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Inside

How AU Stacks Up

Educational level of Auburn University faculty, 2004

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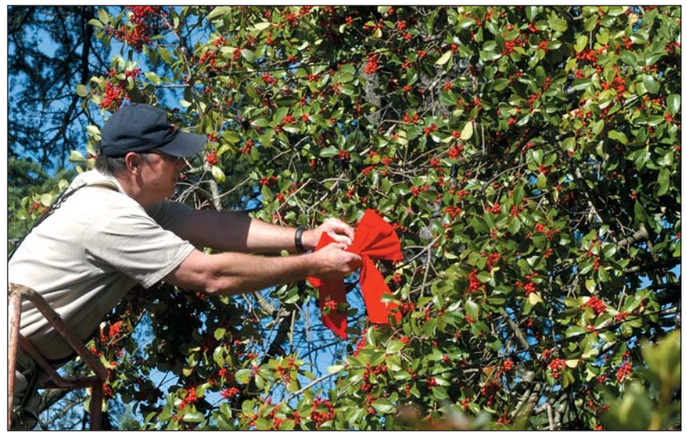
AU report
FOR THE FACULTY AND STAFF OF AUBURN UNIVERSITY



Tying one on
Dwayne Morgan of Landscape Services in the Facilities Division reaches into the upper branches of the large holly at the northeast corner of Samford Hall to tie on one of dozens of large red bows last week. The bows and lights on the tree are part of AU's annual decorations for the holiday season.

At annual meeting

SACS announcement due Tuesday

The Southern Association of Colleges and Schools will issue a report Tuesday on AU's accreditation.

Auburn's accreditation status was among agenda items for the annual meeting of SACS Commission on Colleges that began Saturday in Atlanta. The commission is considering the reports of an assessment team that reviewed university academics and a special committee that reviewed AU governance.

The first committee, visiting in February as part of the regular 10-year accreditation process for all SACS-member institutions, gave AU a favorable report and was highly complimentary of Auburn's academic and support programs.

The special committee visited Auburn in September to confirm AU's compliance with SACS criteria on governance, athletics and commitment to the accreditation process. Those criteria were cited by the commission in December 2003, when it placed AU's accreditation on 12-month probation.

In its written report in November, the special committee complimented the university on its compliance initiatives and issued three recommendations. The AU Board of Trustees passed additional measures on Nov. 12 addressing the committee's recommendations.

However, trustees and interim President Ed Richardson said they felt that the requirements for one of the latest recommendations had been met already but they would take additional steps toward compliance. In that recommendation, the SACS committee requested "that the Board of Trustees take appropriate actions to ensure that it lives up to its own Code of Ethics and that the Board is not controlled by a minority of its members."

In its letter, the SACS special committee disagreed with the conclusion of the Board of Trustees' new audit committee that existing financial ties among some board members do not violate the board's new code of ethics.

The board's audit committee twice reviewed financial statements from trustees and concluded that financial ties between members were not excessive in terms of the members' total business activities and were typical of collegiate boards of trustees elsewhere.

The audit committee also determined that a majority of the board was unaffected by external business relationships among other members.

Richardson cited previous independent reviews

*(See **SACS report**, page 2)*

AU professor's quest for better view leads to new technology

A major breakthrough in microscope technology by an Auburn researcher is being unveiled to a national scientific audience this week.

A microscope using technology invented by Vitaly Vodyanoy of the College of Veterinary Medicine provides far higher resolution and has other significant advantages over current top-of-the-line research microscopes. The new technology enables medical and other researchers to observe living cells in extremely fine detail and without delays or extra steps for processing which are typical of current high-technology microscopes.

"The new technique extends light microscopy, offering a unique view of live cells and cell processes while they are occurring," Vodyanoy said.

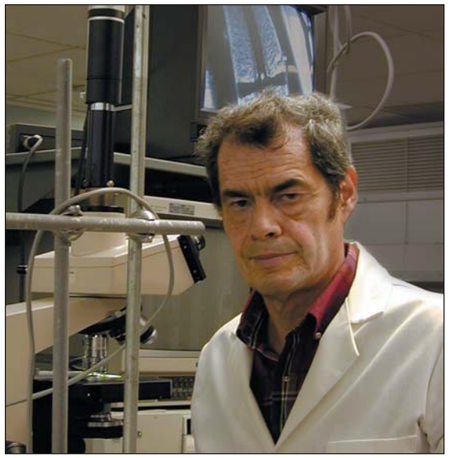
Aetos Technologies Inc., which licensed the technology from AU, is announcing the national market entry of Vodyanoy's microscope technology at the American Society for Cell Biology Annual Meeting on Dec. 4-8 in Washington, D.C.

The patented technology is based on a model Vodyanoy developed nearly 10 years ago to support his research on other projects. The veterinary researcher said he designed and built the first model because no other microscope could meet his needs.

The technology has won praise from other researchers, including John A. Smith of the University of Alabama at Birmingham Medical School. Smith, division director of laboratory medicine in pathology at UAB, told a Birmingham reporter that the new technology, with its higher resolution and "real time" applications, could help answer some fundamental questions of human biology.

The microscope accessory will be the first market offering by Aetos, a company created in October 2003 to introduce the inventions of AU and other researchers to commercial markets. "This is our Phase 1 microscope product," said Aetos President and Chief Executive Officer Charles Ludwig.

Trademarked as the CytoViva 150, the microscope accessory is adaptable to most major research and clinical microscopes currently on the market and will sell for about $15,000 per unit, Ludwig said. The price is a fraction of the cost of comparable but lower-resolution technologies, added Barbara Foster, a nationally recognized microscopy expert and marketing consultant working with Aetos.



Vodyanoy in his lab

The journey from laboratory bench to a marketable product was achieved in about 10 months. "We took Dr. Vodyanoy's proven technology and developed it into a high-end, extremely versatile and cost effective package," said Aetos Chief Operating Officer Sam Lawrence.

AU Vice President for Research Michael Moriarty noted that Auburn owns a 45 percent share in Aetos, but up to 60 percent of the company's net income will flow back to the university. A portion of revenue from marketing the discovery will support additional studies in veterinary and human medicine by a research team that includes Vodyanoy and 15 colleagues in the College of Veterinary Medicine.

SACS report

(continued from page 1)

to support the conclusion of the audit committee but said he has arranged for additional independent analyses from outside sources.

Meeting in a special session last Tuesday, the University Faculty passed a resolution asking trustees Bobby Lowder and Jack Miller to resign from the board. With one-eighth of Auburn's 1,100 faculty voting, the measure passed 131-9.

Supporters of the University Faculty resolution said they felt the need to make a statement because of the SACS committee's letter, which raised questions about the business relationship between the two trustees. Lowder's banking company is among several major clients of Miller's law firm, but the board's audit committee concluded that those business ties are within established ethical guidelines.

Richardson noted that the SACS committee asked not for resignations but for "appropriate actions" to ensure that AU trustees are adhering to the board's code of ethics.

He added that the university has tried to meet all accreditation criteria of SACS, and the external reviews are intended to address any remaining questions.

Upcoming Events

Tuesday, December 7

- Distance Education Seminar: "Quality Control/Assessment of Online Courses" 3 p.m., O.D. Smith Hall 328. Call 844-3476.

Friday, December 10

- First day of finals. Testing period includes Dec. 11 and Dec. 13-15.

Tuesday, December 14

- Health Insurance: Blue Cross/Blue Shield representative available for consultation, 9:30 a.m.-11:45 a.m., Ingram 212. No appointment necessary.

Monday, December 13

- Final AU Report of fall semester.

Wednesday, December 15

- Gallery Talk: Catherine Walsh, curator of exhibitions, discusses the Joan Cousins Hartman Collection of Tibetan Buddhist Bronzes, 2 p.m., Jule Collins Smith Museum of Fine Art.

Thursday, December 16

- Curator's Choice Film Series: "Louis Kahn, Silence and Light," film about a leading architect of the 20th century, 7 p.m., JCS Museum of Fine Art.

Friday, December 17

- Graduation: Ceremony at 2 p.m., Coliseum.

Wednesday, December 22

* Holiday Break: AU offices closed until Monday, Jan. 3.

2005

Monday, January 10

- First AU Report of spring semester.

Tuesday, January 11

- Classes start for spring semester.

AU Report Editor: Roy Summerford. Contributing editors and writers: David Granger, AU Communications; Jamie Creamer, Agriculture; Charles Martin, Veterinary Medicine; and Mitch Emmons, Research. Photography: Trice Megginson, Photographic Services; Charles Martin, Veterinary Medicine; Mike Clardy, OCM; and Sabit Adanur, Textile Engineering.

Assistant Vice President for Communications and Marketing: John Hachtel. Director of Communications: Deedie Dowdle.

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Auburn research discovery could save many lives

Filters made from microfibrous materials developed by an Auburn researcher could help save thousands of lives by removing carbon monoxide from fires at a rate 10 times more efficient than filters currently on the market.

Bruce Tatarchuk, an AU professor of chemical engineering, and his research team developed the ultra-small fibrous material to block carbon monoxide from fuel cells. The team quickly realized, however, that because the material — called MiniOx (short for "miniaturized carbon monoxide oxidation technology") — is more efficient, thinner and longer lasting than other materials used for filters, it could have applications beyond fuel cells.

"We have also been researching materials to filter out biological and chemical contaminants, so we had that pretext," Tatarchuk said. "At the same time, we know the fuel cell is very sensitive to poisons, more sensitive in fact, than human lungs. So, when we saw that this catalyst was doing so well for carbon monoxide with the fuel cells, we knew there was potential for the broader, human application."

Carbon monoxide kills thousands of people each year as a result of poor ventilation or fire in homes, factories, public buildings, high-rise office buildings, aircraft and vehicles.

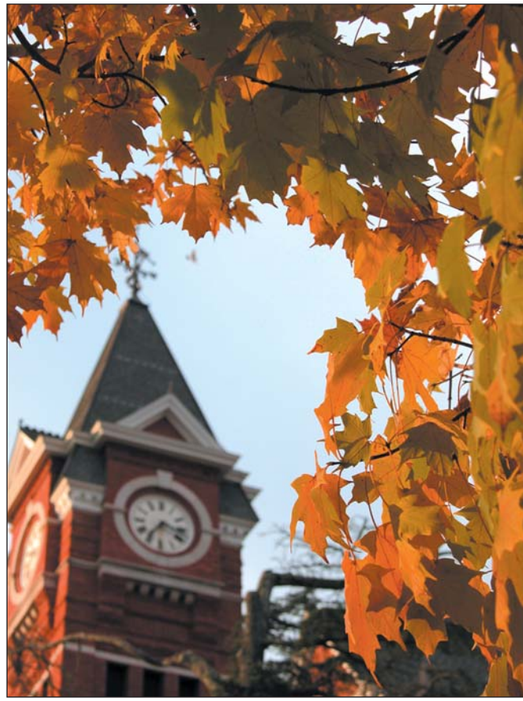
Tatarchuk said tests conducted under the authority of IntraMicron Inc., which licensed the technology from Auburn University, suggest that MiniOx filters easily exceed standards for carbon monoxide-removal efficiency for fire-escape products set by U.S. and international agencies.

At 4 millimeters thick, the MiniOx filters are one-tenth the size of current models, and they can last for hours instead of the 15-minute life of filters now in use. In addition, the new filters are not affected by humidity.

With its reduced bulk and substantial resistance to humidity, the MiniOx filter is much easier to breathe through, Tatarchuk said, adding that he foresees MiniOx being incorporated into light, folding masks that can be widely used. Also, he said, a MiniOx disk could be added to gas masks worn by military, first-responders and others whose masks currently include filters for hydrocarbons, acid gases and other contaminants, but not carbon monoxide.

"If people in high-rises or in homes had access to these light, folding masks, we could potentially prevent a lot of the deaths that currently result from fires," he said, noting that smoke inhalation is the leading cause of death in building fires.

Tatarchuk said the material could also be used in air-circulation units to remove carbon monoxide from aircraft cabins and homes.



End of autumn

With winter approaching, Auburn is seeing the last vestiges of fall color, such as this recent scene in Samford Park.

Smith Museum wins top awards for publications in regional competition

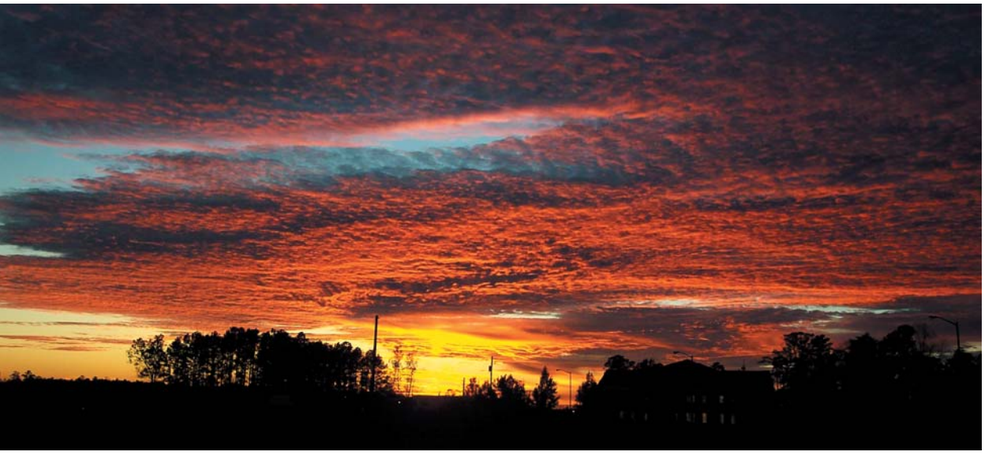
AU's Jule Collins Smith Museum of Fine Art has, for the third year in a row, won multiple first place awards in the Southeastern Museum Conference Publication Design Competition.

The AU museum received three first place awards and one second place award for designs by museums with operating budgets of $500,000 to $2 million.

Dana Ezzell Gay, an assistant professor in the Department of Art, designed the first-place winning publications: JCSM Newsletter, Gary Chapman: Paintings brochure and the JCSM AfterHours postcard series.

The JCSM Opening Invitation and Materials Packet, designed by Shannon Bryant-Hankes, received second place.

The SEMC Publication Design Competition recognizes excellence in graphic design of southeastern museum publications. The competition encourages communication, effective design, creativity and pride of work, and recognition of institutional image and identity.



Looking west

One of the advantages of cool weather last week was this colorful sunset over campus. Sabit Adanur of Textile Engineering was at Davis Arboretum when he captured this brilliant image.

Researchers investigate relationship between prenatal diet, later diabetes

What do pigs, a mother's prenatal diet and the onset of diabetes during middle-age have in common?

A team of Auburn researchers is using pigs and advanced genetic technology to investigate how a mother's diet during pregnancy affects the likelihood that her offspring will acquire type 2 diabetes later in life.

The research project involves faculty members from the colleges of Agriculture, Veterinary Medicine and Human Sciences. The six researchers are studying the impact of an inadequate prenatal diet on fetal growth and on the "programming" of developing tissue that is essential to establishing normal responses to insulin.

The research team is building on other studies that have associated low birth weight and growth retardation early in life with the development years later of insulin resistance, or type 2 diabetes. Insulin is the hormone that controls blood glucose levels.

"Numerous case studies and research involving rodents have established a clear connection between malnourished fetuses, low birth weight and the later development of type 2 diabetes, but rodents may not be the best model for the study of this problem in humans," said Frank Bartol, an AU animal scientist and Alabama Agricultural Experiment Station researcher who specializes in the reproductive biology of swine.

Bartol said the swine model system the team is developing will more accurately bridge the gap to understanding the human condition of type 2 diabetes because the pig is similar to humans on biological, metabolic and genetic levels. Pigs already are used in studies of hypertension and related cardiovascular disorders.

Bartol said the Auburn study appears to be the first in the area of fetal programming of type 2 diabetes to use a pig as a biomedical research model and the first to use DNA microarray analysis, a technique that allows researchers to evaluate thousands of gene expression events simultaneously instead of only a few at a time.

With microarrays, scientists can see how groups of genes in a tissue express themselves at a particular time under a particular set of conditions — in this case, as a consequence of poor fetal nutrition.

The swine study will help to define dietary factors that affect the development of these tissues during fetal life and should encourage high-quality diets during pregnancy as a means of reducing the incidence of diabetes, Bartol said.

The two-year study is funded by a grant from the nonprofit Diabetes Trust Foundation. Bartol and Robert Judd are leading the Experiment Station project. Judd is an associate professor in the College of Veterinary Medicine and director of the Boshell Diabetes and Metabolic Disease Research Program.

Burque wins state educator award

Angie Colvin Burque, an assistant clinical professor of social work at AU, has been named Alabama Educator of the Year for 2004 by the Alabama/Mississippi Social Work Education Conference.

Burque, an AU faculty member for 12 years, is field coordinator for the undergraduate social work program in AU's College of Liberal Arts.

AU faculty member receives national honor

Francesca Adler-Baeder of AU's College of Human Sciences has received the Family Life Early Career Achievement Award for 2004 from the National Council on Family Relations.

Adler-Baeder, an assistant professor in the Department of Human Development and Family Studies, received the award recently during the council's meeting in Orlando, Fla.

The National Council on Family Relations presents the award annually to recognize significant achievement in the fields of child development and family life.

The 2004 award recognizes the AU faculty member for developing an educational program that helps children and adults learn how to develop positive roles and relationships in stepfamilies.

Taught widely across the United States, "Smart Steps for Stepfamilies," is a 12-hour course that teaches remarried parents and their children how to build successful stepfamily relationships.

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