Cancer-causing bacterium targets tumor-suppressor protein

Researchers have discovered a mechanism by which Helicobacter pylori, the only known cancer-causing bacterium, disables a tumor suppressor protein in host cells.

The new study, in the journal Oncogene, reports the discovery of a previously unknown mechanism linking H. pylori infection and stomach cancer, the second leading cause of cancer deaths worldwide.

About two-thirds of the world’s population is infected with H. pylori, a bacterium that can survive in the harsh environment of the stomach. Most infected people never develop disease. For a significant minority, however, infection with H. pylori leads to inflammation, ulcers and in some cases, stomach (gastric) cancer.

H. pylori’s ability to cause disease is closely associated with a virulence protein called CagA. Previous studies have found that CagA-positive strains are much more likely to cause inflammation and spur the abnormal cell division and growth of cells that lead to cancer. H. pylori injects CagA into the epithelial cells that line the stomach. Within the cells, CagA is able to hijack various signaling pathways and disrupt proper cellular functions.

Other studies have identified RUNX3 (pronounced RUNKS-three) as an important gastric cancer tumor suppressor. Loss of expression of RUNX3 is causally associated with the development of gastric cancer, said UI medical biochemist professor Lin-Feng Chen, who led the study. RUNX3 guards against tumor formation by spurring the production of factors that target unhealthy cells for destruction.

“Although emerging evidence suggests that RUNX3 is a tumor suppressor whose inactivation is involved in the initiation and progression of gastric cancer,” the authors wrote, “the trigger for RUNX3 inactivation within gastric cells is largely unknown.”

“The protein, RUNX3, is a transcription factor, so it activates different kinds of genes controlling cell growth and death,” Chen said. “The first thing we wanted to see was whether H. pylori has any effect on the transcription activity of RUNX3.”

Two graduate students in Chen’s lab, Ying-Hung Nicole Tsang and Acacia Lamb, began the study by examining RUNX3 transcription activity in H. pylori-infected gastric epithelial cells. They found that infection with H. pylori reduces the activity of RUNX3, a tumor suppressor that regulates gene activity.

State appropriations for higher education tend to follow a cyclical pattern, with a decrease in funding during lean years followed by a restoration of funding when the economy improves. But the old assumptions that institutions and administrators worked under in the past—that is, take a cut this year but expect the money to be restored in a few years—doesn’t work anymore because the projected timeline for state appropriations to higher education to recover has become so long, Delaney says. “Compared to the previous two decades, the length of time for recovery is increasing,” she said. “The time horizon has gone from 76 percent of states restoring higher education funding following a cut within five years in the 1980s to only 58 percent of states restoring higher education funding following a cut within five years in the 1990s. Between 2000 and 2007, fewer than 40 percent of states that had cut higher education recovery in five years and, during the 2000s, 25 percent of states that had cut higher education funding show no signs of recovery.”

Typically, higher education budgets have been looked at as “the balance wheel” for state budgets, Delaney said. “Higher education is rare among state budget categories in that it can raise outside revenue through tuition, making it an attractive target during an economic downturn,” she said. “During an economic downturn, states generally don’t increase rent for prisoners or tuition for public K-12 students, but it’s very easy for higher education to raise outside revenues through tuition increases to make up for the loss of state support, an ability that most other state budget categories lack. The state can cut higher education funding with the knowledge that universities will be able to survive the cut because they can tap into alternative revenue sources.”

The quick and easy but ultimately short-sighted solution for higher education, according to Delaney, is to turn to students and families to fill in the gap. “Ironically, one of the factors that predicts an increased length of time to restoring funding to pre-recessionary levels is increased tuition,” she said. “Funding increases may actually stall recovery of state funding because state lawmakers could look at the situation this way: ‘They don’t need our help, they have already replaced the state funds. Why restore state funds to higher education when there are so many competing state priorities?’

“It’s a short-term fix that could result in a long-term cost,” Delaney said. “Administrators need to start treating these cuts as if they’re permanent.”

“I would hope that administrators start to think and plan not with the mindset that funding increased following their predecessors had in the ’80s and ’90s, where if higher education is cut, state appropriations will eventually come back and everything will be fine. There’s no promise.”

Cancer-causing bacterium targets tumor-suppressor protein

Gene activity
UI research shows that the protein histone H4L has an important role in regulating gene activity.

Exhibitions open
Six new exhibitions open at Krannert Art Museum this week.

UI scholar
By Phil Clировка
News Editor
With the economy mired in a deep funk, and with state budgets around the country blood red, a UI expert in higher education policy says the timeline for restoring funding for higher education to pre-recessionary levels will inevitably lengthen, or in the worst-case scenario, the funds may simply never reappear.

Jennifer A. Delaney, a professor of educational organization and leadership at Illinois, says the timeline for restoring funding for higher education to pre-recessionary levels will inevitably lengthen, or in the worst-case scenario, the funds may simply never reappear.

Higher ed funding may need decade or longer to recover
By Diana Yates
Life Sciences Editor
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Online betting a house of cards for world economy

By Jan Dennis
Business & Law Editor

I

legalizing online poker and other Internet betting would be a high-stakes loser for the still-sputtering U.S. and global economies, a leading national gambling critic warns.

UI professor John W. Kindle says financiers in the U.S. and elsewhere are betting that Internet gambling would spur economic growth. Kindle will be a featured speaker at the University of Illinois at Urbana-Champaign's 2010 summer conference on gambling.

"Congress must not be induced to take risky bets and put its money on online gambling," Kindle said. "We may see a few winners, but will almost certainly end up the losers."

Grants to fund research on carbon capture, membrane proteins

By Liz Allshberg
Physical Sciences Editor

T

he U.S. Department of Energy will award the UI more than $1.26 million over the next five years to explore a solvent for capturing carbon dioxide emissions from coal burning. The project is one of 19 supported by a $67 million DOE initiative to develop carbon capture and sequestration technologies, and UI is the only academic institution selected to lead a project.

Yongqi Lu, a chemical/environmental engineer in the Advanced Energy Technology Initiative of the Illinois State Geological Survey, will lead the effort, a collaboration between UI and engineering firm Par- ticle Processes, Inc. DOE officials hope the project will complete a proof-of-concept study for the use of carbonated solvents, such as potassium or sodium carbonate, to absorb carbon dioxide and then be released for coal combustion. Preliminary evaluation suggests that carbonate salt processes could use half the energy of traditional absorption processes, providing a more energy-efficient way to reduce carbon emissions, and could be retrofitted to existing coal-burning plants. The researchers hope to advance the process to a pilot-scale demonstration within the three-year period.

Four UI faculty members are a part of a $22.5 million "grant cluster" from the National Institute of General Medical Sciences to study proteins embedded in cellular membranes. Claudia Grosman, a professor of molecular and integrative physiology, Emad Tajkhorshid, a professor of molecular and integrative physiology, and physics professors Klaus Schulen and Paul Selvin are among nearly 30 researchers at 14 institutions working to establish the Membrane Protein Structural Dynamics Consortium, centered at the University of Chicago. Understanding membrane proteins and their gatekeeping roles for a number of cellular functions could provide insight for medical queries such as drug delivery pathways and treatment for certain diseases affecting cellular receptors or transporters.

CANCER. CONTINUED FROM PAGE 1

2008; 50: 1373-1379. doi:10.1038/nrg2358. The researchers found that a newly identified domain of the H. pylori CagA protein physically interact with each other. "This is the first time anybody has shown that this interaction leads to the "tagging" of RUNX3 for degradation via a process called ubiquitination."

Further tests revealed that CagA and RUNX3 physically interact with each other in human epithelial cells. The researchers found that a newly identified domain within CagA, the WW domain, recognizes a sequence in the RUNX3 protein known as the "PY motif." They further showed that this interaction leads to the "tagging" of RUNX3 for degradation via a process called ubiquitination. Previous studies found that there are several unique sequences within the carboxy-terminal region of CagA that are vital to the protein's ability to interact with host proteins and disrupt normal cellular processes. "This is the first time anybody has identified a unique domain within the area. Terminal region of the CagA protein, and it will help us to better understand how this oncogenic protein functions," Chen said. "This study has uncovered a new step in the initiation of H. pylori-induced gastric cancer." The accumulation of multiple deleterious changes in cells leads to the development of cancer. RUNX3 inhibits cell growth while the cellular processes go awry, so H. pylori-induced degradation of RUNX3 "could promote conditions in which more cancerous changes are less inhibited," Chen said.

Chen's group is working to identify the molecular mechanism by which CagA targets RUNX3 for degradation. He and his colleagues hope to design small molecules that can specifically inhibit the interaction between RUNX3 and CagA and block the degradation of RUNX3. Such drugs may be used to prevent the gastric diseases induced by H. pylori.

Researchers from the Vanderbilt University School of Medicine; Nagasaki University, Japan; and the Institute of Molecular and Cell Biology, in Singapore, contributed to the research.

Partial funding for this study was provided by the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health.

EDUCATION. CONTINUED FROM PAGE 1

that the state money is ever coming back, and if it does it could take many years."

Delaney says states that have clear policy goals for higher education usually don't suffer as much as states where state funding for higher education is less clearly tied to state priorities. But no matter where you live, Delaney said, it's not a good environment for higher education right now. "Most state budgets aren't doing well and in bad budget times, higher education is often one of the first state spending categories on the chopping block," she said.

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State cuts to community mental health services continue

By Phil Ciclosa
News Editor

Proposed cuts to community mental health centers in Illinois continue a disturbing trend in the state’s lack of commitment to helping families and individuals experiencing a mental illness, according to UI experts in community-based mental health services.

Christopher R. Larrison, a professor of social work at Illinois, says the state of Illinois has overseen a “decimation” of community mental health services thanks to decades of neglect.

“For community mental health services, it hasn’t just been the last three years of cuts that have proved crippling, it’s been the last 25-plus years of inadequate funding that preceded it,” Larrison said. “As a result, community mental health centers, especially those in the rural areas of the state, are really struggling. Any more cuts or lack of clarity about when the state is going to pay its bills, or what’s going to get reimbursed, could force a lot of these places to severely limit services or possibly have to shut down.

If that happened, Larrison said, there would be a dearth of providers in some of these rural communities to serve people with serious mental illness.

“It will create an endless amount of problems. It’s the epitome of penny-wise, pound-foolish.”

Larrison and UI graduate student Samantha Hack-Retno contacted executive directors of community mental health centers in the southern part of Illinois to get a better sense of how UI will be reimbursing for clients. The center provided a mental illness would be affected by the proposed cuts.

“No one ever talks about what’s going on in the southern half of the state,” he said. “In a lot of these small towns, there’s only one mental health provider. If they close, that’s a problem for the community. It’s the kind of quiet crisis that no one ever hears about.”

Larrison said that increasing uncertainty about when bills will be paid by the state and what types of services are reimbursable has led to financial difficulties at the community health centers, ranging from staff layoffs, leaving open staff positions unfilled, depletion of reserve funds, borrowing from private lenders against future state payments and the reduction of services available to clients.

When asked to put a face on who in rural communities would be the most hurt by the proposed budget cuts, Larrison said the executive directors universally cited the working poor—minimum-wage earners who didn’t qualify for Medicaid or Medicare, and couldn’t afford private insurance.

“People with no visible means to pay for mental health care represent anywhere from a tenth to a third of the population served by community mental health centers in rural areas,” Larrison said. “Most are working at minimum-wage jobs that lack health insurance benefits. Many are able to contribute to their families, communities and jobs despite having a mental illness because of the services they receive from community mental health centers.”

If left untreated, those who suffer from mental illness may no longer be productive members of the community, Larrison said.

“It will have a ripple effect on their lives. The first thing that will happen to a lot of people receiving services from community mental health centers is that they’ll stop receiving treatment, they’ll go off their medication, and they’ll lose their job. Then they’ll create some kind of slight domestic problems or the police will pick them up for something minor, and then they’ll show up in crisis at the emergency room or in the criminal justice system.”

“All of these little things that will just pile up on the system, and rural hospitals need mental health, Page 7
Histone H1 regulates gene activity throughout the cell cycle

By Diana Yates
Life Sciences Editor

A protein that helps pack DNA into the cell nucleus has an important role in regulating gene activity, scientists report. The researchers found that the protein, histone H1, also takes part in the formation of ribosomes, the cellular workbenches on which all proteins are made.

The study appeared online May 3 in The Journal of Cell Biology.

A human cell’s genetic material is so vast that it must be condensed into tightly wound structures resembling beads on a string. The DNA winds around four core histone proteins to form one of the “beads” while H1 or “linker” histones clamp the DNA into place where it enters and exits the beads. One bead and its associated DNA make up a nucleosome. There are well over a million nucleosomes in the nucleus of a cell.

There are many varieties of the H1 histone protein in animals, making the histones difficult to study. Most research into histone biology has focused on the core histones, and previous studies have found that various cellular modifications of these other histones coincide with changes in gene activity.

The new study found that when H1 histones are modified by the addition of a phosphate group, a process called phosphorylation, that modification is associated with changes in gene activity in the vicinity of the phosphorylated histone.

“Most studies of histone phosphorylation have focused on cell division, when phosphorylation is at its peak,” said Craig Mizzen, a professor of cell and developmental biology at the UI and corresponding author of the study. “But our work provides the first evidence that this is also true for H1 that is phosphorylated at specific sites.”

Several core histone modifications are known to localize preferentially to active genes, Mizzen said. “But our work provides the first evidence that this is also true for H1 that is phosphorylated at specific sites.”

“Phosphorylation is at its peak when the ribosomal RNA genes are kept in the nucleus and they’re transcribed by a different enzyme system than the messenger RNAs that are transcribed from protein-coding genes,” Mizzen said. “The ribosomal RNA genes are kept in the nucleus and they’re transcribed by a different enzyme system than the messenger RNAs that are transcribed from protein-coding genes,” Mizzen said. “But our work provides the first evidence that this is also true for H1 that is phosphorylated at specific sites.”

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The new findings could lead to a better understanding of alterations to the cell cycle associated with cancer and other diseases, Zheng said. Some drugs already are on the market that target kinases, the enzymes that phosphorylate other molecules, he said. “The ribosomal RNA genes are kept in the nucleus and they’re transcribed by a different enzyme system than the messenger RNAs that are transcribed from protein-coding genes,” Mizzen said.

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Economic status, genetics influence psychopathic traits

By Diana Yates
Life Sciences Editor

Researchers studying the genetic roots of antisocial behavior report that children with one variant of a serotonin transporter gene are more likely to exhibit psychopathic traits if they also grow up poor.

The study, the first to identify a specific gene associated with psychopathic tendencies in youth, appears this month in the Journal of Abnormal Psychology.

People with psychopathic traits generally are more callous and unemotional than their peers, said UI psychology professor Edelyn Verona, whose graduate student Naomi Sadeh led the study.

"Those with psychopathic traits tend to be less attached to others, even if they have relationships with them," Verona said.

“They are less reactive to emotional things in the lab. They are charming and grandiose at times. They’re better at conning and manipulating others, and they have low levels of empathy and remorse.”

Although psychopathy is considered abnormal, these traits may be useful in certain circumstances, Verona said.

“For example, these folks tend to have less anxiety and are less prone to depression,” she said, qualities that might be useful in dangerous or unstable environments. In most cases, their cognitive abilities are also intact.

Studies of psychopathy often focus on those in prison for violent crimes, but most people who commit such crimes are not psychopathic, Verona said.

Unlike the detached, methodical psychopath, violent offenders are often highly emotional and impulsive, and their cognitive abilities are sometimes impaired.

Early research on psychopathy sometimes confused these two “subtypes,” Verona said. “But our research suggests that offenders are very heterogeneous in terms of causal factors,” she said. “That means that although they end up in similar places, they don’t get there through the same pathway.”

The new research focused on two variants of the serotonin transporter protein gene. This gene codes for a protein that transports serotonin from the synapse into presynaptic neurons. Serotonin is a neurotransmitter that regulates mood, sleep and other functions including memory and learning.

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The two variants, or alleles, of the serotonin transporter protein gene differ in length. The longer allele produces more of the transporter protein, which researchers suspect results in more serotonin being shuttled out of the synapse.

How this affects brain function is unclear, however; less serotonin in the synapse could mean less—or more—serotonin in the brain.

Previous studies have found that those who are highly impulsive and aggressive tend to have lower brain serotonin levels than their peers, while people with psychopathic traits generally have higher brain serotonin levels.

Other research has found an association between the highly impulsive personality type and the shorter allele on the serotonin transport protein gene.

In two separate studies, Verona, Sadeh and their colleagues found that pubescent and prepubescent children with the longer alleles for the transporter gene scored higher than other children on psychopathic traits if they also had low socioeconomic status. These children reportedly exhibited less empathy, they were more prone to arrogance and deceitfulness and were less emotionally responsive to negative events than their peers.

In contrast, youth with the long alleles who also had high socioeconomic status scored very low on psychopathic traits – suggesting that the long allele is susceptible to socioeconomic environment, “for better or for worse.”

Children carrying the short alleles for the same gene scored higher on impulsivity, regardless of their socioeconomic status, the researchers found.

“This is the first genetic evidence that these two types have different origins,” Verona said.

The research team also included researchers from the University of Maryland-College Park and Yale University.

The study was supported in part by the Arnold O. Beckman Award from the UI and by the National Institute of Mental Health at the National Institutes of Health.
John Bardeen

In 1951, Bardeen left a position at Bell Labs to pursue his own research in Urbana. Here he would become the first person to win a Nobel Prize in physics. Bardeen shares his first Nobel with William Shockley and Walter Brattain for the transistor, which amplifies and switches electronic signals. The “solid state” transistor replaced vacuum tubes as the building block of modern radios and other small electronic devices.

In 1954, Bardeen became a full professor of physics at the University of Illinois. As head of the Atomic Energy Commission’s Metallurgy Laboratory, he oversaw the development of the transistor. Bardeen’s second prize was shared with Leon Cooper and Robert Schrieffer for their theory of superconductivity. They were the first to explain how a macroscopic level metal has zero electrical resistance at very low temperatures.

In the documentary, Bardeen’s first electrical engineer student Nick Holonyak and his first physics postdoctoral student David Pines share their memories of working with Bardeen. Other esteemed scientists and Illinois colleagues such as Nobel Prize winner Tony Leggett and U.S. Medal of Science winner Charlie Schlacter remember Bardeen as a hard working scientist who also was a loving father and dedicated golfer.

School of Art + Design
Register now for Saturday Art School!
Prospective students may now register for the fall semester of Saturday Art School, a community art school taught by art education undergraduate and graduate students and faculty members in the School of Art and Design. Registration ends Sept. 4 or when classes are filled, but late registrations will be accepted until Sept. 10, if space is still available.

Classes will meet at the Art and Design building beginning Sept. 11 for 10 Saturdays, culminating in an open house during the Krannert Art Museum Family Fest on Dec. 4 in the Link Gallery of the Art and Design building.

Postdoctoral student David Pines shares his memories of working with Bardeen throughout his life and while he worked for Bardeen as a professor in electrical engineering and physics at Illinois. Interviews include historical photos and simple re-enactments of Bardeen’s story.

Imagine a world without cell phones or all modern electronics in other words, without the discoveries of Bardeen. In 1947, Bardeen and Walter Brattain invented the transistor, which amplifies and switches electronic signals. The “solid state” transistor replaced vacuum tubes as the building block of modern radios and other small electronic devices.

More information, visit http://illinois.edu/art-enrichment.
Mental Health, from Page 3

Lamison added that the state’s criminal justice system have experienced their own budget cuts, leaving them unprepared to address the needs of the mentally ill.

“Everyone we’ve talked to has been implicating the Legislature and the governor to work together to create a more coherent and stable financial environment,” he said. “Once a plan that reflects Illinois’ new financial reality is in place, I hope that the state will once again be a full partner with community mental health centers, reinvigorating the common goal of providing the best, most humane and cost-effective services for people with mental illnesses – care that keeps them productive and connected members of society.”

Extreme conditions inside implosing bubbles

By Liz Ahlberg

Physical Sciences Editor

High-intensity ultrasound waves traveling through liquid lead to bubbles in their wake. Under the right conditions, these bubbles implode spectacularly, emitting light and reaching very high temperatures, a phenomenon called sonoluminescence. Researchers have observed implosing bubble conditions so hot that the gas inside the bubbles ionizes into plasma, but quantifying the temperature and pressure properties has been elusive.

In a paper published in the June 27 issue of Nature Physics, UI chemistry professor Kenneth S. Suslick and former student David Flannigan, now at the California Institute of Technology, experimentally determine the plasma electron density, temperature and extent of ionization. Suslick and Flannigan first observed super-bright sonoluminescence in 2005 by sending ultrasound waves through sulfuric acid solutions to create bubbles.

“The energies of the populated atomic levels suggested a plasma, but at that time there was no estimate of the density of the plasma, a crucial parameter to understanding the conditions created at the core of the collapsing bubble,” said Suslick, the Marvin T. Schmidt Professor of Chemistry and a professor of materials science and engineering.

The new report uses the same setup, but now with a detailed analysis of the shape of the observed spectrum, which provides information on the conditions of the region around the atoms inside the bubble as it collapses.

“The temperature can be several times that of the surface of the sun and the pressure greater than that at the bottom of the deepest ocean trench,” Suslick said.

“What’s more, we were able to determine how these properties are affected by the ferocity with which the bubble collapses, and we found that the plasma conditions generated may indeed be extreme.”

The duo observed temperatures greater than 16,000 kelvins – three times the temperature on the surface of the sun. They also measured electron densities during bubble collapse similar to those generated by laser fusion experiments. However, Suslick emphasized that his group has not observed evidence that fusion takes place during sonoluminescence, as some have theorized possible.

In addition, the researchers found that plasma properties show a strong dependence on the violence of bubble implosion, and that the degree of ionization, or how much of the gas is converted to plasma, increases as the acoustic pressure increases.

“It is evident from these results that the upper bounds of the conditions generated during bubble implosion have yet to be established,” Suslick said. “The observable physical conditions suggest the limits of energy focusing during the bubble-forming and implooding process may approach conditions achievable only by much more expensive means.”

Suslick also is affiliated with the Beckman Institute of Advanced Science and Technology at Illinois. The National Science Foundation supported this work.

Six new KAM exhibitions to explore variety of themes

By Sherrill Forrest

Arts Editor

Motorcycle culture, the counterculture and folk art might all be among the themes explored in six new exhibitions at Krannert Art Museum on the UI campus this fall.

The exhibitions, which open on Aug. 26, will be celebrated with a free public reception from 5-7 p.m. Aug. 25.

New work by faculty artists and designers will be on view through Sept. 26 in the annual School of Art and Design Faculty Exhibition, one of the oldest continually running faculty shows in the U.S. Faculty artists Luke Batten, a professor of photography, and Patrick Hamme, a professor of painting, will host a gallery conversation on Sept. 16 at 5:30 p.m.

Motorcycle culture and the notorious Chicago Outlaw Motorcycle Club will be the focus of an exhibition titled “The Bikeriders: Danny Lyon.” A photojournalist who immersed himself in the Outlaw gang for two years during the mid-1960s, Lyon documented the activities and life stories of the club’s members in a collection of photographs that were published in the book “The Bikeriders” (Macmillan, 1968).

“Crossing the Ohio, Louisville,” 1966 silver gelatin print, by Danny Lyon, from “The Bikeriders: Danny Lyon.”

The photos, part of KAM’s permanent collection, will be on view through Dec. 30.

Issues of migration, memory and restoration in war-plagued Afghanistan will be among the themes explored in the exhibition “Lida Abdul,” on display through Dec. 30. Born in Afghanistan but forced to flee the country in the late 1980s, Abdul now lives and works in the U.S. and in Afghanistan, and stages video-based works that examine destruction, political conflict and efforts to rebuild the country.

“Paintings, works on paper and sculptures by representational artists known collectively as the Chicago Imagists will compose the exhibition titled “Figures in Chicago Imagism.” Known for quirky, humorous and highly sexualized works that investigate what images are and how they function within different contexts, the Chicago Imagists were a group of artists associated with the School of the Art Institute of Chicago in the late 1960s. The show – which will include work by Roger Brown, Gladys Nilsson, Jim Nutt and other artists influential in the creation of the school – will run through Jan. 9.

New and recent works by photo-conceptual artist Allan deSouza will be on view through Dec. 30 in the exhibition “Allan deSouza: The Farthest Point.” Best known for creating images of elusive sexuality, deSouza explores the conditions and consequences of being “placed” in racial, sexual and temporal frames.

“Turn of the Century Posters: Toulouse Lautrec and Others” will feature color lithographs by 19th-century artists, including Henri de Toulouse-Lautrec, Pierre Bonnard, Alphonse Mucha, and Jan Toorop. The posters, part of KAM’s permanent collection, will be on view through Dec. 30.

Fall 2010 Publication Schedule

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Krannter Art Museum and Kinkead Pavilion
500 E. Peabody Drive, Champaign.

Hours: 9 a.m. to 5 p.m. Tuesday through Saturday, 9 a.m. to 9 p.m. on Thursday, and 2 to 5 p.m. Sunday. Admission is free; a donation of $3 is suggested.

ON THE WEB:
http://kam.illinois.edu
By the standards of peacekeeping, where has Iraq succeeded, at least recently, and where might it fail?

The wars in Iraq and Afghanistan have some peacekeeping elements and share some goals with traditional peace operations. In the short term, Operation Iraqi Freedom has succeeded in reducing violence (at least compared to pre-troop-surge levels), has facilitated mostly free and fair democratic elections, and established pockets where the rule of law and local governance are functional. There have also been successes in preventing instability in Iraq from spreading to neighboring countries, such as Kuwait and Turkey.

A final assessment can only be made in the long run, and there are a number of risk factors that could make Iraq resemble a “failed state” in some ways, more than it would resemble the successes of post-occupation Germany or Japan following World War II. These include continuing ethnic and religious cleavages, al-Qaeda factions and independent militia groups, and problems with maintaining local security. The latter of which is a prerequisite for progress, and the former can be seen as the government and act effectively against insurgent forces. That 50,000 U.S. troops will remain is evidence that Iraq forces are not yet ready to deal with security problems, although they are far ahead of comparable national forces in Afghanistan.

There are a number of features that have made Afghanistan virtually ungovernable for decades, if not centuries: well-armed militias, ethnic and religious fractionalization, corruption, interference from neighbors, poor transportation systems and poverty. These conditions are not likely to change, nor are they necessarily amenable to U.S. and NATO peace efforts. The best one might hope for is the containment of Afghanistan’s instability to certain regions within its borders.

You note that there have been more than 125 peacekeeping operations over the last 60 years, U.N.-sponsored and otherwise. Are we learning anything? Probably not as much as we should have.

The U.N. and national militaries all have some kind of “lessons learned” units that are dedicated to drawing policy guidelines based on past operations. Unfortunately, these efforts tend to be driven by the desire to avoid a repeat of the most recent big failure. The lessons drawn from such failures are not necessarily the correct ones either.

One would think that the failures in Rwanda and Bosnia to stop genocide would have prompted greater action in the Congo and Darfur, but instead the international community has concluded that peace agreements and a halt to fighting must be in place before it will deploy wide-ranging peace operations.