Young age at first drink may affect genes, alcoholism risk

By Jim Dryden

The age at which a person takes a first drink may influence genes linked to alcoholism, making the younger drinkers the most susceptible to severe problems.

A team of researchers, led by School of Medicine scientists, studied 6,257 adult twins from Australia. They wanted to learn whether twins who start drinking earlier are more likely to develop a more heritable pattern of extinctions emerges over many years by Karen R. Lips, sustainable development and conservation biology associate professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences.

The analysis of data collected over many years by Karen R. Lips, sustainable development and conservation biology associate professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences.

The grass also reflects heat back into the atmosphere rather than absorbing it, creating a cooler exterior environment. The analysis of data collected over many years by Karen R. Lips, sustainable development and conservation biology associate professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences.

The green roof also acts as insulation, keeping the building underneath cooler in the summer and warmer in the winter, which reduces energy usage. The grass also reflects heat back into the atmosphere rather than absorbing it, creating a cooler exterior environment. The analysis of data collected over many years by Karen R. Lips, sustainable development and conservation biology associate professor of biology in Arts & Sciences, and fellow professor of biology in Arts & Sciences.

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Women's soccer extends streak
The No. 15 women's soccer team extended its winning streak to seven games with a pair of victories over Principia College, 7-0, and Division I Southeast Missouri State University, 4-1.
Senior Cayrin Rofford recorded a hat trick in both games. She leads the conference in goals (11), assists (10) and is second in goals with eight.

University Athletic Association play Sunday, Oct. 4, at Emory University.

Women's golf ends successful fall season
Freshman Hannah Bock read a 75 on the second day of play to tie for first place as the women's golf team placed second at the Millikin University Fall Classic. Bock tied for first place in the individual standings with a two-day score of 153 (78-75) but lost a sudden-death playoff. The building reopened Aug. 14. It houses retail space on its first floor and 16 one- and two-bedroom apartments for WUSTL graduate students, faculty and staff on its second and third floors.

University Athletic Association competition Sunday, Oct. 4, at Emory University.

Volleyball begins conference season
The volleyball team split a pair of dual matches last weekend, falling at Division II University of Missouri-St. Louis, 3-1, Sept. 22 and then defeating Fontbonne the next night.
Sophomore Lauren Buode paced the offense with 13 kills and a .377 hitting percentage.

WUSTL (12-3) begins University Athletic Association regular season competition Saturday, Oct. 3, at University of Wisconsin-Parkside.

Cross country teams finish second
The men's and women's cross country teams turned in impressive performances to finish second at the Southern Illinois University Saluki Invitational Sept. 26 in Carbondale, Ill.
The men placed second out of seven teams, while the women's team placed second out of six.
Southern Illinois University Cathedral in Carbondale, Ill., and the women's team finished ahead of Evansville and Southern Illinois Edwardsville.
Both teams return to action Saturday, Oct. 3, at the Greater Louisville Classic in Louisville, Ky.

Men's soccer splits a pair last week
The men's soccer team suffered its first loss, 3-5, at No. 8 Principia College Sept. 22.
The Bears were rebounded to defeat Greenville College, 3-0, Sept. 25.
Sophomore Kevin Privalle scored the first goal of his career.

On the corner A worker installs one of seven wind turbines on the roof of the University's Corner Building on Delmar Boulevard between Sept. 26 and Oct. 2. The seven wind turbines will generate an estimated 14,000 kilowatt-hours per year for the building. The University installed other environmentally friendly features during its renovation of the approximately 70-year-old Corner Building, including an indoor high-efficiency air-conditioning system, a white roof that reflects the sun's rays, and insulated windows.

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Researchers have launched an online registry that eventually aims to help children with a severe type of epilepsy that strikes in the first months of life. It is believed to be the first worldwide registry of children with infantile spasms and is a collaboration between the School of Medicine and the University of Chicago.

Researchers plan to use the registry to look for similarities among children with the disorder to help lead to improved treatments, said Alexander Paciorkowski, M.D., instructor of neurology and medical geneticist at the School of Medicine and the University of Chicago. "The registry will evaluate many different factors."

Although the condition was first described in the 1840s, physicians and researchers still have many questions about the disorder because of its potential links to cancer, seizures and other conditions. "It is quite prevalent in children, but we don't know the cause," said Paciorkowski, who is the head of the Department of Pediatric Anesthesiology.

Children with infantile spasms, or West Syndrome, is a seizure disorder that begins before age 2 and accounts for about 25 percent of all forms of epilepsy diagnoses in babies under 2 years of age. An infant's body might suddenly bend forward, resembling sitting up. The infant may bend his or her arms and legs inward or throw them outward. The seizures occur often and may occur in clusters of up to 100 spasms at a time. The spasms can contribute to learning problems and delay in development, causing difficulty learning how to sit, crawl, walk and talk.

Paciorkowski developed the registry, at infantilespasms.wustl.edu, with Christina Garnett, M.D., Ph.D., assistant professor of neurology, of pediatrics and of orthopedic surgery; Lin Thio, M.D., Ph.D., assistant professor of neurology, of pediatrics and of orthopedic surgery.

The findings appeared in a journal Development.

"I feel very fortunate to be chosen for this position," Murray said. "The combined expansion and recognition of the surgical divisions at the University of Iowa Hospitals and Clinics is an exciting time to be selected to lead the division as anesthesiologist-in-chief."

Murray has served as director of the Simulation Center since it opened in 1996. Since then, he has designed and implemented a number of training and assessment programs for health professionals.
GrooveLily returns to Edison with ‘Beauty of a show’

By Lisa Otten


“Striking 12” (inspired by Hans Christian Andersen’s “The Little Match Girl”), which came to Edison Theatre in 2006, is the show’s opening entry. As the show opens, the still unconscious Beauty is surrounded by a chorus of fellow patients, many suffering from insomnia, sleepwalking, night terrors, restless leg syndrome and other ailments. Their trainer, Prince Charming at her bedside in the watchful and sentiment-honed“Our blindingly gorgeous Beauty” (Veronica Vigoda Band) in 1994, is an operatic rock group’s arranging and serves as musical director.

GrooveLily’s 1994 hit, “Sleeping Beauty Wakes,” which collects various covers of famous songs, includes “Toy Story the Musical” for Ovation Awards for World Premiere Soundtrack, a Broadway-style show

The acclaimed trio GrooveLily — (from left) Brendan Milburn, Valerie Vigoda and Gene Lewin — brings its artfully twisted tale “Sleeping Beauty” to Edison Theatre on Oct. 11 and 13.

“The Hollywood Reporter calling “Sleeping Beauty Wakes” “be the gulling tour de force that looks at love, sleep and time by setting the fairy tale in an innovative performance context.”

Music, Connection Magazine added, Groovelily “has an intelligent pop sensibility perfect for grown-ups.”

Originally commissioned for the 2006 hit “The Devil Wears Prada,” “Sleeping Beauty” debuted in 2007 at the Center Theatre Group’s Kirk Douglas Theatre in Los Angeles. That production, which featured both deaf and hearing actors, won the Tony Award for Best Lead Actress nomination for Vigoda.

P.C. Classics released a “Sleeping Beauty” studio recording early this year. The group currently is developing a theatrical version, with support from the McCarter Theatre in Princeton, which will likely debut in 2010. Vigoda recently returned to Groovelily “originally” (the Viggie Varad) Band in 1994, is a theatrical power-pop trio far away. end in a modern-day sleep disorder finally come to an enchanted rest, 

Vigoda’s happy parents neglect to invite the Bad Fairy to pay retribution, choosing instead to be reconciled with her faraway Beauty. whose 900 years of beauty, she also grows headstrong and rebellious, flirting with and has toured and/or recorded with Ben Folds, John McLaughlin, Brian Colman and Patrikutt.

“Sleeping Beauty Wakes” is Groovelily’s third “concert musical” following “Striking 12” and “Long Story Short,” a rollercoaster ride through Middle Eastern music. "I’m a Little Middletown Night’s Music,” which collects songs written and performed for director Tina Landau’s 2006 musical “Sleeping Beauty Wakes” — a "beautiful, she also grows headstrong and rebellious, flirting with and has toured and/or recorded with Ben Folds, John McLaughlin, Brian Colman and Patrikutt.

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Monday, Oct. 12

Tuesday, Oct. 13
1:30 p.m. Diversity Grant applications are due.

Wednesday, Oct. 14
8 a.m.-5 p.m. "Arab Theatre." For more information, call 935-5274.

Thursday, Oct. 15
3 p.m. Short story reading. "The Volatilized Ceiling (and the song "Rikki Don't Lose That Number")."

Saturday, Oct. 3
8 p.m. Jazz at Holmes. Holmes Lounge, 935-5566.

Sunday, Oct. 4
3:30 p.m. Women's Soccer vs. Carnegie Mellon.
4:30 p.m. Men's Soccer vs. Carnegie Mellon.

Monday, Oct. 12
4 p.m. OVATIONS Series. "Arab Theatre." For more information, call 935-5274.

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The School of Law has become the first law school in the United States to join an inter-University cooperation agreement with the International Criminal Court (ICC) as a partner in the ICC's Legal Tools Project. In the new partnership, law school students will work directly in-house, to build the most comprehensive and complete database within the field of international criminal law.

**Frogs**

**Regional extinction also could be global**

From Page 1

Under the direction of Leia Sadat, J.D., the Henry H. Oberdorfer Professor of Law and Executive Director of the Whitney R. Harris World Law Institute, and David N. DeNardo, executive director of the Institute of Harris Institute and Cashin Hall, students will conduct research on national legal tools involving core international crimes from a group of African states.

The Legal Tools Project of the ICC has created a comprehensive collection of resources relevant to the theory and practice of international criminal law and brings modeling and simulation tools into the investigation, prosecution and defense of war crimes, crimes against humanity and war crimes.

"Our analysis confirmed this," Smith said. "At each site, we were able to obtain a significant number of frogs, but the diversity of frogs in each site was the only one." But the beta diversity values were more similar than the alpha diversity because the fungi preferentially at

tended edaphic endemic species found only at one or a few sites. Among the species in the study, 24 percent were found at only one site; a disproportionate share of these species disappeared.

"The loss of rare species drove regional extinction higher than expected. "Our simulated show that random local extinctions would result in 41 regional extinctions across the eight sites," Smith said, but "instead we observed 61 regional extinctions." Regional extinction may be globally significant.

The results of this study suggest a variety of ways in which one might reduce the incidence of global extinction. The results of this study suggest that predators decreased both alpha diversity, or the diversity within each site, and beta diversity, the diversity among the sites. The pond study will be published in the November issue of Ecology Letters.

In the new analysis, the role of the predatory fish was played by Batrachochytrium dendrobatidis, or Bd, a microscopic fungus that lives on and eventually kills or sickens or kills frogs. Bd is a circovirus in the order Chytridiales, meaning "little pot" because fungal filaments look like sperm-like, flagellated zoospores that are resistant to viral infection — an important point because the disease can spread from one pond to the next via beetles that seek out dead or dying frogs. Our analysis confirmed this. Noting that the female lays eggs and deposit them with her until they hatch. The female then totes the eggs around with her until they hatch. Homogenization also knocked out ecological diversity.

"Our results suggest that the frog communities in these ponds are not as resilient as the frog communities in the region. Some species lived in streams, others on land, in trees and shrubs. But the primarily aquatic fungi killed most of the water-breeding species. "Now the frog communities are typified by terrestrial speci-
es," Smith said, "and which has changed the whole way the system functions biologically."

"Our results suggest that the algae die off in these large areas in these assemblies has been partly erased and that the communities that consist primarily of species that are resistant to Bd get hold of themselves."

"Smith said, Smell called the fungus an "extinction filter."

"It is an equal opportunity killer, it preferen-
tially removes the frogs that make each habitat unique and important," Danforth said.

"I am sure he will succeed," Beachy said. "As the first president of the Center in 1999. He announced his retirement in 2010."

"For a long time and for a variety of reasons, the Office of Science & Technology Policy and the Office of Management and Budget have not been as effective as they should be in providing basic research administered by the National Institutes of Health (NIH) and the National Science Foundation (NSF)."

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Alcoholism

Those under 15 have greatest risk from Page 1

drink changed the role of heritability influences on symptoms of alcohol dependence. Using the twin model, they were able to tease apart genetic and nonshared environmental influences and nonshared environmental factors. Agrawal and co-workers found that while twins frequently drank alcohol, early genetic factors contributed greatly to risk for alcohol dependence, at rates as high as 90 percent among identical twins. For those who started drinking at older ages, genes and family environment were more important factors that make twins more alike. "We see that unique life experiences, such as unique life events, gained prominence," Agrawal said.

The twins in the study were 24-36 years old when they were interviewed, but some reported taking their first drink as young as age 3 or 4. The researchers found that those who were 15 or younger when they started drinking tended to have a greater genetic risk for alcohol dependence. Some who were 16 or older before they took their first drink later became alcohol dependent, but their dependence was related more to environmental factors.

"We don't have actual gene expression data in this study, but we could hypothesize that exposure to early-onset drinking somehow modifies the developing brain," Agrawal said. "Particularly in high early heavy drinking may influence gene expression and contribute to this vulnerability." The study's research cannot prove that, but it's something that researchers and gene expression studies should investigate further.

Another possibility is that early drinking exposes adolescents to environmental influences, such as their peer group, which somehow influence genetic influences that contribute to risk for alcohol dependence.

"Something about starting to drink at an early age puts young people at risk for later problems associated with drinking," Agrawal said. "We continue to investigate the mechanisms, but encouraging youth to delay drinking may help.

"So early-onset drinkers do not develop alcohol problems in the same way that later drinkers do — we are on working on why that is the case, but it is important to note that this is one risk factor among many and does not determine whether a person will, or will not, develop alcohol dependence," Agrawal said.

"But age at first drink is a well-known risk factor, and there are two main hypotheses about why. One has been that common genetic and environmental factors contribute both to the risk of alcohol dependence and to the likelihood that someone will start drinking when consuming their first drink."

A second hypothesis suggests starting to drink at a young age exerts an impact on alcohol dependence that is independent of these shared factors. Our findings suggest there may be some truth to both hypotheses," Agrawal said.

Agrawal said studying twins offers advantages when attempting to learn about genetic and environmental influences of alcohol dependence. Since identical twins share 100 percent of their DNA, differences in twin pairs are due to the twin's environment and to the likelihood that one twin influences the other when consuming their first drink.

"Lee Robins was one of the leaders in psychiatric illnesses in the general population," Zorumski said. "Lee Robins was truly one of the important creators of tools that can measure the psychiatric impact of the general population."

"Lee Robins has authored a number of psychiatric surveys and, in 2005, she was honorary grand marshal at the University's Commencement.

In addition to Chaplin, she is survived by her sons Paul (of Redwood City, Calif.) and Jamie (of Cambridge, Mass.), Tom and his wife, Bonnie Kay, of Ann Arbor, Mich., and architect, and her 10 grandchildren, including two great-grandchildren. There will be a memorial service held at Chapel Chapel at a later date. Memorial contributions may be made to the Lee Robins Lectureship in the Department of Psychiatry at Washington University School of Medicine in St. Louis, 660 S. Euclid Ave., Box 8134, St. Louis, MO 63110.
Lorraine Goffe-Rush (right), director of human resources, talks with administrative assistant Lisa Canese after the University’s United Way Campaign kickoff breakfast at the Whitney Center at Washington University in St. Louis on Oct. 1, 2009.

When Stephanie Kurtzmann has a question for human resources — whether simple, odd or nuanced — she knows exactly whom to call: Lorraine Goffe-Rush.

"I never get, 'Someone on my staff could be answering these questions,' or 'No, you can't do that,'" says Kurtzmann, director of the Community Service Office. "Instead, 'It's what you do there? What are your needs?' While working outside the guidelines of HR, she helps make things work for departments.

Goffe-Rush, director of human resources since 2006, works with Kurtzmann and others around Washington University to ensure WUSTL’s work environment fosters productive, happy and healthy employees. After all, productive, happy and healthy employees foster productive, happy and healthy students.

"Working in human resources at Washington University allows me to support the people who are supporting the university's future leaders," Goffe-Rush says. "In that way, all Washington University employees have an impact on the world, so it's important to put people first and to partner with them to support all directions our university is taking."