Pathology’s taskmaster wins NAS lifetime teaching award

The medical curriculum can seem insurmountable at times for many students — both because of the amount and difficulty of the material to be learned and the implications of those lessons. “We have to take basic scientific building blocks and apply them to heal others,” says Judy Kuhn, a third-year medical student. “Our first two years in the classroom translate directly to our actions as clinicians on the wards of hospitals.”

The pathology courses taught by Peter Anderson, D.V.M., Ph.D., are known by students to be one of the biggest hurdles in medical school. “The content in my courses is important, and I make no apologies for their rigor,” he says.

Anderson says he has been surprised to receive teaching awards because he is a taskmaster. So he was even more surprised to learn he had been selected for the 2009 Ellen Gregg Ingalls/UAB National Alumni Society Award for Lifetime Achievement in Teaching.

“I have high expectations of my students, and I don’t back down,” Anderson says. “The thing I’m especially proud of about this award is the letters of nomination from the students. I get 200 to 250 stu-

University ready to celebrate 40 years of dreaming big

The summer of 1969 was a season of revolutionary change, and events of those months still are part of the national conversation today:

• President Richard Nixon announced troop withdrawals from South Vietnam.
• Warren E. Burger was sworn in as Chief Justice of the United States.
• Charles, Prince of Wales, was present ed the crown of his title by the Queen.
• The world watched in awe as Neil Armstrong took his historic first steps on the moon.

We knew as these events unfolded they would forever change the world as we knew it. Few, however, foresaw the revolutionary change in education and health care that would follow the decision of the University of Alabama Board of Trustees to create a three-campus system and grant autonomy to its Birmingham extension center on June 5, 1969.

Less than two weeks later Joseph F. Volker was named first president of what was then known as the University of Alabama in Birmingham, a position he officially assumed Sept. 5, 1969, a mere 40 years ago this week.

Volker, we know, saw a future so promising some faculty wondered aloud about his grasp on reality. But his insistence that we do ourselves a disservice by dreaming dreams that are small set the unmistakable tenor for his administration, and that clarion call has been sounded by each of the presidents to succeed him.

The improbable vision became the inevitable dream.

Undergraduates begin rare neuroscience program

The world has benefited from many great scientists who were able to overcome difficult circumstances after being given an opportunity to better themselves through education. Joseph Henry, born to young Scottish immigrants, discovered electromagnetic self-induction and is considered one of the great American scientists of the 19th century. George Washington Carver rose above success to the opportunity to pursue a high school. He and his sisters were the first in their family to graduate high school. Carver graduated from the University of South Alabama, received his doctorate from Vanderbilt University, and completed a post-doctoral fellowship at the Columbia University Center for Neurobiology and Behavior, working on the peanut. George Armitage Miller, though born to a poor West Virginia family in 1920, is considered by some to be one of the top 10 psychologists of the past 100 years. All three credited the chance to earn an education as a key to their success.

David Sweatt, Ph.D., professor and chair of Neurobiology and an internationally renowned researcher, relates to the scientists’ backgrounds. He credits his professional success to the opportunity to pursue a high school. Sweatt grew up in Montgomery in a family of modest means. He and his sisters were the first in their family to graduate high school. Sweatt also graduated from the University of South Alabama, received his doctorate from Vanderbilt University, and completed a post-doctoral fellowship at the Columbia University Center for Neurobiology and Behavior, working on the

40-year Activities

A convocation celebrating “UAB: Forty Years of Breakthroughs” will begin at 9:30 a.m. Thursday, Sept. 24 in the Alys Stephens Center Jemison Concert Hall.

A food drive coordinated by the UAB Student Alumni Society will be held during the 40th anniversary celebration to respond to community needs. Non-perishable food items will be collected at locations across campus.

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UAB, the flu and you: questions answered

The UAB flu page has been updated with frequently asked questions from faculty, staff, and students about such topics as HR and class-attendance policies and more. Check it out today at www.uab.edu/flu.

Please remember to continue to cover your mouth when you sneeze or cough, wash your hands often and call your doctor and stay home from class or work if you experience flu-like symptoms.

E-mail to alert you to changes in Banner, Self-Service profiles

UAB is improving its e-mail alert system to notify you when changes are made to your profile in the HR, Employee Self-Service and the Banner Student Self-Service online applications. These alerts will provide a general description of the data field that changed, such as “home address.” You will not receive the specific data. A link in the self-service application in which the change occurred will be provided so you may log in and review the data, and the phone number to the appropriate office will be included so you may report any unauthorized changes.

IDEA evaluation chairs under way till Sept. 29

Faculty are urged to participate in the IDEA evaluation of department chairs that is being facilitated by the UAB Faculty Senate. The online survey will be sent directly from the IDEA Center, and the survey begins Tuesday, Sept. 8 and ends Tuesday, Sept. 29. More information is on the Faculty Senate site at www.uab.edu/senate.

Hospital ready to put pits on the board

It’s football season and time to put some pits on the board — pits of blood, that is. UAB Hospital and the American Red Cross launch the Kickoff Classic, a week-long blood drive designed to replace blood supplies depleted during the summer, from Tuesday, Sept. 8 through Sunday, Sept. 13 in the North Pavilion. The donation times are 10 a.m. to 5 p.m. Tuesday through Friday and 1 to 6 p.m. Saturday and Sunday. Donors will get a free T-shirt or a Buy 1, Get 1 Free coupon for the Robert Trent Jones Golf Trail. Donors also will be entered in a drawing for a $300 Marriott Gift Card and two $100 gas cards. UAB, Auburn and Alabama team merchandise also will be given away.

Learn the best way to get a K99 grant Sept. 9

The Office of Postdoctoral Education and the Postdoc- toral Association are presenting a special lunch seminar Thursday, Sept. 10 at the Doubtreetree Inn restaurant. All UAB and UABHS employees and retirees are welcome. Call Karen at 996-5730, e-mail alliance@uab.edu or visit www.uab.edu/alliance for more information.

‘Around the World in 90 Minutes’ to be presented Sept. 15

Award-winning author Marty Eisen will present his high-energy, digital slide show, “Around the World in 90 Minutes” at 8 p.m. Tuesday, Sept. 15 in Heritage Hall Room 104. Eisen’s show features interesting facts, humorous stories and the best of thousands of photos he took while traveling the world for his book, Cool Creatures. Hot Planet: Exploring the Seven Continents. The free and open to the public event is sponsored by the UAB Office of Student Involvement. Call 975-5049 for more details.

Research coordinator training program to begin Sept. 16

This workshop will provide study coordinators with the basics of good clinical practice, research compliance and other key topics. This is a six-session course to be held on Sept. 16, 23 and 30 and Oct. 7, 14 and 20. Sessions are from 8 a.m. to noon in the Children’s Harbor Bradley Conference Center; cost is $75 and payable with registration. Enrollment is limited, so please register early. Direct questions to Susan Branscum at sbranscum@peds.uab.edu or call 975-9011. The workshop is designed primarily for nurses. For more information, call 975-9011 or e-mail sbranscum@uab.edu.

Alliance for GLBT Equality monthly meeting is Sept. 10

The monthly meeting of The Alliance for GLBT Equality, an organization of faculty and staff at UAB offering networking, support, and advocacy, is noon Tuesday, Sept. 10 at the Doubtreetree Inn restaurant. All UAB and UABHS employees and retirees are welcome. Call Karen at 996-5730, e-mail alliance@uab.edu or visit www.uab.edu/alliance for more information.

Biologists are raising Diamond Back terrapins in a UAB hatchery in an effort to boost the numbers of this Gulf Coast turtle. Eggs from one of the last remaining large terrapin habitats on Dauphin Island are hatched at UAB and returned to the wild after they have grown large enough to escape predators such as raccoons and birds. UAB has some 100 terrapins in the hatchery with more on the way. Around 25 have been returned to the wild so far.

It’s not too late to join the Walk UAB! Challenge, set Oct. 28

The Walk UAB! Challenge is back for its second year, and it’s not too late to register. The eight-week chal- lenge encourages UAB employees, faculty and students to increase their daily physical activity. Grand prizes include free $500 gas cards and one $500 airfare voucher to be awarded Oct. 28 during the I DID IT celebration. Visit www.uab.edu/wellness for details and step-by-step instructions on how to register.

Spend Spring Break in Paris March 2010

The UAB Department of Foreign Languages and the Al- liance Francaise of Birmingham are sponsoring a week in Paris, France, during UAB’s Spring Break, March 13-21, 2010.

The cost is $1,799 for all UAB employees and Alliance members; in honor of the memory of Alliance member Lee Alexander, the Alliance Francaise of Birmingham has awarded a $400 travel grant to all UAB undergraduate students under 25 years old: $1,799-$400 = $1,399, and $1,849 for all others.

For more information call 934-8902 or 879-9939 or e-mail sbokobas@uab.edu or Alliance Francaise of Birmingham at kmabhii@yahoo.com.

BRIEFS
Sterne Library gets new look, and improved functionality

The tranquil ambiance of Sterne Library has given way to the sounds of hammers banging and saws revving, and it’s for a good cause says Jerry Stephens, Ph.D., director of the library. The library is in Phase I of a year-long, three-phase renovation to enhance and support learning activities for students.

“We’re changing the face of the library, and I think it’s for the better,” Stephens says. “These improvements are going to bring us up to date with the latest technology and enable us to provide an enhanced learning environment.”

Phase I changes to the South wing of the first floor will add two classrooms, individual computer workstations, a new reference print collection area and an area for reference librarians. Construction should be completed by the end of the calendar year.

Phase II includes a renovation of the circulation desk and the West entrance and lobby areas plus the addition of several group study rooms. Phase II construction will begin in January 2010 and should be finished by early April.

Phase III, to be completed by summer’s end, will add new computer workstations for patrons, collaborative study space and the reference and inter-library loan service desk; the lobby area at the North entrance will be renovated.

The entire building will be painted and new carpet installed. Amenities include more power outlets, new furniture, collaborative work centers and a computer-equipped classroom for library instruction and video-conferencing.

“The whole concept is to make the library a learning commons,” Stephens says. “There will be spaces for collaborative learning, more computers and additional reader stations or seating that will support patrons computers and other personal electronic devices. There will also be ample power supplies throughout the building.”

Another highlight is the new university-wide writing center, which will be supported by the Office of the Provost. The first-floor center will enable librarians to work with faculty and students to improve writing skills across disciplines.

The library will remain open with its normal hours during construction. Some library services may be temporarily relocated, but Stephens says the library will offer all of its normal services.

Construction workers will be present Monday through Friday each week from 7:30 a.m. to 3:30 p.m. Students and faculty are encouraged to use the third floor if noise on first and second floors is disruptive.

“Library patrons are not in the spaces where the work is going on,” Stephens says. “That should help some with the noise levels. The building should be more quiet in the evenings — except maybe for the noise coming from the new Starbucks.”

Stephens says the inconveniences will yield rewards.

“With the renovation we will be able to offer resources in a learning-rich environment that will benefit our entire student body,” he says. “We’re very excited about the changes and where we’re going.”

Anderson is presented annually to a full-time, regular UAB faculty member who has demonstrated an outstanding commitment to teaching throughout his or her career at UAB. To be eligible, faculty members must be past recipients of the President’s Award for Excellence in Teaching and have taught at UAB for 20 or more years.

Anderson is the coordinator of the pre-clerkship medical curriculum and director of pathology undergraduate education. He is a 1977 graduate of the University of Washington and a 1981 graduate of Washington State University from which he earned his doctorate in veterinary medicine. Anderson received his second doctorate in experimental pathology from UAB in 1986.

He came to UAB after veterinary school to participate in a National Cancer Institutes-funded program designed to teach veterinarians about human medicine. In this program he participated in autopsies and surgical pathology services as though he were a regular pathology resident. As a result, Anderson gained broad experience in human diseases and in animal models of human diseases.

**Developing digital assets**

Pathology is a three-dimensional study that requires students to understand the makeup of human tissue, learn the processes of change that are normal and abnormal and identify these concepts in a dynamic human body in a clinical scenario.

Studying pathology requires a creative and complex approach, and Kuhn says Anderson and his staff teach students to study and use the principles of pathology through lectures, laboratory experiences with experts in specific fields and a thorough set of online educational aids.

“Medical students tend to use whatever tools they can find to help them master the material they need to study, and Dr. Anderson is well known around the country for being an expert and innovator in using Web-based teaching materials in pathology education,” Kuhn says. “He helps students by providing many resources that were helpful to us and I know are used by students around the country.”

Some of Anderson’s first teaching aids were created for laser disc when the Internet was in its infancy. He created discs with hundreds of images and cases showing students the difference between normal and abnormal tissues and organs.

That early innovation led to the development of the Pathology Education Instructional Resource (PEIR) Digital Library, an online, open-access repository for 45,000-plus multidisciplinary images for educational use in medical and health science education.

The library at http://peir.net was developed under Anderson’s supervision to facilitate image search and retrieval and to foster the development of instructional resources among health-science educators worldwide. Images are searchable by collection, image type and keyword. The PEIR Digital Library search engine incorporates the National Library of Medicine’s Medical Thesaurus to maximize database-query results.

“Pathology is a very integrative discipline, and computers and the Internet are good tools for the integration of information,” Anderson says. “We were in the forefront, and we capitalized on the growth of technology. It was a perfect storm; as the technology developed we had the materials and the need for it all to come together. Now, our UAB students and people from all over the world use the PEIR Web site.”

**A researcher, too**

Anderson is a well-known researcher, and in the past 25 years his research has yielded more than 150 peer-reviewed publications and several patents, some of which also have benefitted UAB.

One of his patents was for a drug-eluting stent — a coronary stent placed into narrowed, diseased coronary arteries that slow releases a drug to block cell proliferation and prevent scarring. Approximately 400,000 of these stents are placed in patients every year, and this invention has considerably improved patient care.

This stent patent enabled Anderson to endow the Rev. Robert and Ruth Anderson Endowed Chair in Pathology, named for his parents. “It means a great deal to me that I was able to honor my personal memory in this way,” he says.

Students have benefitted from Anderson’s research mentorship. They’ve also benefited from his desire to help them reach their goals — even when those goals seem unattainable.

Dawn E. Woode, chief resident in combined internal medicine and pediatrics at Wright State University and a UAB graduate, had the opportunity to work with Anderson on several teaching-aid development projects. But Woode says he will always be grateful for the personal interest Anderson took in him during the lowest point of his tenure at UAB as a student.

“He was a source of encouragement and helped me stay focused on my goal of becoming a physician, even when my chosen area of medicine appeared to be very bleak,” Woode says. “He provided an environment in which I excelled, and ultimately I regained the confidence to complete my medical education.

“I plan on pursuing an academic career and hope that someday I can have the kind of impact on medical students that Dr. Anderson had on me.”

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**Anderson**

**Continued from page 1**

...and it’s for a good cause says Jerry Stephens, Ph.D., director of the library.

Sterne Library is receiving a makeover during this academic year, and Library Director Jerry Stephens says the inconveniences will yield rewards.

**PARDON OUR PROGRESS**

New and improved library in 2010!

Sterne Library is receiving a makeover during this academic year, and Library Director Jerry Stephens says the inconveniences will yield rewards.
Guided dental implant surgery high-tech option for repair

Joseph Deatherage, D.M.D., M.D., considers himself lucky. Well, sort of. Deatherage, medical director of the Oral and Maxillofacial Surgery Clinic on Highway 150 in Hoover, has been where many of his patients find themselves — on the receiving end of a new tooth.

“It was a bike wreck about 10 years ago,” he says. “I cracked a tooth, which damaged the nerve. I had to get a root canal, and that failed. Then I had to have my tooth removed, and I had a removable artificial tooth made. I wore that for one night and couldn’t stand it. I just learned to smile crooked so nobody would see it was missing.”

Deatherage went on to get a tooth implant, one that he still wears today. “It looks and feels like a regular tooth,” he says. “I bet you can’t tell which one it is.”

Deatherage and his partner, David Roden, D.M.D., M.D., are experts on dental implants and offer a high-tech procedure that enables implant reconstruction with the latest 3D computer imagery and guided surgery techniques.

The guided dental implant surgery procedure delivers permanent, fully functional teeth to a patient with just one two-hour surgical procedure.

“The with the guided technology there are two phases: the fabrication of the prosthesis and the surgery,” Deatherage says. “When the patient comes in, we image and scan the patient with a 3D CT scan that is then generated into computer models. With that we can develop a 3D view of the jaw, sinuses and the nerves so we can see exactly where we have room for the implants and whether or not we’ll have to place bone grafts.”

The data is then transmitted to Nobel Biocare, creator of the first dental implants more than 40 years ago. The company fabricates the prosthetic teeth and a template that is identical to the patient’s jaw line. The template gives Deatherage and Roden a surgical guide to assist in precise placement of the implants.

“Nobel Biocare uses computer-generated technology to make a model of the jaws and teeth, and then they make the stent that precisely fits on the patient’s gum tissue,” Deatherage says. “The stent is held in place with little screws. Then we can drill using that guide as a template knowing based on the computer radiographic data that we’re not going to go into the sinuses, and we’re going to stay away from the nerve. We can very precisely place the implant exactly as we had planned it on the computer.”

Some patients will have their prosthetic teeth placed the same day as the stent, Deatherage says. Others return for a single, one-hour surgery under local anesthesia.

“The procedure is much less invasive than traditional implant surgery and has much less trauma for patients.”

“They did it on the computer.”

“With the guided technology there are two teeth to a patient with just one two-hour surgery under local anesthesia.”

Deatherage says bone loss is common for those who lose teeth, saying the teeth are needed to keep the bone in shape.

“Bone is a dynamic tissue. So for bone to maintain its mass it has to have a functional stimulus,” Deatherage says. “If you put your arm in a cast and don’t use it for a few years, you’ll still have bone there but it shrinks in mass and density. In the jawbones, the teeth, every time you bite it stimulates the maintenance of that bone. So when you lose the tooth through disease that causes bone loss, then that bone atrophies away.”

Some patients can have so much bone loss that there’s no bone in the upper jaw to place the implants. Bone grafting then becomes a must.

Bone can be harvested from the other jaw, the tibia, the hipbone and, in extreme cases, from the skull. Some patients also opt for cadaveric bone because it’s less expensive and doesn’t require a second surgery.

Good for your health, self-esteem

Numerous studies in recent years have lauded the positive impact healthy teeth can have on the rest of the body.

Deatherage points to a study at a Veteran’s Administration hospital in Texas that examined the consequences of having no teeth. It revealed that patients with no or few teeth reported digestive problems among other systemic health problems.

When the patients were given implants it improved their chewing function and had a profound effect on their self-esteem — a key component for why many want to have implants.

Deatherage comes from a family of dentists. His father, both of his brothers, and some of his uncles and cousins are dentists. He had never had any complicated dental work prior to losing his tooth, but says the experience hummed the effect the cosmetic part of tooth loss can have on his patients.

“I was fishing in Alaska with one of my brothers and I hadn’t told him about losing my tooth,” Deatherage says. “I’m not very vain, but my brother saw it and says ‘You’re missing a tooth!’ Then I could see what my patients felt like when someone looked at them funny because they’re missing a tooth.”

“It was actually a good experience for me. I was courteous to my patients and sympathetic to the fact, but it definitely gave me a new appreciation for what they are going through.”

The 3D computer imagery and guided surgery also is available at the Oral and Maxillofacial Surgery Clinic at The Kirklin Clinic.

Contact Deatherage for more information at jjddmdmd@uab.edu or call 907-1173 for appointments.

Guided dental implant surgery works best for full-mouth implant rehabilitation.

People who suffer from long-standing tooth loss due to their jawbones dissolving away are candidates for the procedure. Those who have suffered a traumatic face injury that resulted in tooth loss or had jaw bone reconstructed after battling cancer also are candidates, as are those who have lost teeth and bone due to gum disease or other factors.

Deatherage says bone loss is common for those who lose teeth, saying the teeth are needed to keep the bone in shape.

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Though the nation has a multitude of universities that have buildings older than our institution, UAB faculty, staff and students have made the most of their time. In four decades, UAB has become a world-renowned research university and health-care center. Alabama’s single largest employer and the economic engine of Birmingham with an impact exceeding $3 billion. Its campus — covering more than 80 city blocks — is home to more than 18,000 students and some 18,000 faculty and staff. So this university known for establishing traditions and shattering norms will observe its first University Day on Thursday, Sept. 24 and commemorate its founding and 40th anniversary.

In coming years, University Day will become an annual event to celebrate UAB’s founding and future. A convocation celebrating “UAB: Forty Years of Breakthroughs” will begin at 9:30 a.m. in the Alys Stephens Centerjemison Concert Hall. Everyone in the UAB family — students, parents, staff, faculty, retired employees, alumni and friends — is invited and encouraged to attend.

President Carol Garrison and Provost Eli Capilouto have invited 40 distinguished UAB alumni representing the graduating classes from 1969 to 2009 to attend. Chancellor Malcolm Portera of the University of Alabama System will speak, and four graduates, one from each decade, also will present remarks during the ceremony.

The UAB Student Alumni Society is coordinating a food drive during the 40th anniversary celebration to respond to Birmingham community needs. Canned and non-perishable food items will be collected at locations across campus and distributed to area food banks.
Part of the fun in traveling to exotic places is exploring things new and unfamiliar.

John Van Sant, Ph.D., associate professor of history, knows this. When he leads students on a two-week study-trip to Japan, he encourages them to notice the differences and to find the similarities.

“We see some old and well-known temples and shrines, particularly in Kyōto,” Van Sant says. “But we also go to see some modern things, too, particularly in Osaka, which is a very modern, glitzy city in every sense.

“A place like Japan seems completely different to the United States to some people, but there are many similarities. The people there often have similar concerns and interests to Americans.”

Van Sant will be taking students to Japan in May 2010 as part of the UAB in Japan faculty-led program. Faculty and students can learn about this and other study-away opportunities during the Study Away Fair, Thursday, Sept. 17 from 10 a.m. to 2 p.m. in the Hill University Center lobby.

The Office for Study Away will promote its 2010 UAB faculty-led programs and answer questions about funding opportunities. Appointments for additional program presentations and Q&A will be available online.

The Office for Study Away offers students the opportunity to complement and enhance their degree programs by participating in its programs. UAB has more than 101 affiliations with universities in 46 countries. Programs of study include graduate-level coursework, internships and research projects, field studies and clinical or observational externships.

Fantastic opportunity
Van Sant took nine students to Japan in 2008 and will take as many as 10 students there in 2010.

Van Sant, who lived in Osaka for six years and Kyōto for one year, will travel with students to those cities and Hiroshima, among others.

The itinerary reflects his teaching objectives: Explore the historical and cultural traditions of Japan and also its urban traditions to find the similarities between American and Japanese culture.

“Osaka and Hiroshima are great modern cities that students can compare to cities they know in the United States, like Birmingham,” Van Sant says. “It’s a fantastic opportunity to show and teach students about the history and society.”

Full immersion
Kristen Shealy, a pre-med senior majoring in International Studies with a minor in chemistry, took part in the International Partnership for Service Learning and Leadership program in Siena, Italy, this past summer. Shealy chose the program for its service-learning aspect.

“I wanted full immersion into a culture, and I really liked the opportunities IPSL offered to volunteer within the community of Siena,” Shealy says.

One of the highlights of her experience was the opportunity to learn about the socialized Italian health-care system.

“We learned the theory behind socialized health care in Italy and then saw it in action when we toured an Italian hospital or volunteered in a nursing home,” she says. “It is interesting to see what works, what does not work and what—as Americans—we can learn from the structure of the Italian health-care system. It gave me a better perspective on the current health-care debate here.”

Shealy says the opportunity to immerse herself in a culture half a world away gave her a new perspective on life abroad and at home.

“My mindset has changed to think beyond the local or even national levels to a more global level,” she says. “It gave me the desire to continue my travels around the world, and to experience more of my own culture here in Alabama. I learned to work with different people, overcome language barriers and appreciate cultures other than my own.”

The Office for Study Away works in tandem with Academic Programs and Policy and the schools throughout campus to provide a multitude of possible course equivalences so that students do not have to take their degree programs on hold while they study away.

“We truly can find a program tailored to each student’s specific goals, and that is why we encourage students to visit the fair and explore the possibilities,” Levens says.

“They can make an appointment to talk to us one to one about making their goals a reality.”

Visit www.studyabroad.uab.edu for more information.

NEUROSCIENCE
CONTINUED from page 1

More than 100 neuroscience programs exist in the United States, says McFarland. Of more than 2,000 four-year colleges and universities in the United States, fewer than 100 offer a degree in neuroscience.

“Neuroscience is a hot area of science and research that describes the outcome of their research. Program and helps with the honors thesis entrance into these schools. The program will make them highly competitive for academic and research foundation that they will already have completed a very rigorous junior-year curriculum and an in-depth research project; they’ll be really well prepared,” Theibert says. “If students want to go to medical, dental or optometry school, they will have an outstanding academic and research foundation that will make them highly competitive for entrance into these schools. The program will provide tremendous opportunities for our students.”

Visit www.unp.uab.edu to learn more about the Undergraduate Neuroscience Program.

Classes in the School of Medicine, and they will spend their final two years in neuroscience laboratories conducting individual research under the guidance of a mentor.

“This is an honors major with one-to-one laboratory experiences,” McFarland says. “Our students are going to spend at least two years working in labs with some of the best scientists in the country. They’re going to graduate with publications. They’re going to do something nobody else in Alabama has ever done.”

Hot area of science
The Comprehensive Neuroscience Center, directed by David Stanfield, M.D., Ph.D., supported Sweatt, McFarland and Theibert.

“This major is greater than any one department, Standaert says. “It’s reaching out and changing the university by opening the door to an undergraduate major that we hope will produce students who will enter our graduate programs, and we hope it will become a magnet to draw the best and brightest. That’s the kind of systemic change we like to see in order to make a difference.”

Theibert, director of the program, authored the program proposal — a document that required months of planning supported by extensive discussion with UAB faculty and administration, plus research in neuroscience programs at some of the nation’s most prestigious universities. Theibert says UAB is launching this degree program at the right time.

“Neuroscience is a hot area of science and research,” Theibert says. “A large amount of NIH and foundation funding is being invested in research in neurodevelopmental, cognitive, neurological and psychiatric disorders. We expect this trend to continue for decades.”

One of the highlights of the program is mentoring. Students will be matched one-to-one with an honors research advisor who guides their development in the research program and helps with the honors thesis that describes the outcome of their research. Students also will be required to make a public presentation of their research during their senior year.

Theibert says students graduate from the program will have broad graduate- opportunity opportunities.

“If students want to go to graduate school and do biomedical research or pursue public health in the future, they will already have completed a very rigorous senior-year curriculum and an in-depth research project; they’ll be really well prepared,” Theibert says. “If students want to go to medical, dental or optometry school, they will have an outstanding academic and research foundation that will make them highly competitive for entrance into these schools. The program will provide tremendous opportunities for our students.”

Visit www.unp.uab.edu to learn more about the Undergraduate Neuroscience Program.
Trial offers hope to people with uncontrolled hypertension

Teresa Bumgartel didn’t see her little girl Abbey when she first learned to crawl. She also didn’t get a chance to see her take her first steps.

Bumgartel was bedridden with resistant hypertension, or blood pressure that can’t be adequately controlled with regular medication.

“I was as low as you could be emotionally,” Bumgartel says. “I had no zest for life left in me.”

An international clinical trial at UAB is giving Bumgartel renewed hope: The Rheos Hypertension Therapy System is a high-blood-pressure treatment that consists of an implantable device designed to electrically activate the body’s own natural blood-pressure-regulation system in order to treat drug-resistant hypertension.

The data collected from this study will be used by the Food & Drug Administration to evaluate whether the device should be made available for sale in the United States.

Bumgartel is one of approximately 260 people to have the device placed in their body in this trial. She was UAB’s first implant in January 2008. Bumgartel no longer has blood pressure readings above 250 any more, and she’s also not confined to the four walls of her bedroom.

“I’ve had blood-pressure readings as low as 120 over 80—something, which is very exciting,” she says. “I can finally be a part of what my children are doing. I can go to baseball games and watch now. Before I couldn’t even finally be a part of what my children are doing. I can go to baseball games and watch now. Before I couldn’t even be a part of what my children are doing. I can go 

“Some of the early analysis suggests the Rheos device will have its intended effect,” Passman says. “But still there are questions that have to be answered.”

“Do we know that all of the people who have the device see their blood pressure drop when they come in every month for their dose-response testing?” Passman says. “But the study has to determine other things like durability and tolerance. All of that should get sorted out in the research data.”

Bumgartel says the Rheos trial is giving her hope that her blood pressure will stabilize.

“There were no other options for me,” Bumgartel says. “I couldn’t function as a person. I’m grateful just to have this chance to see if we can get my blood pressure stabilized for good.”

Similar to pacemaker

Marc Passman, M.D., associate professor of surgery, is the principal investigator at UAB for the Rheos trial. He has implanted seven devices since the trial began this past year.

“The Rheos system is an interesting device because it works on blood pressure from a more central mechanism,” Passman says. “Many of the available medicines work on different pathways of blood-pressure control, but the stimulator device on the Rheos system stimulates the carotid baroreceptor directly, lowering blood pressure.”

A person can lower their blood pressure by rubbing their carotid artery just below the ear lobe on the right side of their neck, which sends small electrical impulses to the carotid sinus.

“It’s almost like rubbing your carotid with an electric stimulus that activates the carotid sinus,” Passman says. “It’s more or less fooling the body into thinking it needs to lower the blood pressure. It’s essentially doing what the body is not doing on its own; it’s stimulating the carotid so the body will respond as it normally should when you have high blood pressure.”

The implanted device is the same size as a pacemaker and consists of a generator and two leads that are surgically implanted and wrapped around the carotid arteries where the baroreceptors are located.

A probe that goes on the chest wall over the power unit turns on the device externally. It is then activated through a remote computer where doctors can change the settings on the device to fit the patient’s needs.

“It’s like a pacemaker for the blood pressure,” Passman says.

Determining eligibility

Eligibility to participate in the study is based on a specific set of criteria. Candidates must:

- Be ages 21 to 80
- Have a blood-pressure reading for which the bottom number is 160 or above
- Have a blood-pressure reading for which the bottom number is 80 or above
- Be taking two or more drugs for high blood pressure
- Not have had a procedure or treatment such as radiation, endovascular stent placement or surgery to the carotid sinuses

The device is implanted in everyone participating in the clinical trial, but one-third of the participants do not have their device turned on for six months. Physicians do not know whether a recipient’s device is on or off during the first sixth months. Every patient has their device tested when they come in every month, and after six months every recipient’s device is turned on.

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Teachers prepare for urban education

In some Birmingham-area school districts, up to a quarter of new teachers leave within the first three years, frustrated by crowded classrooms, inadequate funding, and other challenges.

A UAB Magazine Online feature describes how the Urban Teacher Enhancement Program (UTEP) is changing that statistic with specialized training and mentoring—and shares the stories of alumni applying their new skills in Birmingham classrooms.

Students in the UTEP program learn teaching strategies that are most effective with groups of culturally diverse children, English-language learners and students with disabilities. UTEP classes are co-taught by UAB faculty and master teachers from the program’s partner school districts.

To read more, visit www.uab.edu/ubamagazine.
New therapeutic target may help patients with pulmonary fibrosis

UBC researchers have identified an oxidant-generating enzyme, NOX 4, as a key element in the development of fibrosis, or scarring, in the lungs and other organs. In findings published online in Nature Medicine, the research team successfully treated mice with idiopathic pulmonary fibrosis using genetic and pharmacologic strategies aimed at NOX4.

New Web site to track data on sedation safety

UBC has launched a new Web-based data repository to examine the incidence of adverse events during procedural sedation and the conditions that exist during these events. Designed by Chad Epps, M.D., assistant professor of Clinical & Diagnostic Sciences and Anesthesiology, SafeSedation.org is an online site where health-care professionals from facilities across the country can report on procedural sedation safety. The site has the ability to track metrics associated with procedural sedation and satisfies Joint Commission standards for tracking and notification of these events.

Hypothermia used to prevent brain damage after cardiac arrest

UBC emergency medicine physicians are inducing hypothermia in patients with cardiac arrest in an effort to prevent brain damage caused by loss of oxygen. Patients whose hearts stop and then are restarted following CPR or defibrillation are candidates for the hypothermia therapy, which cools the patient to 32 degrees Centigrade (89.6 Fahrenheit).

TB bacteria’s secret to survival uncovered

UBC researchers have discovered a key mechanism behind the survival instinct of tuberculosis, one of the world’s leading cause of death. The researchers looked at how Mycobacterium tuberculosis (Mtb), the causative agent of tuberculosis, survives on fatty acids and regulates its metabolism to persist in humans for extended periods, a finding that paves the way for developing new drugs and better vaccines to fight TB’s drug-resistant latent state, the researchers said.

Soft-tissue masses should be biopsied by cancer specialists before removal

Patients with a suspected benign, soft-tissue tumor who get an early referral to a cancer specialist have better outcomes if the tumor is a malignant sarcoma, who get an early referral to a cancer specialist have better outcomes if the tumor is a malignant sarcoma, according to new research published in the American Journal of Surgical Oncology. Orthopaedic surgeon Herrick Siegel, M.D., says that early referral to a sarcoma specialist can avoid many of the complications that occur when excisions are not performed at cancer centers. There is less chance that the cancer will return and less likelihood that major reconstructive surgery, or even amputation of a limb, would be necessary.

New parents overlook dangers in the home

UBC psychology researchers report that new parents identified less than half of the safety hazards in a simulated home environment, and most perceived that their children were less vulnerable than other children. The findings appeared in the journal Accident Analysis and Prevention. UAB doctoral student Joanna Gaines is the lead author of the study, and UAB pediatric psychologist David Schwebel, Ph.D., is its co-author.

UBC joins study of mobility/exercise in Parkinson’s patients

UBC is one of four U.S. sites participating in a study of long-term changes in quality of life and mobility that occur in people with Parkinson’s disease. The results of this research will help advance the understanding of the way interventions, such as exercise, produce changes in quality of life and mobility during the course of the disease.

AIDS research center earns grant renewal

The UAB Center for AIDS Research has won a $7.5 million grant for its work in the research, prevention and treatment of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). “This award enables us to keep moving forward into those areas, projects and techniques used to fight HIV and adapt to and explore projects that I consider leading-edge or uncharted,” said Michael Saag, M.D., director of the UAB CFAIR. “Our center has excelled in the basic science of HIV, and now we’re doing the same in terms of patient care — advancing the mes-

Whitley serving on national swine flu working group

Director of Pediatric Infectious Diseases Richard Whitley, M.D., was tapped to serve on the 2009-H1N1 influenza working group of the President’s Council of Advisors on Science and Technology (PCAST). The group is providing recommendations to U.S. President Barack Obama, through PCAST, on federal activities needed to respond to H1N1, or swine flu. Issues examined by the group include infection data collection, vaccine production, drug stockpiles, preparedness plans and other public-health concerns, Whitley said.

Whitley is co-director of UAB’s Center for Emerging Infections and Emergency Preparedness and a renowned researcher on the antiviral therapies designed to fight infections in children and adults. He is president elect of the Infectious Diseases Society of America (IDSA) and serves on the Advisory Council for the National Institute of Allergy and Infectious Diseases (NIAID), one of the National Institutes of Health. PCAST, administered by the Office of Science and Technology Policy, and its working groups include the nation’s leading scientists, doctors and engineers who directly advise the president and the Executive Office of the President on prevention, planning, best practices, resource allocation and other responsibilities.

Researchers: Vine that ate the South may provide health benefits

Kudzu, the fast-growing vine that has gobbled up some 10 million acres in the Southeast, may prove to be a lifesaver for people with metabolic syndrome, a condition that affects 50 million Americans.

In findings published in the latest Journal of Agriculture and Food Chemistry, which is posted online at http://pubs.acs.org/journal/jafcdu, UAB researchers say studies on animal models showed that substances called isoflavones found in kudzu root improved regulation of blood pressure, cholesterol and blood glucose. The isoflavone purarin, found only in kudzu, seems to be the one with the greatest beneficial effect.

Learn more about these topics and other UAB research at www.uab.edu/news.
Five-Time Grammy Winner

BUDDY GUY

Saturday, September 26 • 8 p.m.

This Rock and Roll Hall of Fame inductee has received five Grammy Awards, 23 W.C. Handy Blues Awards (the most of any artist), and the Presidential National Medal of Arts.

Join us at 6:30 p.m. for a season kickoff party in the Haskell Courtyard with live music from Tennessee Hollow, Dreamland BBQ, and cash bar.

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September 17

Thursday, 6-9 p.m.
Enter for a chance to win a brand new smart® car!

David Sedaris

October 9

Friday, 8 p.m.

On Stage w/ the Band Series

Jim Lauderdale
Bluegrass Trio

October 14

Wednesday, 7 p.m.

Arts in Action LIVE!
Free Family Event

September 20

Sunday, 1-3 p.m.

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