Auburn Teams With Business to Develop Biofuels

The Natural Resources Management & Development Institute at Auburn has entered into a collaborative agreement with the Colorado-based biomass conversion technology company PureVision Technology Inc. for research and development of biofuels and biomass products.

As part of the agreement, PureVision is providing a continuous biomass fractionation process development unit to Auburn for use in research and technology commercialization initiatives.

The unit rapidly converts cellulosic biomass into sugars and lignin for making many bio-based products, including biofuels and industrial chemicals. For use by Auburn’s Center for Bioenergy and Bioproducts, the unit will be located in newly renovated space in the Forest Products Laboratory and will be available for interdisciplinary collaborative programs to advance biomass research programs.

“Our biorefining research and development programs are focused on deploying these advanced biomass fractionation technologies in conjunction with biochemical and thermochemical conversion processes to take advantage of Alabama’s abundance of natural resources, particularly woody biomass, and convert them into energy or liquid fuels,” said Steve Taylor, Center for Bioenergy and Bioproducts director.

Taylor said the PureVision unit provides Auburn researchers with unique capabilities for fundamental and applied research on biomass feedstocks that are readily available in Alabama and throughout the Southeast for conversion to bioenergy and a variety of bioproducts. Funding for these efforts is being provided by the university, the Alabama Department of Agriculture and Industries, the U.S. Department of Agriculture and the U.S. Department of Energy.

The PureVision unit also will be used by the Alabama Center for Paper and Bioresource Engineering.

“We are pleased to have the PureVision technology available for pursuing biomass fractionation and utilization programs,” said Harry Cullinan, center director.

(BIOFUELS, continued on page 5)

Just days before his 92nd birthday, Dean Emeritus James E. Foy leads a crowd of students, friends and well-wishers in his classic rendition of the “War Eagle” cheer. During and after his days as dean of students in the 1950s, ’60s and ’70s, the popular dean became so adept at the cheer that it became his nickname, Dean War Eagle Foy. Joining him on stage here are current Dean of Students Johnny Green, Aubie, former Coach Pat Dye and President Jay Gogue. Foy led a parade and festivities on Nov. 5 for the dedication of the new Student Center and the Foy Information Desk.
Message from the President

Dear Auburn Alumni and Supporters,

Initiatives in Auburn University’s recently completed strategic plan to enhance academic quality and reputation are under way. For this year, Auburn is concentrating on 35 of the 58 tactics in six strategic priority areas, and the first status report to the Board of Trustees in November summarized progress to date. Among the highlights reported:

- The writing requirement on ACT/SAT college entrance exams for entering freshmen will be implemented this year, and a writing center operational by this fall to help colleges and schools implement new standards for improving the quality of student writing across the curriculum and within their disciplines.
- Faculty and academic administrators are developing a new model for the Honors College. A successful Honors College is a critical catalyst to increasing institutional quality, and a key draw for top performing students.
- Providing students more international education presents a challenge Auburn is determined to meet. While the university is expanding programs and incentives to get more students involved in Study Abroad, many students can’t participate due to financial or other reasons. Administrators and faculty are working together to find ways to help these students increase international knowledge that prepares them for a global society.

Each school and college at Auburn now has at least one Study Abroad program, and the number of students in the Auburn Abroad faculty-led and exchange programs increased from 469 two years ago to 565 last year, with an additional 137 students approved to study at international universities for Auburn credit. So, the total number of Auburn Abroad students reached 702 last year. Twenty new Auburn faculty-led programs have been added for 2008-09, bringing the total number of programs to 49, and the goal is to move toward a 20 percent participation rate for all programs abroad.

The university should make rapid progress this year in establishing learning communities where students with similar academic interests are grouped to support their long-term academic development. The Village residential community is being built to facilitate that model, and more opportunities to encourage involvement in service learning, another widely cited element of academic growth, are under way.

The campus community has shown a great deal of initiative in developing and implementing a workable strategic plan, and periodic review and adjustments to meet changing conditions will help ensure continued participation and success.

War Eagle!

Jay Gogue

Auburn Joins NSF to Boost Minority PhDs

The National Science Foundation has selected Auburn as one of 18 sites in the nation for the foundation’s 2008-10 Louis Stokes Alliance for Minority Participation Bridge to the Doctorate program.

The program provides funding to underrepresented minority students in science, technology, engineering and mathematics disciplines for the first two years of their graduate studies as part of an effort to increase the number of domestic minority PhDs in these fields.

Other 2008-10 Bridge to the Doctorate universities include Arizona State, UCLA, LSU, North Carolina State, Oklahoma State, Florida and Maryland.

The Auburn site will receive $1 million over two years to support 14 Bridge to the Doctorate Fellows in biological sciences, computer science and software engineering, industrial and systems engineering, electrical engineering, nutrition and food science, mathematics and statistics. Fellowship recipients come from Alabama State, Alabama A&M, Auburn, Birmingham-Southern, California State University at Dominguez Hills, Johnson C. Smith University, North Carolina A&T, New Mexico State, Rensselaer and Texas A&M.

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Faculty In The News

J. David Irwin, who retired in December after serving as head of the Department of Electrical and Computer Engineering for 35 years, has been named an American Association for the Advancement of Science Fellow. His election as a Fellow was in recognition of his distinguished contributions to the field of electric circuits and for leadership in engineering education and the profession.

Irwin will be presented with an official certificate and a blue rosette pin on Feb. 14 at the 2009 AAAS Annual Meeting in Chicago, Ill.

Jack Feminella, a professor in the College of Sciences and Mathematics’ Department of Biological Sciences, has been named department chair for a four-year term. He succeeds Jim Barbaree, who served in that position for more than five years.

Journalism Professor Ed Williams recently received the 2008 Distinguished Adviser Award of the College Media Advisers, a national association for collegiate media advisers.

Williams, who continues to teach in the Department of Communication and Journalism, stepped down last spring as faculty adviser to the Auburn Plainsman. During his 25 years advising the student newspaper’s editors and staff, Williams won several teaching awards and the Plainsman won 13 Pacemaker Awards, which recognizes quality in student journalism.

The Auburn Alumni Association will present its 2008 Minority Achievement Award on Nov. 8 to Shirley Scott-Harris, director of the AT&T Minority Engineering Program in the Samuel Ginn College of Engineering.

The award recognizes Scott-Harris for her contributions toward attracting, retaining and improving the graduation rates of minority students at Auburn. She will receive the award at the association’s annual Minority Alumni Involvement Now Event brunch at the Auburn President’s Home.

Bogdan Wilamowski, a professor in the Department of Electrical and Computer Engineering, has received the Commander

(CADC Students Build Replica of Slave Cabin for Westville History Park)

Students from the Design-Build master’s program in Auburn’s College of Architecture, Design and Construction have researched, designed and constructed a replica of a slave cabin in Westville, a living history town in Lumpkin, Ga., that portrays life in the pre-industrial South of 1850.

The installation in November was in conjunction with Westville’s fall festival. The village has historically accurate buildings, such as houses, schools, churches and shops but has not had interpretations of slave houses that would have existed during that period.

Westville’s board of trustees approached Anthony Carey, former chair of Auburn’s Department of History in the College of Liberal Arts, and D.K. Ruth of the Design-Build master’s program to help construct a historically correct 1850s slave cabin. Students, in a studio under the direction of visiting professor Anthony Tindill, created a plan for the design and construction of the structure. Westville then cut lumber to specifications and shipped the material to Auburn.

As a teaching tool for the students, the house was first constructed at Auburn. The disassembled structure was then shipped to Westville, where it was reconstructed in its permanent location.

Funded by the U.S. Department of Housing and Urban Development, the project was directed by Andy Mose, former chair of the Westville Board of Trustees, in collaboration with the History Department in Auburn’s College of Liberal Arts and the College of Architecture, Design and Construction.

Students in the College of Architecture, Design and Construction take a break during construction of a replica of a slave cabin for the Westville living history park. The students built the cabin on campus, and the building was later disassembled, moved to Westville in Lumpkin, Ga., and reassembled there. The inset shows a frontal view of the cabin as it neared completion.
The College of Business has established a new ethics center to help organizations avoid unethical practices and to teach students about appropriate business conduct. The Auburn University Center for Ethical Organizational Cultures conducts surveys to help clients determine if their organizations are operating in a proper manner.

“If we find an unethical culture, we will help the management develop a plan to correct it,” said Achilles Armenakis, the James T. Pursell Sr. Eminent Scholar in Ethics. “The small things we find may keep the organization from doing much worse later, like ‘cooking the books.’”

James T. Pursell Sr., founder of Pursell Technologies Inc. in Sylacauga, is presenting an annual award to fund the center. In 1998, he began supporting Auburn’s eminent scholar chair and program to help emphasize the significance of ethics to students.

“The College of Business eminent scholar program exposes Auburn University students to the importance of ethics in managing organizations,” said Pursell. “This new ethics center will complement the instructional program by conducting applied research within organizations and providing managers with the tools to assess an organization’s culture and to develop and maintain ethical management practices.”

Pursell is a 1952 graduate who came up with the idea of selling specialty controlled release fertilizers under the Sta-Green brand name. In March, the Auburn Alumni Association presented him with a 2008 Lifetime Achievement Award.

Armenakis says Pursell’s support will help organizations using the ethics center avoid pitfalls that are increasing in today’s business culture. He cites ethical problems found during annual surveys of 2,000 businesses by the Ethics Resource Center in Washington, D.C., which asks if participants have observed misconduct. More than 50 percent said yes. When asked if they reported it, more than 40 percent of the respondents said no. Misconduct encountered in the workplace might include conflict of interest, lying and abusive behavior.

“They either said they feared retaliation or felt it would not do any good to report it,” he said. “We want to help companies have ethical cultures and to foster an environment that does not punish those who report unethical behavior.”

Armenakis and other faculty and graduate students are conducting a case study with Pursell Technologies Inc. to conduct research methodology for studying other organizations. More than 30 faculty members in the College of Business devote a total of 150 classroom hours to teaching ethics. Graduating students also are asked to complete a questionnaire about their confidence in their grasp of ethics, as are various alumni and employers. “The cultures of organizations they join have been established already and the new graduates often face pressure to conform,” Armenakis said. “We want our students to recognize unethical situations and to make the right decisions.”

He said outside speakers also are used to illustrate the importance of proper workplace behavior. Previous speakers have included Jeffrey Wigand who exposed tobacco companies’ use of nicotine to make users addicted; Roger Boisjoly of Morton Thiokol who warned about the O-ring problems before the space shuttle Challenger explosion in 1986; and Roy Vagelos, retired CEO of Merck pharmaceutical company, who wrote the book, *The Moral Corporation.*

**EPA Designates Auburn 'Center of Excellence'**

The U.S. Environmental Protection Agency designated Auburn as a Center of Excellence for Watershed Management on Oct. 7, an action that Auburn President Jay Gogue said will enhance the university’s efforts to address water quality and availability issues in Alabama and the region.

Auburn is only the fourth Center of Excellence to be designated in the Southeast and the first in the state of Alabama.

Gogue and officials from the EPA and the Alabama Department of Environmental Management signed a memorandum of understanding to formalize the partnership among Auburn, the EPA and ADEM.

“We appreciate this opportunity to partner with the Environmental Protection Agency and the Alabama Department of Environmental Management to help manage water resources as prudently as possible, with an eye toward conservation and increased availability,” said Gogue. “Auburn has a broad array of expertise to contribute to these efforts.”

The EPA program works with colleges and universities to provide communities with hands-on, practical products and services to solve watershed problems, such as pollution control and water availability. EPA officials said the benefits of being a recognized Center of Excellence include technical assistance from the agency and EPA letters of support for grant opportunities.
Along with Auburn's Center for Bioenergy and Bioproducts, the Alabama Center for Paper and Bioresource Engineering has expanded beyond traditional pulping and papermaking processes to include advanced biorefining technologies for producing fuels and chemicals from woody biomass and other cellulosic feedstocks.

PureVision has been developing and scaling up its biomass conversion technology, known as biomass fractionation, since 1999. “This new collaboration with Auburn University will advance research and development initiatives and expedite the commercialization of those technologies needed to convert abundant cellulosics into bio-based fuels and chemicals,” said Ed Lehrburger, president and CEO of PureVision.

Students recently walked a print of one of the most famous paintings of the 20th century past Auburn’s Late Victorian Era Samford Hall as part of the School of Fine Arts’ annual Art Walk. The 12-foot-square print is a copy of Pablo Picasso’s Les Demoiselles d’Avignon (The Young Ladies of Avignon), which is one of the artist’s best known works and is frequently cited by art critics as a seminal work in the early development of the style known as Cubism. This reproduction was used in the University Theatre’s production of “Picasso at the Lapin Agile” in September.

The College of Education has announced the creation of two new offices, the appointment of an interim department head and the introduction of 12 new faculty members. The new faculty appointments include those filling formerly vacant positions as well as new positions.

Administrative appointees include Rodney Greer as director of the new Office of Research and Innovation, which the college created with the help of a $1 million gift by 1968 graduates Wayne T. and Cheryl Smith. The office supports faculty efforts to boost research opportunities by helping to identify, cultivate and pursue state, regional, national and international funding opportunities, as well as assisting in grant preparation and completion of funded projects.

Greer previously served for four years as assistant to the dean in Western Illinois University’s College of Education and Human Services, where he was responsible for teacher education partnerships, professional development and technology.

Melanie Brooks is coordinator of the new Office of International Programs, where she directs the Consortium for Overseas Student Teaching. Her work includes expanding opportunities for study abroad programs and promoting research and service learning opportunities for undergraduates, graduate students, faculty and staff. She serves in a joint appointment as a reference and instruction librarian at Draughon Library.

Wayne T. Smith Distinguished Professor E. Davis Martin is serving as interim head of the Department of Special Education, Rehabilitation, Counseling and School Psychology. The department is the result of the merger of the Department of Rehabilitation and Special Education and the Department of Counselor Education, Counseling Psychology and School Psychology in August. Martin, who joined the College of Education faculty in 2003, is graduate program director of the college’s rehabilitation counseling program.

Juan Gilbert, TSYS associate professor in the Samuel Ginn College of Engineering’s Department of Computer Science and Software Engineering, has been designated a National Associate of the National Research Council of the National Academy of Science for a lifetime appointment.

Gilbert’s appointment comes at the beginning of Auburn’s push to bring more members of prestigious academies to its campus. The university’s strategic plan, approved by its Board of Trustees in June, calls for increasing the number of members of preeminent academies among its faculty. President Jay Gogue said the presence of such faculty distinguishes leading national universities, helping them attract the best students and other top faculty to their institutions.

Engineering Dean Larry Benefield noted that competition for positions in these academies is rigorous. “Dr. Gilbert’s selection speaks volumes of not only his work, but also the caliber of faculty that call Auburn University home,” Benefield said.

The National Academies originated in 1863, when a congressional charter signed by President Abraham Lincoln created a private, nonprofit institution comprised of experts in the areas of science, health and technology from which national leaders and the general public have since sought critical advice.

**BIOFUELS**

*continued from page 1*

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Professor’s ‘Dirty’ Book (About Soils) Becomes Best-seller

An Auburn professor’s “dirty” book has become a best-seller in its field, but the book is “dirty” only in the sense of being about soils.

Soils Magic, a book by Civil Engineering faculty member David Elton, has become a best-seller for its discipline. Elton’s book has sold more copies than any other American Society of Civil Engineers book, exclusive of conference proceedings.

The book is used by universities, Boy Scouts, public schools and service organizations to explain inexpensive, simple experiments that often have unexpected results. In the book, Elton seeks to teach the principles of soil mechanics in an amusing and insightful way. His Soils Magic experiments have been performed in venues all around the U.S., including the Stardust Hotel in Las Vegas.

“I enjoy helping people learn about civil engineering and geotechnical engineering in particular,” said Elton. “Soils Magic provides just the right balance of fun and education to get people’s attention and teach them.”

Elton recently received a National Science Foundation grant based on Soils Magic.

The three-year, $300,000 grant, written with James Hanson of California Polytechnic State University at San Luis Obispo, involves new methods and technologies for teaching soil mechanics. “We’re excited to have this project and to be able to develop new ways for students to learn and to involve technology in learning,” said Elton.

Leading military and technology industries in Huntsville hosted 90 Auburn students in business and engineering as future career prospects at the Space and Rocket Center and other area locations Oct. 23-24. Staff and faculty from the College of Business also attended the event.

Ann Beth Presley, an associate professor in the Department of Consumer Affairs, has received the Educator of the Year award from the International Textile and Apparel Association.

In its fall 2008 issue, the Journal of Advertising ranks the Department of Marketing in Auburn’s College of Business fifth among academic programs in its field in terms of advertising research productivity for the period 1997-2006.

James Barth, Lowder Eminent Scholar in Finance in the College of Business, gave a presentation, “Demystifying the Mortgage Meltdown: What it Means for Main Street, Wall Street and the U.S. Financial System,” at a forum hosted by the Milken Institute on Oct. 2 in Santa Monica, Calif.

Barth has also been interviewed about the financial crisis by reporters and hosts on Fox Business, Fox News, National Public Radio, and Federal News Network, in addition to several newspapers and business magazines.

Denise Davis-Maye, an associate professor in the College of Liberal Arts’ Department of Sociology, Anthropology and Social Work, has been invited to participate in the Robert Wood Johnson Foundation’s New Connections Research and Coaching Clinic. The clinic will coincide with the 2008 American Public Health Association conference in San Diego.

The New Connections program is designed to expand the diversity of perspectives related to the foundation’s programming and introduce new researchers and scholars to the foundation.

Jose Llanes, head of the College of Education’s Department of Educational Foundations, Leadership and Technology, has been named to the board of trustees of the Pacific Graduate School of Psychology.

A private, independent institution in Palo Alto, Calif., the Pacific Graduate School of Psychology, offers undergraduate programs in business psychology and psychology and social action, as well as master’s programs in forensic psychology and distance learning.

Faculty

(continued from page 3)

Cross of the Order of Merit of the Republic of Poland from President Lech Kaczynski.

Wilamowski, director of the Alabama Micro/Nano Science and Technology Center, is the most recognized Polish electronics and computer scientist in the United States and in 2007 was elected as the honorary chair of the Hungarian Academy of Science.

Roy Broughton, former Philpott Stevens Distinguished Professor of Textile Engineering in the Samuel Ginn College of Engineering, recently received awards from two organizations at the International Nonwovens Technical Conference in Houston.

Broughton, who recently retired after 32 years at Auburn, was recognized with the Rhom and Haas Prize for leadership and service to the Nonwovens Division of the Technical Association of the Pulp and Paper Industry and the INDA Lifetime Service Award. Also, Broughton and coauthors from the University of Tennessee earned a session best paper recognition for “Production and Evaluation of Meltblown Poly(phenylene sulfide).”
Forestry Study Sheds New Light on Homeowner Savings

An Auburn study sheds new light on just how valuable shade trees are in reducing homeowners’ electricity bills during hot summer months.

Professor David Laband in the School of Forestry and Wildlife Sciences says electricity usage and costs will be 11.4 percent less if a house has just 17.5 percent heavy shade coverage. This is compared to a house with no shade.

“The keys are heavy foliage and late afternoon shade,” Laband said. “The savings can be very significant for homeowners. Over the years I had read statements that shade trees reduce electricity consumption, so we wanted to put a dollar amount to it.”

AAA Invites Faculty, Staff To Join Its Membership

The Auburn Alumni Association cordially invites all faculty and staff of Auburn University to join its membership. You need not be an alumnus of Auburn University to join. Members receive Auburn Magazine quarterly; discounts on auto/home insurance; online shopping discounts such as Target, Kansas City Steaks and FTD; and free entrance to the Alumni Hospitality Tent on home football game days. We are also adding to our local benefit list as well, just for residents of Lee County. To join or find out more, contact us at 844-2960 or online at www.aualum.org.

Support AU With Spirit of Auburn Credit Card

The new Spirit of Auburn credit card featuring the WorldPoints® program contributes to Auburn’s scholarship fund while building rewards for you, too. By using this card for all your everyday purchases, you share the Auburn spirit by benefiting students who most deserve academic scholarships—at no additional cost to you—and you ultimately help shape the future of Auburn. And cardholders will be rewarded when they redeem all the points earned for travel, merchandise or cash rewards. This is the only card that directly supports your alma mater. For more information about the card, or to apply, go to www.auburn.edu/spiritcard.

His office conducted a yearlong study of 160 houses in the Auburn area to determine the annual energy savings provided by shade trees, primarily looking at the months of May to September. He analyzed power bills, calculated shade coverage and surveyed the homeowners about household makeup, electricity-usage habits, square footage, type of air conditioning, appliances, roofing, exterior material and other factors.

“We looked at the amount of shade in the early morning, early afternoon and late afternoon,” Laband said. “If you have trees on the west side of your house, you will have a much lower power bill.”

Using local power company rates for kilowatt hours per day, Laband said the 11.4 percent savings would equal $31 to $33 per month. The study, which categorized types of shade into light, moderate and heavy, also found that a house covered with 50 percent of light shade will save 10.3 percent.

Thermostat settings were important as well. “For each degree you raise your thermostat, you will save 3.3 percent on your power bill,” he said. “We also found that children under age 12 are the major power consumers in the home. They watch television, play games and leave lights on.”

Laband said he hopes the study will discourage real estate developers from cutting down all the trees on new lots.

“Many older houses have large trees around them because the owners did not rely as much on air conditioning then,” he said. “Houses today often do not have shade trees because it’s easier to run an air conditioner. This study shows how much can be saved when trees are used in yards.”

The study was funded by a $116,000 grant from the Forest Service’s Urban and Community Forestry Program in the U.S. Department of Agriculture and a matching $116,000 grant from Auburn’s School of Forestry and Wildlife Sciences.

Laband has briefed USDA officials on the results and has presented seminars in Australia at the Tropical Forest Research Institute, the University of Melbourne and the University of Adelaide.

“It gets very hot there, too,” he said. “They are interested in doing a similar project.”

Laband, who earned his PhD in economics from Virginia Tech in 1981, conducts research and teaches on topics related to economics and policy, with a focus on natural resources.
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This time-lapse photograph of cars passing the new Shelby Center for Engineering Technology appears in the 2009 Auburn University calendar, *Twilight on the Plains*. The calendar is on sale for $10.75 at Photographic Services in Foy Hall, University Bookstore, local off-campus bookstores, online at www.auburn.edu/photo and by phone at 844-4560. Produced by the Office of Communications and Marketing, the 11”x14” wall calendar features dusk and nighttime scenes shot by Jeff Etheridge and Melissa Humble of Photographic Services, with graphic design by Tracey Spates Newell.