Academic Health Center Enacts Tobacco-Free Policy

In light of the recent passage of the Issue 5 smoking ban and for the well-being of employees, students and visitors, the UC Academic Health Center’s (AHC) smoking policy has been revised.

Effective Thursday, March 1, the AHC will become a tobacco- and smoke-free institution.

The use of tobacco products, including cigarettes, cigars, pipes, chewing tobacco and snuff, on the AHC campus will be strictly prohibited.

This includes inside and outside all university-owned and leased AHC facilities, sidewalks, parking lots and green space. This also includes smoking while in vehicles on the AHC campus and in university-owned vehicles off the AHC campus at all times.

“A major health institution, UC expends considerable time and effort in preventing and treating illness and injury, as well as promoting positive health behaviors,” said Jane Henney, MD, senior vice president and provost for health affairs, in a recent letter to AHC faculty and staff.

“Achieving a tobacco-free campus,” she says, “reinforces those efforts and the university’s health commitment to employ-

See POLICY page 2

Physiology Ranked in Top 10

A new study of faculty productivity showed that UC’s systems biology and physiology program ranked No. 6 in the nation.

The study, the Faculty Scholarly Productivity Index, rates faculty members’ scholarly output at nearly 7,300 doctoral programs around the country using objective, unbi-ased data, such as papers published and grant dollars received, rather than “reputation” rankings.

UC’s systems biology and physiology program comprises about 70 faculty members.

“The quality of the faculty who teach in this and many other pro- grams at UC means that students who choose our university will get a world-class education, and Ohio will continue to produce world-class scientific knowledge,” says program director Nelson Hormane, PhD.

The other top 10 programs were at Johns Hopkins, Case Western Reserve, Vanderbilt, Cornell, Pittsburgh, Yale, Columbia, New York University and the University of Washington.

The Faculty Scholarly Productivity Index is produced by Academic Analytics, a for-profit company.

UC Finds Common Drug Linked to Increased Rate of Brain Hemorrhage

Greater Warfarin Drug Use May Explain Increased Hemorrhage Cases

By Dama Kimmon
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The rate of intracerebral (brain) hemorrhage associated with blood-thinning drugs quintupled during the 1990s after studies showed it reduced the risk of stroke caused by blood clots in the heart—a painful condition known as chronic myocardial ischemia, or angina.

Daniel Acosta, PhD, noted that men and women are taught to get to class.

“He wasn’t in a classroom at UC, but at a pharmacy school in Dubai, where the Muslim religion requires that men and women are taught separately.

Dubai is part of the United Arab Emirates, a Middle Eastern country comprising seven smaller countries each ruled by its own “emir” or prince. Acosta was asked by the UAE Ministry of Education to lead review teams assessing the quality of pharmacy programs at Ajman University of Science and Technology in Dubai and at a new school in the emirate of Abu Dhabi, Al Ain University of Science and Technology, which is expected to open this fall.

“The United Arab Emirates is a fairly new country (established in 1971),” explains Acosta. “Unlike the United States, they don’t really have a group of established pharmacy schools that have gone through the accreditation process—that’s why they asked us for help.”

Acosta says the curriculum at the UAE pharmacy schools is very similar to that in the United States. One difference, however, is that they offer a baccalaureate degree in pharmacy instead of a doctorate, and they don’t currently offer a clinical pharmacy degree.

See PHARMACY page 4

Stem Cells May Help Painful Heart Condition

By David Bracey
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UC physicians are participating in a nationwide clinical trial to test the effectiveness of treating adult heart disease patients with their own stem cells.

The goal of the 20-center clinical study, says local project leader Neal Weintraub, MD, director of cardiology at UC, is to improve the lives of people who suffer from a lack of blood flow to the heart—a painful condition known as chronic myocardial ischemia, or angina.

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FEBRUARY 2007
Genetically Altered Skin Cells May Reduce Lethal Infections in Severe Burn Victims

By Amanda Harper

Burn researchers have created genetically modified skin cells that, when added to cultured skin substitutes, may help fight off potentially deadly infections in patients with severe burns.

Dorothy Supp, PhD, and her team have found that skin cells genetically altered to produce higher levels of a protein known as human beta defensin 4 (HB44) kill bacteria, Supp says, it can also contribute to the emergence of drug-resistant strains of bacteria, so better infection control methods are needed to counter this effect.

Currently, physicians manage cultured skin graft infections during the early Healing period by continuously wrapping the wound in dressings soaked in antimicrobial drugs. Although this prevents the grafts, Supp says, it can also contribute to the emergence of drug-resistant strains of bacteria, so better infection control methods are needed to counter this effect. In a three-year laboratory study, Supp isolated the HB44 gene from donated tissue samples and transferred it into skin cells to give them enhanced infection-fighting abilities. These cells were then infected with Pseudomonas aeruginosa, a type of bacterium found commonly in hospitals, and allowed to incubate. Analysis revealed that the genetically altered cells containing HB44 were more resistant to microbial infections than the unaltered cells. "If it proves effective in additional testing," Supp predicts, "this type of gene therapy could be a promising alternative infection-control method for burn wounds.

Researchers have reported these findings in the January 2007 issue of Journal of Burn Care and Research. Cultured skin substitutes are grown in a laboratory using cells from a burn patient’s own skin. These cells are cultured, expanded and combined with a sponge layer of collagen to make skin grafts that are then reattached to the burn wound.

"Cultured skin substitutes are improving the lives of many burn patients, but they also have limitations—including an increased susceptibility to infection," says Supp. "Because cultured skin grafts aren’t connected to the circulatory system at the time of grafting, they aren’t immediately exposed to circulating antibiotic drugs or antibodies from the body’s immune system to fight off infection.

Currently, physicians manage cultured skin graft infections during the early healing period by continuously wrapping the wound in dressings soaked in antimicrobial drugs. Although this prevents the development of bacterial infections, patients can still experience complications and discomfort.

"If it proves effective in additional testing," Supp predicts, "this type of gene therapy could be a promising alternative infection-control method for burn wounds. Researchers hope to begin testing this approach in an animal model this year.

The study was funded by Shriners Hospitals for Children. Coauthors include John Gardner, Jennifer Klungelborg and Andrea Smiley, of Shriners, and Alice Neely, PhD, of Shriners and UC.

UC is one of very few institutions studying vascular adjuvants stem cells, which researchers hope will deliver promising therapy for humans. Research is currently approved by the U.S. Food and Drug Administration, to the heart and guide an experimental catheter, known as a Myostar, to inject the cells into the heart.

"The body’s ability to heal injury and restore normal function “often ends up having something to do with stem cells,” Weintraub explains. “The body has an innate capacity to heal itself,” he says. “This ability of stem cells to regenerate and replenish tissue function helps us to heal from injuries and illnesses. It may also help us maintain bodily functions as we age.

“Were trying to enhance nature’s own way of healing by isolating these cells and injecting them in concentrated form directly into the heart, where we think they can help improve blood flow to the heart muscle.”

The trial is funded by the Cellular Therapies branch of Baxter Healthcare Corporation, which manufactures the Isolse cell selection system. Weintraub has no financial interest in either Baxter or Johnson & Johnson, which markets the NRA XP and Myostar technologies.

The study will eventually involve about a dozen patients. For more information, including participation criteria, call (513) 558-2273 or e-mail heart@uc.edu.

Leaders to Present NIH Grant Application Update Feb. 13

Academic Health Center leaders will present an update on UC’s application for a National Institutes of Health (NIH) Clinical and Translational Science Award at noon Tuesday, Feb. 13, in Kresge Auditorium.

“The NIH Roadmap and Clinical and Translational Science Award Mean to the Academic Health Center” will be led by Jane Henney, MD, senior vice president and provost for health affairs, David Stern, MD, College of Medicine dean, Thomas Boat, MD, chair of the pediatrics department and director of Cincinnati Children’s Hospital Research Foundation, and James Heubi, MD, and Joel Tovat, MD, codirectors of the Center for Clinical and Translational Science and Training (CCTST).

The presenters will provide an update on the progress of the grant working groups.

Receiving the NIH Clinical and Translational Science Award will create an academic home for clinical and translational research across the entire Academic Health Center and transform the way both types of research are conducted.

UC’s application is due Oct. 24. For reservations, call (513) 558-7549 or e-mail susan.sweatting@uc.edu. For more information on the grant application process and the CCTST, visit med.research.uc.edu/cctst.

POOLICY: Academic Health Center Bans Tobacco Use from page 1

The Academic Health Center is not the only health facility implementing this new initiative. Nearly 20 other local hospitals, including University Health Care and other Health Alliance of Greater Cincinnati hospitals, Cincinnati Children’s Hospital Medical Center and Cincinnati Shriners Hospital for Children, have recently enacted tobacco-free policies.

The university is offering education, information and cessation support to those immediately affected by this new policy through the UC Wellness Center. Those interested in learning more about available nicotine programs should call (513) 584-4457 or visit www.uc.edu/uhhs.

UC is also encouraging tobacco users interested in quitting to contact the state of Ohio’s Tobacco Quit Line by calling (800) 984-4860 or visiting www.stopohoio.com.

AHC faculty and staff are asked to contact their department manager with any questions concerning this new policy. They can also read the entire policy and review other information by visiting health.uc.edu/finance/admin/tobaccopolicy.html.

HEART: Stem Cells Tagged Promising for Angina from page 1

“The hope is that the stem cells will help to form new vessel networks to deliver blood flow to the heart and alleviate the symptoms of angina,” says Weintraub. Stem cells are “undifferentiated” cells that haven’t yet evolved into any specific tissue. The researchers will collect cells capable of forming endothelial vessels—the inner lining of blood vessel walls, from each patient’s blood, and then inject them into regions of the patient’s ailing heart that have insufficient blood flow.

Weintraub says that obtaining the cells in this study is less invasive compared with previous methods of harvesting them. Instead of cutting the stem cells directly from the patient’s bone marrow, researchers will use a far more comfortable and convenient procedure. They will inject participants with a medication that “mobilizes” or draws the cells out of the bone marrow and into the blood stream, where they can easily be harvested.

The researchers will collect the stem cells using a blood donor’s Center’s Specialized Amicus blood cell separator, a process known as apheresis. They will then identify the specific stem cells they need using an Isolse 3001 magnetic cell selection system. The staff at University Hospital’s cardiac catheterization lab will inject the purified cells into the patient’s heart.

Lab personnel will use a NOGA XP cardiac navigation system, recently approved by the U.S. Food and Drug Administration, to “map” the heart and guide an experimental catheter, known as a Myostar, to inject the cells into the heart.

No surgery is involved, Weintraub stresses, so patients will be allowed to go home the next day. Their progress will then be followed for a year.

“The risk of this therapy is low,” Weintraub says, “and it’s much less traumatic than performing open heart surgery to deliver the cells.”

The body’s ability to heal injury and restore normal function “often ends up having something to do with stem cells,” Weintraub explains. “The body has an innate capacity to heal itself,” he says. “This ability of stem cells to regenerate and replenish tissue function helps us to heal from injuries and illnesses. It may also help us maintain bodily functions as we age.”
What Every Woman Needs to Know About Heart Attacks

By Jamie Davis
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Cardiovascular disease (CVD) is the No. 1 killer of American women, and more women have died of the disease than men since 1984.

Despite this, when women seek medical care, doctors may not always associate their symptoms with acute coronary syndrome (ACS) and do not treat them as aggressively as men.

That’s what researchers from across the country, including Andra Blomkalns, MD, assistant professor and director of the UC emergency residency program, found in a review of several national studies.

“I feel that sometimes clinicians, and even patients, don’t believe that women have the disease,” says Blomkalns. “Coronary heart disease has been thought of as a ‘man’s disease’ for so long that the attitudes, therapies and interventions have not been thought of as gender neutral.”

Blomkalns suggests several things that women should know about coronary heart disease:

• Women may have different heart attack symptoms than men. Pain in the chest and arms and shortness of breath are among the “classic” symptoms many people associate with a heart attack. Gastric symptoms such as stomach pain or nausea, not the “classic” symptoms, may be experienced more by women, says Blomkalns. “Unfortunately,” she says, “physicians often have greater difficulty identifying serious cardiac symptoms in women.”

• Women may be older than men when they have their first heart attack. According to Blomkalns, in addition to being older than men by about 10 years, women often have other health complications, like diabetes and high blood pressure. These conditions can have a higher risk for death or other cardiovascular complications.

• Cardiac treatment is mostly based on research trials involving men. Traditionally, fewer women have been enrolled in CVD clinical trials than men. “Because the standard methods of diagnosis and treatment for heart attacks are the result of trials involving mostly men, the treatment may not be perfectly applicable to women,” says Blomkalns.

• Women are often not treated as aggressively as men. Despite the fact that women tend to have higher risk features than men, recent national research that Blomkalns was involved in shows that women who arrived at the hospital with heart attack symptoms were less likely to be treated according to the standard guidelines. “We’re trying to understand the disparity so we can ensure that all patients at risk for a heart attack, female or male, receive care that has been proven to save lives.”

• Women may experience greater side effects from cardiac treatment than men. Women tend to have more complications from cardiac procedures than men, including bleeding more often after receiving antithrombotics (blood thinners) and fibrinolytics (clot busters). “Women and men are different when it comes to heart disease,” Blomkalns says. “They present differently and act differently when they are treated. We have not begun to understand the implications of these differences, and more research is needed.”

Regardless whether you are a man or a woman, there are several risk factors you can control or treat to reduce your chance of coronary heart disease:

• Avoid tobacco smoke and excessive alcohol consumption
• Eat food low in cholesterol and saturated fats
• Be physically active and maintain a healthy weight
• Get regular medical exams.

“Following these suggestions can improve your cardiovascular health and prevent other diseases, such as diabetes,” she says.

UC Health Line features timely health information for consumers.
When Paul Johnson arrived before dawn at University Hospital for a routine screening exam, he could never have predicted that he’d instead end up in the cardiac catheterization lab, just minutes away from death.

Johnson, 68, had experienced some unexplained bladder bleeding. So he had scheduled a routine exploratory procedure to identify the source of the problem. But Johnson never made it past the registration desk. Instead, he had a sudden heart attack.

The quick thinking and smart decisions of an early-morning team of hospital clerks, technicians, nurses and doctors changed what could have been an ill-fated morning into a life-saving experience for Johnson.

When Johnson arrived at the registration desk, admissions representative Helen Mathis observed tightness in his chest and called the same-day surgery team to alert them of a possible problem.

“That call was the first step in a series of decisions that saved Paul’s life,” recalls Bruce Braden, MD, the urologist scheduled to perform Johnson’s exploratory surgery.

Nurse Lindsay Mausburger also jumped to action, instructing Mathis to alert the critical nearby cardiac nurses in the catheterization lab of a possible emergency. Less than 60 seconds after that call, a team of nurses and technicians were on the scene to whisk Johnson away to the cardiac catheterization recovery area for evaluation.

His heart was not recovering enough oxygenated blood and his body was rapidly shutting down. Klohroy placed a cardiac-assist balloon pump in Johnson’s aorta. He then placed a supportive stent in the vessel to clear the blockage and optimize blood flow.

Less than 30 minutes later, Johnson was resting safely in the coronary care unit. As he says, he dodged that bullet that day and I give all praise to God and University Hospital.”

Johnson recently returned to University Hospital’s cardiac catheterization lab to thank the team that saved his life. He says they gave him his life back, and that was the best present he has ever received.

“I just love those people,” he says. “I felt like the president of the United States—that’s how well they treated me.”

University Hospital patient Paul Johnson (center) reunites with the rapid response team that saved his life.

For Parkinson’s Treatment, Is Espresso Worth a Shot?

By Dama Kimmons
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PHARMACY: Dean Asked to Review Overseas Educational Programs

From page 1

Since males and females are educated separately, faculty members also teach the same courses twice a day. Once UAE students graduate, however, both sexes work together.

The review team recommended to the colleges that students receive more practical experience working in community, hospital and industrial settings to complement their curriculum with real-life experiences as a pharmacist or scientist. Although Acosta was in Dubai and Abu Dhabi to review educational programs, he says the experience going to be a part of the world he has not previously visited was educational for him. “I am able to learn more about the culture, and see how students behave and how they interact with faculty,” says Acosta.

“I am happy to be able to help my international colleagues strengthen their pharmacy programs to graduate students who will practice good pharmacy.”

It was clear: Johnson was experiencing an anterior myocardial infarction, otherwise known as “the widow maker.” The team had to act quickly if they were going to save his life.

After conferring with cardiac interventionalist Sabe Khoury, MD, the team immediately took Johnson to the cardiac catheterization lab, not the emergency room—the second life-saving decision of the morning.

Johnson’s angiogram showed a complete blockage in his left anterior descending coronary artery. His heart was not recovering enough oxygenated blood and his body was rapidly shutting down. Klohroy placed a cardiac-assist balloon pump in Johnson’s aorta. He then placed a supportive stent in the vessel to clear the blockage and optimize blood flow.

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