilization. She and her husband decided to gamble and have the embryo implanted — but no pregnancy resulted.

There are many reasons for IVF failure, including poor egg quality. Severe sperm problems can sometimes be overcome through a procedure called intracytoplasmic sperm injection (ICSI), in which doctors inject the sperm into the egg and force fertilization to take place. But sometimes, the reasons for the failure are mysterious.

"We get eggs that look fine, we get sperm that looks fine, we get fertilization and an embryo that begins to grow and looks pretty good," Ratts says. "Then we place it in the uterus and it just doesn't take. Are there uterine or implantation factors at work? Some of this is still unknown."

For couples undergoing IVF, the two-week waiting period following implantation is filled with roller-coaster emotions. Will the procedure work or will the woman's menstrual period begin as usual, signaling failure to conceive? Despite every medical effort, some couples never achieve pregnancy — a devastating blow.

The center's physicians and its infertility counselor, Gail Gordon, work with these patients to help them achieve closure.

In May 1999, the Kuligs decided to try again. While they had paid out-of-pocket for the first cycle, their financial decision was easier this time; their insurance company had agreed to provide partial coverage, on the grounds that Kathy's cancer therapy had impeded her fertility constituting a disability under the Americans with Disabilities Act. But there was still no shortage of anxiety.

On the day after Mother's Day, Ratts retrieved two eggs from Kathy and sent them to the lab. Soon the fertilized eggs were dividing and the eggs looked strong, so the implantation procedure took place; then the waiting period began. One night, discouraged, Kathy told her husband that she thought the cycle had failed, but Matt, an optimist, still held out hope. Kathy decided to take a home pregnancy test just to show him.

That test came back positive: the next day, a second did too. So Kathy went in early for her blood test, which showed surprisingly strong hormone levels. "Do you think it could be twins?" she ventured. Two weeks later, ultrasound revealed two fuzzy forms growing comfortably in her uterus. "It was wonderful. We were so thrilled, crying," she recalls, crying even now at the memory of it.

Twins and triplets are "doable pregnancies," says Ratts, but the center works hard to avoid multiple gestations by limiting embryo placements to two for patients under age 33, three for those up to age 39.

"For medical reasons, we don't want multiple gestations, we want one good healthy baby," she says.

The Kuligs' twin daughters were born on January 18, 2000, weighing 7 pounds and 6 pounds, 7 ounces, after an uncomplicated pregnancy. Melanie's middle name is "Elizabeth" for the biblical figure — long past childbearing age — who gave birth to John the Baptist. Now Kathy, more than five years free of cancer, is planning trip back to the center for another IVF cycle — and just maybe another child.

With luck, she will someday be showing off a third baby in the center, where the staff loves to pose for pictures with the children of grateful patients. Birth announcements and newborn photos also arrive frequently by mail.

"At the end of a hard day, it is wonderful to find one of those little-bitty envelopes in the mail. You just know what is in it," says Ratts. "And you say to yourself: 'OK, today was a hard day, but look what happened when I had a hard day nine months ago — this is the result.'"

The Center for Infertility and Reproductive Medicine has an active egg donor program that is currently seeking women ages 18 to 32 who are willing to donate eggs to help infertile couples. A rigorous screening process is involved; donors are compensated for their time. For more information, contact the center at (314) 286-2419.

Valerie S. Ratts, MD
FIRST YEAR
Journal
Beginning a Life in Medicine
In the Fall issue, medical student Sarah Cook shared her thoughts and feelings as she took the first steps toward becoming a physician. Rejoin Sarah as her first year of medical school winds down and she travels to Maine for a summer externship in rural medicine.

PART II

A Scent of Maine

BY SARAH COOK

MARCH 12, 2000—Back in St. Louis after an amazing trip home to Hingham. Dave arrived in Hingham on Thursday afternoon, less than an hour after Casey, Nancy and I had walked through the front door. Within minutes, we were hanging out like old friends. It was an unseasonably warm day, so I took them out to World’s End, a local conservation area, to walk through the woods and out to a point where the Boston skyline is visible across the harbor. As the sun set, a March chill came over us and we hurried home for dinner. My stepdad Charlie had made salmon, asparagus and rice—yum! Mom had a big chocolate birthday cake for Dave with a little rowboat and a fishing rod on top. The weekend flew by and it was time to head back to St. Louis. As I said goodbye to Dave and we left for the airport, I was filled with incredible memories of the weekend and dreams of the summer to come in Maine. And now, I’m back in St. Louis. I feel good about the upcoming exams. I have been on top of the material all semester and now have a few days’ rest under my belt. The heavy-duty studying begins today.

ILLUSTRATIONS BY ERIC YOUNG
MARCH 21
I am being buried alive under mountains of books and notes! A card came from Dave in the mail last night. Perfect timing—he sent a sprig of balsam fir. The fresh scent of Maine and his words of encouragement were desperately needed. This week may easily be one of the roughest that I've ever had. I don't feel like I have even had a chance to stand back up between the steady stream of punches. My whole body is fighting back—my head is pounding, my stomach is a bundle of nerves that just wants to hurl, every muscle in my body is sore, and to top it all off, I have such a sore throat that I can barely swallow—a true indication that I will be good and sick just in time for spring break! Enough complaining. Only two more exams and 72 hours to go. I think that I will just collapse at the end!

APRIL 4
I have been placed at the Aroostook Valley Health Center in Ashland, Maine for the summer. Dave responded to my e-mail of the news with a YIPPPPPPPPPPPPEEEEEEEEE! YAAAAAAAHOOOOOOOOOOOOOOOO! The health center is only about a third of a mile from Dave's house! It is incredible that out of about 30 possible sites, I was placed in Ashland. We must have a guardian angel working some magic.

APRIL 11
I have been working on the immunization drive for next fall. I spoke with all kinds of people in the St. Louis Public School system and in the Missouri Medicaid office. To be eligible for our vaccination program, kids have to be without health insurance or on Medicaid. Unfortunately, about 70 percent of the 45,000 kids in the St. Louis public schools are in this boat. The good news is that my friend and classmate Rachel and I are planning to expand the immunization drive beyond anything that Washington University could ever imagine! We are going to set up a center at a local neighborhood gym or club—the kind of place that has after-school athletic programs to keep the kids off the streets. I have spoken with the human relations people at the schools, and we are going to send flyers home with the kids informing parents about vaccination requirements and our immunization drive. The school health department was really excited to have some help. Apparently tons of kids couldn't start school last year because they hadn't been immunized. Not gonna happen this year!!!
I realized that a family practice physician really does need to be prepared for anything. More importantly, I know that someday I will be a rural family practice doc.

MAY 7
Dave came to St. Louis! We had a fabulous weekend—we ran in Forest Park, went to the Soulard Farmer's Market, took Daniel and his sister, Ebony, to Turtle Park and Grant's Farm, and had a cookout with friends on Saturday night. We also spent a lot of time just hanging out and talking. I confess that I was confused as I dropped Dave off at the airport tonight. How do I know if this is right? If it is right, how are we going to survive the next few years apart? Maybe I am just over-tired and thinking too much. I should just let it go—if it is meant to be, it will be.

MAY 12
We are heavy into the neuroscience course now! I am finding the class fascinating and have learned about all kinds of things that I have always wondered about. For instance, I've discovered why it is that when you shine a light in one eye, both pupils constrict. I've also learned a lot about the mechanisms of pain sensation and potential targets of treatment for pain. I am fascinated by the formation of memory, and how sleep—something medical students don't get enough of—is critical to that process. I wonder how I am going to keep it all straight and retain everything to apply to our neurology course next year.

MAY 25
I made it!!!! Today was the last day of finals. I can't believe that the year is over and that I survived. Both the neuroscience and clinical epidemiology exams went well. I know that I learned an astonishing amount this year, but sometimes I feel as if I haven't learned enough. I guess that I better get used to that feeling!

JUNE 27
My first day of work at the Aroostook Valley Health Center. I arrived at 6:45 a.m. and met John, the physician's assistant, who greeted me with a warm and friendly welcome. He gave me a tour and showed me the office space that I would share with him for the next six weeks. A mounted black bear, the tail of a white tail deer, and many fishing pictures hung from the walls. Dr. Goselin's dog, Moses, sat in the corner of the office. This was definitely my kind of place!

The first day was incredible ... a well baby check; a physical on a 50-year-old female with a history of breast cancer; a young teenage girl requesting birth control; a teenage boy with severe acne; a 73-year-old alcoholic in renal failure; a 35-year-old man who had just suffered a serious accident with a band saw; a 55-year-old man recently cured of lymphoma. The list goes on and on.

We even made house calls. The first to a 82-year-old man suffering from congestive heart failure. He lives back in the woods in an old trailer with no running water and no power. His medication needed to be adjusted and without a phone, it was necessary to make the trip out of town. Later, we visited the home of an elderly woman whose husband is dying a slow death from emphysema. We made the house call to assess the situation and to identify resources to assist her in the care of her husband.

By the end of the day, I had been challenged by an overwhelming diversity of diseases and medical emergencies. In less than 12 hours, I learned more than I ever thought possible. I realized that a family practice physician really does need to be prepared for anything. More importantly, I know that someday I will be a rural family practice doc.
JULY 16
My birthday weekend! Dave and I traveled home to Woodland to spend the weekend with his family. As we pulled into the drive on Friday night, his nieces, sister, Mom, Dad, cousins, aunts, uncles and Grandma all poured out of the back door. Dave had not warned me that everyone would be there! I had been expecting to spend a quiet evening with his parents and was blown away by the warm welcome and huge birthday cake. We spent Saturday at camp on West Grand Lake. The day was extraordinary—warm sunshine, a cool breeze, countless coves to fish, big juicy steaks cooked over an open fire ... That evening we went to a birthday party for a family friend in Grand Lake Stream. The whole town turned out! On Sunday, we went to church with Dave’s Dad and sister before heading home to Ashland. I really felt like I was with family.

I fell in love this summer ... with the wild beauty of Aroostook County, with the people of Northern Maine, and with the challenge of rural family practice. Maine has truly carved its beauty deep within my mind and soul.

AUGUST 2
I am leaving Ashland today. As I pack my things, my mind is flooded with thoughts and memories of the summer. I fell in love this summer ... with the wild beauty of Aroostook County, with the people of Northern Maine, and with the challenge of a rural family practice. Maine has truly carved its beauty deep within my mind and soul.

AUGUST 18
I have been working furiously to get ready for the immunization drive. We will be holding the drive at the Mathews-Dickey Boys Club this year. There are so many details to be dealt with! The vaccine has arrived. I checked the order and stored the supply in the refrigerator at the Family Care Health Center. I made final changes to the training manual that I put together this summer. It is practically a book, but should help the first-year volunteers. I ordered additional supplies—syringes, saline, alcohol wipes, gloves ... for the student training session and the drive. I hope that the shipment arrives in time! I still need to track down the folks in Respiratory Therapy for an oxygen tank, ambu bag and mask. Dr. St. Geme has recruited about 10 physicians to assist with the drive and has been an incredible help with everything! My mind is a scattered mess of “to-do lists.” I really hope that the drive is a success!

AUGUST 20
Tonight marks the official end of my first year of medical school. As I reflect on the past year, I realize how significantly my life has changed. I have gained an incredible body of knowledge and experience, I have made amazing new friends, I have built memories that will last forever, and I have met the man with whom I will spend the rest of my life. Tomorrow morning I will begin the next segment of the journey. I am both excited and terrified. This is the year in which I will begin to build a foundation of REAL LIFE clinical knowledge! It is also the year for which medical school gains its notorious reputation. I have been told that the second year is analogous to drinking from a fire hose. Well, I’m ready to drink from that fire hose! Bring it on!

Editor’s Note: Sarah and Dave were engaged in October. They are to be married next September in Grand Lake Stream, Maine. If you missed Part 1 of Sarah Cook’s journal, access it at medschool.wustl.edu/~wumpa/outlook/.

Winter 2000  Outlook
Students breathe new life into CPR training

CPR 4 U (me!)

benefiting the School of Medicine and its neighbors

BY GILA RECKESS

It takes just 4 minutes for the brain to begin to deteriorate when someone stops breathing. During cardiac arrest, a person’s chances of recovery decline by 10 percent every minute that emergency care is delayed. Cardiopulmonary resuscitation saves lives. With proper training, CPR is easy to learn and use, and it can mean the difference between life and death in an emergency situation. In a new community outreach program, students at the School of Medicine have joined forces with the American Red Cross to learn CPR and then pass that knowledge on.
**First-year students banded together in 1999 to form Community CPR, a student-run program that offers CPR training to medical students and staff of the Medical Center and to residents of the neighboring community.**

Such an endeavor calls for cooperation from many sources—the university, students, community organizations and the American Red Cross. But it wasn’t difficult to convince these partners to combine their efforts. All agree—you can’t say “no” to Adit Ginde, second-year student and founder of Community CPR.

“If you met Adit and saw the enthusiasm that radiates from him, you would know why I had no hesitation about backing the program,” recalls Leslie E. Kahl, MD, associate dean of student affairs and associate professor of medicine. Ginde, a well-trained veteran of CPR instruction from his undergraduate years at Rice University and his experience as an ambulance volunteer in Houston, impressed everyone with his plan.

In fact, when Ginde sent out a “feeler” e-mail to his new classmates, he was dubious that any would be willing to relinquish some of their scarce free time. To his surprise, 25 students volunteered to make a two-year commitment to the program. Ginde reluctantly surrendered to the limits of his training budget, selecting just 10 of the volunteers to form the core group.

Less than a month after walking into Kahl’s office, Ginde and his chosen 10 purchased their own equipment, received instructor training from the American Red Cross, and were on their way to teaching others in both the St. Louis and Washington University communities.

The American Red Cross in St. Louis certifies about 39,000 people each year in CPR and/or first aid. And yet, according to Ginde, less than 5 percent of people in large cities who suffer cardiac arrest outside the hospital survive. This low survival rate is partly attributable to a lack of available and accessible training for those who would like to learn these life-saving skills, but cannot afford the cost of standard training.

Though the Red Cross strives to reach all community sectors, Ed Caret, community education specialist for the group’s St. Louis area chapter, admits that some populations are simply difficult to target. When Washington University medical students approached him with their plan, he quickly realized that a partnership would be an ideal chance to further the American Red Cross mission.

“When Adit came along with his program that focused on underserved parts of the community, we thought it was an excellent opportunity to fulfill our national goals and obligations and to help support his endeavors,” says Caret.

The American Red Cross has been dedicated to teaching CPR and first aid for 83 years. Through the Community CPR program, it has gained some highly qualified and committed volunteer instructors.
Though already convinced of the impressive caliber of students here, Yoon Kang, MD, instructor of medicine and the faculty adviser for the group, says she has been amazed at the efforts of these aspiring young clinicians.

"Among the many rewards that students receive from participating in this program, two in particular stand out in my mind," says Kang. "First, there is the sense of community spirit and giving directly to the community which is inherent in the field of medicine but is difficult to convey as part of formal course work. Second, through the instructor training, the students learn teaching skills. Many are naturally gifted teachers, and I am curious to see if this will be borne out later in their careers."

Assuming a leadership role—in the Washington University community and outside the medical setting—is a huge confidence boost for students just starting out in what can be an intimidating medical environment.

"Physicians have a responsibility to both promote health and cure diseases," explains first-year student Ian Hagemann, part of this year's newly trained group of volunteer CPR instructors. "When you're in your first year, you can't cure diseases yet. So it's nice to know that we can begin to fulfill our duty to promote health. It's empowering to feel that you could save someone, and even more so to help someone else feel that way."

John Pachak, director of Midtown Catholic Community Services, thinks the students provide just that feeling for the people he serves. "The CPR training not only helps improve skills for both our staff and our participants—it also improves their self esteem," he says.

Most importantly, working with neighborhood residents and institutions promotes a connection between them and the medical presence in their backyard.

"These are the people who will be part of our patient population at Barnes-Jewish Hospital," Ginde says. "It makes a big difference to them to see us out there caring in the community right next door to us. And it is a way for students to get our feet wet and relate to different populations of people that we might not have had contact with before."

The students are now in high demand. Beyond their work in the community, they taught at the "Mini Medical School" held last year, and have held several classes in-house to train School of Medicine administrative staff. Eventually, the group hopes to offer classes to the entire medical community. Already, the program has inspired similar efforts—Carry and his colleagues are now developing a program on the Hilltop Campus.

For more information about the Community CPR program or to arrange a course, contact Adit Ginde at gindea@msnotes.wustl.edu.
New therapy holds hope for lives
Last February, Cathy Jones’ family gave her a special Valentine’s Day gift: a trip—alone—to Las Vegas. What should have been a relaxing, solitary vacation was instead a scary nightmare, at least while Jones was in the air. On the plane to Las Vegas, she began to have trouble breathing. She was lightheaded, dizzy and overwhelmed with fear. A panic attack. Not her first, but they never get any easier. “I finally made it to Las Vegas, got off the plane, and I was fine,” Jones recalls. “I didn’t have any problems while I was there. But when I went to the airport to check in and come home, I couldn’t get on the plane.” Finally, Jones forced herself, deciding that if she didn’t, she might never see her husband and son again. But she spent most of the flight home in the plane’s bathroom, literally sick with worry. Not all plane rides have had that effect on her. Nor have they been the only trigger for her panic attacks. Jones never knew what would set off her next attack.

invaded by anxiety. By Jim Dryden
Jones' experience is typical for those with panic disorder, a condition that occurs in 1.5 to 3.5 percent of the population. Some people associate their panic attacks with particular events or circumstances like flying in a plane. But they don't have to be associated with anything, according to Keith E. Isenberg, MD, associate professor of psychiatry at the School of Medicine.

"The most important dimensions of panic disorder are the rapid onset of symptoms, which are much more extensive than would occur in common anxiety, say before giving a speech," he says. "Another important part of panic disorder is the anxiety that lingers between attacks. That can be as disabling, or more disabling, than the attacks themselves."

Isenberg is principal investigator for the St. Louis site of a multicenter study testing pregabalin, an investigational drug that has shown early promise in treating panic disorder. Preliminary results suggest the drug works quickly without many of the unpleasant side effects that accompanied past drug therapies for panic disorder.

Years ago, researchers made the serendipitous observation that drugs called tricyclic antidepressants not only eased depression, but also helped to control panic attacks in depressed patients. From there, it was a short step to determine that the drugs also helped to control panic attacks in patients who were not depressed.

Since then, newer antidepressant drugs called Selective Serotonin Reuptake Inhibitors (SSRIs) have been tested in patients with panic attacks. Those drugs are somewhat effective, too. But Isenberg says neither type of medication is ideal.

"Antidepressants can take several weeks to work—sometimes even a month, or more —and they can cause unwanted side effects in some patients, such as jitteriness, sexual dysfunction or gastrointestinal problems," he says. Benzodiazepines are another class of drugs that has proven useful in panic attacks. These drugs are known to enhance the function of a particular neurotransmitter in the brain called GABA (gamma-aminobutyric acid). The GABA molecule is the brain's major inhibitory neurotransmitter.

In the brain, benzodiazepines enhance the effectiveness of GABA, particularly at type A GABA receptors on neurons. Clinically, the drugs frequently provide almost instantaneous relief from panic attacks.

"But some patients develop tolerance over time, and the drugs are no longer effective," Isenberg says. Plus, benzodiazepines can be associated with excessive sleepiness, clumsiness and memory problems.

Even so, the GABA connection was worth exploring further because some anti-seizure medications work by enhancing GABA production. Isenberg and other researchers have wondered whether panic attacks—with their heart palpitations, breathing difficulties and other physical symptoms—might be some type of emotional or behavioral "seizures." One drug that has been tested is gabapentin.

"There is some evidence that gabapentin, and other drugs like it, enhance the amount of GABA available at the nerve terminals where the neurotransmitter is released," Isenberg says.

In this study, Isenberg is investigating a related drug, pregabalin. Like gabapentin, pregabalin is thought to increase the amount of GABA available at receptor sites on neurons.

"The theory is that releasing GABA at those specific sites increases the inhibitory tone of the nervous system and, presumably by that mechanism—and this is not really clear, by the way—decreases anxiety," Isenberg says.

**Diagnosing the problem**

Although she had suffered attacks off and on for more than a decade, Cathy Jones wasn't aware she had panic disorder until after her Las Vegas trip.

"The Sunday after I returned, I saw an ad in the newspaper and responded to it. I told them what my symptoms were, and they told me to come in as quickly as possible," Jones recalls.

When she called the phone number in the ad, the voice on the other end of the line belonged to Theresa Kormos, coordinator for the pregabalin study at the School of Medicine.
Researchers are optimistic that the drug will help people like Jones and that once the word is out, more people with panic disorder will seek help.

"It's not unusual for a person not to know what's wrong or to think they're the only one in the world who suffers from these attacks," says Kormos. Many patients with panic disorder — like those with other psychiatric illnesses — never get plugged into the mental health system.

For 13 years, a parade of doctors had told Jones various things about her attacks. One neurologist said she had a brain tumor, another told her that when she was under stress, her brain stem rubbed up against one of the bones in her spine, leading to the attacks.

"People with panic disorder are frequently evaluated by primary care physicians or by specialists because their physical symptoms can be so striking," says Isenberg. "Many receive cardiac stress tests, tests of lung function or evaluations of their gastrointestinal systems."

Although many doctors had evaluated Jones over the years, none had figured out what was actually wrong or how to treat it. She had undergone numerous tests, but when all was said and done, the consensus was that she simply would have to live with her problems.

Panic disorder typically strikes people in their late teens through 30s. During attacks, patients often report a racing heart, shortness of breath, chest pain, upset stomach or some combination of those symptoms.

Attacks come suddenly, can become disabling in just a few minutes and typically last for about an hour. Although many people have attacks, only those who continue to experience anxiety between their attacks are classified as having panic disorder.

Pregabalin therapy may alleviate the symptoms of this paralyzing form of dread.

It seems to have done that for Cathy Jones. She was randomized into the active arm of the study, and Kormos and Isenberg explained to her that she might receive an inactive placebo. She quickly realized that she had not.

"I knew within three days," Jones recalls. "My body told me that it felt different. I just knew I wasn't on a sugar pill."

Jones has since been part of the open-label group of patients. After completing the initial 12-week study, she was offered an opportunity to continue taking the study drug.

It was an easy decision, considering that she has not had a panic attack since last winter. That followed six months in which the attacks were coming almost daily.

**A possible solution**

Jones never sought the psychiatric help she needed because she was secretly worried that she was crazy, and she thought a psychiatrist might confirm that fear.

"I would think, 'When will I have another attack? What am I going to be doing when it happens? What if I'm in a car? What if I have my son with me?' For me, the fear of having people think I was crazy was as bad as the attacks themselves," she says.

"Cathy is fairly typical of the patients we see," says Kormos. "She had been told so many things over the years, and no one had been able to make the problem go away. Because so few of these patients get proper treatment, after a while people like Cathy can begin to think that they, themselves, are the problem."

Kormos and Isenberg are optimistic that pregabalin will help people like Jones and that once the word is out, more people with panic disorder will seek help.

"No treatment is going to work for everybody all of the time," Isenberg warns. "We simply want something that's very safe and can help some people with panic disorder. It appears possible—we have to wait for the results of the trial—that this medication may offer those things."

*CATHY JONES IS A PSEUDONYM*
Splash! Students and faculty in the Program in Occupational Therapy make a big splash with two new community outreach efforts. In or on the water, they work to remove barriers that limit the potential of individuals with disabilities.

Making waves  Janet Howell, left, a student in the Program in Occupational Therapy, and Theresa Bradford, a community practice therapist in the Program in Occupational Therapy, work with 5-year-old Scott Rayfield at AquaAbility, a water exercise program that provides occupational and physical therapy in the form of fun, fitness and swimming instruction.
Watercraft  Occupational therapy students Amy Friederich, Jennifer Topolewski and Sarah Housman (left to right, above) install a back support in a canoe at Spanish Lake in North St. Louis County MO with the help of instructor Patricia A. Schneider, MS, OTR/L (far right, above). The apparatus was designed by OT students and is part of a prototype device to make canoes and kayaks accessible to the disabled. The back support was developed in cooperation with the American Canoe Association, the St. Louis Wheelchair Association and StreamTeach.

Below: OT students Terri Cooper (left) and Housman take the adapted canoe out on the water for a trial run. Students who worked on the project but are not pictured: Becky Bonner, Lee Daudt, Kelly Klamper, Stephanie Masten, Cathy Moriarty, Chris Varner and Jim Vugteveen.
The Honorable Continuum

BY RUTH BEBERMEYER

Highlighting the accomplishments of students, medical graduates, current and former house staff and faculty who embody the School of Medicine's unbroken tradition of excellence.

A fierce approach to work and life

LEONARD JARETT KNOWS A LOT ABOUT DIABETES, especially about the mechanism of insulin action. His research has contributed to major technological advances and earned him an international reputation. Now Distinguished Professor at the University of Pennsylvania, he concentrates on investigating the role of protein-tyrosine phosphatases in insulin resistance of diabetes mellitus type II.

Jarett also knows a lot about Parkinson's Disease, which he has been battling for nearly 10 years. For someone who had always been athletic and extremely sharp-minded, it was a devastating diagnosis. In 1998, it forced him to step down as chair of the Department of Pathology and Laboratory Medicine at Pennsylvania, a position he had held for 18 years. During that time he built the department into a national leader which now ranks first in the country in NIH research funding to pathology departments. Still growing, it has more than 100 faculty, 50 residents and fellows, and holds the largest number of patents in the school.

Characteristically, Jarett fights Parkinson's with ferocity. Last year, after deterioration in ability to control his muscles through medication, he elected to have an experimental surgery — a sub-thalamic nuclear implant of electrodes and pacemakers in the chest to control the muscles. That has significantly improved his ability to walk and function. He goes to work every day and plans to continue "until they carry me out feet first."

Jarett has been an achiever from the start. He earned a BA degree with honors from Rice Institute in Houston (he is a native Texan), and the MD cum laude from Washington University. Then followed a residency in pathology at Barnes Hospital and research in biochemistry under Dr. Hiromichi Narahara and Nobel laureate Dr. Carl Cori. After a stint at the National Heart Institute, he joined the Washington University faculty in 1966. Three years later, at age 32, he was appointed the first head of the Division of Laboratory Medicine. Before Pennsylvania lured him away in 1980, he built that into a model academic unit with the top residency and postdoctoral training programs in the nation.

Recently the American Society of Investigative Pathology gave Jarett the Gold Headed Cane Award for his role in establishing the field of academic laboratory medicine and the Association of Pathology Chairs gave him the Meritorious Service Award. Among his earlier honors are the Cotlove Award from the Academy of Clinical Laboratory Physicians and Scientists and the David Rumbough Award from the Juvenile Diabetes Foundation.

For all that, Jarett values most his family. He and Arlene, his wife of 38 years, have three children and two grandchildren.

A student teaching students

AS PRESIDENT OF THE CLASS OF 2001, Andy Josephson will soon be giving orders for his own patients, something he practiced as a child by imitating his neurologist father phoning admission orders to the hospital. He says that the obvious joy his father gained from his daily work helped to make neurology his own specialty choice.

At Stanford University, where Josephson earned a BAS with distinction and honors in biological sciences and political sciences, he helped start United Students for Veterans' Health, a national, not-for-profit organization that matches college students with patients in dementia wards at VA hospitals. That experience deepened his
interest in neurology and earned his group a 1995 Saturn Award for innovation in community service.

At Washington University he has collaborated in dementia research with John C. Morris, MD, professor of neurology and head of the Alzheimer’s Disease Research Center. One result is his manuscript, *Autosomal Dominant Kufi’ Disease: A Cause of Early-Onset Dementia*, currently submitted for publication.

The opportunity to combine research, clinical work and teaching convinced Josephson to aim for a career in academic neurology. He has been a faculty member at the National Youth Leadership Forum on Medicine in San Francisco. At Washington University he serves on various curriculum evaluation committees.

Josephson has been instrumental in creating a new program at the School of Medicine in which fourth-year students will earn credit for teaching a first-year elective. This winter he will teach the pilot course, focusing on evidence-based medicine, and he hopes the program will be a model for other medical schools.

Awarded a four-year, full-tuition Distinguished Student Scholarship, Josephson has continued to add to his honors. Recently, he was elected to Alpha Omega Alpha and received the Medical Center Alumni Scholarship Fund Prize for excellent work during his third year. Last year he received the Robert Carter Medical School Prize for outstanding overall performance in the medical school curriculum.

Josephson still finds time for distance running (he was assistant cross-country coach at his high school in Carmel IN) and to enjoy the arts.

**Looking back in gratitude**

*Washington University was the right place* at the right time, Joseph K.T. Lee says gratefully. It was the only major medical school which not only accepted him, a foreign student with few resources (albeit a cum laude graduate of the Chinese University of Hong Kong), but also gave him a scholarship.

Now E.H. Wood MD Distinguished Professor, chairman of the Department of Radiology and of the Clinical Chairs Group at the University of North Carolina School of Medicine in Chapel Hill, Lee still carves time out one day each week to see patients. He cherishes that time, and speaks of how he learned from his Washington University role model, Hyman Senturia, MD ’33, that talking with patients was as much a part of radiology as reading X-rays. In fact, Lee recently wrote an editorial for the *American Journal of Roentgenology* emphasizing that those in his field must be “physicians first and radiologists second.”

Clinical work is for Lee the instant gratification in his job; his administrative responsibilities, helping to chart the course of the medical school, are longer-term satisfactions.

Until Lee went to North Carolina in 1991, he was professor at the Mallinckrodt Institute of Radiology at Washington University, where he completed his residency in diagnostic radiology in 1977. He co-directed the Computed Body Tomography Section for six years and directed the Magnetic Resonance Imaging Section for three years.

Lee has been the principal investigator for a number of research studies and has published extensively. He has been president of the Society of Computed Body Tomography and of the Society of Chairmen of Academic Radiology. At North Carolina he has received the Charles A. Bream Award for Teaching Excellence. He currently serves on the Executive Council of the Washington University Medical Center Alumni Association.

Lee and his wife, Christina, love to travel. He says that, ironically, the only place they haven’t been is China. (He grew up in Hong Kong, came to St. Louis in his early 20s and stayed.) His busy schedule now only allows short vacations, and he likes to go fishing.

The Lees have twin daughters who participate in the longitudinal twin study at Washington University. One plans to enter medical school at North Carolina next year; the other is in an executive training program in New York. Their son is a 2000 graduate of Washington University’s School of Law and works for a telecommunications company in St. Louis.
Marvin Brennecke
A lasting legacy for scientific research

When Marvin Brennecke was in Medical School at Washington University in the 1920s, money for his education ran out after he completed his second year. His grandfathers had generously agreed to finance the first two years; after that, he was on his own. So Brennecke approached several local bankers and unsuccessfully requested loans.

Undeterred, he returned home to Jackson MO, where he found a banker who empathized with his plight. But the banker also understood that $5,000 was too big a gamble for any one person to wager — so he devised a plan. Instead, the banker asked 100 people to loan Brennecke $50. They did, and Brennecke was able to finish his education.

It's an experience that the doctor never forgot. His gratitude for their generosity was a big part of why he was so generous to the School of Medicine.

Brennecke graduated in 1930, at a time when jobs were scarce. He accepted a position as a plantation doctor on the Hawaiian island of Kauai, joining fellow Washington University alumnus Jay M. Kuhns, MD '15. Brennecke thought his time in the islands would be brief, but life had other plans. He fell in love with the islands and people and stayed there for the rest of his life.

His career took on another dimension when he served, in addition to his position as medical director and physician for several sugar and pineapple companies, as the government physician for the Koloa District on Kauai.

Throughout the years, he maintained ties with fellow faculty and students at Washington University. Brennecke died in 1994, leaving a bequest to the university that includes three professorships.

Stephen M. Beverley, PhD, is the Marvin A. Brennecke Professor of Molecular Microbiology. A tropical disease specialist, Beverley is widely recognized for his work on Leishmania, a microscopic parasite that infects more than 10 million people in tropical countries. He joined the faculty at Washington University from Harvard, where he also held a distinguished chair. The prestige of the Brennecke chair was one reason he made the move.

Brennecke established the chairs specifically for basic science researchers because he was aware of their continued need for financing.

Timothy M. Lohman, PhD, is the Marvin A. Brennecke Professor of Biological Chemistry. His research focuses on obtaining a molecular understanding of how two classes of proteins, single strand binding proteins and DNA helicases, interact with DNA and carry out their functions.

Lohman, who has been at the university since 1990, was awarded the chair earlier this year.

The third professorship, the Marvin A. Brennecke Professor of Molecular Biophysics, has yet to be named.

The generosity of donors such as Marvin A. Brennecke is very much appreciated and will certainly enhance research efforts, says Lohman.

Without a doubt, Brennecke would be pleased with the work these scientists are undertaking.
Clark Cox  Committed to higher education  BY NANCY MAY

IN ELSBERRY MO, the high school gymnasium is named in honor of Clark Cox, an alumnus, who for many years was the financial adviser to the Lincoln County R-2 Board of Education. At William Woods University in Fulton MO, originally a college for women, the science-language building was named for him. Throughout his life, Clark Cox was a champion of education, particularly the education of women.

At Washington University School of Medicine, Cox bequeathed the Clark and Mildred Cox Scholarship in Medicine for female students. “His generosity to the school is deeply appreciated,” says William A. Peck, MD, executive vice chancellor for medical affairs and dean of the School of Medicine, “as is his dedication to advancing educational opportunities for women.”

It was serendipity that allowed Cox to establish a tie with Washington University. Following his wife’s death in 1982, he suffered a tractor accident on his Lincoln County farm that left him wedged for hours between his vehicle and a tree. It was during his long hospitalization in traction for a broken neck that one of his friends asked John D. Davidson, MD ‘52, to look in on Cox. The two struck up a friendship, and eventually Davidson became Cox’s physician and one of three trustees of his estate.

In addition to the scholarship for women at the medical school, Cox endowed a similar award at Washington University School of Law. Although advanced and professional education for women were his top priorities, Cox’s generosity spilled over into considerable funds being given to the Medical Center for research in cardiovascular disease, multiple sclerosis, metabolic bone disease and the Alzheimer’s Disease Research Center.

Cox’s respect for women originated in the high esteem in which he held his schoolteacher mother and his wife. Davidson relates that on one occasion, Cox was asked to address a large group of college presidents. At that time, Cox expressed his opinion that a “roomful of them were not as much good to society as one good mother.”

Born in Foley MO, Cox earned his bachelor’s degree at Culver-Stockton College in Canton MO. It was there he met his wife, Mildred Mae McGhee, whom he married in 1929. With a master’s degree from the University of Iowa, a rarity for a woman in the early years of the 20th century, Mildred Cox taught for five years at Culver-Stockton and during World War II was an instructor at Washington University in the English department. During those years, Clark Cox was a vice president at the old Harris Trust and Savings Bank, which covered nine Midwestern states. In 1968, he became an executive at the Heitner Corporation in St. Louis, where he was in charge of the municipal bond department.

Cox also took pride in civic service. He helped to raise funds for Boys Town of Missouri in St. James through the Exhibitors Horse Show Association, of which he was an officer for many years. He also made a generous gift to the Scholarship Foundation of St. Louis endowment fund to assist students, preferably women, to pursue higher education. He served on the board of trustees at William Woods for more than 50 years. That institution awarded him an honorary doctorate of law in 1969.

Clark Cox truly had a clear commitment to higher education.
Eddy named the first Goldfarb Professor of Computational Biology

ST. LOUIS RETAILER ALVIN GOLDFARB has established a professorship in computational biology in the genetics department at the School of Medicine. The named recipient of the professorship is Sean R. Eddy, PhD.

“This chair will support Sean’s work in an exciting new area that holds great potential for understanding the human genetic blueprint,” Goldfarb says. He and his late wife, Jeanette Rudman Goldfarb, have had a long-standing relationship with Washington University.

Goldfarb attended the John M. Olin School of Business, leaving in 1937 to pursue a sales career that led to the presidency of Worth Stores Corporation, a St. Louis-based retailer of women’s apparel. He received an honorary doctorate in the humanities in 1999.

Jeanette Rudman Goldfarb graduated from the George Warren Brown School of Social Work in 1936. Her interest in plants and gardening is commemorated in the Jeanette Rudman Goldfarb Plant Growth Facility, which provides the biology department with office and lab space and a greenhouse.

A 150-seat auditorium in James S. McDonnell Hall bears Alvin Goldfarb’s name, as does the multipurpose building that in 1998 doubled the space available to the School of Social Work. The Alvin and Jeanette Goldfarb House, adjacent to the Hilltop campus, provides quarters for the St. Louis Hillel Center. As well as contributing to the University’s physical plant, the Goldfarbs were founding sponsors of the Scholars in Business Program at the School of Business.

“We are deeply grateful to Alvin Goldfarb for this commitment to the medical school and the advancement of biomedical science. We are confident that his gift will support striking advances in the interpretation of data from the Human Genome Project, in which the School of Medicine plays a leading role,” says William A. Peck, MD, executive vice chancellor for medical affairs and dean of the School of Medicine.

Eddy is developing new tools to probe the genome. His skills place him in a unique position to interpret data from the Human Genome Project.

His combined skills in computer science, information technology and genetics place him in a unique position to interpret the vast amounts of sequence data from the Human Genome Project.

Before coming to Washington University, Eddy was a postdoctoral researcher at the Medical Research Council Laboratory of Molecular Biology in Cambridge, United Kingdom. Working under John Sulston, PhD, and Richard Durbin, PhD, both of the Sanger Centre, he developed a new computer-based approach to analyzing RNA sequence and a software package, HMMER, for analyzing protein sequences.

Eddy joined the School of Medicine in 1995 as an assistant professor and became an associate professor earlier this year, when he also was selected as a Howard Hughes Medical Institute Assistant Investigator.
Second Century Award winners honored at dinner

THE SECOND CENTURY AWARD celebrates the advent of the second hundred years of excellence in patient care, teaching and research at the School of Medicine. The awards for 2000 were presented at a gala dinner held at St. Louis’ Ritz-Carlton Hotel on Oct. 6. Honorees for the year were: Samuel R. Goldstein (posthumously), Charles Kilo, MD, the Mallinckrodt Family and Lee N. Robins, PhD.

Samuel R. Goldstein was an eminent businessman and philanthropist in St. Louis for many years, supporting many major community health, educational and recreational projects and organizations including the Missouri Botanical Garden, the Missouri Historical Society, Grand Center, the St. Louis Association of Retarded Citizens, the United Way and the Jewish Community Center. He married Gloria Mintz and joined the Mintz family firm, Apex Oil Co., which he later built into a multi-billion-dollar enterprise. A Life Eliot Society Patron and generous supporter of Washington University, Goldstein made significant gifts in support of the Siteman Cancer Center and a new Learning and Teaching Center at the School of Medicine. His philanthropy also has benefited Jewish Hospital, St. Louis Children’s Hospital and Washington University’s George Warren Brown School of Social Work.

Charles Kilo, MD ’59, is a professor of clinical medicine at the School of Medicine and an endocrinologist in private practice. He also is chairman and co-founder of the Kilo Diabetes & Vascular Research Foundation. The foundation has raised millions of dollars through donations, grants, corporate gifts and fund-raising activities to fund research that has contributed significantly to understanding how diabetes affects the body and to the development of medications and treatments that prevent the damage it can cause. Kilo is a fellow of the American College of Endocrinology and of the American College of Physicians. He has presented more than 600 lectures throughout the world and coordinates the Kilo Foundation’s annual symposium to educate health care professionals about the latest developments in diabetes research and clinical care.

The Mallinckrodt Family has been an extraordinary friend of Washington University and the School of Medicine for generations. Edward Mallinckrodt Sr., one of the founders of Mallinckrodt Chemical Works, provided the building to house the school’s Department of Radiology, which was completed in 1930 and bears his name. His son, Edward Jr., who succeeded him as head of the chemical company, established the Mallinckrodt Foundation and the Mallinckrodt Trust, which ultimately provided one of the largest gifts in Washington University history.

The foundation has been a major source of funding for medical research, and income from the trust was instrumental in establishing the university’s Division of Biology and Biomedical Sciences, enabling many students and faculty to carry out research in a number of areas. In addition, the family has founded two other departments, a campus student center, and numerous scholarships and professorships. Today, Barbara Mallinckrodt Osborne, MD, and her sisters, Elizabeth Mallinckrodt Bryden, and Ann and Rosalie Mallinckrodt, carry on the family tradition of philanthropy and service.

Lee N. Robins, PhD ’51, is University Professor of Social Science and professor of social science in psychiatry at the School of Medicine. A world health leader in psychiatric epidemiology research for more than 40 years, Robins recently was inducted into the American Academy of Arts and Sciences. In 1999, she received Presidential Commendation from the American Psychiatric Association in recognition of her work in the area of child development and its impact on future mental health. She has received numerous honors and awards, and is a member of the Institute of Medicine of the National Academy of Science.
New Scholarship Challenge to honor geneticist

Andy McCanse, MD '54, and Barbara Buchanan, MD, his wife, have launched a challenge commitment of $50,000 to endow the "Class of 1954 Scholarship in Memory of Dan Nathans."

Daniel Nathans, MD '54, was a Nobel Prize-winning geneticist who pioneered the use of restriction enzymes in analyzing DNA, a technique that helped to create the biotechnology industry and has fueled the revolution in molecular cloning.

Nathans died of leukemia in 1999.

McCanse remembers Nathans as a brilliant and talented medical student, but also as "a very nice guy."

He hopes that fellow classmates will give generously in Nathans' memory to help future medical students.

"In reflecting on Danny’s accomplishments and those of all of our classmates from the Class of 1954, we have initiated this special scholarship to acknowledge Danny and the school’s role in our lives," says McCanse.

Reunion 2001 plans now underway

Reunion 2001 for MD alumni will be held May 10-12, 2001, with activities beginning at noon on Thursday and running through Saturday. The reunion hotel will be the Ritz-Carlton in Clayton, where class dinners will be held on Friday evening. The banquet at which alumni awards will be given will be held at the Chase-Park Plaza on Saturday evening.

Registration materials will be mailed in February. In the meantime, find reunion information on the Web at medschool.wustl.edu/alumni.

New Scholars in Medicine awarded

Ten new scholarships were awarded to third-year medical students this year through the Scholars in Medicine program.

"With the gifts received from seven donors, we were able to award these students with $2,500 scholarships," says Phillip E. Korenblat, MD, HS '63–65, who helped initiate the program. "If you consider the interest on a $2,500 loan, you can see just how valuable the scholarships are for our students."

The goal of the Scholars in Medicine Program is to reduce the burden of loans that medical students incur.

Reunion class social and gift chairpersons

| Class of 1941 | Vergil Slee, MD, social chair |
| Class of 1946 | Willard Walker, MD, social chair |
|               | Larry O'Neal, MD, and Jack Barrow, MD, gift chairs |
| Class of 1951 | Marvin Levin, MD, social and gift chair |
| Class of 1956 | Richard W. Hudgens, MD, social chair |
|               | Arthur Auer, MD, gift chair |
| Class of 1961 | Alan L. Pearlman, MD, social chair |
|               | Ronald Rosenthal, MD, gift chair |
| Class of 1966 | Kevin Schaberg, MD, social chair |
|               | Bruce Walz, MD, gift chair |
| Class of 1971 | Richard Blath, MD, social and gift chair |
| Class of 1976 | John Milton, MD, social chair |
|               | Thomas Pohiman, MD, and gift committee |
| Class of 1981 | Michele Kemp, MD, social chair |
|               | Ellen Binder, MD, gift chair |
| Class of 1986 | Michael Korenfeld, MD, social chair |
|               | Lyn Duncan, MD, and Alison Whelan, MD, gift chairs |
| Class of 1991 | Gregory and JoAnn Galakatos, MDs, social chairs |
|               | Andrew Blatt, MD, gift chair |
Class Notes

30s
Katherine Morris Fitzgerald, NU'32, recently moved to an apartment in Mt. Vernon IL where she is active in church and community affairs.
Pauline Ferencovic Kittlaus, OT'32, has moved from St. Louis to a retirement complex in Matthews NC.

40s
Vergil Slee, MD '41, recently published a book, The Endangered Medical Record, which proposes significant changes in the handling of medical record information. As a result, he has been quoted in the Wall Street Journal and is receiving e-mail from around the world. Details are available on the Web at www.tringa.com.
Stanley S. Kahn, MD '43, and his wife, Adeline, moved from Birmingham AL in December 1999 to Berkeley CA to be closer to their children and grandchildren. They have discovered the active Bay Area alumni group and have enjoyed attending School of Medicine alumni functions in San Francisco.
Richard Huck, MD '48, retired from private practice with Unity Medical Group on January 1, 2000. He now does clinical volunteer practice weekly.
Rudolph Maffei, MD '48, retired in July 1998 after practicing more than 40 years in Hawaii. One-thousand patients and friends gave him a surprise party on that occasion. He continues to do volunteer work and attends the University of Hawaii to keep active.
Jack W. Shrode, HA '49, is now a resident in Atria of Elizabethtown KY, an assisted-living facility.

50s
Richard B. Windsor, MD '52, is retired and now distributes a business card with the inscription, “Just a Good Guy With Whom to Do Business.” Among the services he offers are “banjo lessons, antiques manufactured, revolutions started, computers trashed, and lot lizards outwitted.”

60s
Harry Jonas, MD '52, retired September 1 after 13 years as secretary of the Liaison Committee on Medical Education (LCME), the accrediting body for the country's medical school programs. He has moved from Chicago to Lee's Summit MO and returned to the University of Missouri at Kansas City where he was dean for 10 years and will now serve as a consultant.
Frances Carpenter Marks, NU '52, has retired from her position as professor of nursing at Orange County Community College in Middletown NY, where she was a clinical instructor.

70s
Richard A. Blath, MD '71, has been named Director of the Medical Section of Gay/Lesbian Professionals, Inc., a national political action committee whose mission is to give voice to gay and lesbian professionals and to promote diversity and tolerance in the business and professional world. At his installation he delivered an address titled, “The Impact of Gender Identity and Gender Preference on Collegiality in a Medical Community.”

80s

Michael Teister, MD '67, presented a paper on “Repetitive Motion Disorders in Musicians and Dancers” to the Performing Arts Medical Association in Aspen CO in June. In August, he moderated a panel of experts in pulmonary medicine, endocrinology and exercise physiology from the Ohio State University Medical School at the National Flute Association meeting in Columbus OH in a presentation entitled, “As time goes by... Slowing down the metronome.” At that same meeting, which was dedicated to the memory of Jean-Pierre Rampal, he performed with 159 other flutists from around the world in the “Odyssey Flute Orchestra.”

E. James Andrews Jr., MD, HS '69-'71, recently has been elected president of the Florida Radiological Society. He practices diagnostic radiology in Pensacola.

Katherine Uraneck, MD '84, writes that she has “left my emergency medicine practice in Vermont for the bright lights and big city to pursue a Masters of Journalism at Columbia University.” She has been published in Salon.com and also will be included in a to-be-published anthology of women physicians. She recently completed a documentary, “Art on Fire,” and acts as a health consultant for the Albany Times Union. She can be reached by e-mail at Kuranek@nycrr.com.
Cynthia Meyer MacDougall, PT '87, and her husband, Robert, welcomed their second son in November 1999. He joined 3-year old Grant. MacDougall works part-time at Mercy Medical Center in Des Moines IA.

Nasima A. Hossain, HA '88, has been promoted to senior practice manager at Children's National Medical Center, Children's Pediatrics and Associates and Center for Community Pediatric Health in Silver Springs MD.

John C. Han, MD, HS '91, a partner in McLean County Anesthesiology, Ltd., was appointed chief of anesthesia in June at BreMenn Healthcare in Normal IL.

Ha (Lee) Austin, PT '92, and J. Christopher Austin, MD '94, have moved to King of Prussia PA, where Chris is now doing a fellowship in pediatric urology at Children's Hospital of Philadelphia. He completed his urology residency earlier this year at the University of Iowa and received the Pfizer Scholars in Urology Award 2000. Ha is currently a stay-at-home mom for Molly, 2 1/2, and Emma, 1.

Peter Mark Bridge, MD '93, and Donna Holden, MD, have just moved to the Tampa area. He has just passed his plastic surgery boards and is joining a multispecialty group. She is starting a solo practice focusing on breast cancer.

Michael Raney, MD '94, and his wife, Sharon, have returned to St. Louis where he is a radiologist with the Scott Radiology Group. They came from Washington DC, where he had finished a one-year fellowship in body imaging at Georgetown University after completing his residency in Memphis TN.

Glenn Doyle, MD '94, and Linda Robinson, MD '93, have married and are living in Secane PA.

Amy M. Urquhart, OT '96, moved to St. Louis in August and is currently staff occupational therapist and team leader for the rehab department at Festus Nursing Center.

Aimee Kappler, PT '96, and her husband, Chris, welcomed Nathan Rene on June 5. Nate joins big brother Caleb, 2. The Kapplers live in Eureka MO.

Kristen Jolly, OT '97, and husband Chad are the parents of Noah Gabriel, born July 7. They live in Kansas City MO.

Amanda Heidemann, MD '99, and her husband, Mitch Johnson, are proud to announce the arrival of their son, Adam Christopher Johnson, on August 7. Amanda is in her second year of family medicine residency at St. John's Mercy Medical Center in St. Louis.

Robert D. Brookes, MD '38, a retired psychiatrist and neurologist, died Nov. 14 as a result of pulmonary aspiration at St. Luke's Hospital in Chesterfield MO. He was 86. Before his retirement in 1993, Brookes was on staff at several St. Louis area hospitals, including St. Luke's, Barnes-Jewish Hospital and Missouri Baptist Medical Center. He was a past president of the Eastern Missouri Psychiatric Association and a 50-year member of the American Psychiatric Association. He was preceded in death by his first wife, Mary Scott Brookes, in 1984. He is survived by his wife, Virginia Irwin Brookes, along with children, stepchildren and their families.

Berla C. Thomas, OT '41, died July 20, one month before her 91st birthday, at a hospice in Tucson AZ.

Audrey Giddings, NU '41, died on June 3 in San Antonio TX.

Ray E. Green, MD '41, a retired family practitioner, died July 25 in Salt Lake City UT. He is survived by his wife, Betty.

Dean C. Austin, MD '42, died in Venice FL on June 2, at the age of 82. He served as a captain in the U.S. Army during World War II, then practiced medicine in Brookings SD for 15 years. In 1960 he moved his family to Venice where he practiced until his retirement in 1995. He is survived by his wife of 57 years, Beverly Austin, and five children.

Franz U. Steinberg, MD, HS '44, died at his home in St. Louis on Feb. 7, 2000, after suffering a heart attack. He was 86. He was a pioneer in rehabilitation and geriatric medicine and directed the department of rehabilitation medicine at Jewish Hospital for 26 years before he retired in 1985. He also was a professor of clinical medicine at Washington University School of Medicine.

Wiley H. Harrison, MD '46, died of colon cancer on Jan. 25, 2000, in Skokie IL, at the age of 78. He was an ear, nose and throat surgeon in Chicago for 48 years, and had developed several instruments used in ear surgery, including the Harrison knife. He was a longtime member of the American Hearing Research Foundation and was its president when he died. He taught at Cook County Hospital and Northwestern University's School of Medicine, where he was a professor emeritus of otolaryngology. Survivors include his wife, Mary Lou, three daughters and a son.

Gladden V. Elliott, MD '46, died of complications from lung cancer on Feb. 15, 2000, in La Mesa CA, at the age of 78. He completed a fellowship in gastroenterology and radiology at Washington University and was on the radiology faculty until he accepted an
opportunity to practice in San Diego County, moving there in 1958. He served at various times as a chancellor of the American College of Radiology, vice president of the Radiological Society of North America, president of the California Medical Association and of the San Diego County Medical Society. In 1985, his peers selected him as Physician Citizen of the Year in San Diego. He was active on the California Medical Political Action Committee and the American Medical Political Action Committee. He was instrumental in starting the Grossmont Hospital Foundation, which he chaired for three years. He is survived by his wife of 56 years, Peggy, and two daughters. The family suggests memorials to Washington University School of Medicine.

Robert C. Garner, MD '47, a retired pediatrician, died of cardiovascular disease on April 19 in Atlanta GA. He was 75. He had been an associate professor of clinical pediatrics at Emory University and had practiced in Atlanta since 1959. He is survived by his wife, Patricia Stuart Garner, four children and eight grandchildren.

Arthur G. Sartorius Jr., MD '48, died in Dayton OH, on March 22, at the age of 78. He had practiced obstetrics and gynecology in the Dayton area for more than 48 years. He was preceded in death by his first wife, Olivia Zeller of St. Louis, in 1970, and one son. He is survived by his wife, Mary, two daughters and three sons, as well as two brothers and one sister.

Beulah Reiman Hausafus, NU '48, died of cancer at the age of 72 on April 21 at St. Mary’s Hospital in Evansville IN. She is survived by her husband, Richard.

Betty Berst Medlock, NU '49, died Feb. 20, 2000, in St. Louis.

Francis C. King, MD '52, died of congestive heart failure on Feb. 4, 2000, at the age of 74. He had been a family practitioner in Kirkwood MO for 30 years and a member of the faculty at St. Louis University School of Medicine. He also was active on the board of the St. Louis Association for Retarded Citizens. Among his survivors are his wife, Dolores, four daughters, two sons, three stepsons and one stepdaughter.

Alfred M. Markowitz, MD '52, died on June 9 in New York. A general surgeon, he was a founding member and past president of the Society of Practitioners of Columbia-Presbyterian Medical Center. He had been professor of clinical surgery at the College of Physicians and Surgeons at Columbia University. Among his survivors are his wife of 45 years, Sydell Markowitz, and four children, Dr. Arlene Markowitz, Dr. David Markowitz, Dr. Marian Haber and Amy Rosen. The family requests that memorial gifts be made to the Alfred M. Markowitz Endowment for Scholars at Columbia University College of Physicians and Surgeons, Milstein Hospital, Building 7, New York NY 10032.

Murdoch Ritchie McKeithen, MD '53, died at home March 13, after an extended illness from transitional cell carcinoma. He is survived by his wife of 45 years, Lorretta, and three children, McKeithen practiced obstetrics and gynecology at the Laurinburg Surgical Clinic in North Carolina from 1962 until his retirement in 1994.

Fern Smith Steffen, NU '54, of St. Louis died April 13, after a long struggle with hepatitis brought on by a blood transfusion. She is survived by two daughters and a son.

Charles Ottensmeyer, MD '54, died May 12 of pancreatic cancer at age 77. He was a retired psychiatrist in Vancouver WA. He practiced adult and child psychiatry in St. Louis and in Springfield MO before moving to Wyoming and later to Washington.

His wife, Wanda, survives, along with two sons and two daughters.

Roy Worthen, MD '56, died on June 6 at the age of 70. He had been a psychiatrist in Seattle WA. He is survived by his wife, Jane.

Donald Bussmann Jr., MD '73, died in Springfield MO on January 15, 2000, apparently of coronary thrombosis. He was a general surgeon. He is survived by his wife, Yvonne L. Bussman, MD '73; three children; his father, Donald Bussmann, MD '45; and three siblings.

Robert J. Scheff, MD '74, died of a malignant brain tumor on May 1, at the age of 51. He was the longest-living glioblastoma patient on record, surviving for 16 1/2 years. He was an internist and gastroenterologist in St. Louis, and was on staff at Barnes-Jewish and St. Luke’s hospitals and at Missouri Baptist Medical Center. Among his survivors are his wife of 25 years, Candace, a son and a daughter.

Memorials are suggested to the Memorial Sloan-Kettering Neurosurgical Research Fund, Box E1275 York Avenue, New York NY 10021.

Mark Dale Cooper, MD '84, a psychiatrist, died at his home in New York NY on June 29. In addition to family members, he is survived by his partner, John Fromer. Memorial gifts may be made in his name to “God’s Love We Deliver,” 166 Avenue of the Americas, New York NY 10013, to the attention of Michael Kanyuch.
As you review your personal financial plan, you may find that a **Washington University Charitable Gift Annuity** can be helpful to you if you are age 60 or older. Here’s one way you can modify your plan and make a significant gift to the University:

If you are age 72 and create a $10,000 Gift Annuity with cash, you will receive the following benefits:

<table>
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<th>Rate of Return</th>
<th>Guaranteed annual income for life</th>
<th>Tax-free portion</th>
<th>Taxable portion</th>
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<td><strong>$770</strong></td>
<td><strong>$399</strong></td>
<td><strong>$371</strong></td>
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**Immediate federal income tax deduction** **$4,221***

**Effective payout rate** **10.9%**

(first 14.5 years at the 31% tax bracket)

You may also fund a Gift Annuity with appreciated securities.

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**Sample Rates of Return**

**Single Life**

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**Two Life**

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<td>85 &amp; 85</td>
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For further information or to request a personalized example, please call **1-314-935-5848** or **1-800-835-3503**, complete the attached reply card, or e-mail us at plannedgiving@aismail.wustl.edu.

Visit our Web site at [http://development.wustl.edu](http://development.wustl.edu), click on "Making a Gift," then on "Planned Gifts."

Advice from your tax or legal advisor should be sought when considering these types of gifts.

*Amount of charitable deduction may vary slightly.*
Washington University in St. Louis
SCHOOL OF MEDICINE

- Washington University is already included in my estate plans—I would like to become a Robert S. Brookings "Partner."
- I am age 60 or over. Please send me a personalized, confidential calculation using the following birthdate(s) to illustrate the very attractive benefits that I will receive from a Washington University Charitable Gift Annuity.
- I would like a calculation based on a theoretical gift of:
  - $_________________.
  - Cash (minimum $5,000)
  - Securities
    - $_________________ (Cost Basis) (Acquisition Date)
  - First Beneficiary
    - Birthdate_________________ Relationship____________
  - Second Beneficiary
    - Birthdate_________________ Relationship____________

☐ Please send me your booklet on Charitable Gift Annuities.
☐ Please send me your booklet on other Life Income Plans at Washington University.
☐ Please send me information on making a bequest to Washington University School of Medicine.
☐ Please have David C. Jones, Paul Schoon or Lynnette Sodha from the Washington University Planned Giving Office call me.
  Name_________________
  Address ____________________________
  City/State/Zip ______________________
  Daytime Phone ______________________

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Address__________________________City/State/Zip__________________________
Specialty__________________________Class/HS Year__________________________
E-mail__________________________ (May we list your e-mail address in our web page directory?)  ☐ Yes  ☐ No

(Bend this form and seal edges with tape to mail.)
Ian Rice, a second-year student in the Program in Occupational Therapy, was one of nearly 4,000 competitors at the 2000 Paralympics held Oct. 18-31 in Sydney, Australia. The Paralympics is the Olympic equivalent for the world's top athletes with disabilities, and is held every four years, just after the Olympic Games and at the same venues. Rice, a wheelchair racer, participated in four track events, placing fifth in the 100 meter, and sixth in the 200 and 400 meter races.
The 10-story, 226,000-square-foot Pediatric Research Building was dedicated on September 13. The new facility, funded in part by a $20 million gift from the McDonnell family, consolidates pediatric research activities into one building and allows clinicians and clinical investigators to work side by side with basic scientists.

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medschool.wustl.edu/~wumpa/outlook/