Popular physics

Course reaches nonscience students with everyday life applications

All of us are concerned about trying to reach the nonscience students," said Michael W. Friedlander, Ph.D., professor of physics, who teaches the course along with Jonathan B. Losos, Ph.D., assistant professor of biology.

"Some of us would call it an evangelical mission," Losos said.

Losos receives five-year Packard fellowship for evolutionary research

Jonathan B. Losos, Ph.D., assistant professor of biology, has received a five-year $500,000 fellowship in science and engineering from the David and Lucile Packard Foundation.

Losos is the third Washington University scientist to win a Packard fellowship, following Joanne D.发布了错误的日期，正确的日期应该是1994年10月27日。
Animal welfare

Researchers will learn more about the responsible use of animals in research during a two-part workshop and seminar Nov. 7-8 in St. Louis. Representatives of the U.S. Department of Agriculture's Animal Welfare Information Center (AWIC) will present legal alternatives in animal research. These alternatives, or the “three R’s,” include reducing the number of animals used, refining experimental procedures to lessen pain and distress, and replacing animals with in vitro methods.

The seminars are sponsored by the St. Louis Consortium for Animal Welfare Education, which comprises institutions involved in animal research, including Washington University, St. Louis University, the University of Missouri-St. Louis, Monsanto Corp. and Mallinckrodt Medical Inc.

The first part of the workshop will take place from 9:11 a.m. Nov. 7 at Monsanto Corp. followed by a seminar from 1:30 to 2:30 p.m. in the School of Medicine’s Philip N. Niederlein Library, Room 307 in the South Building. The second half of the workshop, a computer lab for data base search strategies, will be held from 8 a.m. to noon Nov. 8 at the School of Medicine Library in Room 601B.

According to Nicole Duffee, D.V.M., Ph.D., assistant director of educational services in the Division of Comparative Medicine, these alternatives promote good science and the efficient use of animals. Participants will be introduced to organizations and electronic media that will help them learn more about alternatives in animal research.

Duffee said a good example of reduction in animal use was demonstrated recently by the National Cancer Institute’s (NCI) drug research and development program. A few years ago, the NCI reportedly was using as many as 4.5 million rodents a year to screen chemicals for anti-tumor activity. However, the standard animal model system was far from ideal. After much argument and debate, the NCI switched to the use of cell cultures and in vitro testing methods.

The U.S. Congress established AWIC, which is housed at the National Agricultural Library in Washington, D.C., in 1985. AWIC serves as an information resource on the welfare of animals used in research. Scientists rely on AWIC to locate appropriate model systems and avoid duplicate studies. The center makes available current bibliographies on a range of research-related topics, such as embryo and gene transfers and animal models in biomedical research.

AWIC staff also can conduct customized data base searches and provide guidelines on how to search data bases for research alternatives related to animal studies. Duffee said an effective search for alternatives is not easy because of limitations in the database searches and provide guidelines on how to search data bases for research alternatives related to animal studies.

For more information about AWIC, call (301) 594-6212. To register for either the seminar or workshop, call Duffee at 365-4516.

Volunteers needed for hormone replacement study

Volunteers are needed for a multicenter study at the School of Medicine evaluating hormone replacement therapy regimens and doses in post-menopausal women. The medical school will recruit 25 area women to participate in the study.

Previous studies have demonstrated the benefits of hormone replacement therapy in post-menopausal women, such as prevention of osteoporosis and protection against heart disease. But no large-scale study has evaluated and compared different hormone replacement therapy regimens and doses. This new study is designed to do that.

The Upjohn Co. is funding the one-year study, which will involve 480 women from 15 medical centers nationwide. "I think the key is that all women who are post-menopausal should be on some form of hormone replacement therapy," said Dan Williams, M.D., assistant professor of obstetrics and gynecology and the site’s principal investigator. "In order to get more women to take the medication, there needs to be alternative ways of giving it because some patients will do well on one regimen and not on another.”

Throughout the study, researchers will evaluate bone mineral density, growth of the uterine lining, serum lipid levels and monitor symptoms such as hot flashes.

The research may help physicians determine an optimal dosage of progesterin that would help prevent pre-cancerous growths of the uterine lining and reduces side effects, such as headaches and dizziness, that some women experience after taking the drug, Williams said.

For more information, call study coordinator Carol Cholewa, R.N., at 362-4777.
**Virology expert targets HIV infection**

S

Shortly after noted National Institutes of Health researcher Robert Gallo, M.D., co-discovered the human immunodeficiency virus (HIV) in 1984, he summoned the help of Lee Ratner, M.D., Ph.D., as a fellow in his lab. Gallo needed someone to "spell out" the molecular sequence of HIV, the virus that causes AIDS.

The project would play a critical role in understanding how HIV gradually destroys the immune system's ability to fight the infection and how future drug therapies might disarm the virus.

"Gallo came into the lab and told me, 'Here are the clones of the virus. Drop what you're doing and sequence them,'" Ratner recalled.

At the time, Ratner was involved in another project to study a different virus, called HTLV-I, which causes a form of leukemia in humans. "I told Gallo that I didn't think I had the time to devote to the AIDS project."

In retrospect, Ratner said he, like many scientists, did not fully understand how developments in AIDS research would lead to important advances in many areas of medicine, including molecular genetics, molecular biology and immunology.

"Gallo told me, 'You have the time. You will never regret the decision,'" Ratner said. "He was absolutely right. He pushed me into the decision of my life."

Ratner, now a professor of medicine and molecular microbiology at the School of Medicine, coordinated the National Institutes of Health (NIH) effort to sequence the AIDS virus. He was one of three NIH scientists who worked night and day for three months to determine the virus' molecular sequence.

The team, with Ratner as lead author, published its findings in January 1985 in the journal Nature. In all, 19 scientists contributed to the effort. Ratner's research at the National Cancer Institute from 1983 to 1985 laid the foundation for his research projects at the School of Medicine. He is the only Washington University scientist studying the molecular control of HIV.

In recent years, he also has resumed studying HTLV-1, which causes a significant proportion of leukemia cases in Africa, the Caribbean, parts of Asia, as well as cases in the United States.

Ratner's quiet nature belies the intensity with which he approaches research projects, his colleagues say. He is focused and productive, all the while overseeing a lab with some 15 to 20 students.

When Ratner is not working in the lab, seeing patients or spending time with his family (he and his wife, Andrea, have five school-age children), chances are he may be on the handball court.

"I approach handball the same way he approaches his research program," said Gerald Medoff, M.D., professor of medicine and chair of clinical affairs. "He's extremely competitive and he strives to be the best he can be. He absolutely demonstrates that same commitment to everything he does."

In addition to his responsibilities at the School of Medicine, Ratner serves on the editorial boards of several journals, including AIDS, Virology, and Journal of Virology, and serves as chair of the NBI grant review study section on AIDS molecular biology and virology.

Ratner received a Ph.D. in virology as a Ph.D. student at the University of Washington in 1983 to 1985. In 1985, he spent summers poring over molecular clones of HIV to dissect every gene in the virus. He and his co-workers are looking at how the virus replicates and uses the genes to pinpoint possible targets for interrupting its replication.

Ratner's latest work in the lab serves as a vital link to future therapies against the AIDS virus, said William Powderly, M.D., associate professor of medicine and co-director of the Center for AIDS Research at Washington University's Clinical Trials Unit. The unit is one of 50 nationwide networks established by the National Institutes of Health to evaluate new AIDS therapies.

Ratner's lab is one of the lead laboratories in the National Institutes of Health drug development network, including the site at Washington University, soon will begin testing a protease inhibitor based on research conducted by Ratner in a collaborative project led by Garland Marshall, Ph.D., professor of molecular biology and pharmacology. Protease inhibitors are considered by many AIDS experts to be one of the most promising classes of anti-HIV drugs under study. The enzyme protease is essential to the life cycle of HIV. Ratner and Marshall demonstrated that blocking the enzyme can stop the virus from its infectious properties.

The network recently began testing a glycosylation inhibitor as a potential AIDS therapy. Ratner published the following in Nature. In all, 19 scientists contributed to the effort.

"I think treatment for the disease has turned out to be more difficult than I anticipated because the virus is constantly mutating and resistant strains are emerging. The virus is developing fairly quickly," Ratner said. "This virus replicates so fast. It is one of the things we didn't initially understand very well."

AIDS cure may be impossible, Ratner said. Instead, the best way to control the disease may be to develop drugs with varying toxicities, similar to chemotherapy for the treatment of cancer.

"How many drugs is it going to take, I'm not sure," Ratner said. "I think we've learned so much about the virus by taking it apart and putting it back together in every possible way that I think we'll develop every possible drug to find a way to stop it."

Ratner, who is a specialist in molecular and medical and doctoral degrees from Harvard University in 1979. He completed an internal medicine internship and a year of research at Stanford Hospital before beginning a fellowship at the National Cancer Institute.

"After even HIV was first discovered, there were multiple discoveries in the scientific literature and in news reports," Ratner said. "I never thought that I would become an AIDS researcher."

Ratner has devoted his entire career to AIDS research because his research may give scientists tools to direct therapy against the disease's life-threatening complications.

"We see first-hand from our patients how drastic the complications of the disease are," Ratner said. "They give us renewed interest for approaching problems in the lab."

For example, Ratner said many of his patients have very low blood platelet counts, a complication of HIV infection. Platelets play a crucial role in blood clotting. Some scientists have suggested that HIV infection of platelet precursor cells, called megakaryocytes, may be responsible for the small number of platelets circulating in patients' blood. Ratner and his co-workers are just beginning a project to study how HIV gets into megakaryocytes. Their work may give scientists clues for ways to better treat this complication.

Over the past several years, AIDS research has led to better treatments for some opportunistic infections of the disease, such as pneumocystis carinii pneumonia, lymphoma and Kaposi's sarcoma. But 10 years into the disease, an outright cure for AIDS still seems to be in the distant future.

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Calendar guidelines
Events sponsored by the University — its departments, schools, centers, organizations and its recognized student organizations — are published in the Calendar. All events are free and open to the public, unless otherwise noted.

Calendar submissions should state time, date, place, sponsor (name of event, source of funds), and admission cost. Quality promotional photographs with descriptions are welcome. Send items to Calendar, please call 935-4926.

Oct. 27—Nov. 5

Exhibitions
Biannual Faculty Exhibition. Features work by School of Art faculty, Oct. 28 through Dec. 18. Opening reception: 5-7 p.m. Oct. 28. Gallery of Art, upper gallery, Steinberg Hall. Gallery hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. Call 935-6050.

“An Other Ballgame: Works on Paper.” Drawings by Ruth Hardinger, visiting artist, New York and Oaxaca, Mexico. Nov. 2-4, Bixby Gallery, Bixby Hall. Gallery hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. Call 935-6050.

Lecture
Thursday, Oct. 27
9:30-10:30 a.m. "Murphy’s Stakes Equations," Marco Cannone, prof. of mathemat-ics. Room 199 Cupples Hall. 935-6726.
4 p.m. "Hematemesis: From the Deter- coated Vesicle Assembly on the Golgi," Luisa Trusco, prof. of Biochemistry, Room 100 Cupples Hall. 935-6726.

Saturday, Oct. 29

4 p.m. Architecture and Design seminar. "Important Streets/Big Roads," Joseph Passonneau, civil engineer and former dean of the School of Architecture. Steinberg Hall. 935-6726.

Tuesday, Nov. 1
4:30 p.m. Computational genetics seminar. "Paving the Hallway to High Throughput Sequencing," Joseph Passonneau, civil engineer and former dean of the School of Architecture. Steinberg Hall. 935-6726.
4 p.m. New Music Circle concert. "Composers who have Learned From the Apollo Program," Sergio Fenley, asst. prof, of mathematics. Room 100 Cupples Hall. 935-6726.
4 p.m. Genetics seminar. "Molecular Genet-ics of Human X Inactivation," Huntington F. Willard, Dept. of Genetics, Center for Human Genetics, Case Western Reserve School of Medicine, Cleveland. Erarger Aud. McDowell Medical Sciences Bldg. 362-7072.
4 p.m. International Business Council lecture. "Economic and Social Developments in Western and Eastern Europe: Karl Engelbriet, management consultant specializing in human resources and former managing director of OLAQ, the holding company for Austria’s national industries. May Aud. Simon Hall. 935-6398.

Friday, Nov. 4
4 p.m. Physics seminar. "Brown bag lunch. "What We Have Learned From the Apollo Program," Robert W. McAdams, prof. of physics.

10:30 a.m. Solid state engineering and applied physics seminar. "Effect of Single-mode Optical Fiber to Polymer Optical Waveguide," Tim Barry, graduate student in electrical engineering. Room 305 Bryon Hall.
4 p.m. Molecular microbiology seminar. "Economic and Social Developments in Western and Eastern Europe: Karl Engelbriet, management consultant specializing in human resources and former managing director of OLAQ, the holding company for Austria’s national industries. May Aud. Simon Hall. 935-6398.

Saturday, Nov. 5
8 p.m. New Music Circle concert. "Blue" Glenn Dinsmore, Steinberg Hall Aud. Cost: $4 for the general public and $6 for WU students.

Performances
Thursday, Oct. 27
8 p.m. "Stardance Speech." a play by Richard Seltzer and directed by Henry Selvy, chair of drama. (Also Oct. 28 and 29, same time, and Oct. 30 and 31, same time.) 8 p.m. in the auditorium of the School of Medicine, Bldg. 362-9038.
4 p.m. "Streetlight School of Dance." Please call 935-4926 for more information.

Friday, Nov. 4
8 p.m. "New Music Circle concert. "Blue" Glenn Dinsmore, Steinberg Hall Aud. Cost: $4 for the general public and $6 for WU students.

Saturday, Nov. 5
8 p.m. "New Music Circle concert. "Blue" Glenn Dinsmore, Steinberg Hall Aud. Cost: $4 for the general public and $6 for WU students.
October 27
8 a.m. Office of Continuing Medical Education seminar: Rupert B. Turnbull Memorial Lectureship and Surgical Grand Rounds. Sponsored by the Section of Colon and Rectal Surgery at Jewish Hospital and the School of Medicine’s Division of Molecular Genetics and Office of Continuing Medical Education. Cont. on Oct. 29 at 8 a.m. Brown Room and Steinberg Amphitheater, Jewish Hospital. To register or for cost info., call 362-6893.
First Week: 1:30 p.m. Thursday, Oct. 27, 935-4475.

Genetics philosopher gives Assembly Series talk

I

Historian and philosopher of genetics Robert Olby will give a lecture, titled “Molecularizing the Neuron: The Case of Memory” as part of the fall Assembly Series program. His presentation, which serves as this year’s Thomas Hall Lecture, will be held at 11 a.m. Wednesday, Nov. 2, in Room 215 Reebolt Hall. The talk is free and open to the public.

Olby has extensively written on the works of Charles Darwin and on the moral and philosophical underpinnings of molecular genetics. He was the first to question whether Mendel, the Austrian monk and botanist who founded the modern theory of genetics, would have agreed with the views promoted in his name during this century, namely that offspring inherit specific particles from their parents that determine adult traits.

More recently, Olby has focused his attention to the development of molecular biology and genetics. He wrote The Path to the Double Helix as a counterpart to James Watson’s account of Watson’s co-discovery with Francis Crick of the double helix structure of DNA.

As a philosopher, Olby has scrutinized the ethical and philosophical implications of molecular biology’s increasing intimate knowledge of the molecular structure of the gene, and, in his most recent book, Causation: The Molecular and Functional Significance of DNA Sequences, has explored the implications of molecular biology for the social construction of human nature.

This lecture is co-sponsored by the Assembly Series, the Department of Biology and Student Union. For more information, call 935-5297.

Research and development focus of lecture

The director of the U.S. Department of Commerce’s National Institute of Standards and Technology (NIST) will give the fourth annual Thomas Hall Lecture in Technology and Human Affairs at 4:30 p.m. Wednesday, Oct. 31, in Room 101 Lupata Hall.

Arati Prabhakar, Ph.D., will speak on “Civilian Research and Development: The Changing Face of Federal R&D.”

The Stuckenberg lecture honors the late William R. Stuckenberg, an electrical engineering graduate of Washington University in 1958, as well as professor and Carnegie Mellon University, who endowed a professorship in honor of Stuckenberg’s professor, the late Nobel laureate in physics and co-founder of the National Institute of Standards and Technology, Frederick Seitz.

Prabhakar, who earned a Bachelor of Science degree in electrical engineering from Texas Technological University in 1979, and a master’s degree in electrical engineering from the California Institute of Technology in 1980. In 1984 she became the first woman to earn a Ph.D. in applied physics from that institution.

Prabhakar chairs a key government task force on how to maintain America’s superhighway,” she said.

For information, call 935-5419 or 935-5474.

Fashion show to benefit Student Union

The annual fashion show and fashion sale to benefit the Catholic Student center at Washington University will be held at noon Friday, Oct. 28, at 8 a.m. Office of Continuing Education, 4475 Forsyth Blvd., St. Louis, Mo. (Specify St. Louis, Oct. 28 at 8:30 a.m. to register.) To register for event, call 362-6893.

First Week: 11:45 a.m. Office of Continuing Medical Education seminar: Rupert B. Turnbull Memorial Lectureship and Surgical Grand Rounds. Sponsored by the Section of Colon and Rectal Surgery at Jewish Hospital and the School of Medicine’s Division of Molecular Genetics and Office of Continuing Medical Education. Cont. on Oct. 29 at 8 a.m. Brown Room and Steinberg Amphitheater, Jewish Hospital. To register or for cost info., call 362-6893.
First Week: 1:30 p.m. Thursday, Oct. 27, 935-4475.

This Week: 1:30 p.m. Saturday, Oct. 29, Quenette became Washington University National Invitational.
First Week: 1:30 p.m. Friday, Oct. 28, at St. Louis University. WU men won 3 (15, 15, 15), St. Louis 0 (6, 13, 8). WU finished first in the conference, St. Louis second and SLU third.
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Financial Aid Office reorganized, renamed — from page 1

Front-line employees helped identify redundant steps and areas where automation would be more efficient.

Lifelong Learning Institute attracts older learners

The following criminal incidents were reported to the Campus Police Department Oct. 7-13. Readers with information that could assist the investigation of these incidents are urged to call 935-5555. This release is provided in cooperation with the Hilltop Campus Police Department.

Oct. 17

10:20 a.m. — Currency and receipts belonging to the Department of Psychology were reported stolen from Room 107 East Hall sometime between Oct. 14 and Oct. 17.

1:50 p.m. — A visitor's Expo pack containing currency, medication and a driver's license was reported stolen from a woman's locker in the Athletic Complex sometime between 1:35 p.m. and 1:55 p.m.

Oct. 18

19th c. — A video camera belonging to the V.A. Health Care System was reported stolen from Room 212A Lopa Hall sometime between 5:00 p.m. Oct. 17 and 9 a.m. Oct. 18.

10:45 a.m. — A microwave oven was reported stolen from Room 227A Lopa Hall sometime between 5:30 p.m. Oct. 17 and 9:30 a.m. Oct. 18.

12:42 p.m. — Two models belonging to the John M. Olm School of Business were reported stolen from an area between 8:30 a.m. Oct. 14 and 11 a.m. Oct. 17.

Oct. 19

10:15 a.m. — A television and videocassette recorder belonging to University College were reported stolen from Room 20 January Hall sometime between 10 p.m. Oct. 17 and 8:30 a.m. Oct. 18.

11:30 a.m. — A student's bicycle and lock were reported stolen from the bike rack on the south side of Olm Library sometime after Sept. 24.

1:57 p.m. — A student's television was reported stolen from a residence hall sometime after 8:45 a.m. and 1:40 p.m. Oct. 18.

2:57 p.m. — A faculty member's car was reported stolen from South Forty sometime between 10 a.m. Oct. 10 and noon Oct. 11.

11:07 p.m. — A visitor's GMC van was reported stolen from Brookings Drive in the westbound lane sometime between 7:30 and 11 p.m. Oct. 19.

Oct. 20

8:50 a.m. — A commercial property occurring at 12:30 p.m. Sept. at Shurtleff Residence Hall. A student entered her room and noticed a white mule shoe which had been left on the floor of the room. She also noticed 150 lbs., this build with dark complexion, wearing a black jacket and dark t-shirt, blue jeans and white tennis shoes. He was going through her roommate's CDs. The subject then left the dorm in an unknown direction; nothing appeared to be missing.

Oct. 21

11:30 a.m. — A faculty member's wallet containing credit cards was reported stolen from Room 507 Joliet Hall sometime between 9:15 a.m. and 3:33 p.m. A student's mountain bike was reported stolen from the bike rack on the east side of the Athletic Complex sometime between 1:30 and 3:30 p.m. Oct. 21.

4:30 p.m. — A student's backpack was reported stolen from the main level of the Library sometime between 11:15 a.m. and 11:20 a.m. Oct. 21.

8:30 p.m. — A student's mountain bike and lock were reported stolen from the bike rack on the west side of South Forty sometime between 2 and 5 p.m. Oct. 21.

Oct. 22

9:45 a.m. — A student's mountain bike and lock were reported stolen from the south side of Simon Hall sometime between noon and 2 p.m. Oct. 22.

Oct. 24

8:20 a.m. — A student's bike rack and lock were reported stolen from the bike rack on the west side of South Forty sometime between 2 and 5 p.m. Oct. 22.

2:02 p.m. — A student's backpack was reported stolen from the main level of the Library sometime between 11:15 a.m. and 11:20 a.m. Oct. 21.

3:33 p.m. — A student's mountain bike was reported stolen from the bike rack on the east side of the Athletic Complex sometime between 1:30 and 3:30 p.m. Oct. 21.

4:30 p.m. — A student's backpack was reported stolen from the main level of the Library sometime between 11:15 a.m. and 11:20 a.m. Oct. 21.

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Introducing new faculty members

Medical Campus:

Jeffrey A. Lowell, M.D., assistant professor of general surgery, comes from the University of Nebraska Medical Center in Omaha, where he was a resident in pediatrics and pediatric transplantation. His re-
search focuses on intestinal transplantation and living-donor liver transplantation. He received a bachelor's degree in psychology from Colby College in 1981 and a medical degree from the Yale University School of Medicine in 1985.

Helen Pwischen-Worms, Ph.D., associate professor of cell biology and physiology, comes from Harvard Medical School in Boston, where she was an associate professor of microbiology and molecular genetics. She has been a postdoc in microbiology and immunology since 1984 from Duke University in Durham, N.C.

For The Record

For The Record contains news about a wide variety of faculty, staff and student scholarly and professional activities.

Of note

James A. Brisk, M.D., assistant professor, Howard P. Forman, M.D., former resident, and Jay P. Heiken, M.D., professor, all in radiology at the School of Medicine's Mallinckrodt Institute of Radiology, received the Contrast Award from the Society of Computerized Tomography and Magnetic Resonance. Their winning paper was titled "Reduction of Intravenous Contrast Material Required for Human Spinal Computed Tomography."

N. Matthew Kommor, Ph.D., professor of mathematics, received the Hillman Award from the Council of Industrial and Scientific Research of India. He received the award for his contributions to commutative algebra and algebraic geometry.

David Schlessinger, Ph.D., professor of molecular microbiology and of medicine, received an honorary degree from the University of Uppsala in Sweden for his work as one of the world's leading molecular geneticists. Schlessinger directs the Center for Genetic Medicine. His lab is involved in a major project to map the human X chromosome and to analyze several genes involved in X-linked diseases.

Speaking of

Carl Phillips, assistant professor of both African and Afro-American Studies in English, will read his poetry before The Academy of American Poets in New York on Nov. 1. The program is "New Science: Rafael Campo, Suzanne Gardiner and Carl Phillips."

OriPressman

Several professors served as faculty mem-
bers during the George Engen Mathemat-
ics and Science Institute Research Program. The program gives high school seniors an opportunity to conduct research with faculty from Washington University, St. Louis University and the University of Missouri-St. Louis. Washington University faculty who participated were: Richard L. Axelson, Ph.D., assistant professor of mechanical engineering; David A. Bajaz, Ph.D., associate professor of psychology; D. Anne Cross, M.D., assistant professor of neurology and of genetics; and Anthony H. Sayah, M.D., assistant professor of neurosurgery. Says he wants to be a neurosurgeon.

George Eberle Jr. graduated from Washington with a bachelor's degree in mathematics from Washington in 1964. He then began his career at the Famous-Barr division of the May Depart-
ment Stores Co. He became May's chief financial officer in 1981 and was named president in 1990. He is chair of the Board of Junior Achievement of Mississipi Valley.

Terry L. Lengfelder is a member of the faculty in mathematics. He is married with his wife, Carol, and lives in the St. Louis area. The Lengfelders have two sons.

Jerome T. Loeb received his bachelor's degree in physics from Washington in 1964. He then began his career at the George Warren Brown School of Social Work in 1958. A founding member of the school's Century Club, Eberle has taught at the school and incorporated Grace Hill as a key part of the school's bicentennial program. Eberle's honors include the school's Outstanding Alumni Award. He also serves on the Dean's Professional Advisory Committee.

Euler joined Arthur Andersen & Co. in 1961 after receiving a bachelor's degree in business from the University of Illinois in 1957 and as a master's degree in human resources management from Washington University in 1953. He can be reached at 935-5164.

Ph.D., assistant professor of both anatomy and neurobiology; Stephen L. Glass, M.D., associate professor of cell biology and physics and technology. They were given the award "for their work as one of the world's leading molecular geneticists. Schlessinger directs the Center for Genetic Medicine. His lab is involved in a major project to map the human X chromosome and to analyze several genes involved in X-linked diseases.

Jack D. Minner, professor of both genetics and of medicine, was a key part of the school's practicum program. He worked as a student in 1972 and as a medical student in 1976. He received an honorary degree from the University of Uppsala in Sweden for his work as one of the world's leading molecular geneticists. Schlessinger directs the Center for Genetic Medicine. His lab is involved in a major project to map the human X chromosome and to analyze several genes involved in X-linked diseases.

Speaking of

Carl Phillips, assistant professor of both African and Afro-American Studies in English, will read his poetry before The Academy of American Poets in New York on Nov. 1. The program is "New Science: Rafael Campo, Suzanne Gardiner and Carl Phillips."

OriPressman

Several professors served as faculty mem-
bers during the George Engen Mathemat-
ics and Science Institute Research Program. The program gives high school seniors an opportunity to conduct research with faculty from Washington University, St. Louis University and the University of Missouri-St. Louis. Washington University faculty who participated were: Richard L. Axelson, Ph.D., assistant professor of mechanical engineering; David A. Bajaz, Ph.D., associate professor of psychology; D. Anne Cross, M.D., assistant professor of neurology and of genetics; and Anthony H. Sayah, M.D., assistant professor of neurosurgery. Says he wants to be a neurosurgeon.

George Eberle Jr. graduated from Washington with a bachelor's degree in mathematics from Washington in 1964. He then began his career at the Famous-Barr division of the May Depart-
ment Stores Co. He became May's chief financial officer in 1981 and was named president in 1990. He is chair of the Board of Junior Achievement of Mississipi Valley.

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Hiawatha Park

The following is a partial list of positions available at the Hiawatha Park. Interested persons may call the Office of Human Resources, Room 209 for more information. The deadline is October 20, 1990. Note: All positions require three years related experience.

Nurse Assistant, Part time 950061
Health Services Requirements: High school diploma or equivalent; experience in temperature and blood pressure readings. Hours: 24 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Answer door, take temperature and blood pressure; fill and file charts; take vital signs; prepare meals, change bed linens; restock supplies; some clerical tasks.

Administrative Assistant 950077
Board of Trustees Requirements: High school graduate, some college preferred; efficiency in word processing and data processing. Hours: 24 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Answer calls; file; type; prepare reports; sort mail; maintain office; perform other related tasks.

Library Assistant, Part time 950086
Library and Information Science Requirements: Bachelor's degree preferred; some college courses completed. Hours: 15 hours per week, 1:30 p.m.-5:00 p.m., Monday through Friday. Duties: Assist with the library's cataloging and indexing.

Computer Technician/Programmer 950096
Computer Science Requirements: Bachelor's degree in computer science; two years of college-level computer science courses completed. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Design, write, and test computer programs; maintain computer equipment; perform other related tasks.

Clerical Work 950100
Clerical Work Requirements: High school diploma; some computer experience helpful. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Answer calls; file; type; prepare reports; sort mail; maintain office; perform other related tasks.

Office Manager 950101
Business Administration Requirements: Bachelor's degree in business administration or equivalent experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Prepare budgets; maintain personnel records; maintain office; perform other related tasks.

Clerical Work 950103
Clerical Work Requirements: High school diploma; some computer experience helpful. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Answer calls; file; type; prepare reports; sort mail; maintain office; perform other related tasks.

Medical Secretary II 950120-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950121-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950122-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950123-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950124-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950125-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950126-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950127-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950128-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950129-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950130-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950131-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950132-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950133-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950134-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950135-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950136-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950137-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950138-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950139-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950140-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950141-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950142-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950143-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950144-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950145-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950146-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950147-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.

Medical Secretary II 950148-R
Medical Secretary II Requirements: High school diploma; two years related experience. Hours: 35 hours per week, 8 a.m.-5 p.m., Monday through Friday. Duties: Type reports; answer calls; schedule appointments; perform other related tasks.