A Lost Voice: Determined UC Doc Gives Catholic Priest Something to Talk About

By Amanda Harper

Surgical Complications Left a Priest Voiceless, But Thanks to Sid Khosla, MD, Father Gene Wilson Is Back in Service

Talking—or more accurately, ministering—was Father Gene Wilson’s life for more than 48 years. So when complications from a routine thyroidectomy performed in California left him without a voice and with a permanent breathing tube, he was devastated. “I had come back to Ohio to start a Spanish-speaking ministry in Cincinnati during my retirement years,” he recalls. “But without the ability to speak, I couldn’t fulfill my life-calling as a Catholic priest. I struggled with my new limitations and was a semi-invalid for a year and a half.”

Father Wilson was among 5 percent of patients who suffer from vocal cord paralysis as a result of nerve damage after thyroid surgery. Frustrated and seeking help, Wilson turned to Sid Khosla, MD, a UC otolaryngologist and expert on complicated voice disorders.

Khosla was determined to give Wilson his voice back. But first he had to improve Wilson’s airway and remove a breathing tube. Once that was accomplished, he would rebuild both vocal cords.

When a person speaks, the vocal cords close slightly to create vibrations in the larynx or voice box. Sound is generated when air flows through the larynx. The vocal cords move apart when a person breathes.

“One of Father Wilson’s vocal cords had become rigid as the result of nerve damage from the initial thyroid surgery,” explains Khosla, an assistant professor of otolaryngology.

Father Wilson was among 5 percent of patients who suffer from vocal cord paralysis as a result of nerve damage after thyroid surgery. Frustrated and seeking help, Wilson turned to Sid Khosla, MD, a UC otolaryngologist and expert on complicated voice disorders.

Khosla diligently worked to rebuild Father Gene Wilson’s damaged vocal cords. Now a year later, the priest is back celebrating Mass.

Three-Way Partnership Breaks Down Language Barriers for Better Health

By Katie Pence

Local Health Care Providers Join Forces to Create a Latino Health Network

Tiffiny Diers, MD, says understanding and improving health care for the local Latino community is very important to her. And it’s not only a professional interest. Her husband, Fernando Martinez, is Puerto Rican.

“When I first returned to Cincinnati in 1997, I rarely heard Spanish being spoken around town,” she says. “I wasn’t sure there was enough support locally to raise our children to be bilingual and bicultural.”

But after 10 years, Diers says she changed her tune.

“There is a growing and vibrant Latino community here in Cincinnati,” she says. “And from a doctor’s viewpoint, we are seeing an increasing number of Latino patients in our inpatient and outpatient sites.”

In order to better serve the health needs of this growing population, Diers, an assistant professor of medicine and pediatrics at UC, is working with colleagues at University Hospital and Cincinnati Children’s Hospital Medical Center as well as with community-based leaders to create the Latino Health Collaborative of Greater Cincinnati, an academic and community partnership aimed at improving the health of the local Latino community.

“The collaborative seeks to improve the cultural competence of direct clinical service to Latino patients, to conduct research using community-based methods and to educate our students about the local Latino community and national issues in Latino health,” Diers says.

The effort received $20,000 from the UC Faculty Development Council to support development of expertise in these areas.

The collaborative works in partnership with the Initiative on Poverty, Justice and Health, a UC community-based program that works to provide health care to those in poverty.

UC Recognizes Tri-state Nurses

By Dama Kimmon

A team of UC scientists has discovered a new target in the fight against tumor formation, raising hopes in the battle to contain aggressive cancers.

The group of researchers led by Jorge Moscat, PhD, and Maria Diaz-Meco, PhD, has determined that the protein p62 controls a specific tumor-promoting gene called Ras induces NF-κB, but the mechanism by which this was happening was completely unknown, says Moscat, the newly appointed chair of the department of cancer and cell biology at UC.

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New Cancer Target Identified

By Dama Kimmon

A team of UC scientists has discovered a new target in the fight against tumor formation, raising hopes in the battle to contain aggressive cancers.

The group of researchers led by Jorge Moscat, PhD, and Maria Diaz-Meco, PhD, has determined that the protein p62 controls another protein (NF-κB) previous-
New Web Site for Researchers

By Dama Kimmon
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UC faculty and staff have a new place to go to access everything they need to get started in research or maintain a successful research program.

Researcher’s Gateway (www.researchgateway.uc.edu) is a password-protected Web site containing information on sources of funds, collaborators, facilities, resources, education and training and more. It also features information specific to new researchers and a “Quick Links” section for experienced investigators.

The site, which launched in mid-April, includes regular announcements about upcoming events and links to newsletters and research news articles. In addition, Researcher’s Gateway is now the place to go for updating research protocols.

UC Urologic Surgeons Among the First in Tristate to Offer the Highly Specialized Kidney Procedure

By Amanda Harper
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In the past, a kidney cancer diagnosis almost always meant losing a kidney, leaving the patient with one functioning kidney and an increased risk of needing dialysis in the future.

But UC urologic surgeons say that is no longer the case.

“They are among the first in Greater Cincinnati to offer—and have significant experience performing—what is known as “kidney-sparing surgery” to remove small cancerous tumors without sacrificing the entire organ, using minimally invasive techniques,” said Dama Kimmon, UC’s chief of urologic surgery.

Kidneys are small, crescent-shaped organs that filter blood and remove waste products. However, the body via urine. People can live with one or part of one kidney, but if both organs are removed or dysfunctional the blood must be mechanically cleansed using a process known as dialysis.

Clinical data has shown that removing only the tumor and sparing the rest of the kidney is as effective as removing the entire organ in certain patients.

The UC team offers a number of kidney-sparing, minimally invasive surgical procedures for the treatment of small kidney tumors, including laparoscopic partial nephrectomy (removing part of the kidney) and laparoscopic cryosula

“The goal is to maintain the kidney’s function so the patients have an option of the cancer recurs or if they develop any form of kidney disease later,” explains Krishnanath Gaitonde, professor of surgery at UC and minimally invasive urological surgeon with UC Physicians and University Hospital.

“Once the tumor is removed, the kidney can heal and usually maintains function,” said Gaitonde. “Kidney-sparing surgery is usually performed for tumors that are 4 centimeters in diameter or smaller (about the size of a walnut) but can be done for larger tumors in special circumstances such as patients with decreased overall kidney function or those who have only one functioning kidney.

Partial nephrectomy is a good option for younger patients with small kidney tumors who are otherwise healthy and can tolerate a sig

Sarah Couch, MD, PhD, professor of nutritional sciences in the College of Allied Health Sciences, study diet affects tumor growth and was recently awarded funding from the National Heart, Lung, and Blood Institute to examine the long-term effects of a specific diet on blood pressure and vascular function in adolescents.

The funding—$4.9 million over five years—will support the study of 185 adolescents who will be seen in the Hypertension Clinic at Cincinnati Children’s Hospital Medical Center. Couch and colleagues will investigate how well a diet low in fat and sodium lowers blood pressure.

UC Healthline Line

High Blood Pressure on the Rise Among Obese Teens and Kids

By Dama Kimmon
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The rising rate of obesity among kids and teens is now leading to other health problems in that age group, including diabetes, high blood pressure and vascular damage.

Sarah Couch, MD, PhD, professor of nutritional sciences, is studying how well a low-fat, low-sodium diet lowers blood pressure.

“High blood pressure is no longer an adult-only disease,” says Couch. “Early prevention and intervention efforts are needed to address this increasing public and individual health problem.”

Study participants will be randomly assigned to receive the DASH diet intervention or regular hospital-based nutrition care. They will be asked to stick with either diet for a 24-week period. Blood pressure will be measured twice each week before beginning the study and again upon completion. Participants will also be asked to come in for a one-year follow-up appointment.

Couch’s team will use in-person counseling sessions and follow-up telephone calls to assist with and determine adherence to each diet. Parental involvement in this study, Couch says, is crucial.

Parents are ultimately the ones responsible for buying the groc

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Tristate Nurses Recognized at 16th Annual Awards Dinner

By Jill Hafner

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Being a nurse can be a tough job. But being on an awards committee to single out the Tristate’s most caring nurses might be even tougher.

Each year, the UC College of Nursing’s Board of Advisors are given the task of naming just 16 individuals out of a pool of hundreds of Greater Cincinnati nurses who best exemplify excellent direct patient care.

Those selected join other winners picked to receive the college’s covered Florence Nightingale Awards for Nursing.

This year the board deliberated over 422 nominations submitted by community members for the 16th annual awards. The winning nurses were honored during an awards banquet held April 24.

“There’s something to be said about the quality of nursing in Cincinnati and beyond,” says Andrea Lindell, PhD, dean of the College of Nursing.

“We have one of the largest health networks in the country, further emphasizing the importance of recognizing exceptional caregivers.”

“The critical work of a caring nurse requires a commitment and provision of health care to people which is first and foremost,” Lindell continued. “This year, our honorees will be recognized through their work on one-interaction between a health care provider and a patient that signifies the true essence of patient care.”

Six nurses received the Florence Nightingale Awards, which included a bronze bust of Florence Nightingale, the founder of modern nursing, and $1,000. Ten other finalists won Dean’s Awards, consisting of a plaque and $400.

Nightingale Awards winners:

- Sheila Hicks, Cincinnati Health Department
- Stacy Levi, Cincinnati Children’s Hospital Medical Center
- Judy Monroe, Cincinnati Department of Veterans Affairs Medical Center
- Terri Rutt, Cincinnati Children’s Hospital Medical Center
- Suzanne Smith, Shriners Hospitals for Children—Cincinnati
- Karen Thompson, Cincinnati Health Department

Dr. Award winners:

- Terri Borders, St. Luke Hospital East
- Kristine Duke, Jewish Hospital
- Loreta Hall, St. Luke Hospital East
- Lori Hartman, Cincinnati Children’s Hospital Medical Center
- Agnes Hudak, Mercy Hospital Anderson
- Mary Kappesser, TriHealth
- Margaret McLaughlin, Cincinnati Health Department
- Mike Miles, St. Elizabeth Medical Center
- Dana Moore, Cincinnati Department of Veterans Affairs Medical Center
- Cindy Wissowski, Cincinnati Children’s Hospital Medical Center

For more information, including a listing of 2008 nominees, visit nursing.uc.edu/nightingale.

CANCER: Team Finds New Target to Fight Tumor Formation

From page 3

Moscat’s team has shown that when cells get transformed by genes like Ras, a complex of molecules is formed that includes p62. NF-κB is then activated, making tumor cells more resistant to cell death.

“Now the goal is to develop drugs that stop NF-κB, which will then allow the drugs to kill the cancer cells more effectively,” said Moscat.

Moscat and Diaz-Meco, who also studied human cancer tissue, also studied mouse models of lung cancer and colon cancer.

In 2005, Wills-Karp won the Distinguished Immunology Research Award from the National Institute of Allergy and Infectious Diseases. She was named a Howard Hughes Medical Institute investigator in 2007. Wills-Karp also serves as professor of immunology and cell biology.

Wills-Karp received a listing of 2008 nominees, visit healthnews.uc.edu.

Shriners Fill Two Posts, Creates New Position

By Dama Kimmon

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The College of Medicine recently filled two key department chair positions and added a new post in the Dean’s Office—associate dean for strategic initiatives.

Cancer and Cell Biology

Jorgi Moscat, PhD, was named chair of a newly formed depart- ment of cancer and cell biology. His appointment became effective March 15, and is pending approval by the UC Board of Trustees.

This represents the first appointment to the joint cancer biology department and has also sparked the merger of the departments of molecular oncogenesis (formerly genomic sciences) and cell and cancer biol- ogy—bringing together nearly 40 faculty with research expertise in genetics, immunology, and nutrient signaling.

Moscat, who leads investigations molecular and cellular events underlying asthma, cancer, and obesity, was recruited to UC in 2006 and has served as interim chair of molecular oncogenesis since July 2007.

He has authored and/or coau- thorized more than 100 publications in peer-reviewed journals and has held research positions at the Hospital Clinic San Carlos and the Hospital Gregorio Marañón, both in Madrid, and the National Cancer Institute of the National Institutes of Health.

Moscat replaces Peter Stambuk, PhD, who led the cell and cancer biology department as the Francis Bruning Chair and Professor since 1996. Stambuk will remain at UC as a professor of cancer and cell biology.

Pharmacology and Cell Biophysics

Litsa Kranias, PhD, will lead the pharmacology and cell biophysics department. Her appointment became effective April 1 and is pending approval by the UC Board of Trustees.

Kranias, professor of pharma- cology and cell biophysics and director of cardiovascular biology, has been on UC’s faculty since 1978. She has made significant advances in identifying key genes associated with heart failure and sudden death.

Kranias has also distinguished herself internationally as a molecu- lar cardiac researcher and has research and develop new cures, while providing a continuum of care for children, adults and fami- lies with cancer.

For more information and sto- ries on UC cancer research initia- tives, visit healthnews.uc.edu.

Shriners Celebrate 40 Years

By Val Vinciguerra

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The exhibit includes a patient reunion and open house display wall that highlights important advancements in pediatric burn care over the past four decades.

The exhibit includes a patient gallery, interactive display to show stages of first-, second- and third-degree burns and a timeline displaying that highlights impor- tant milestones in burn care, including history, prevention and future research.

This exhibit will be open to the public in the hospital’s atrium after May 17.

For more event information, call (513) 872-6059.

Medical Fills Two Posts, Creates New Position

By Dama Kimmon

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Moscat has replaced Robert Highsmith, PhD, who has served as interim chair since March 2007. Highsmith is the associate vice president for research at UC, and the associate dean and director of the office of research and graduate education. He will return to his full-time administrati- ve duties in addition to being a professor in the molecular and cellu- lar physiology department.

Strategic Initiatives

Marcia Wills-Karp, PhD, has been named associate dean for strategic initiatives.

Wills-Karp will play an essential role in identifying collaborative opportunities, especially in the college’s “Centers of Excellence and Emerging Programs,” which includes pediatric physiolog- y and cancer biology.

She will be pivotal in aligning the college’s missions in research, educa- tion and clinical care more closely with Cincinnati Children’s Hospital Medical Center.

Wills-Karp serves as professor of pediatrics at UC and director of the division of immunobiology at Cincinnati Children’s. She received her doctorate in physiology from the University of California, Santa Barbara, and held postdoctoral fel- lowship positions at both Yale and Johns Hopkins universities.

Wills-Karp received a listing of 2008 nominees, visit healthnews.uc.edu.
Plastic Surgery Teams Up With Drake Center on rebuilding both vocal cords.

For Helen Colley, treatment at Drake Center and the UC surgery program was a major turning point in her life. Colley, 73, suffers from cutaneous lupus erythematosus—a chronic, inflammatory skin condition that can lead to scarring and scarring from additional airway disease and operations also prevented her other cord from moving, flattening the joint. As a result, his vocal cords could not come close enough to talk and his voice sounds so narrow to breathe properly.

Khosla used micrographical instrumentation and lasers to remove the layers of scar tissue restricting Wilson’s airway above the vocal cords and to restore the joint of the vocal cords to the jelly-like layer that allows the vocal cords to move up and down in the airway. Without this operation, the airway could not function. Wilson was back on the pulpit to deliver Mass in March 2008.

Khosla says most people don’t realize how important their voices are until they lose them. "People tend to think only individuals who have more serious problems that rely on their voices—singers and teachers, for example—are affected by voice problems, but we all have a drive to communicate. Without our voices, that becomes very challenging and can affect everyone," says Khosla.

"Patients—especially those who are older—often become depressed and withdrawn because they can no longer communicate with friends and loved ones," he adds. "No one should take their voice for granted."

Wilson’s voice is still a bit scratchy, but it is getting stronger every day. "I have high hopes. I can impact their risk for cancer."

March 17 event is a resource for anyone who wants to understand how the environment can impact their risk for cancer. Author and breast cancer survivor Nancy Evans will give the keynote address. Evans was diagnosed with breast cancer in 1991, and became a leader in the grassroots breast cancer movement. A health science writer and editor with over 20 years of experience, she is a health science consultant for the Breast Cancer Fund and the original editor of State of the Evidence: What is the Connection Between the Environment and Breast Cancer? Evans is also co-producer of the documentary films “Rachel’s Ray” and “Searching for the Causes of Breast Cancer,” “Children and Asthma” and “Teen Health and Obesity in American Children.”

Registration is free and includes breaks, educational materials and parking. Space is limited and registration is required by Friday, May 16, or as seats are filled.

For more information, visitucs.uc.edu/growingfemale.
Struggles of Some Patients

Med Students Experience Physical Poverty Simulation Event

By Katie Pence

Katie Pence

A medical student participates in a poverty simulation event at the University of Cincinnati. (Photo byspecial to the Enquirer)

Katie Pence

By Katie Pence

EYES: Old Corneas Good for Transplant

from page 1

or diseased corneas—the clear part of the eye in front of the iris and pupil—is replaced by donated corneal tissue. "There has been a long-standing bias among corneal surgeons to use younger donors," Holland says. "But starting in the late 1990s, we’ve been addressing the shortage of corneal tissue due to the U.S. Food and Drug Administration regulations and the elimination of usable corneas due to Lasky surgery."

Lasky surgery permanently changes the shape of the cornea using a laser. A mechanical microkeratome—a Made device—used to be called a flap. The flap is folded back revealing the stroma, or the middle section of the cornea.

Pulses from a computer-controlled laser vaporize a portion of the stroma and the flap is replaced.

This procedure may repair eye sight but it leaves the cornea virtually useless for transplants.

In this new study, the research team randomly assigned cornea recipients younger or older tissue and found the corneas of both groups survived just as well five years later.

The study, funded by the National Eye Institute, involved 105 surgeries at 80 medical centers across the nation.

Approximately 1,100 people with a swelling known as Fuchs’ dystrophy and postoperative cataract surgery swelling were recruited for the study.

"At the five-year mark, the success rate was the same, about 86 percent, for both those in the age range of 12 to 65 years and those in the age range of 66 to 75 years," Holland says. "This was very encouraging.

Holland says this study will hopefully encourage corneal surgeons to use older tissue and will increase the donor pool by 20 to 35 percent, which is significant growth."

"It will also reduce health care costs because the number of cancellations for scheduled surgery will be reduced," he says. "In addi tion, more corneas can be used locally instead of requiring ship ment from across the country."

"We feel that this finding will significantly impact the lives of those who have been waiting for corneal transplants and will help surgeons across the country deliver these life-changing operations in a timelier manner," Holland adds.

Collaborative: Providers Reach Out to Latino Patients

from page 1

faculty group that focuses on developing educational experiences for residents and medical students in public health related topics such as the impact of poverty on health, health literacy and cross-cultural communication. Many Latinos in the community do not seek medical attention because of the language and cultural barriers, Diers adds. "They fear in the Hispanic community that visits to health care settings may result in immigration investigations," she says, "and they are afraid their families may be put at risk."

The collaborative’s initial focus has been connecting with the local Latino community to better understand issues pertaining to health.

Members of the collaborative presented at the “Somos Unidos, Somos Latinos” (“We are Unique, We are Latinos”) conference last October, which addressed, in Spanish, how to make the most of a visit to your doctor. They collected pilot data on bar riers to health care and community priority for health projects.

Members have also conducted community-based research with Harmony Garden, a non-profit research foundation devoted to the health of girls. The collaborative is also working with Santa Maria and Su Casa agencies, which both provide critical services to the Latino community, to train organizations to provide culturally competent care to Latino patients and provide health screening at local health fairs.

Diers says the collaborative recently presented to the Hispanic Collaborative, a local networking organization, promoting partnerships among people working with the Latino community. "It is inspiring to see so many dedicated individuals working in support of Latinos in Cincinnati and across the state," she says.

Diers says the next step for the collaborative is to offer more educational experiences for UC stu dents and residents.

"We have already presented at a number of venues for medical stu dents and residents," she says, noting that she and her colleagues have been working on a pilot rotation in Latino health.

"Ultimately, members of the collaborative would like to develop rotations for medical students and residents that include a local cultural immersion experience.

"We see so much interest in international health, and while those experiences are certainly eye opening, there is much to learn from our local community as well," Diers says. There are many opportunities for this work to grow within UC’s newly formed master’s of public health program in the public health sciences department.

"Our model of academic and community collaboration has the potential to significantly benefit the health of Latinos locally while training physicians and student physicians to seek partnerships and better serve patients," she says.

Founding members of the Latino Health Collaborative include Diers, Lisa Vaughn, PhD, UC pediatrics department; Candace Iretton, MD, UC family medicine department; Lilliana Guitero-Rojas, PhD, Harmony Garden; Joan Murdock, PhD, UC College of Allied Health Sciences; Radha Reddy, MD, UC obstetrics and gynecology department; Margie Gerena-Lewis, MD, UC hematology-oncology division; Vanessa Nino, University Hospital director of interpreting services; Liga Gomer, UC romance languages department and director of the Hispanic Coalition; and Denise Judge, UC’s new education in medical doctorate student.

EYES: Old Corneas Good for Transplant

Nursing Hosts Gerontology Scholar

Gerontology expert Barbara Resnick, PhD, of the University of Maryland, visited the UC College of Nursing April 23–24 to discuss the latest interventions for motivating older adults to engage in function and physical activities. She also spoke on ways to better serve the growing numbers of patients with faculty and staff of the Center for Aging with Dignity. Resnick, professor in the organizational systems and adult health department, is internationally recognized for her research and clinical work of promoting primary medical management to older adults. The event, which included a lecture, was sponsored by the Institute for Nursing Research.
Simple Tests Can Prevent Falls in the Elderly

By Katie Pence
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Susie Thomas, 93, remembers her days as a college student at UC vividly.

“I graduated in 1946,” she says. “At first, I wanted to teach, but I ended up taking my degree in psychology and sociology.”

Thomas went on to spend 44 years with the Cincinnati Recreation Commission, where she made sure people of all ages stayed entertained and active every day of the week in recreation centers throughout the city.

Now, Thomas says she tries to keep herself active so that she can remain healthy, strong and avoid experiencing fall No. 2.

Last year, Thomas, who lives at Bridgeway Pointe, an assisted living facility on the campus of the Duke Center, took a big spill, but she was lucky and unharmed.

“They didn’t find any broken bone,” she says. “But I have an artificial shoulder, and I had a stroke about four years ago, so my doctors are concerned it may happen again.”

Falls are the leading cause of emergency room visits and injury-related hospitalizations among adults over age 65, according to the Hamilton County Fall Prevention Task Force.

Now, UC researchers are trying to see if that risk can be reduced by simply teaching people like Thomas to detect their own chances of taking a spill.

According to a random survey by the task force, almost 8 percent of Hamilton County residents could not identify the most common risk factors for falling and nearly 12 percent of those surveyed did not know how to reduce the risk of falling in senior adults.

Arvind Modawal, MD, associate professor of family medicine and geriatrics, and medical student Robert Altenau conduct a single-leg stance test on Charles Orr. Modawal is working to prevent falls in older adults.

“We researched differences in fall risk and functional measures between assisted living facility residents and independent living older adults,” he adds. “We found that these tests can accurately and efficiently assess balance and gait problems in the elderly.”

Researchers recruited residents from two assisted living facilities and from those who lived independently but attended a senior center.

They used physical tests that measured the amount of time it took participants to stand up from a chair, walk around and sit down again (timed get-up-and-go test), how far they could reach in front of them without losing balance (functional reach test), and how long they could stand on one foot (single-leg stance test).

Overall, residents of assisted living facilities had more history of falls and struggled more with the function measures, therefore having a greater chance of falling again.

“The participants’ medications, exercise habits, past fall histories and medical conditions were also taken into consideration,” Modawal says.

The results showed that participants who were on cardiac or osteoporosis medications and exercised regularly walked more quickly and accurately and could reach further.

“Now, we must study the best ways to teach these tests to at-risk populations,” Modawal says. “We need to show patients that completing these tests is as simple and routine as their own blood pressure.”

Besides these tests, older people need to take disease conditions, medications and environmental factors, such as a loose rug or slippery floors, into consideration for contributing to falls.

“Even poor vision, hearing and non-use of hearing aids or glasses can throw off a person’s balance,” Modawal adds.

“There are many other risk factors in the elderly that can really cause problems, and even the first fall can be fatal.”

Modawal says these tests are very cost effective and have potential to make the most impact in fall prevention efforts.

“If we can promote these tests, we can keep our older population healthy, safe and independent for longer,” he says. Thomas, who participated in the study, says she thinks these tests are very beneficial for people who are at risk for falling.

“I am a little off-balance, and I think that these tests would help with monitoring that,” she says.

“This could definitely help with prevention of falls.”

This study was funded in part by a summer scholar award given to Robert Altenau, a third-year medical student, and by the American Federation of Aging Research.
Environmental Health Awarded $1.3 Million Grant to Develop a Method to Destroy Biological Agents

By Amanda Harper
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In modern warfare, the fear factor isn’t kamikaze airplanes and guerrilla tactics.

Today, it is the threat of “weapons of mass destruction”—biological devices engineered to obliterate an entire population by injecting dangerous agents into the very air we breathe.

It’s a frightening concept, but one that the United States needs to be prepared to combat. A group of UC bioaerosol experts hopes to do just that.

UC’s environmental health department has received a $1.3 million basic science grant from the U.S. Department of Defense’s Defense Threat Reduction Agency (DTRA) to develop and test a new method they believe can kill the biological agents most likely to be used in weapons of mass destruction.

DTRA recently began awarding basic science grants for research aimed at reducing, eliminating or countering the threat of weapons of mass destruction in the battlefield and for civilians. The UC-led team is one of a few groups to receive funding for basic research this year.

Led by Sergey Grinshpun, PhD, director of UC’s Center for Health-Related Aerosol Studies, the team has partnered with researchers at the New Jersey Institute of Technology (NJIT) and its business incubator, Reactive Metals Inc., to develop and validate an experimental method for deactivating biological agents using a new class of energetic materials—filled nanocomposite materials, containing nanoparticles.

The multi-institutional team’s goal is to create a single, self-contained compound that can be released into the air after an explosion to target and kill dangerous biological agents. “Destroying aerosolized bio-aerosol agents is very challenging,” says Grinshpun, professor of environmental health and principal investigator of the grant. “Some biological agents are resistant to environmental stress, including high temperature. Once in the air, these microorganisms and viruses can travel through the air like any other aerosolized particles and wreak havoc.”

He says the predominant thinking is that if a biological weapons storage facility is hit with an explosive device, the heat generated from the explosion will also destroy viruses and bacteria.

“But that is not necessarily the case with a microorganism that has been specifically prepared to be part of a weapon intended to inflict massive harm,” explains Grinshpun. “That explosion may actually just help disseminate the microorganisms through the air.”

For this grant, UC and NJIT researchers will develop a prototype of the filled nanocomposite material that could be released into the air after detonation of a weapon of mass destruction.

The idea is that these materials will release specific components—iodine, for example—into the atmosphere to kill or “deactivate” the potentially lethal bacterial agents.

Small-scale tests using non-pathogenic surrogates will be conducted in specialized biosafety chambers in UC’s environmental health department. The entire process happens in milliseconds, so in order to accurately measure exposure and the effects of the pellets the research team will use an algorithm of experimental simulations that allows them to slow down the process.

Since there are thousands of species of bacteria, Grinshpun’s team has selected two low-risk simulants of microorganisms most likely targeted for use in weapons of mass destruction: Bacillus subtilis, a bacterial spore, and MS2 bacteriophage virus.

“It’s important to note that this is a laboratory study—not a real-life simulation. Our goal is to understand the biological reasons a microorganism will not die after being exposed to heat stress,” explains Grinshpun. “We’re pioneering a novel method we hope will work under specific conditions, but the broad-reaching outcome of combating weapons of mass destruction is more important.”

UC’s Tiina Reponen, PhD, and Atin Adhikari, PhD, are co-investigators in this study. The team also includes Chunxi Li, PhD, a visiting fellow from Fudan University in China and graduate student Robert Eninger. Researchers Mirko Stoenitz, PhD, Edward Dreizin, PhD, and Mike Trunov, PhD, represent the NJIT team collaborating in this study.

Nursing Co-Op Students Make Big Showing at Regional Rapid Response Symposium

By Jill Hafner
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College of Nursing students Keno Babani and Anna Hoerst won the poster competition at the second annual Rapid Response Symposium.

Nursing students Keno Babani and Anna Hoerst won the poster competi- tion at the second annual Rapid Response Symposium.

Among an estimated 200 attendees at the second annual Rapid Response Symposium—a day-long event where best practices in delivering quick, bedside patient care are shared among representatives of the region’s (and in some cases, the world’s) leading hospitals and health systems.

The event was held April 16 at the Health Alliance of Greater Cincinnati’s Alliance Business Center.

Babani and Hoerst, who as co-op students split their weekly shifts between classes in Procter Hall and clinicals at University Hospital, demonstrated, using a poster format, how determining team structure and role assignment results in effective leadership and yields better patient outcomes in a rapid response setting.

Rapid response teams respond to a call when someone recognizes the signs and symptoms of a patient’s deteriorating condition in a non-intensive care unit and immediately takes the appropriate action to save his or her life.

“The students incorporated the latest research and clearly identified the roles each caregiver must assume when trying to save a life,” says Shirley Alsup, a registered nurse and director of the nursing co-op program.

“It’s pretty impressive that out of all the poster entries, two UC students won,” she adds. “It clearly shows that our students are learning from their experiences and that we have a right to be proud as educators at UC.”

Babani and Hoerst are certainly proud of their accomplishment—and their teachers.

“We didn’t really feel it was as much a competition as it was a way to contribute a piece of knowledge,” says Babani, who has already landed a full-time job in University Hospital’s Surgical Trauma Intensive Care Unit upon graduation in June.

“I’m not dry in saying that we are long on book knowledge, but short on experience, but I really have to give credit to Shirley and all the pre-ceptors who participate in the co-op program,” says Babani. “They took us from a place of being begin- ners and shepherded us through a program where we have learned so much. The real credit is to them.”

For more information on the co-op program, call (513) 558-3325 or e-mail shirley.alsup@uc.edu.

Grant Takes Aims at Weapons of Mass Destruction

Environmental health researchers, including Tiina Reponen, PhD, Sergey Grinshpun, PhD, Atin Adhikari, PhD, and Chunxi Li, PhD, are working to develop a self-contained compound to kill biological agents.

PR Team Earns National Honors for Web Work

The Academic Health Center (AHC) Public Relations and Communications Office recently won two awards for excellence in Web communications.

The team won an award of distinction from the Association of American Medical Colleges for its work in developing, designing and maintaining the AHC’s official news Web site, HealthNews (healthnews.uc.edu).

More than 125 entries were sub- mitted into the competition from 60 academic health institutions nationwide. HealthNews was one of only five online tools to be recog- nized.

In the World Wide Web Health Care Awards, HealthNews won a bronze award in the education cat- egory. The awards competition is a part of the National Health Information Awards, organized by the Health Information Resource Center, a national clearinghouse for consumer health information.

Since its launch two years ago, HealthNews has garnered five national awards.

The team includes Richard Puff, Jill Hafner, Amanda Harper, Suki Jeffrey, Dama Kinnison and Katie Pence, and photographers Dave Collins and Dan Davenport.
Second Annual ‘Ride Cincinnati’ Event to Benefit Local Cancer Research

Race Aims to Raise Funds for Breast Cancer Research at UC, University Hospital

By Amanda Harper

UC Vascular Surgeons Expand Program

UC vascular surgeons have expanded their clinical practice to serve patients at the Medical Arts Building five days a week. The division also expects to begin offering daily appointments at University Pointe in West Chester starting July 1.

By George Meise, MD, the vascular team will continue to perform surgery at Christ Hospital and University Hospital. Patient consultations and testing procedures, such as abdominal aortic aneurysm screenings and vascular ultrasound, will be available at the Medical Arts Building and University Pointe only. To schedule an appointment, call (513) 558-3700.

Dean’s Scholars in Clinical Research Named

The Center for Clinical & Translational Science and Training has announced the 2008 Dean’s Scholars in UC’s clinical and translational research program. Sohaib Khan, PhD, a professor in UC’s cancer research and cell biology department, will conduct a basic science study to develop novel anti-angiogenesis in breast cancer.

Glidden Zaiser, PhD, assistant professor in UC’s surgery department, will explore the role of vitamin D3 activation in adipocytes (fat cells) in breast cell development. A third grant will be awarded in the near future.

Ride Cincinnati cyclists and families can choose to ride 10, 25, or 62 miles. All rides start at Yeatman’s Cove, but at staggered times throughout the morning:
- 6:30 a.m.—42-mile ride
- 7:30 a.m.—40-mile ride
- 8:30 a.m.—10- and 25-mile rides
- 9 a.m.—March of Dimes rides

Participants line up for the start of last year’s bike race.

Children and event chairperson, Kyla Gordon, who is age 13, and 750 riders will get a T-shirt and goodie bag. Adult registration can be made in advance of race day for $30 by calling Karen Niemeyer at (513) 941-0304 or by visiting www.ridecincinnati.org. Child registration is $15. On the day of the event, all riders will get a bike jersey.

Breast cancer survivors who attend the event will be recognized with a special gift bag and be entitled to a drawing to win prizes.

Ride Cincinnati 2008 is supported by title sponsors Western and Southern Life Insurance and American Financial and numerous other local businesses.

To schedule an appointment, call (513) 558-1810.

Cancer Education Day

University Pointe Medical Office Building, West Chester

Get answers to all your questions about breast cancer. Attendees can talk one-on-one with more than 40 local cancer physicians and experts and take a tour of our new World-renowned expert Henry Lynch, MD, will give keynote address at 9 a.m. Visit www.ucanwerenceday.org.

College of Allied Health Sciences PArF Conference

9 a.m. to Noon

Undergraduate and graduate students showcase the latest research. Symposium includes poster displays, oral present- ations and interactive exhibits. Call (513) 558-7485 or e-mail maureen.medr@uc.edu.

College of Medicine Reunion

Various Times and Locations

The College of Medicine will welcome alumni back during this weekend of full activity. Classes ending in a “3” or “8” will join together to commemorate their five-year reunion. The Gold Class reunion, sary of the 1958 class and silver anniversary of the 1963 class will be held Friday.

Looking Upstream for Environmental Links to Breast Cancer

10:30 a.m. to 12:10 p.m.

University Research Institute

Experts discuss how the environment may impact the public’s risk for cancer. Keynote presentation by author and cancer survivor Nancy Evans. Visit uci.edu/growingupstream.

Brain Tumor Conference: Neuro-Oncology—Gliomas and Metastatic Tumors

8 a.m. to 11:55 a.m.

Hannan Northwest

Attendees will learn about a multidisciplinary approach for managing malignant brain tumors in adults and children.

Correction to Skull-Base Tumor Story

The story headline, “Docs Use Robotic to Treat Skull Base Tumor,” published in the April 2008 issue of Findings, inadvertently implied that researchers in the otolaryngology and aerospace engineering departments were currently using robots to perform skull-base tumor surgery. However, Razi Sany, MD, professor of otolaryngology, and Albert Bosse, PhD, associate professor of aerospace engineering, are currently researching the possibilities of someday using robotic artists in the surgical treatment of skull-base tumors and other health ailments. We regret the error.

For more information, e-mail Samy at ravi.samy@uc.edu.

UPCOMING EVENTS

MAY 10

UC Pulmonary Medicine for Primary Care Practitioners

7:30 a.m. to 2 p.m.

Great Wolf Lodge, Mason

Learn about updates on chronic obstructive pulmonary disease, asthma, interstitial lung disease, pulmonary hypertension, interventional procedures for lung cancer, sleep apnea and more.

A maximum of five American Medical Association Physician Recognition Award Category 1 credits are available. The cost is $50 for physicians and practitioners and free for resi- dents and fellows. Call (513) 558-1810.

MAY 15

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9 a.m. to Noon

University Pointe Medical Office Building, West Chester

Undergraduate and graduate students showcase the latest research. Symposium includes poster displays, oral presenta- tions and interactive exhibits. Call (513) 558-7485 or e-mail maureen.medr@uc.edu.

MAY 16-17

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For more information, e-mail Samy at ravi.samy@uc.edu.