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**Mechanism Marathon:** Four undergraduate students will represent the University in a 1,100-mile road rally in a car that the students converted to run on methanol. Students from 15 American and Canadian universities will depart April 28 from Detroit, Mich., arriving five days later in Washington, D.C.

The United States is poised to launch the Magellan Mission to Venus on April 28. The first U.S. planetary project since the 1978 Pioneer mission to Venus, Magellan promises a treasure-trove of new knowledge. But it also threatens to raise the stakes of computer-generated data to the flood stage.

In terms of understanding the solar system, the next 10 years in space will be priceless," says Raymond F. Arvidson, Ph.D., professor of earth and planetary sciences and a member of the radar investigation group for the Magellan Mission. "But there is a corresponding data explosion that may baffle the layman. The amount of data generated by the Magellan project will become critical by the time Magellan data return to Earth. At first glance, that seems to be simply too much of a good thing, but the implications are deeper than that.

In the 11 years since the last planetary mission, scientists have made tremendous advances in remote sensing (computer imaging) — advances that promise to make Magellan one of the most enlightening space explorations ever undertaken. These advances, however, have led to sensors that can generate data sets far more voluminous and complex than those of the past, says Arvidson.

According to Arvidson, the Magellan Mission will map by radar 70 percent of the Venusian surface with a resolution as fine as the width of two football fields, providing unprecedented "snapshots" of Earth's saury twin. Magellan alone will return enough data to double the existing digital image data for all the previous planetary missions combined. Closer to home, the amount of data generated from various Earth Observing System (EOS) spacecraft could encompass a staggering one trillion bits a day by the mid-1990s, according to a July 1988 National Research Council report.

Arvidson is the director of the University's remote sensing laboratory, one of 13 NASA Regional Image Facilities. The laboratory is home to an archive of moon and planet photographs and digital maps used by scientists throughout the world. In recent years, the laboratory has expanded to include highly refined digital maps of the Earth.

Arvidson and NASA scientists at the Jet Propulsion Laboratory in Pasadena, Calif., the U.S. Geological Survey in Flagstaff, Ariz., Massachusetts Institute of Technology and Brown University will be the prime caretakers of the complete collection of radar imaging of Venus from the Magellan Mission. Those images will be computer-interpreted and assembled to make global maps of Venus — data that will help the scientists explore possible volcanic activity, changes in the planet's climate and similarities between the Venusian and Earth surfaces.

**Venus: a hot topic**

Scientists already know or can infer a good deal about Venus, thanks to major efforts by the Soviet Union (the Venera series) and the United States (the Pioneer spacecraft) during the 1970s. Previous remote sensing and rock sample data reveal a world of lava flows and mountains. Extraordinarily hot — its surface is about 850 degrees Fahrenheit, roughly one-and-a-half times the highest heat of a kitchen stove — Venus is largely devoid of water and lacks any evidence of continents.

The Magellan Mission, with its high-resolution imaging, may prove that there are active volcanoes on Venus, a notion scientists have held for many years. Analyses of rocks from the Soviet Venera missions reveal granite and basalts, which suggest a history of volcanism, but are not conclusive enough evidence.

"Previous tests have revealed an abundance of sulfuric acid in the Venusian atmosphere," Arvidson says. "Something is putting sulfur in the air right now, perhaps volcanoes." Magellan data also may show whether the mountain ranges of Venus, like Earth's, are due to plate tectonics, or whether some other process is involved. It is known that Mars, Mercury and the moon, for instance, are one-plate planets that release their interior heat mainly by conduction through the crust.

Finally, the greenhouse effect, which on Earth concerns many scientists, is a natural condition on Venus. The greenhouse effect — where heat is trapped by carbon dioxide, thus evaporating water and heating the planet — is so rampant on Venus it is called a "runaway" effect. Ninety-seven percent of the Venusian atmosphere is composed of carbon dioxide. Water in such an extreme environment is not stable.

The numerical data generated by Magellan, as well as by other existing and projected space satellites and communications systems, provide NASA scientists the raw data to geologically map Earth and the planets. They also tip scientists to such global problems as the greenhouse effect and depletion of the ozone layer. But, Arvidson warns, the enormous jumble of data is meaningless without the computer power to interpret it — a classic case of "water everywhere, but not a drop to drink."

**Finer view**

At the crux of the 1990s space challenge is the decade-long advance in remote sensing. For example, the Viking Landers that imaged Mars in 1976 examined the "Red Planet" through three filters of red, blue, and green, each filter showing a different aspect of the Martian surface. In contrast, equipment to be used on the EROS spacecraft, Arvidson notes, will reflect light in more than 200 wavelength ranges, revealing intimate information about the atmosphere, oceans and surface of the Earth.

Arvidson's colleague Mohamed J. Kiefer, Nowakowsky, and Vilchez Cazmer LT. For more on the Magellan Mission, see story on page 2.

**Magellan Mission**

*Next 10 years in space will be priceless,* says Ray Arvidson

Jerome R. Cox, S.S.D., professor of computer science and chairman of the department, has been named the first Harold B. and Adelaide G. Welge Professor of Computer Sciences at the School of Engineering.

The ceremony was held at a ceremony April 28 in Loftus Hall Gallery. The professorship will provide ongoing support for Cox's research activities in computer communications, computer imaging and algorithms for mapping of the human genome.

"Since joining the Washington University faculty in 1955, Dr. Cox has made many outstanding contributions to computer science and its applications," says James M. McKeelvey, Ph.D., dean of the School of Engineering. "He is a highly versatile engineer who now, as in the past, is in the middle of exciting and challenging advances. Dr. Cox is richly deserving of this honor.

Harold B. and Adelaide G. Welge Professor of Computer Science

The Washington University School of Engineering alumni who worked for the Department of Defense and industry in the fields of communication, computer systems, and electrical engineering. In 1983, the Computer Science and Engineering Department named a professorship in honor of the two, "Dr. Cox holds a master's degree in mathematics with a minor in science. Even in the mid 1950s, the Welges had maintained a longstanding interest in the sciences, including computer science. "I am honored to be the first Welge professor," says Cox. "The support this position provides is of great value to my ongoing projects in computer imaging, communications systems, computer architecture, data communication and computer vision and computer speaking and recognition."

Dr. Cox holds the bachelor's, master's and doctoral degrees in electrical engineering from the Massachusetts Institute of Technology. In 1955 he joined the research department at the IBM Watson Research Center to work in electrical engineering and the design of computer circuits. That same year he was appointed associate professor in computer science and in 1964, became director of the Biomedical Computer Laboratory at Washington University.

"Dr. Cox has served on many committees for the National Institutes of Health, the National Science Foundation, the Defense Mapping Agency and other organizations. Since 1974, he has as an associate international conference of computers in radiology with Paul Hufnagel of the Technical University of Munich, Germany, and later with Jurgen Meyer of Johannes-Gutenberg University, Mainz, Germany. Dr. Cox holds membership in various professional organizations, including senior membership with the Institute of Electrical and an alumnus who worked for the Department of Defense and industry in the fields of communications, computer systems, and electrical engineering. In 1983, Washington University established a professorship in honor of the two, "Dr. Cox holds a master's degree in mathematics with a minor in science, "I am honored to be the first Welge professor," says Cox. "The support this position provides is of great value to my ongoing projects in computer imaging, communications systems, computer architecture, data communication and computer vision and recognition."

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Arabic Novel: An Historical and

Making a ‘futuristic technology happen now’

1,100-mile road rally will test

students’ methanol‐converted car

Washington University’s name will
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in the eastern states and even in
Canada next week.

Four undergraduate students will
represent the university in a 1,100-mile
road rally that will test their craftsmanship
and ability to make the 1990s the most
cosmic decade of the U.S. space program.

"The gift is vital to take us where
we want to go," says Arvidson. "It’s a
equipped remote sensing laboratory.
the University’s Department of Earth
resources has awarded a $300,000 grant to
the group’s founder and artistic-
der over the university’s space program.

"The lecture is co-sponsored by the
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"A solo dance is probably the most
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performer are the same person,” says
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expressing an idea. A dancer is usually
the first to work with the choreographer. He or she
must open the doors. But someone else
must drive the car."

St. Louis Dancers to present nine solos
The St. Louis Dancers will perform a
spring concert, which includes four
premieres, at 8 p.m. Friday and Saturday, March 30 and 31, at 2 p.m.
Sunday, May 7, in Edison Theatre.
The program also features choreography
by and performances of so-called
"space dancers," will feature nine solos, some per-
forming their own choreography.

Four of the solos are guest
artists, including James Reedy, a mem-
ber of the renowned Eric Hawkins
Company of New York City, who will
premiere "Sun on Rocks," a work he
choreographed. Fred Matthews, a
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Four undergraduate students will
feature nine soloists, some per-
forming their own choreography.

The troupe, a professional com-
pany affiliated with Washington
University, is composed of faculty and
alumni of the university’s dance
department.

A benefit reception for the St.
Louis Dancers will be held following
the May 5 performance at the Alumni
House, 6100 Wallace Circle, off Forsyth
Boulevard. Admission to the cham-
paign and dessert reception is $7.

Tickets for the performance are $5
and include admission to the Washington
University faculty and staff parking lot; $10 for general public;
and $2 discount for all tickets bought in
advance.

For information, call 889‐5643.

The Methanol Marathon, students had to write
on an 85 percent methanol/15 percent gasoline blend. They altered the engine,
the intake/exhaust systems, fuel and
gasoline mix. They altered the engine,
ignition systems. They will be judged
on such variables as fuel economy,
emissions and the manufacturing sector. This
project will emphasize teamwork
and will end up with results of practi-
cal importance to the nation’s popula-
tion and the manufacturing sector. This
was a great match between the
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AIDS task force aims to educate

From spotlighting the story of a person living with AIDS, to disseminating printed materials on the deadly disease, a Washington University task force is set to further inform the University community about AIDS.

The AIDS Task Force, which boasts approximately 50 members, comprises Washington faculty, students and staff.

Malcolm Trecuer, a counselor with the Student Counseling Service, and James P. Keating, a professor of surgery, gave a talk on "Expert Testimony: The Problem of Witness Bias" at the annual convention of the American College of Healthcare Executives. Their talk, titled "Do You Know Someone With AIDS?...You Will!" The event featured more than 70 people. "A lot of our students have lived with someone who is sick or has died of AIDS," Trecuer said.

The task force is strictly designed as an educational tool. It does not set policy. The Washington University AIDS Task Force, headed by J. Russell Little, M.D., professor of medicine and of microbiology and immunology, is the policy-making group for the University.

To achieve their goal, task force members have sponsored several AIDS programs this academic year. On March 1, the group held a dialogue titled "Do You Know Someone With AIDS?" The event featured talks by a person with AIDS and a volunteer for St. Louis Effort for AIDS.

"Gociot thinks the talks raised awareness about AIDS. "A lot of people came to realize that, five years from now, they may have a friend, sister or brother with AIDS. It is not a discriminate disease."

The AIDS task force also co-sponsored the Feb. 21 Assembly Series event, "The Thoughts and Discoveries of the World Health Organization's Global Programme on AIDS."

Suzanne Landolphi, an actress, filmmaker and volunteer for the Fenway Community Health Center in Boston, gave an AIDS presentation sponsored by the task force to nearly 600 people last November in Edison Theater. "The audience was absolutely captivated," says Trecuer.

Other task force activities have included distributing Valentines cards in residence halls and throughout key campus locations. The Valentines cards are printed materials on the deadly diseases. "We plan to continually keep this issue alive throughout the school year and introduce it in all areas of the students educational experience."

Although education remains our major goal, we've reached a point now where our students can take what they learn and go back to the campus community. That's the direction we hope to take next year," Trecuer said.

The AIDS task force is the most energetic and committed group I've worked with on campus," says Trecuer. "We plan to keep this issue alive throughout the school year and introduce it in all areas of the students educational experience."

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The most obvious one is social—young people wouldn’t be stimulated if competitiveness exceeds a healthy level, Ambrose notes.

Michael’s one of a growing number of bright young people—high achievers—who need to succeed so great that they throw themselves into a sort of competitive overdrive, says pediatric psychologist Peter Ambrose Jr., Ph.D. It’s a phenomenon that Ambrose has observed in his practice at the Pediatric Psychology Center at the School of Medicine, and one that he suspects is occurring more and more across the country. These young people are so intent on meeting their goals that they refuse to acknowledge their limitations, often times pushing themselves to succeed even when they are out of their league.

These are teenagers, often from upper-class families, who by most standards have it all, or at least the potential for having it all, Ambrose says. But the standards they set for themselves are impossibly high.

“These teenagers, especially those in competitive upper-echelon schools—are very bright, but they compare themselves with peers who may be even more intelligent and then start to feel there is something wrong with them, that they can’t make the grade,” Ambrose says.

“We assume their lives are rosy. Nobody expects these kids to have problems, so nobody is helping them.”

— Peter Ambrose

To help teens combat feelings of inadequacy, Peter Ambrose, Ph.D., works with the teens as well as their parents.

Sacrificing happiness for success

High achieving teens’ problems often overlooked

The feelings of inadequacy can grow, he points out, culminating in a host of emotional problems, from anxiety disorders to full-blown depression and tragically at times to suicide attempts. Precisely because of the obvious advantages in their lives, these upper-echelon achievers “fall through the cracks,” Ambrose says. He assumes their lives are rosy. Nobody expects these kids to have problems, so nobody is helping them.

While this is by no means an epidemic, Ambrose says, he can walk into almost any elite academic program and find a handful of teenagers who fit this description.

Some degree of competition is good, Ambrose says. “But when competition exceeds a healthy level—basically you’re looking for symptoms of depression or anxiety.”

The most obvious one is social withdrawal—usually the bright kids who are unhappy have fewer peers. It’s okay to be non-traditional or anti-establishment, but when you see an adolescent has no friends or little social contact, there could be a problem. Parents should look for teenagers withdrawing from their friends and withdrawing from their families, Ambrose says. He also advises watching for changes in their daily schedules. This would include disturbed sleeping or eating patterns, and of course signs of drug or alcohol use. Many times they may also give up activities that were once pleasurable. It’s okay if a child who loves piano suddenly stops playing it to study for an algebra final, he says but points out, if the sacrifice is a permanent one, made simply to survive, then priorities need to be reevaluated.

Sometimes parents have to be the watchdog. If these children are compromising their health, like living on three hours sleep a night, then the parents need to make a stand. If they are compromising their social life, the parents may need to be more involved. Obviously, you can’t tell a teenager you want them to go out, it’s Friday night. But you can say, “Look, I don’t think you need to study every night of the week until 2 o’clock. Unless there’s a final exam, the lights go off at 11.”

Unfortunately, over-achieving teenagers often base their criteria for success on parental expectations. “It’s a double-edged sword. How much do you push your kids? How much should you expect from them? In the long run, the question should be, what do your kids want for themselves?”

Well-meaning parents often put too much emphasis on their children being successful, rather than happy, Ambrose notes. The classic example, he offers, is the parents who insist on an Ivy League school because they want the best for their child, and the best education will help them land the best job. Whether intentionally or not, he remarks, parents program their children early that there are certain criteria for success.

“To some parents, being a professional — whether it’s judge, doctor, professor, or what — is important. In other families being a CEO is better because monetary status is more important. Parents need to learn that their influence early on does stay with these kids,” Ambrose stresses.

Inevitably, young people functioning merely to please their parents will end up feeling unhappy and unequal to the task, he says. These children set very certain and strict, often unreasonable, criteria for success: scoring 800 on the SAT’s or making in the top 10 percent of a very competitive class. Parents frequently don’t realize the pressure their children feel in trying to live up to values that don’t fit their own goals, he notes.

“At some point parents need to ask themselves, ‘Whose life is this?’”

Most parents will tell you they want their children to have everything they didn’t have. That’s an admirable sentiment, but the pressure shouldn’t be for them to have 10 times as much.

Parents can best help by providing their children with opportunities and support from which to make their own decisions, Ambrose says. “Teenagers need a reasonable grade average, and they need the truth. If they really do want to go to medical school, they need to know that their competition is working hard, and does have the 3.75 grade average and the 600 SAT’s.” With this information available teenagers can make educated decisions on how much they are willing to sacrifice.

Parents should have expectations of their children, and should encourage them to excel, Ambrose says, but they should not choose the competitive arena. While grades are important, kids should know academics are not the only measure of their worth, he reminds. And, he says, they should be encouraged to develop other talents — art, music, cooking, athletics — that can be a source of confidence.

Ultimately, he says, parents must teach their children to believe in themselves. “Whenever a child tells me ‘I can’t do that,’ I usually try to find an example of where they have done it under other circumstances, or more importantly, when they’ve done something more difficult. I try to make them realize that we all have our limitations, and it’s time to start enjoying what they can do.”

Really, what parents should establish is an environment where their children are rewarded for effort and perseverance. If children are allowed to fail, they are also allowed to succeed.”

Joni Westerhouse
Scientists to study HIV prevalence in drug users

A scientist at the School of Medicine has received funding to conduct the first study in the St. Louis area on the prevalence of HIV infection in intravenous drug users and their needle-sharing sexual partners.

The three-year study is being directed by Linda B. Cottier, Ph.D., an epidemiologist with the Department of Psychiatry. Cottier, an associate professor, will receive a total of $797,000 from the National Institute on Drug Abuse for the project.

Until now, there have been no studies in St. Louis to determine the prevalence of HIV infection in drug users, Cottier says, because of the area's relatively low reported AIDS cases. However, research and educational efforts elsewhere in the country have begun to focus on IV drug users, she notes, since educational programs have stabilized the rate of new HIV infections among homosexsuals.

The St. Louis study will follow some 650 subjects, including 300 IV drug users and 150 non IV drug users and 260 sex partners. In addition to studying prevalence of HIV infection, Cottier will evaluate risk factors for HIV infection — particularly the co-occurrence of psychiatric symptoms, other substance abuse, needle-sharing, personality, and high-risk sexual behaviors — to better target public education efforts. Cottier hopes to determine whether education can help change high risk behaviors and thus reduce the incidence of HIV infection in this study population.

Participants for Cottier's project will include prisoners and prostitutes, as well as clients in area drug treatment programs. Sexual partners will be recruited as well.

British editor to deliver Brodman lecture

Stephen P. Lock, M.D., F.R.C.P., editor of the British Medical Journal since 1975, will deliver the ninth annual Estelle Brodman Lecture May 9 at the School of Medicine.

The lecture, "Twenty-five Years of Publishing the British Medical Journal: Ethics, Authorship, Peer Review and Challenge of the New Electronic Media," will begin at noon in Gore Auditorium.

Lock has been editor of the British Medical Journal since 1975. Trained as a hematologist, he served on the staffs of London teaching hospitals before being appointed assistant editor of the journal in 1964. He became deputy editor in 1974 and was a medical correspondent to the BBC Overseas Service from 1968 to 1974.

Lock's special interest is medical writing and biomedical communication, including evaluating scientific information, the role of peer review, the editing process, and the impact of new information technology. He has taught many courses in medical writing in Britain, Finland, Iraq, Kuwait, Canada and Australia.

The Estelle Brodman Lecture is sponsored by the School of Medicine Library in honor of Brodman, who served as library director and professor of medical history at the School of Medicine from 1961-81.

For more information on the lecture, call 362-2773.

Brown to co-direct infectious diseases division

Eric J. Brown, M.D., has been named director of the newly created research section of the division of infectious diseases at the School of Medicine.

Brown is associate professor of microbiology and immunology, and of cell biology and physiology. The appointment, effective July 1, was announced by David M. Ritts, M.D., head of the Department of Internal Medicine.

Brown will serve as co-director of the Division of Infectious Diseases with Gerald Medoff, M.D. Medoff, who has headed infectious diseases since 1972, will devote full-time efforts to directing the division's clinical section.

Beyer chosen as first McDonnell Scholar in cancer research

Eric C. Beyer, M.D., will serve as the School of Medicine's first McDonnell Scholar in Cancer Research.

Beyer, who will join the faculty July 1, recently was named a 1989 McDonnell Scholar by the James S. McDonnell Foundation's Program for Molecular Medicine in Cancer Research. His appointment brings with it a three-year, $75,000 grant that will enable him to pursue his research in oncology.

The McDonnell Foundation's program was established this year to develop physician-investigators who will apply techniques of modern biology to problems in clinical oncology. It supports young physicians who have demonstrated superior potential for original basic research as well as an interest in training in oncology.

Beyer's work focuses on molecules on cell surfaces that are involved in cellular communication, adhesion, and development. Using the techniques of molecular and cellular biology, he has isolated membrane proteins that form tunnel-like structures between cells. These "gap junctions" play a role in passing between cells small molecules involved in metabolic support, growth control, and the development of embryos. In the heart, they permit electrical communication from one muscle cell to another. Beyer plans to study the synthesis and assembly of the gap junction proteins and to analyze their role in cell to cell communication in normal and cancer cells.

Currently Beyer is an instructor of pediatrics at Harvard Medical School. He also serves as an associate in medicine at The Children's Hospital and as a clinical associate at the Dana Farber Cancer Institute. Since 1989, he has been a research fellow at The Children's Hospital, the Farber Cancer Institute, and the departments of pediatrics and anatomy and cellular biology at Harvard Medical School.

Beyer received his doctorate in physiology and pharmacology in 1981 and his medical degree in 1982 from the University of California in San Diego. His postdoctoral training includes an internship and residency in pediatrics at the Children's Hospital, and a clinical fellowship in pediatric hematology and oncology at The Children's Hospital and the Farber Cancer Institute. He has received numerous awards and honors for his research, including the 1987 American Heart Association's Clinician Scientist Award.

The McDonnell Foundation's $10 million Program for Molecular Medicine in Cancer Research, one of the largest of its kind in the nation, will support 25 scholars over the next four years. Scholars are selected by the foundation's trustees with assistance from a national advisory committee chaired by Philip W. Majerus, M.D., professor of biological chemistry and medicine and co-director of the division of hematology-oncology at Washington University School of Medicine.

The James S. McDonnell Foundation was established in 1959 by the late aerospace pioneer who guided the McDonnell Douglas Corporation from 1939 until his death in 1980. The foundation awards millions of dollars in grants annually to support programs in the biological and medical sciences, education, and international affairs.

The School of Medicine's McDonnell Center for Cellular and Molecular Neurobiology, McDonnell Center for Higher Brain Function, and Center for Genetics in Medicine were all made possible by grants from the McDonnell Foundation.
Olson named to genome advisory committee

Maynard V. Olson, Ph.D., professor of genetics at the School of Medicine, has been chosen as one of 12 members of the National Institute of Health's (NIH) Program Advisory Committee on the Human Genome.

The committee will advise the NIH and its associate director for human genome research, Nobel Prize-winning scientist James D. Watson, Ph.D., on the new NIH initiative to map and sequence the human genome. Watson and his colleagues won the Nobel Prize in 1962 for their discovery of the molecular structure of DNA.

Olson is associate director of Washington University's Center for Genetics in Medicine. He is renowned for his innovative method of cloning human DNA in yeast cells, a technique which allows larger unique fragments of human DNA to be cloned and purified than was previously possible. His work plays a significant role in the effort to piece together the human genetic puzzle by mapping and sequencing the entire human genetic structure. Scientists think that doing so could lead to the determination of the genetic basis for as many as 3,500 diseases caused by genetic mutation, as well as possible ways to diagnose, correct and prevent many genetic disorders.

In 1969, Olson came to the School of Medicine in 1979 as an assistant professor of genetics, and was named professor in 1987. He received his doctorate in chemistry from Stanford University.

Immune system expert Herman Eisen to give Lowry lecture

Herman N. Eisen, M.D., an expert on immune system responses to disease, will deliver the 12th annual Oliver H. Lowry Lecture in Pharmacology May 11 at the School of Medicine.

The lecture, open to all members of the medical profession, will begin at 4 p.m. in the Carl V. Moore Auditorium, 660 S. Euclid Ave. Eisen will discuss cytotoxic, or killer, T Cells, antibodies that are capable of dissolving or destroying other cells.

Eisen, a former member of the Washington University faculty, is Whitehead Institute Professor of Immunology at the Massachusetts Institute of Technology (MIT). He has played a major role in defining the biochemical and molecular basis for the immune system's recognition and response to viruses, microorganisms and other disease-causing substances. He was recruited to the Department of Dermatology at Washington University School of Medicine in 1955, and from 1960-73 served as professor and chairman of microbiology and immunology. He left St. Louis in 1973 to develop a program in immunology at the Massachusetts Institute of Technology, where he has turned his efforts to understanding the basis for recognition and response to pathogens by the cellular arm of the immune system.

Eisen received his bachelor's degree Phi Beta Kappa in 1939 and a medical degree in 1943 from New York University. After further clinical and scientific training at Columbia University, he joined the faculty of industrial medicine at New York University in 1949. The Lowry Lecture is sponsored by the Department of Pharmacology to honor Oliver H. Lowry, M.D., Ph.D., distinguished professor emeritus and lecturer. Lowry served as head of the department from 1937-75 and as dean of the School of Medicine from 1955-58. Since February, he has been serving as interim head of the Department of Pharmacology. An internationally known biochemist, his discoveries have widely influenced research in medical science, particularly in the areas of neurobiology, muscular dystrophy, mental retardation and biochemistry.

The grant, from the National Institutes of Health, was awarded to Gustav Schonfeld, M.D., Kountz Professor of Medicine in the Department of Internal Medicine.

The grant will support a project titled, "Metabolism of Genetic Variants of Apolipoprotein B." The study will involve analysis for variations of the blood protein that are responsible for carrying cholesterol and triglycerides, with the goal of finding the structure-function relationships of apolip and its role in atherosclerosis.

In addition to directing the Lipid Research Center, Schonfeld is head of the metabolism division at Jewish Hospital and on staff at Barnes Hospital, both sponsoring institutions of the Washington University Medical Center. A 1956 graduate of Washington University and a 1960 graduate of the School of Medicine, he joined the faculty in 1956 as an assistant professor of medicine. He became a full professor in 1977 and was named Kountz professor in 1987.

Schonfeld belongs to many professional societies, including the American Physiologic Society, the American Heart Association, the American College of Physicians and the American Society for Clinical Investigation. As past president of the American Society of Biological Chemists and the Council on Atherosclerosis, he is a diplomat of the American Board of Internal Medicine and a fellow of the American College of Physicians. He serves on the editorial boards of several journals, and is an associate editor of the journal Circulation. He is author or co-author of more than 130 papers.

Parkinson's disease exercise class has openings

The Parkinson Exercise class, sponsored by the Irene Walter Johnson Institute of Rehabilitation at the School of Medicine and the Greater St. Louis Chapter of the American Parkinson Disease Association, is accepting new students.

The class is a professionally supervised outpatient program of group exercises and activities designed to address the problems encountered by those with Parkinson's disease and their families.

The exercise classes emphasize good posture, deep breathing and practical daily activities. Activities also stress concentration and walking.

Goals of the program are to improve functional mobility, motivate patients to exercise regularly, encourage family support, promote socialization and offer self-help skills.

Participation is open to any patient with Parkinson's disease with the approval of their physician. Participants may attend class once or twice a week. The class meets Monday through Friday in a private room. Cost is $65 per month.

For more information, call Linda Hunt at 562-2570.
Tuition benefits available to employees are outlined effective July 1, 1985, the following non-taxable tuition benefits are available to full-time faculty, administrators and staff after five full years of continuous service:

1. Education benefits are available to children who are dependent on a parent who is a full-time member of the University. Such children must meet the normal admission standards of Washington University.

2. Those who do may attend any undergraduate division of the University on a tuition-free basis.

3. In addition, all full-time faculty, administrators and staff members who die while full-time employees of the University or were on leave, including disability leave. It also is available to the children of faculty members, administrators and staff members who died after July 1, 1985.

4. In addition, after seven full years of continuous service* tuition of not over half of the then current Washington University tuition, and not in excess of the tuition and required academic fees of the college or university attended, whichever is less, is also available to such children who choose to attend undergraduate programs at other accredited colleges or universities.

The full-time member must:

- establish eligibility for each individual child through the Personnel Office. The staff member or spouse must establish his/her eligibility through the Personnel Office. Employees or spouses enrolling in University College are approved for one-half tuition at the time they register.
- Full-time service at other institutions of higher education may be counted to meet the eligibility requirement.

Accessibility guide is updated

The Office of Physical Facilities in coordination with the Committee on University Policy and Practice Affecting the Disabled has published a brochure last fall indicating accessibility to facilities on the Hilltop Campus for mobility-impaired persons. The following updates the Guide to Handicapped Accessibility — Hilltop Campus.

- Coordinator for Handicapped Services relocated to fully accessible Mullincocntd Center.
- Additional curb cuts — approx. 20 curb cuts, and permanent ramps installed.
- Handicapped parking spaces marked as required by local codes and ordinances.
- Modification of selected rest rooms has taken place: men's room on first floor of Altman House, women's room in South Brookings, unisex room on first floor of Whitmore House's men's room, basement of Wilson Hall; unisex room, Unrath Health Service; January Hall, Brown Hall; Brook Hall, Olin Library, Eliot Hall and Malling, court.
- In addition, all new and recently renovated buildings have restrooms accessible by the handicapped.
- Health Service exterior access ramp has been designed and is scheduled for installation. A chair lift specified and to be installed during the summer of 1989.
- Graham Chapel accessible to handicapped via a permanent ramp and via a temporary ramp.
- Alumnae House first floor and basement accessible via separate entrances.

Staff openings

Qualified candidates are being sought to fill secretarial, clerical and technical positions. Current staff openings on the Hilltop Campus follow:

- Accountant, 1 position; Administrative Assistant, 3 positions; Area Coordinator, 2 positions; Biology Lab, Research, and Technican, 7 positions; Buildings Supervisor, 1 position.
- Qualified candidates are being sought to fill secretarial, clerical and technical positions.

Retirement annuity contributions can be changed on July 1

Participants under the retirement annuity change their tax-deferred contribution on July 1, 1989. Eligible non-participating employees may also establish eligibility in the retirement annuity at this time.

The retirement plan comes under the Internal Revenue Code, which limits the annual amount of your tax-deferred contributions to up to $5,500 and the number of salary reduction agreements to one agreement per year.

Under tax reform, there is a $30,000 annual limit on combined employer and employee contributions and after-tax contributions.

The maximum contribution to qualify for the University contribution under the basic plan is 5 percent. The percentage is based on the participant's age as of July 1 of the year. The contributions for those employees attaining 5 years of service will be based on their salary as of July 1 of each year. Their contribution schedule follows:

<table>
<thead>
<tr>
<th>Annual Earnings</th>
<th>Required Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20,000</td>
<td>0%</td>
</tr>
<tr>
<td>$20,000 but less than $25,000</td>
<td>1%</td>
</tr>
<tr>
<td>$25,000 but less than $27,500</td>
<td>2%</td>
</tr>
<tr>
<td>$27,500 but less than $30,000</td>
<td>4%</td>
</tr>
<tr>
<td>$30,000 and over</td>
<td>5%</td>
</tr>
</tbody>
</table>

Copies of the guide are available at the University.

If you desire to contribute a tax-deferred contribution in excess of the general limits, it is necessary to have a calculation done by the Payroll Office.

Additionally, investment options to TIAA-CREF are available under the Supplemental Retirement Plan through the Vanguard Group of Investment Companies and TIAA-CREF. Enrollments in Vanguard, including transfers to Vanguard, must be made effective on July 1 of each year, except for new employee enrollments.

For more information or forms, contact the following people: Hilltop Campus, Bill Maurer (academic) and Nylia Fedor (nonacademic), 889-5990, Box 1184; Medical School, Jacqueline Eaves (academic) and Mary Walsh (nonacademic), 362-7194, Box 8002; and Dental School, Carol Young (academic) and the Hilltop Campus Personnel Office, 362-7194, and the Medical Campus Personnel Office, 362-7194.

Personnel News

Personnel News appears monthly in the Record and is prepared by the Personnel Office. Personnel News is designed to keep Washington University employees and their families informed of the benefits and opportunities available at the University.
Thursday, April 27
4 p.m. Dept. of Chemistry First Jack Marx Colloquium, "Biophysical Approaches to the Inhibitor and Substrate Specificity of Physiological Proteases," John J. Piskanec, prof. of chemistry, Northeastern State Medical Center, U. of Texas, 311 S. Euclid.
4 p.m. Dept. of Pathology Seminar, "Immunocytochemical Studies on the Neuropil of the Inhibitor Substrate Specificity of Physiological Proteases," John J. Piskanec, prof. of chemistry, Northeastern State Medical Center, U. of Texas, 311 S. Euclid.
4:30 p.m. Dept. of Mathematics Colloquium, "Interpretation of Operators in Mixed Normed Spaces," Saimon Isgur, prof. of mathematics, 413 S. Euclid.