Traditional Drugs May Affect Memory in Insulin Users

By Angela Koenig
angela.koenig@uc.edu

More than 200 million people worldwide take anti-psychotic medications to cope with psychiatric problems. Within this population, the risk of diabetes is elevated as much as two-fold.

Pair older generation anti-psychotic drugs with insulin-induced changes in brain chemistry and there may be potential for unnecessary memory impairment, theorizes an interdisciplinary team of researchers at UC’s College of Medicine and James L. Winkle College of Pharmacy.

The team, which includes associate professors of psychiatry Neil Richtand, MD, PhD, and Stephen Benos, PhD, and pharmacy professor Gary Gudelaty, PhD, has received $425,000 from the National Institute of Mental Health to test its theory in an animal model.

Over the next two years, the researchers will measure what happens to memory when three individual drugs (haloperidol,quetiapine and aripiprazole) are coupled with insulin overdose.

Insulin releases a brain chemical called glutamate which can kill neurons when it rises to abnormal levels.

The UC researchers have identified evidence that haloperidol will worsen the toxic effects of glutamate, while quetiapine and aripiprazole will be protective.

This study is especially relevant, says Richtand, because 35 million people worldwide take anti-psychotic drugs with insulin overdose.

See DRUGS page 3

Student-Run Health Group Gets Big Boost

By Angela Koenig
angela.koenig@uc.edu

The UC researchers have identified a potential clue for predicting environmentally related asthma in children—particularly those born to mothers who live in high-traffic areas like Northern Manhattan and South Bronx when pregnant.

The team reported its findings in the Feb. 16, 2009, issue of PLOS One.

This is the first study to examine the effects of prenatal ambient air pollution-related asthma may start in a mother’s womb.

See ASTHMA page 4

UC ‘Goes Red’ for Women

By Amanda Harper
amanda.harper@uc.edu

UC, University Hospital and UC Physicians collaborated with the American Heart Association on Feb. 6 to paint the campus red—literally. The National Wear Red Day event, held in the atrium of the CARE/Cawley Building, featured a full schedule of activities to raise awareness about heart disease, the nation’s No. 1 killer. Activities included free cholesterol and blood pressure screenings, and a heart health talk by Stephanie Dunlap, MD, an associate professor of medicine in the UC cardiovascular diseases division.

See HEART page 2

UC Appoints Clinician-Scientist to Lead Hematology/Oncology, Cancer Program

By Amanda Harper
amanda.harper@uc.edu

The UC College of Medicine has recruited George Atweh, MD, to lead the department of internal medicine’s division of hematology/oncology and serve as Koch Chair and professor of hematology/oncology.

Atweh will also serve as director of the adult cancer program located in the UC Barrett Cancer Institute at University Hospital, a position that David Stern, MD, vice president for health affairs at UC and dean of the College of Medicine, has filled since 2006 while a national search for a permanent replacement was conducted.

Stern will actively continue his role as dean and vice president for health affairs at UC. Atweh’s appointment was effective March 1, 2009.

The UC Barrett Cancer Institute is part of the Cincinnati Cancer Consortium (formed by the joint cancer program), a collaborative initiative involving the UC College of Medicine, Cincinnati Children’s Hospital Medical Center and University Hospital. It brings together interdisciplinary research teams of scientists and health professionals to research and develop new cures, while providing a continuum of care for children, adults and families with cancer.

Recruiting Dr. Atweh to Cincinnati is a major step forward for the Cincinnati Cancer Consortium and its goal of coordination.

See DIRECTOR page 3
Author Visits UC to Tell Tale of Divided Mental Health System

By Keith Herrell
keith.herrell@uc.edu

It came as somewhat of a surprise to Steve Lopez that College of Medicine students actually have time to read books other than “Theory and Practice of Histological Techniques” or “Peripheral Vascular Interventions.”

In fact, about 30 students—many clutching copies of his book, “The Soloist: A Lost Dream, an Unlikely Friendship, and the Redemptive Power of Music”—attended a noontime talk at the Medical Sciences Building to hear Lopez discuss his remarkable experience with Nathaniel Anthony Ayers, a street musician on Skid Row in Los Angeles, and a mental health system that often seemed divided on how best to address Ayers’ needs.

The talk was sponsored by the Psychiatry Student Interest Group, which has regular meetings and outings. Aurora Bennett, MD, a professor in the psychiatry department, is faculty adviser for the group and the department’s vice chair for education.

Lopez was in town for several appearances in connection with On the Same Page Cincinnati, the community-wide reading program of the Public Library of Cincinnati and Hamilton County. His book, this year’s selection, has been adapted into a movie starring Robert Downey Jr. as Lopez and Jamie Foxx as Ayers. It opens this April.

Lopez, a columnist for the Los Angeles Times, first encountered Ayers four years ago on Pershing Square, “kind of your version of Fountain Square,” he told the students—in downtown Los Angeles. Standing next to a shopping cart containing his belongings, Ayers was playing classical music on a violin missing two of its four strings.

Lopez spoke up a conversation with Ayers and began visiting him regularly. Ayers told his story in bits and pieces—including the revelation that he had once been a music student at the prestigious Juilliard School in New York. And while that startling bit of information checked out, it also became clear to Lopez that Ayers was mentally ill.

“He’d say some incredible things that were really poetic, and other things that sounded kind of nonsensical,” Lopez said. “It was as if he was full of broken glass.”

Lopez wrote about Ayers and readers responded overwhelmingly, sending instruments for Ayers to play and asking via letters, phone calls and e-mails if Lopez would be able to help him get off the streets—something Ayers adamantly resisted at first.

“They were rooting for him and rooting for me to be able to help him,” Lopez said. “It was a lot of pressure to be under for somebody who knew virtually nothing about mental health.”

Lopez has learned plenty in the last few years as his life has become intertwined with Ayers’. Still, he knows there’s no one-size-fits-all answer to mental illness.

Skid Row, he said, is “a snapshot of our collective failures—that’s what happens when you shut down mental hospitals and never follow through on the promise of community clinics. And we did that across this country.”

“It’s easy to dismiss them and to think that somebody’s made a choice to be there, but then you meet somebody like Nathaniel and you find out that they’re not strangers.

“I’ve got brothers and sisters and sons and daughters, and they were struck down through no fault of their own—especially those who are dealing with mental illness, especially those who are dealing with a genetic predisposition to alcohol or substance addiction.”

“So how can society in general—and the medical community in particular—react to the problem?”

One psychiatrist told Lopez that the best thing he ever did was “for everything he learned in med-ical school,” where he said the approach was all about medication and institutionalization. The important thing was building trust, he said. Another psychiatrist told Lopez he e-mail saying, “(Ayers) will never get better without med-ication. It’s not gonna be about hugs and sunshine and friendship.”

Lopez recognizes the value of medications that can be targeted to specific needs without robbing a person of energy or creativity when used in conjunction with programs such as Project 50 in Los Angeles, where 52 particularly vulnerable homeless people were given complete services to change their lives, including broader access to the things that he loves most, which is the music,” Lopez said. “And from day one he’s been a challenge and an inspiration and just a great gift in my life.”

Grant: Local Foundation to Support Urban Health Project

In exchange for their service, students have the opportunity to gain hands-on knowledge in a social and clinical agency setting. Students also receive a small stipend for expenses.

The organization was founded in 1980 and currently operates on a budget of about $85,000 annual-ly, says Jessica Sisto, co-director for 2008-09.

The funds come from private foundations, outreach programs and student-run fundraisers.

Co-director Lauren Simendinger applied for the grant to help expand the number of internships through UHP, increase the compensa-tion for internships and move toward the beginnings of an endowment.

“Our hope is that UHP will not only make a significant contribu-tion to the local community each summer, but also provide medical students with a formative experience,” says Simendinger.

Sisto adds: “We’d like to see that UHP has financial stability, so that students do not have to keep fundraising all of the time.”

If you’re experiencing chronic breathing difficulties, a simple procedure with a complicated name could be the answer to your problem.

Radiofrequency ablation of the turbinates—put more simply, reducing the size of tissue within the nose with the aid of a needle-equipped heating device—is a pro-cedure that can be done in a physi-cian’s office under local anesthesia.

That gives it a big advantage over traditional surgery, which involves removing part of the turbinates under general anesthe-sia in an operating room, says Lee Zimmer, MD, an assistant profes-sor of otolaryngology.

“It’s quicker, safer, convenient and painless,” says Zimmer, adding that the procedure itself only takes about 12 minutes after the local anesthetic takes effect.

Turbinates are structures located inside the nose—three on each side—covered with mucus mem-branes. They warm and moisten air that is breathed in and also trap allergens, bacteria and viruses, keeping them from gaining access to the body.

Enlarged turbinates hinder air intake, so the goal of radiofre-quency ablation is to shrink them so the patient gains more volume for breathing.

“To submit news, suggestions or address questions, contact Jill Hafner, phone: (513) 558-2910, fax: (513) 588-2010, e-mail: healthnews@uc.edu.”

Copyright © 2009 University of Cincinnati. Material may be reproduced provided permis-sion is obtained and credit is given to the University of Cincinnati as an affirmative action/ equal opportunity employer.
Grant Helps Nontraditional Student Launch Career in Environmental Health

By Amanda Harper

Chris Curran, PhD, was working as a science writer at UC when she met her mentor—environmental health researcher Daniel Nebert, PhD—and discovered her true calling: gene-environment research.

Nebert had just received the Rieveschl Award and Curran was assigned to write a story about his work to understand the complex relationships between genes, disease, and environmental exposures.

“I earned my master’s in biological sciences and genetics and had really enjoyed my courses in environmental health, so after meeting Dr. Nebert I decided that if I ever pursued my doctorate, I would follow in his footsteps,” recalls Curran, a graduate of the environmental health department’s doctoral program in environmental genetics and molecular toxicology.

Soon after that epiphany, Curran had the opportunity to teach biology at Raymond Walters College in a two-year agreement expected to lead to a full-time faculty position.

Unfortunately, the faculty member she had temporarily replaced decided to come back, leaving her jobless, but with one year of course work completed toward her doctorate in environmental health.

Knowing she needed to pursue other avenues, she decided to pursue her doctorate as a full-time graduate student. She applied for and received the Albert J. Ryan Fellowship, the highest honor the UC College of Medicine bestows on graduate students. The goal of the award is to promote the careers of students who will make important contributions to biomedical research.

“I always had an interest in genetics and environment, so the combination was very exciting—especially working with someone like Dr. Nebert, who has hands-on experience in understanding the common theme of investigating how humans react when they encounter something in the environment—whether it is medication, something in the water or the air we breathe,” she adds.

For her doctoral research project, Curran chose to focus on genetic susceptibility to polychlorinated biphenyls (PCBs), organic compounds banned in the 1970s for their high toxicities to humans.

“I wanted to know where these chemicals were going in the body and whether there was a difference in susceptibility based on genetic differences,” she explains.

“Although PCBs have been banned for many years, we can still be exposed to high levels of the substance in certain areas. Over time, knowing who is genetically more susceptible will be important as PCB levels fall because what is safe for the average person may not be for you.”

In 2006, she was awarded a pilot grant through UC’s Center for Environmental Genetics Pilot Research Project (FRP) to support her research.

The FRP is an initiative funded by the National Institute of Environmental Health Sciences that offers financial support to young investigators with promising research ideas.

In addition to financial support from the FRP, she also had access—through UC and Cincinnati Children’s Hospital Medical Center—to the sophisticated equipment necessary to do gene expression research. Curran was able to develop skills applicable to various types of research—from participating in neurobehavioral studies of the fetal alcohol syndrome to Chil- dren’s to conducting high-end analytical work at the U.S. Environmental Protection Agency.

She credits that diverse learning experience and strong mentorship for launching her career.

Within a few blocks, there were so many resources—both in terms of technology and world class scientific mentors. It made for an excellent learning environment,” she recalls.

Curran, who officially graduated with her doctorate of environmental health in June 2008, is now an assistant professor of biological sciences at Northern Kentucky University.

Thanks to the mentoring of Daniel Nebert, PhD, and a grant from the UC Center for Environmental Genetics Pilot Research Project, Chris Curran, PhD, is now fulfilling her dream of a job in environmental health.

---

DRUGS: Study to Focus on Drugs, Memory and Insulin from page 1

people worldwide could be affected by the combination of the two disease states—mental illness and diabetes—and the drug thera- pie involved to treat both condi- tions.

“We believe this particular side effect of older anti-psychoctics drugs has been underappreciated. Fortunately, there are newer med- ications available which may pro- vide protection against this prob- lem, and are also better tolerated,” he says.

While other medications and clinical settings can also cause glu- tamate levels to rise, the focus is on insulin overdose because of the large population prescribed anti-psychotics and because, Richtand says, “persons with type 1 diabetes take too much insulin over 40 years a time, while patients with type 2 diabetes average more than one episode per month.”

Gudeley’s role will be to mea- sure the amounts of glutamate pro- duced in the brain, while Richtand’s expertise is in learning and memory, and animal behavior models.

“We are very fortunate to have a team of investigators and labs able to study the different pieces of this puzzle,” says Richtand, who is principal investigator for the pro- ject.

The grant is funded through the National Institute of Mental Health’s Center for Translational Research, which identifies projects with potential to shift paradigms or translate advanced research into clinical care.

Richtand is a physician at the Cincinnati Department of Veterans Affairs Medical Center. He works with type 2 diabetes average over 40 times a year, while patients with type 2 diabetes average more than one episode per month.”

---

DIRECTOR: Mt. Sinai Hematologist to Lead Cancer Program

from page 1

ing advanced cancer care and research in the Greater Cincinnati area,” says Stern. “Dr. Atweh is an outstanding investigator, clinician and leader. We are proud to have him join our team.”

“Dr. Atweh is a proven leader and exemplary clinician-scientist who has the experience necessary to build a world-class hematology/oncology clinical team and create a better, more personalized care experience for our patients,” adds Bradley Britting, MD, chair of UC’s internal medicine depart- ment.

Prior to joining UC, Atweh served in numerous leadership roles at Mt. Sinai Medical Center, including hematology/oncology division chief, interim director of the American University of Beirut’s cancer center, and chief executive officer of University School of Medicine.

He works with type 2 diabetes average over 40 times a year, while patients with type 2 diabetes average more than one episode per month.”

---

The Barrett Cancer Institute at University Hospital.

He completed his medical degree, internship and residency at the American University of Beirut and a hematology/oncology fellowship at Duke University Medical Center. He then did a post-doctor- al research fellowship at the Yale University School of Medicine.

Atweh has published more than 65 scientific manuscripts and holds a U.S. patent for globin gene expression vectors, a discovery that has enabled scientists to pursue novel treatments for blood diseases such as sickle cell.

Upon arriving at UC, Atweh says his first priority is to build a more robust hematology/oncology division. His long-term goal is to recruit up to 25 new faculty mem- bers who will form multidiscipli- nary disease-based teams that serve as the foundations of several cen- ters of excellence such as prostate, lung, breast, colorectal and brain cancer.

“We achieved a true balance between real partnership and healthy competition with commu- nity physicians during my tenure at Duke, and I believe the same model can be successful here in Cincinnati,” he says. “What’s most important is that we work together to provide the best possi- ble care to the community in the Cincinnati metropolitan region.”

Atweh specializes in the treat- ment of sickle cell and blood can- cers. His research focuses on the molecular basis of human blood diseases, including currently fund- ed research projects investigating the molecular basis of human acute leukemia, the regulation of differ- ent members of the human globin gene family in health and in dis- ease, and the development of new targeted therapies for leukemia and prostate cancer.

He is expected to begin seeing patients at the Barrett Cancer Academic Health Center and open UC’s Physician practices sites in late 2009; howev- er, his initial time at UC will be dedicated to building the hematol- ogy/oncology clinical practice.

“There are still opportunities for growth,” Atweh says. “We are working to add to the UC Barrett Cancer Institute.”

---

Thanks to the mentoring of Daniel Nebert, PhD, and a grant from the UC Center for Environmental Genetics Pilot Research Project, Chris Curran, PhD, is now fulfilling her dream of a job in environmental health.
Radiofrequency Catheter Ablation Helped Local Man Regulate His Erratic Heartbeat Once and For All

By Katie Pence katie.pence@uc.edu

Charles Craddock is one of millions of people who needs an implantable defibrillator to help monitor his heart rhythm and prevent the occurrence of sudden cardiac death—or death resulting from an abrupt loss of heart function.

Defibrillators are complex devices that deliver internal electric shocks to a patient’s heart whenever a life-threatening cardiac rhythm is detected.

Craddock, 57, was diagnosed with and treated for ischemic cardiomyopathy—a deterioration of the heart muscle due to insufficient blood supply—in March 2003. Since that time, he has received several implantable defibrillators. About a year ago, after receiving at least 17 painful shocks from his defibrillator for episodes of extremely rapid, life-threatening heart rates, he realized that his defibrillator, aside from delivering painful shocks, could also fail to save his life.

“One night, after two hours of my heart racing, my wife said, ‘One more shock and I’m out,’” he says.

Craddock’s wife, Elizabeth, drove him to the emergency room at the Veterans Affairs (VA) Medical Center, where his heart condition was further evaluated.

A decision was made to perform a radiofrequency catheter ablation in an attempt to prevent future episodes of ventricular tachycardia—or fast heart rhythms originating in the heart ventricles.

Radiofrequency catheter ablation—a somewhat new technology—is a nonsurgical, catheter-based procedure that uses real-time recording and processing of the electrical signals inside the heart. It uses X-rays for continuous imaging of the catheters inside the heart, as well as different mapping systems that help in positioning the catheters.

During radiofrequency ablation, a mild, painless radiofrequency energy pulse is delivered to areas that have electrical abnormalities, destroying carefully selected cardiac cell bundles that cause the specific rhythm problems. Alex Costea, MD, and Mehran Attari, MD, both electrophysiologists and assistant professors of medicine in the cardiovascular diseases division at UC, performed not one but two ablation procedures on Craddock.

“Due to the significant scarring of his heart muscle, Mr. Craddock’s heart rhythm would often become unstable and life threatening,” Costea says. “His ICD, or implantable cardiac defibrillator, recorded multiple episodes of ventricular tachycardia, a potentially lethal condition with heart rates above 150 beats per minute.

“He hasn’t had any more abnormal rhythms since the second procedure was performed.”

Craddock says he feels great and that his quality of life has improved tremendously.

“I’m able to get out and do more than what I have been able to do in the past,” he says. “My wife and I will go for walks, and I can walk up to a mile and a half on good days whereas before I was straining to do a quarter of a mile.”

He adds that he is able to do more volunteer work at his local kingdom hall, or church, since the procedure.

Artan and Costea, the two electrophysiologists at the VA and University Hospital, are using this and other evolving technologies to map and image the heart, helping pinpoint the exact location of cardiac rhythm disturbances.

“With these tools, we are able to obtain very detailed information about the electrical network of the heart and tailor care to the patient’s specific problem.” Costea says. “These technologies allow us to more efficiently, safely and effectively provide cardiac care in patients with complex, life-threatening heart rhythm disturbances.”

“My quality of life is much better now—especially when it comes to the ablation procedure. I’m a big believer in it,” he says. “It has improved my quality of life. I am very thankful to the doctors and their staff and am very grateful that we have this technology available in Cincinnati.”

New Heart Technology Gives Patient a Solid Rhythm

“Asthma: Prenatal Environmental Exposure Can Trigger Disease

By Katharine B. Haynes

pollutant exposure on epigenetic changes linked to asthma.

Epigenetic changes may disrupt the normal functioning of genes by affecting their expression but do not cause structural changes or mutations in the genes.

For this study, UC researchers teamed with Columbia’s Mailman School of Public Health to study the relationship between prenatal PAH exposure and childhood asthma. Epigenetic reprogramming is the result of an organism’s genes interacting with the environment.

“Our data supports the concept that environmental exposures can interact with genes during key developmental periods to trigger disease onset later in life, and that tissues are being reprogrammed to become abnormal later,” says Shuk-mei Ho, PhD, senior author and chair of the environmental health department at UC and director of the UC Center for Environmental Genetics.

“This research is aimed at detecting early signs of asthma risk so we can more better prevent this chronic disease that affects as many as 25 percent of children in Northern Manhattan and elsewhere,” adds Frederica Perera, DePPE, professor of environmental health sciences and director of the Columbia Center for Children’s Environmental Health (CCCEH) at the Mailman School of Public Health and co-first author.

Using biological specimens from the CCCEH birth cohort of mothers and children living in Northern Manhattan and the South Bronx, UC scientists analyzed umbilical cord white blood cell samples from 56 children for epigenetic alterations related to prenatal PAH exposure. (The mothers’ exposure to PAHs was monitored during pregnancy using backpack air monitors.)

The researchers found a significant association between changes in ACSL3 methylation—a gene expressed in the lung—and maternal PAH exposure. ACSL3 also was associated with a parental report of asthma symptoms in the children prior to age 3.

With confirmation in further studies, researchers, changes in the ACSL3 gene could serve as a novel biomarker for early diagnosis of pollution-related asthma.

“This study provides a blueprint for the discovery of epigenetic biomarkers relevant to other environmental exposures,” says Wan-see Tang, PhD, UC research scientist and co-first author, says this study will provide a “blueprint” for the discovery of epigenetic biomarkers relevant to other prenatal exposure studies.

With these tools, we are able to obtain very detailed information about the electrical network of the heart and tailor care to the patient’s specific problem.” Costea says. “These technologies allow us to more efficiently, safely and effectively provide cardiac care in patients with complex, life-threatening heart rhythm disturbances.”

“My quality of life is much better now—especially when it comes to the ablation procedure. I’m a big believer in it,” he says. “It has improved my quality of life. I am very thankful to the doctors and their staff and am very grateful that we have this technology available in Cincinnati.”
Anti-Estrogen Drug Treatments May Slow Progression of Common Brain Tumor

By Katie Pence

UC researchers have discovered that estrogen receptors are present in medulloblastomas—the most common type of pediatric brain tumor—leading researchers to believe that anti-estrogen drug treatments may be beneficial in limiting tumor progression and improving patients' overall outcome.

This research is published in the March 2009 edition of Endocrinology.

In estrogen-responsive cancers—such as breast cancer—estrogen receptors act to increase tumor growth and progression. Estrogen receptors are also the most important drug targets for the treatment of breast cancer.

“Current therapies for this type of cancer involve cranial surgery, chemotherapy and radiation,” says Scott Belcher, PhD, principal investigator of the study. “This discovery suggests that we may be able to use anti-hormone or estrogen drug therapies—like those used to treat breast cancers—to limit progression of these childhood brain tumors and to decrease the adverse side-effects of radiation treatment.”

Medulloblastoma, or MD, is a highly malignant brain tumor, most commonly diagnosed in children.

Patients with MD typically have a five-year survival rate between 50 and 70 percent, and survivors who endure current, more aggressive treatments face an increased risk for chronic illnesses such as diabetes or cardiovascular disease later in life.

Belcher, an associate professor of pharmacology and cell biophysics, and his team examined tumor tissue from 22 patients between the ages of 6 months and 18 years. They found evidence of estrogen receptors, particularly estrogen receptor beta, in the cancerous cells of every tumor analyzed.

“MD manifests when specific neuron precursors in the brain fail to stop normally differentiating into mature neurons,” Belcher says.

“Our previous studies showed that estrogen receptors are regulated during differentiation of these neuronal precursors. MD growth and tumor cell formation can be blocked by inhibiting the activity of these receptors.”

A team led by Scott Belcher, MD (right), has discovered that estrogen receptors are found in a common pediatric brain tumor, which may suggest that using anti-estrogen drugs during treatment may slow the tumor’s growth.

Belcher says these results exemplify the importance of “bench to bedside” discoveries.

“We started in tumor cells and then moved to animal models of MD and found that we could stop the growth of tumors using anti-estrogen therapies,” he says.

“We’ve been able to identify these receptors in humans. We are now hoping that our basic developmental biology findings can take the final step by stopping the growth of these tumors in humans.”

Diabetes Clinic Helps Patients Better Manage Their Disease

Expert-Based Instructional Program Prods Patients to Understand the Disease and Get Regular Checkups

By Katie Pence

Terrance Cole knows diabetes is a serious illness, but now he’s even more aware of it.

“This is very educational,” he says after attending the first instructive diabetes clinic of its kind at UC, held to inform patients about their disease and to get them in the doctor’s office for a checkup.

Cole was one of 28 patients who made their way to the second floor of Hospworth Blood Center on Feb. 6 to participate in the afternoon event, which included not only educational videos and checkups but also a raffle, healthy snacks and take-home bags.

“If you’re at home by yourself, you often forget that you need to take your insulin or track your blood sugar, or you may not have everything you need,” Cole says.

He adds that the day helped encourage him to more proactively manage his illness and to help others around him who live with diabetes.

“I have two friends, a mother and a son, who both have diabetes and don’t take care of themselves like they should,” he says. “I’m trying to pass this information on to them.

“People come to us with a lot of complications,” she says. “We address all of those needs in a comprehensive plan. Residents in this clinic focus on one area, and patients have all of their needs met at once. Patients and residents con- nect at this early stage to show the investment in the patient’s care.”

Warm says reaching out to patients through a clinic such as this shows a true concern for their well-being.

“We strive for quality care,” he says. “If these patients get a call from their doctors at home, asking where they’ve been, it tells them that they are a priority and that their health really matters to us.”

Warm says his team tracks data for patients who come to the clinic for chronic disease care, such as diabetes or hypertension, to see if the improvements in health maintenance activities improve.

“We’ve seen our percentages go up since 2006,” he says, adding that residents receive points on a “report card” for improved numbers. A certain quality number is required of them.

Warm says that clinics addressing other chronic diseases, such as hypertension, may be in the works for future patient follow-up.

“Most of the horrors people with chronic diseases face are preventable,” he says. “We want to do our part to make sure it doesn’t get to that point. So, why not call these people up and do the things that need to be done?”

Customer Team Up to Support Heart Marathon, Walk

By Michele Rablton

For the first time, UC, University Hospital and UC Physicians are coming together to raise awareness about cardiovascular disease and research.

The three local health care providers have united to create a team for the upcoming 32nd Annual Mini Marathon and Heart Walk organized by the American Heart Association (AHA).

The event, scheduled for Sunday, March 29, is the AHA’s largest fundraiser, raising dollars for local and national cardiovascular research. The AHA currently contributes more than $3.6 million in research support to a number of projects at UC.

The 5K run begins at 9 a.m., the 10K mini marathon starts at 10 a.m., and the 5K and 10K heart walks start at 1 p.m. There will be a 2K Mini-Marathon at 12:30 p.m. for kids, ages 7 to 12.

The minimum entry fee for all races is $10. The walks are $35 and the kids’ run is $20.

On March 28, the AHA will host a Health and Fitness Expo at the Cincinnati Convention Center from 11 a.m. to 3:30 p.m. Events include a Kids’ Fun Run at 11:45 a.m. in the convention’s lobby.

To register for the runs or walk, visit www.heartmini.org.

Resident Justin Smith, MD, says that he has seen many patients enter the clinic not even knowing how to test their own blood sugar levels.

“You have to fight diabetes head-on, and we need this sup- port,” says Cole.

The clinic, facilitated by Eric Warm, MD, associate professor of medicine, and a team of nurses, internal medicine residents and even some first-year medical students, was held as a way to reach out to patients who were not scheduling regular checkups and managing their illness appropri- ately.

“We went into the computer system and flagged individuals whose diabetes was not quite under control,” Warm says. “We then contacted these patients and asked them to come to a planned visit for their diabetes.

“We just want to make sure people don’t fail with their treat- ment.

“Patients come to us with a lot of complications,” she says. “We address all of those needs in a comprehensive plan. Residents in this clinic focus on one area, and patients have all of their needs met at once. Patients and residents con- nect at this early stage to show the investment in the patient’s care.”

Warm says reaching out to patients through a clinic such as this shows a true concern for their well-being.

“We strive for quality care,” he says. “If these patients get a call from their doctors at home, asking where they’ve been, it tells them that they are a priority and that their health really matters to us.”

Warm says his team tracks data for patients who come to the clinic for chronic disease care, such as diabetes or hypertension, to see if the improvements in health maintenance activities improve.

“We’ve seen our percentages go up since 2006,” he says, adding that residents receive points on a “report card” for improved numbers. A certain quality number is required of them.

Warm says that clinics addressing other chronic diseases, such as hypertension, may be in the works for future patient follow-up.

“Most of the horrors people with chronic diseases face are pre- ventable,” he says. “We want to do our part to make sure it doesn’t get to that point. So, why not call these people up and do the things that need to be done?”
High-Fat Food Binges Can Damage the Heart

By Katie Pence
katie.pence@uc.edu

The occasional indulgence in fatty food has generally been considered appropriate, but a new UC study suggests that even small amounts of high-fat cuisine may lead to deteriorating heart health.

The study, published in the American Journal of Clinical Nutrition, shows that high-fat diets, even if consumed for a short amount of time, can inflame fat tissue surrounding blood vessels, possibly contributing to cardiovascular disease.

Cardiologist Neal Weintraub, MD, and colleagues examined adipose tissue—or fat—surrounding the coronary arteries of humans.

The team found these fat cells to be highly inflamed, suggesting that they could trigger inflammation of the blood vessels, an important component of atherosclerosis. They also found that the inflammation of fat tissues around the arteries of mice is increased by feeding the animals a high-fat diet for just two weeks.

“Is independent of weight gain or blood lipids—cholesterol levels,” says Weintraub, director of the cardiovascular diseases division at UC.

Weintraub says that high-fat diets contribute to atherosclerosis—or the hardening of arteries—in a number of ways.

“Elevated blood lipids—or cholesterol levels—can worsen with the intake of high-fat diets, and this is known to contribute to atherosclerosis,” he says. “Bad diet habits can lead to a number of problems, and this suggests that a high-fat diet is detrimental in ways we didn’t previously understand.”

Aneurysm Risk Factors, Causes Could Be More Complicated

By Keith Herrell
keith.herrell@uc.edu

Does “genetic anticipation” play a role in ruptured brain aneurysms? Previous studies have suggested that it does, with the aneurysms occurring at younger ages in subsequent generations of families with at least one case of ruptured aneurysm. But they actually may tend to happen at an older age, according to a new UC study.

If that’s the case, says the team headed by David Swails, MD, associate professor of neurology at UC, the genetic epidemiology of ruptured brain aneurysms is far more complicated with multiple genetic and environmental risk factors interacting with each other.

The study was published in the February 24, 2009, edition of Neurology.

Prior studies had suggested that aneurysms reflect the second generation as much as 20 years younger than older generations, suggesting that a genetic risk factor is accumulating with each generation and that aggressive screening should be performed. The new study, correcting for length of follow-up, shows that aneurysms actually may happen at an older age.

“The finding also suggests that we should be looking for all types of genetic risks, not just those that accumulate over generations, which are a very small group of risk factors,” says Swails.

The team suggests that even small sheltie who belongs to another owner.

“You can’t even see he realized he was hearing something and you could see he realized he was hearing something,” says the ultimate challenge of UC’s Facility for Education and Laboratory dissections. To register, visit www.ent.uc.edu.

There’s still a lot of engineering to do, he says. “But a new UC study, the University of Cincinnati’s Hospital Medical Center audiologists, MRI team and genetics researchers, as well as collaborators at Marquette University’s computer and electrical engineering department, the University of Connecticut’s animal science department, the Georgia Aquarium, Mystic Aquarium and Cincinnati Zoo and Botanical Gardens.

There is a screening fee and dogs must be referred to the clinic by their veterinarian. For more information, call (513) 558-8519 or e-mail peter.scheifele@uc.edu.

UC’s Canine Hearing Clinic Fits First Dog With Test Hearing Aid

By Angela Koenig
angela.koenig@uc.edu

“Come here, boy, come on!”

It seems like a simple request, especially for a talented dog like Otter: a high-trained, mixed-breed miniature pinscher/beagle whose abilities were once showcased on “The David Letterman Show.”

Unfortunately, however, at 17 he’d become severely deaf due to age. Lucky for Otter, for his owner, Pete Scheifele, PhD, is the director of UC’s Facility for Education and Testing of Canine Hearing and Laboratory for Animal Bio-acoustics, also known as FETCH/LAB, located within the College of Allied Health Sciences where Scheifele is an assistant professor of bioacoustics and hearing/speech sciences.

Since mid-2008 Scheifele and his FETCH/LAB team have been conducting hearing screenings on canines and other animal life, such as cats, birds, horses, and Otter was the first up to be fitted for an exploratory hearing device.

The reason, says Scheifele, is that highly trained dogs like Otter are amenable to handling and new experiences. The difficulty in developing something for the “average” canine, he says, is that they would refuse to wear it or scratch it off as an irritant.

Once Otter started wearing the aid, though, it seemed to grow on him, to the point where he now seeks it out.

“At first he went from basically hearing nothing to then hearing some level of soft sound. I was there when it came over him that he was hearing something and you could see he realized he was hearing something,” Scheifele says.

A retired member of the U.S. Navy, Scheifele, who also has a love for marine life and has long studied whale acoustics, says the ultimate goal for a clinic such as the one he’s developed at UC is to change the way we think about hearing loss in animals.

“Right now, there’s really no clinically normative data about canine hearing or sensorineural hearing loss, yet many dogs and families are dealing with this issue,” he says. “In addition, a hearing screening is paramount for assistance, military and police dogs. I hope that the knowledge we gain will lead to the creation of an audiology subspecialty in veterinary medicine so that more animals can be diagnosed and treated at their vet’s office.”

There’s still a lot of engineering to do, he says, and the aid is certainly not ready for commercial production—but it’s more than a good start and there is a long lot of people willing to give it a try. The next trial will be on a Ginger, a small sheltie who belongs to another staff member, and there are eight other dogs waiting in the queue, he says.

“The FETCH/LAB is a collaboration of UC’s College of Allied Health Sciences. Cincinnati Children’s Hospital Medical Center audiologists, MRI team and genetics researchers, as well as collaborators at Marquette University’s computer and electrical engineering department, the University of Connecticut’s animal science department, the Georgia Aquarium, Mystic Aquarium and Cincinnati Zoo and Botanical Gardens.

There is a screening fee and dogs must be referred to the clinic by their veterinarian. For more information, call (513) 558-8519 or e-mail peter.scheifele@uc.edu.