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University to award six honorary degrees at Commencement

Three faculty elected to National Academy of Sciences

BY BETH MILLER

Three University scientists are among the 72 members and 18 foreign associates recently elected to the National Academy of Sciences (NAS). Election to the academy is considered one of the highest honors accorded a U.S. scientist. The academy's 179th annual meeting was held in Washington, D.C., on April 28.

WUSTL's new academy members are: Charles Kenneth Bender, professor of pediatrics at the School of Medicine and the Faculty Dean of the Executive Education Center; Clifford M. Will, professor of physics at the School of Arts & Sciences and the Dean of the McDonnell Center for the Space Science and Engineering; and Henry Givens Jr., Ph.D., professor of biochemistry and molecular biology at the School of Medicine and the A. Doisy Professor of Biochemistry and Molecular Biology.

To keep the discussion going, this summer's symposium will feature a panel of experts discussing the future of cancer research and treatment. The panel will include leading cancer researchers, policy makers, and patients who have been affected by the disease. The symposium aims to bring together experts from different fields to share their insights and experiences and to promote interdisciplinary collaboration.

To learn more about the symposium and to register, visit the event page on the WUSTL website.
Medicaid financing to be topic of major public forum

By GERRY EVERTING

Increasing health-care costs and diminishing health insurance coverage among the medically indigent has created several critical issues debated by leading medical policy experts. One such policy expert is looking for a major public forum on Medicaid financing challenges for the future.

M.D., the Alan A. and Edith L. Wolff Distinguished Professor of Medicine and director of the University of Washington’s Health Care Policy Center. Wolff presented a paper at a recent conference on the future of the Medicaid program.

"Concerns about quality, high costs, and access to care have placed Medicaid at the forefront of the U.S. health-care agenda," Wolff said.

"This is a major conference and an opportunity for a select range of faculty and practitioners to discuss Medicaid,“ Wolff said.

For the first time in decades, all MFA studios are located together in a single facility, the Lewis Center at 723 Kingland Avenue. Further, the class of 2007 is the first to graduate since the MFA program was reorganized in 2005. The program now offers all students an MFA degree in studio art, rather than MFA degrees in individual media such as painting or sculpture.

The idea is to create a larger, more integrated MFA community," said Mr. Wrighton, who is organizing the exhibition with former Lewis Center director and interim director of the graduate school of art.

The Artist's First Move: C-prints in which Fraser employs improvisation is intended to be a re-creation of the artist's own acts of creation.

"What do I, as an artist, provide?" The artist's first move, a solo exhibition of Fraser's work from 1984 to 1990, is included in relation to representations of women and art objects.

The exhibition will highlight a series of recent C-prints in which Fraser employs improvisation to investigate how art history constructs the artist as a transgressive subject and, in particular, how that construction is articulated in relation to representations of women and art objects.

The C-prints are made from images Fraser created in 1984 by superimposing slides of modern and old master paintings and drawings.

The resulting works are both disjointed and seductive. For example, in "Untitled (Pollock)" (1984), "Untitled (Venice)" gently dematerializes one of Jackson Pollock's all-over fields.

The exhibition also explores Fraser's strategic use of video in stylization and projection. The students and faculty of the美术馆, for example, in "Untitled (Pollock)" and "Untitled (Venice)", share this process.

The exhibition will be held in the Lewis Center at 723 Kingland Avenue. Further, the class of 2007 is the first to graduate since the MFA program was reorganized in 2005. The program now offers all students an MFA degree in studio art, rather than MFA degrees in individual media such as painting or sculpture.

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Scientists have decoded the genome of the first non-human primate to have a close genetic relative to humans, the orangutan. The sequencing process was completed by an international consortium of researchers, including scientists at the Genome Sequencing Center at the School of Medicine, and is published in a specific section of the April 13 issue of the journal Science.

In related news, University scientists recently completed the raw sequence for the orangutan and marmoset genomes. Analysis of these genomes and a comparison with primates and other organisms will be carried out over the next several months.

The National Human Genome Research Institute, one of the National Institutes of Health, is funding all three sequencing projects.

“Having this growing portfolio of primate genomes will allow us to better understand the important biology that underlies the information encoded in the genome sequences,” said Richard K. Wilson, Ph.D., director of the Genome Sequencing Center. “We’ll be able to gain clues as to why humans and some primates develop certain cancers and other diseases, while other primates do not.”

By CAROLINE ARANJAS

Scientists have linked a protein that regulates the production of the sugar glucose. In the process, they illustrated the protein’s rolesensitive to insulin.

He also found evidence suggesting that the changes were linked to the weight loss in fat tissues.

“Fat, muscles and the liver all respond to insulin, but fat tissues seemed to be the source of increased insulin sensitivity in these individuals,” Shaw said.

“We’re going to follow up by knocking out the gene variant in these individuals to see if the changes are really coming just from fat or if there is a connection between the different tissues that contributes to the differences,” Husain said.

by MICHAEL C. PERRY

Scientists have isolated a protein that is especially prominent in the area of how the immune system recognizes and responds to invaders and how those mechanisms can go awry in autoimmune disorders and immune deficiency.

The term immunobiology recognizes the increasing breadth of health concerns that scientists have started linking to the immune system, including growth and development, infectious diseases, such as the mouse, rat, dog, cow, human, bee, roundworm and yeast, as well as infectious diseases (ncbi.nlm.nih.gov/Genbank) at NIH’s National Center for Biotechnology Information.

The orangutan and marmoset genome sequences can be accessed at the Genome Sequencing Center.

To watch a video on this story, visit mednews.wustl.edu/news/pupaروف/ф/фعلى.html.
Call to Action springs from gathering

The International Symposium on Energy and Environment, sponsored by the McDonnell International Scholars Academy, brought prominent international university presidents and leaders to St. Louis.

The leaders of 11 premier universities in Asia and the Middle East, along with Chancellor Mark S. Wrighton, discussed ways their institutions are addressing global energy and environmental concerns.

The four-day event included addresses by a former U.S. ambassador to the United Nations, the president of the National Academy of Sciences and the U.S. National Academy of Engineering, and the president of the National Science Foundation.

The four-day event included addresses by a former U.S. ambassador to the United Nations, the president of the National Academy of Sciences and the U.S. National Academy of Engineering, and the president of the National Science Foundation.

Wrighton issued a call to action. "The talented students and faculty of our Partner Universities have established a summary of new knowledge and the application of new knowledge to solve energy and environmental problems. Breakthrough research and the development of disruptive and green energy technologies will be aggressively pursued, and in the immediate future effort must be directed to developing and implementing carbon dioxide sequestration technologies. Research in areas such as renewable energy, including biomass and other biofuels, is promising, but near-term opportunities also include improvements in the efficient use of fossil fuels and resources under the supervision of clean combustion processes, catalysis, engines, and the use of advanced building materials. University Presidents of the McDonnell International Scholars Academy are conducting research related to energy and environment, and the Academy will work to develop specific research programs that bring together faculty and students from around the world to accelerate the pace of energy and environmental research.

"Social Science and Policy Studies. Advancing the progress in meeting the energy needs of the world will require cooperative efforts to understand the myriad of consequences of an approximately doubling of energy consumption by 2050. Research universities of the McDonnell International Scholars Academy represent premier intellectual resources where the problems can be defined, debated and discussed in objective forums. Building a sustainable future is a universal aspiration. The Academy responds to the best educational and research opportunities to gather academic, government, and corporate leaders from around the world to assist national leaders in formulating policies and implementing the best policies to meet the economic interests and needs of the world's people.

"Operations. Each of the Partner Universities of the McDonnell International Scholars Academy strives for excellence in all that they do and provides the best educational and research environment at the lowest possible cost. Improving efficiency in use of energy, for example, has already significantly lowered the cost of energy at major research universities of the Academy. Emerging as leaders in best practices in connection with energy and environmental issues is an important aspiration for all 21 Partner Universities. The Academy will develop procedures for the partner universities to communicate with each other and to become aware of advances around the world to improve the efficiency of energy utilization, to understand the best practices associated with new buildings and renovation of existing buildings, and to communicate with other large institutions to encourage them to embrace the best policies and practices."

(From left) Rafi Semiat, head of the Grand Water Institute at Technion - Israel Institute of Technology; Chang Young Jung, president of Yonsei University; Ashok Misra, director of the Indian Institute of Technology Bombay; and B.B. Bhattacharya, vice chancellor of Jawaharlal Nehru University, address the audience during a May 5 session on "Educating Future Generations on Energy and Environment."
Energy and Environment

(From left) Lap-Chee Tsui, vice chancellor of the University of Hong Kong; Lau; Nami Kitamura, professor of energy sustainability at the University of Tokyo; and Binglin Gu, president of Tsinghua University, enjoy a view of the Gateway Arch prior to their tour of the facility May 5.

Top: John F. McDonnell, vice chairman of the Board of Trustees, shakes hands with Khunying Suchada Kiranandana, president of Chulalongkorn University, prior to the Presidents Forum May 5.

Middle: Ira J. Kodner (left), the Solon and Bertie Gershman Professor of Surgery and director of the Center for the Study of Ethics & Human Values, chats with alumnus Michael Adams ('67), son of photographer Ansel Adams, during a special preview of the exhibition "Ansel Adams: Reverence for Life" May 6 at the Kemper Art Museum.

Above: (From left) Jiming Hao, director of the Institute of Environmental Sciences and Engineering at Tsinghua University; Gu; Yuan Yuan, deputy chief of the Division of International Liaison at Tsinghua University; and Yi Zhang, director of the International Office at Tsinghua University, prepare to ride to the top of the Gateway Arch May 5.

Left: Chancellor Mark S. Wrighton (left) and a panel of international university presidents discuss ways to move forward at the symposium’s concluding session May 7. Joining Wrighton are panelists (from left) Wang; Jung; Kiranandana; Ural Akbulut, president of Middle East Technical University; Usman Chatib Warsa, rector of the University of Indonesia; and Si-Chen Lee, president of National Taiwan University.

To watch a video of Wrighton and other university presidents offering a call to action, visit news-info.wustl.edu/news/page/normal/9470.html.
Alamos' 2007 'Ulum Distinguished Scholar. He spent the 2006-07 academic year as resident at Los Alamos Center for Nonlinear Studies.

Alamos' Center for Nonlinear Studies. He has authored or co-authored numerous books and articles on nonlinear systems, chaos, and complex systems.

Jackson's work at Los Alamos has focused on the development of methods for analyzing complex systems, including applications in climate science, neuroscience, and social networks. His research has been funded by the Department of Energy, the National Science Foundation, and the National Aeronautics and Space Administration.

Jackson's work has been recognized with numerous awards and honors, including the National Academy of Sciences' Award for Outstanding Research in the Mathematical Sciences, the Presidential Early Career Award for Science and Engineering, and the John Simon Guggenheim Memorial Foundation Fellowship.

Jackson's research has been published in prestigious journals such as Nature, Science, and the Proceedings of the National Academy of Sciences. He is a member of the American Physical Society and the Society for Industrial and Applied Mathematics.

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Arts & Sciences will recognize five distinguished alumni May 14 in recognition of their contributions to their communities and the University. The Board of Trustees and alumni and friends of Arts & Sciences have selected from among Arts & Sciences graduates 50 who have made noteworthy contributions to their communities and the University. They will be honored at 7 p.m. May 14 in a ceremony at the School of Engineering & Applied Science, McDonnell Medical Sciences Building. The Arts & Sciences Forum of St. Louis, chaired by Albert H. B. Brown, R.D., will sponsor the event.

The five who are receiving the Distinguished Alumni Award are:


A native of St. Louis, Albert Brown spent 10 years rising through corporate legal ranks. He was given a unique opportunity to attend law school at night while working as a securities analyst for Wood Struthers & Co., a commercial real estate and investment company. His educational accomplishments allowed him to rise to the chief executive officer at ITT International.

He also served as president and chief executive officer of the Bank of America, N.A., chairman of American Medical International, chairman of International Paper, chairman of St. Louis and Missouri Bankshares, and chairman of the United Way of St. Louis. A former WUSTL trustee, he is a past and present chair of the Board of Trustees for more than 20 years. His academic degrees are in philosophy — including his doctorate, for which he did his dissertation work from Fordham University.

A member of the Religion of the Sacred Heart from 1957 to 1961, he served as president of Villa Duchesne/Oak Hill School, and then president of Maryville College (1970-77), where she is the college’s successful transition from a traditional Catholic women’s college to an independent liberal arts college, now Maryville University. She is responsible to the chancellor for oversight of Maryville’s 28,000-member board and its 13 standing committees.

Exhibits

Friday, May 11


Exhibits

Thursday, May 10


Monday, May 14

4 p.m. Immunology Research Seminar Series: "Tregulatory hematopoiesis in response to innate immune stimulation in the intestinal tract. Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

5:30-7 p.m. The Walter E. and Virginia Thomas Walter Science and Engineering Festival. "Students build, create and celebrate their discovery of science, technology, engineering, mathematics and space. Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

Saturday, May 12

7:30 a.m.-4 p.m. Cardiology & Cardiovascular Disease CME Course. "Unique Pediatric Entity." Charles Curran, M.D., Nathan Petrow, M.D., and Sophia Curran, M.D., Children's Hospital. 432-6400.

5:30-7 p.m. Neurology Research Seminar Series: "T-cell regulation in the neuroimmune system. Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

Monday, May 14

4 p.m. Center for the Applied Program of Information Technology: "Computer-based tool for teaching of protein structure to undergraduates. Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

May 15

10 a.m. to 12:30 p.m. Biotechnology Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

12:30 p.m. to 4 p.m. Biotechnology Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

Tuesday, May 15

8 a.m.-5 p.m. Multidisciplinary Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

5 p.m.-7 p.m. Biotechnology Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

Wednesday, May 16

8:30 a.m. Faculty Career Development Seminars: "Toward a CME Recognition Ceremony." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

5 p.m.-7 p.m. Biotechnology Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

5 p.m.-7 p.m. Biotechnology Clinical Research Career Development Program: "Renal Normalization of Proteins." Through April 2008. Fels Center for Science and Innovation, St. Louis University Medical Center. 566-4333.

7:30 a.m.-2:15 p.m. Hospital Care CME Course. "Unique Pediatric Entity." Charles Curran, M.D., Nathan Petrow, M.D., and Sophia Curran, M.D., Children's Hospital. 432-6400.

7:30 a.m.-3:45 p.m. Cardiology & Cardiovascular Disease CME Course. "Unique Pediatric Entity." Charles Curran, M.D., Nathan Petrow, M.D., and Sophia Curran, M.D., Children's Hospital. 432-6400.

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When I tell people I'm an archaeologist, they sometimes say, "Oh, I've heard all the jokes." "When I tell people I study wild ass, I do get some looks," says Fiona Marshall, Ph.D., professor of anthropology and of African & African American Studies, both in Arts & Sciences.

But it's no laughing matter. Marshall is one of the world's pre-eminent scholars on donkey domestication in Africa.

Marshall is an African archaeologist whose research incorporates zooarchaeological and ethnoarchaeological approaches to the beginnings of food production and the development of pastoralism — tending of large herds of animals — in northeast Africa.

She has published many articles on these topics and is conducting a National Science Foundation-sponsored multi-year study on African pastoralism and the domestication of the donkey.

Born in Kenya, Africa, Marshall developed an early interest in archaeology when her parents took her to lectures by famed archaeologist and naturalist Louis Leakey, whose work was important in establishing human evolution.

In 1983 in Kenya, her husband, who had come to Kenya with her, became one of the first to work on the donkey. "My mother married a donkey lover who wanted to be when I grow up," says Marshall. "I'd written when I was probably 5 or 6 in which I wanted to be an archaeologist because I was good at finding things," she says.

And she remained good at it, earning a bachelor's degree from the University of Reading in England and a doctorate from the University of California, Berkeley in 1986.

At Berkeley, she was a student of Glynn Isaac and of Desmond Clark, British archaeologists particularly noted for their work on prehistoric Africa. After her doctorate, she worked on early human development in the study of early hominid archaeology at Lake Turkana, in northern Kenya, where she switched much of her focus to the origins of agriculture in Africa.

"In the late 1970s, around the time I was making my way through my dissertation, it became clear that there wasn't just one way that humans had become agriculturalists," Marshall says. "It was wonderful to see that there were ways that African agricultural development may have been different from that of the rest of the world." She has since turned her research focus to the early pastoralist societies of northeast Africa.

In 1981, she went to work in the Maasai-Mara area of Kenya, just north of the Serengeti.

Though not explored archaeologically, the area is part of an ecosystem with the largest animal biomass in the world.

Working with several colleagues, Marshall excavated more than 100,000 animal bones, along with a lot of pottery and other artifacts.

"While we expected to find a lot of hunting, we ended up finding a lot of domestic bones and covering very few bones of wild animals," Marshall says. "Most of the bones we found were of domestic animals. This told us that around that time, 3,000 years ago, the people were specialized in cattle keeping. It was clearly a choice for them not to eat wild animals."

The study lifted Marshall's interest in and raised questions about the definitions of wild and domestic and the roles animals play in wild ecosystems.

Her Ph.D. from Berkeley had come to Kenya with her. Her husband, Thomas E. Kilgore, Ph.D., is an instructor in radiology at the Mallinckrodt Institute of Radiology at the School of Medicine.

In 1986, the couple moved to St. Louis when Marshall was hired in the Department of Anthropology. "It was wonderful to see that my dissertation adviser at Berkeley was fascinated with and was a major participant in the European and African pastoral communities as farmed for food and for prestige," Marshall says. "Then when I came here, I found probably the only other person in the archaeological community as farmed for food and for prestige."

Over the past decade, Marshall has published many articles and book chapters on donkeys and pastoral societies, both in northeast and west Africa. "I was very fortunate because I was able to find a position in a university that valued my research, my teaching and my community service," she says.

With the support of her research, Marshall was able to visit a lot of natural history museums and actual sites to collect data and artifacts.

She has been to England, Kenya, Egypt, Italy, Belgium and Germany, among many others. In fact, she was so busy and effective at her research that she was able to find out not only how donkeys were domesticated but what role that played in African pastoral societies.

"There are about 17 million donkeys in Africa as far as one can determine in the entire world," Marshall says. "Surprisingly, I have also been able to locate about 35 donkey skeletons." She has also studied their DNA to determine how they may have been brought to Africa as a result of pastoralism.

So after joining the WUSTL faculty, she set off for eastern Africa to study in collaboration with her husband, where present-day people in that area hunt and gather honey and to better understand the domestication of the ancient hunter-gatherers sites.

Between 1993 and 1996, she went on to direct the archaeolog- ical team from WUSTL that un- covered the re-excavation of the 3.6-million-year-old Laetoli footprint site for conservation by the Getty Conservation Institute and the Tanzanian government.

Over the past decade, the team has continued to work on early pas- toralism in Africa and later hunter- gatherers to get a better overall comparative perspective on how the human societies worked continent-wide during the begin- nings of food production in Africa.

This resulted in a 2002 paper, co-written with her graduate stu- dent Lisa Hildebrand, called, "Cat- tle Before Crops: The Origins and Spread of Food Production in Africa."

Marshall was also one of the first to research the ancient history of African agriculture classes about the human trajectory in Africa from 3.6 million years to 2,000 years ago.

But the research on which Marshall focuses is donkeys and the African wild ass.

"Several years ago," says Marshall. "Several years ago, Erik Trinkaus [Ph.D., the Mary Tite- nion Henrysowey Professor of Physical Anthropology in Arts & Sciences] gave me a paper on 'horse genetics.' Marshall says. "It had always been assumed that Egyptians domesticated the don- key. But as I started to look into the scientific literature, I noticed there were no formal studies on the domestication of the donkey — a biological history. Apparently, since the donkey is not a food animal, it was seen as having low status and not worthy of study."

But Marshall began to change that.

"The donkey is only one of the eight major mammals ever domesticated. What makes it extremely rare, she says, "is that donkeys are not great candidates for domestication. They are territorial, anti-social and have a reputation for being stubborn."

"I wanted to find out why donkeys were domesticated and what role that played in African pastoral societies, her husband says. "There are about 17 million donkeys in Africa as far as one can determine in the entire world." "Surprisingly, I have also been able to locate about 35 donkey skeletons.""