Beers receives NSF grant to study genes, wood formation

By Netta Benson

Eric Beers, associate professor of horticulture and a researcher in the Virginia Agricultural Experiment Station, has received a $345,000 grant from the National Science Foundation (NSF) for a three-year study of wood formation. Beers expects his findings to be applicable to all woody plants. Beers is working with Arabidopsis because it is a small plant that can be easily grown in the lab and has a short life cycle. In addition, the entire Arabidopsis genome has been sequenced, further increasing the value of Arabidopsis for identifying genes important to wood formation.

Since beginning work in this area in 1998, Beers has narrowed his focus to just three genes that code for proteases specific to wood-forming tissue. Currently, he is attempting to use techniques for gene silencing and gene knockout to define the functions of these three genes.

“We silence a specific gene, and then infer the function of the gene by observing the new phenotype,” he said.

Woody xylem is a tissue that consists of three cell types, and all three are formed from a population of stem cells known as the vascular cambium. “I am interested in the fundamental question of how cell fate in the xylem is specified at the vascular cambium,” Beers said.

“How do these cells know what to do? What tells them what to become?”

The expression of the protease genes Beers is studying is limited to specialized water-conducting cells within the xylem, known as tracheary elements. With a technique known as one-hybrid analysis and using genetic analyses, Beers expects to identify the genes that are important to wood formation and, eventually, to identify genes that code for proteases specific to wood-forming tissue. Currently, he is attempting to use techniques for gene silencing and gene knockout to define the functions of these three genes.

Summary of General Fund Reductions

(in millions)

<table>
<thead>
<tr>
<th>University Division</th>
<th>House*</th>
<th>Senate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition Offset</td>
<td>$19.8</td>
<td>$18.0†</td>
</tr>
<tr>
<td>Net General Fund Reduction</td>
<td>$15.0</td>
<td>$13.4</td>
</tr>
</tbody>
</table>

Other Reductions

| VCE/VAES | $4.9 |
| Equipment Trust Fund | $4.0 |
| Maintenance Reserve | $3.7 |
| Net Overall Reductions | $27.6 | $26.0 |

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The Alaska researchers were broadcast live, allowing students in rural and remote locations to view the video conference and participate in the distance-learning experiment.
SEC makes $50,000 available for projects

By Karen Gilbert

The Virginia Tech Student Engineers’ Council (SEC) is soliciting proposals in search of projects that will benefit the largest number of engineering students and best reflect the needs of the College of Engineering. The students have allocated $50,000 for the selected projects.

The SEC is looking for projects that best reflect the needs of the college. Applicants should identify ways in which money can best be used to improve the college. There are no restrictions on ideas for the types of projects to submit for funding—anything from physical improvements to scholarships will be considered. The proposal can be for a project with a budget as high as $50,000, or the SEC can choose to award several smaller projects totaling $50,000.

During the past four years, the students

(See SEC on 4)

‘Destinations’ career fair expanded to two days

By Jean Elliott

The thirteenth-annual “Destinations,” a career fair for the students in the College of Human Resources and Education, will be expanded to two days and held in Owens Banquet Hall and Dining Room February 26 and 27. Despite the recession, 70 companies will be represented this year. The event is coordinated by Associate Dean Valerie Giddings and graduate assistant Rebecca Farrell.

“With the expanded two-day format, along with the move to Owens, schools should only serve to improve an event that has thrived in the past,” Giddings said.

Students from each department in the College of Human Resources and Education will find appropriate representatives. Traditionally, the hospitality-and-tourism-management field boasts the largest number of potential employers—including hotels.

(See ‘DESTINATIONS’ on 4)

Staff Senate seeks governance nominations

Each year at this time the Staff Senate Elections and Nominations Committee puts out a call for nominations of classified staff members to university councils, commissions and committees. We encourage all interested classified staff members to consider participating in one or more of these campus-wide bodies which provide input into the operation of the university. It is a wonderful opportunity for staff members to have a voice in matters that affect the university while learning how things really work and meeting people from other parts of campus.

Information on the councils, commissions and committees along with nomination forms have been distributed to Staff Association presidents and staff senators. They are responsible for making this information available to staff members in their areas. To let us know you’re interested in serving, we offer these options: 1) fill out the nomination form and return it through campus mail to Jo Wooge, mail code 4042; 2) send an e-mail to jwooge@vt.edu; or call Wooge at 1-1589.

Pamplin presents Wachovia, First Union speakers

The Pamplin College of Business will present two Wachovia First Union distinguished speakers in March.

Philip S. Thompson, IBM vice president of business transformation and chief information officer, will speak on diversity and the workplace Tuesday, March 19, at 2 p.m. in Owens Recital Hall.

Bridgey Ryan Berman, president and chief operating officer of Polo Ralph Lauren’s retail division, will discuss career and leadership issues Wednesday, March 27, at 4 p.m. in the DBHCC auditorium.

A reception will be held after the program.

The following classes are being offered through the Horticulture Gardens:

Monday, Feb. 25: “Create a Terrarium,” 6 to 7:30 p.m. Greenhouse classroom, Washington St. $30.

Saturday, March 9: “Prune and Train Home Fruit Trees,” 10:30 a.m. to noon, Greenhouse classroom, Washington St. $25.

Monday, March 11: “Orchids are Easy,” 6 to 7:30 p.m. Greenhouse classroom, Washington St. $25.

Monday, March 18: “Propagating Indoor Plants,” 6 to 7:30 p.m. Greenhouse classroom, Washington St. $20.
Campus diversity initiatives inventory available on line

By Clara B. Cox

After three years of work and two iterations of a survey to accumulate information on campus-wide events, activities, and programs that address climate-related issues, the Office of Multicultural Affairs has completed its “Diversity Initiatives Inventory” and has made the report available on line at http://w w w .m u l t i c u l t u r a l.v t.edu/docs/inventoryreport.PDF.

“We need to be able to respond to questions regarding what is actually being done to increase student, faculty, and staff diversity at Virginia Tech, as well as to know what is in place that supports and promotes a welcoming environment for all groups,” said Benjamin Dixon, vice president for multicultural affairs.

According to Dixon, the project began during the 1998-99 academic year through the efforts of Myra Gordon, associate dean in the College of Arts and Sciences, and other members of the Advisory Council on Diversity and Multicultural Affairs, which advises Dixon’s office. The group honed an on-line inventory and distributed it in 1999 to all academic colleges and major administrative units.

After reviewing the submissions, the staff of the Office of Multicultural Affairs modified the process and developed criteria for identifying diversity initiatives and activities. To be included in the inventory, a program or activity must meet five minimum standards. It must address diversity or multicultural issues, be approved by the administrative unit, have personnel assigned or dedicated to it, be supported by resources and be structured by specific objectives and stated outcomes.

Program types also were defined, and the decision was made to exclude academic courses, although workshops, seminars, and retreats that address issues of diversity are included.

“Our definitions and criteria need to be more explicit, but the university community also needs a better understanding of the number of programs and activities that were reported, he said, have no method for evaluating their effectiveness. “It would be beneficial if there were more assessments on various programs to determine if they’re effective,” he said. “Overall, though, the inventory provides valuable information regarding diversity activities at Virginia Tech, and we plan to update it periodically, at least every two years.”

Individuals interested in additional information about the inventory should contact Alicia P. Cohen, assistant to the vice president for multicultural affairs, at 1-1820 or acohen@vt.edu.

GENERAL ASSEMBLY

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General programs, including tuition revenue, will range from less than 2 percent to a high of 4.7 percent at Virginia Commonwealth University. The figure for Virginia Tech is 4.4 percent; George Mason University, 4.3 percent; and the University of Virginia, 4.0 percent. In General Fund reductions, the University of Virginia, Virginia Tech, and VCU account for about $70 million of the recommended $132-million reduction for the first year of the biennium, and $89 million of the recommended $171-million reduction in the second year.

While institutions’ boards of visitors will be responsible for approving tuition increases, each committee provides extensive guidelines to be used in deciding the amount of the increases. These policies relate primarily to projecting in-state undergraduate students and ensuring larger increases for out-of-state students and graduate and professional students. In addition, the House speculates that institutions that currently enroll more than 25 percent out-of-state students should not increase their enrollment numbers “until a rational policy on this issue can be determined,” signaling the committee’s interest in pursuing this issue in the coming year.

The Cooperative Extension/Agri-cultural Experiment Station reductions range from $4.2 million and $4.9 million for the two years, as in Warner’s budget. As previously reported in Specturm in Warner’s budget the State-Wide Equipment Trust Fund was reduced from $50 definitions and criteria already in use. We know that there are programs and activities that were not reported,” Dixon said.

The Senate recommends a $25 million, a $4-million reduction for Virginia Tech. The Senate would require $10 million to the state-wide figure in FY 03. Also, the Maintenance Reserve Fund was cut in half in Warner’s budget (a $3.8-million reduction for Virginia Tech). The House recommends eliminating Maintenance Reserve funding entirely.

Both House and Senate propose reductions to research and public-service centers at the institutions. While the Senate recommends a reduction of $135,000 for Virginia Tech in FY04, the House recommendation is $463,000 in FY03 and $535,000 in FY04.

Finally, the Senate recommends employee bonuses of 2.5 percent of salary for the first year of the biennium and 2 percent in the second. These bonuses would not become part of an employee’s base salary going forward. The House, on the other hand, recommends a 2.75 percent increase for all state employees in fiscal year 2004, to be implemented in December 2003.

These committee recommendations are now being considered by the full House and Senate, respectively. Next week a Committee will begin meeting to iron out the differences between the two chambers, and the General Assembly is scheduled to adjourn on March 9.

Information on the state budget recommendation can be found on the Legislative Information System at http://leg.1.state.va.us. For more information, contact Ralph Byers at 1-7111 (rbyers@vt.edu); or Laura Fornash at 804-786-1604 (lfornash@vt.edu).

DISCUSS

Continued from 1

while McNamee discussed the university’s response to the situation.

“It is critical to keep investing in core programs and new initiatives so Virginia Tech can continue to do as many things as it chooses to do as well as it can do so that when we recover from the situation, we can rebuild as quickly as possible,” McNamee said.

He said all units of the university will be expected to participate in addressing the budget situation through expenditure reductions or revenue enhancements; that auxiliaries will be asked to generate funds to assist the university’s core missions; and that the university is working with related corporations, such as the Virginia Tech Foundation, to gain additional revenue.

According to McNamee, the deans, vice presidents, and vice provosts will be submitting by March 1 their respective internal detailed plans to accompany a percentage cut. The idea for the plans, he said, is not to focus on across-the-board cuts but to make judgments for re-investments of resources.

McNamee said this also “seems to be a time to look at the structure of the university” and said he has already begun discussions with various university groups.

Responding to a question about newspaper reports that 255 positions would be eliminated at the university, Ridenour said the state had asked early in its planning process for reduction scenarios, including possible position eliminations. He said that many of those positions are either currently vacant or will become vacant through normal turnover, adding that departments and colleges are looking at programs that can assist should further reductions in personnel be required. Approximately 80 percent of the university’s budget is tied up in personnel costs.

When asked if the university would consider an early retirement option, McNamee said, “All signals are that the state is not going to have a buyout. We can’t unilaterally institute a buyout plan, but we’re looking at what we can do to manage workforce changes for our employees.”

A video of the forum is available on line at http://www.unirel.vt.edu/vt/budgetnews.html.
Hodges to lead CSES department

By Stewart Machin

Steven Hodges, a professor of soil science with extensive experience with Cooperative Extension, will become head of Virginia Tech’s Department of Crop and Soil Environmental Sciences on May 1.

“Extension is a critical component of this department, which provides support to a large segment of Virginia’s agriculture industry,” Agriculture Dean Andy Swiger said. “Dr. Hodges’ knowledge and expertise in Extension programming will allow us to continue to provide the support our farmers have come to expect from Virginia Tech and the support they deserve.”

Just as important, Swiger said, is Hodges’ experience with research and the education of students. Hodges will be leading faculty members who conduct basic and applied agronomic and environmental research, communicate that research to farmers, policy makers, and other clientele through Virginia Cooperative Extension, and teach undergraduate and graduate students.

“It is unusual to find a department with nationally recognized research and Extension programs in areas as diverse as biotechnology, crop improvement and management, and soil and water science that is so committed to excellent teaching,” Hodges said. “Although these are very challenging times, I am very excited to join a department focused on meeting the critical scientific and educational needs of today’s and tomorrow’s farmers and environmental managers.”

Currently a professor in the Department of Soil Science at North Carolina State University (NCSU), Hodges also has served as the department’s Extension leader and as an Extension nutrient-management specialist. Hodges replaces Jack Hall, who retired January 1. The department is being led in the interim by professors Dan Brann, Mark Alley, and Dave Parrish.

Hodges earned his bachelor’s and master’s degrees from the University of Florida and his doctorate from Virginia Tech. He served on the faculties of Clemson University and the University of Georgia before joining NCSU in 1993. He is a member of the American Society of Agronomy, the Soil Science Society of America, and other professional and honor organizations.

SEC

Continued from 2

have distributed $123,000 to support the college. Projects they funded or contributed to include the college’s Student Assistance Center, the Frith Freshman Design Engineering Lab, the virtual corporation, the Freshman Engineering Program, and an endowed scholarship.

The council, which sponsors a number of programs to support students, also will find representatives from various organizations, including school districts from across the state.

For more information, please see http://sec.vt.edu.

INTERNET2

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Internet2 is a consortium being led by more than 180 universities working in partnership with industry and government to develop and deploy advanced network applications and technologies. The Internet2 K20 Initiative brings together Internet2 member institutions, K-12 schools, colleges and universities, libraries, and museums to get new technologies—such as advanced networking tools—into the hands of innovators across all educational sectors in the country.

For more information, please see www.internet2.org/K20.

Fishwick’s Popular Culture in a New Age, presents ‘aerial mosaic’ of everyday life

By Sally Harris

Marshall Fishwick’s latest book, Popular Culture in a New Age, presents “an aerial mosaic” of popular culture the way photographers create pictures of large areas by matching up adjoining aerial photographs.

With a foreword by renowned author Tom Wolfe, “Popular Culture in a New Age shows how the poorly understood and often underestimated area known as popular culture affects all of our lives. It will help you understand the way we eat, think, vote, and respond to our fast-changing world in the era of hype, spin doctors, chat rooms, and jargon,” according to the publisher.

Just what is popular culture? “The people are a giant Atlas, carrying the world on their shoulders,” wrote Fishwick, professor of interdisciplinary Studies and director of the American Studies and Popular Culture programs. “How and why do they do it? To ask such questions will always be popular culture’s first task.”


Ray B. Brown, emeritus professor of popular culture at Bowling Green University in Ohio, calls Popular Culture in a New Age “brilliant and entertaining.” “Widely read and deeply observant, Fishwick has scanned many aspects of our age, shown how it has grown out of life in earlier ages, and speculates where it will end up and why.”

“I try not only to answer questions but to raise them and urge readers to ask new questions for themselves,” Fishwick said. “We live in exciting but confusing times, when high hopes fail prey to false hyps.” He writes not about reform and remedy, nor about political, social, or diplomatic history, but about popular culture. “I do so because I think the ‘culture of the people,’ more than some other and more formal disciplines, holds the mirror up to humankind in our postmodern, multicultural democracy. Reflecting sudden and dramatic changes, the mirror also suggests some recurring similarities, patterns, motives, and meanings.”

Fishwick holds several honorary degrees and teaching awards. He received the Lifetime Achievement Award from the American Culture Association and is a co-founder of the Popular Culture Association. Having served as Fulbright distinguished professor in Denmark, Italy, Germany, Korea, and India, he helped establish the American Studies Research Center in Hyerabad, India, which now houses the largest collection of American books in Asia. Fishwick is the author of more than 20 books, including American Heroes: Myth and Reality, Icons of Popular Culture, Go and Catch a Falling Star, and Popular Culture: Cavespace to Cyberspace.

BEERS

Continued from 1

of mutants that express the xylem proteases incorrectly, Beer intends to use these protease genes as “molecular handles” to get hold of other genes that act earlier in the sequence of events leading to trachyeelement differentiation.

“By identifying the genes that regulate the expression of our trachyeelement-protease genes, we will be taking the first steps toward the long-term goal of identifying the master regulators that control wood formation,” he said.

Such information could have important implications for both food crop development and would represent an important contribution to the understanding of this fundamental aspect of plant development.

Candace Haigler of Texas Tech University in Lubbock, Texas, is co-principal investigator for the work supported by the NSF grant. Haigler is a professor in the biological sciences department and director of the Texas Tech University Electron Microscope Facility.

(Editors’s note: This is the first of a series of articles covering university faculty members who have received NSF funding.)

‘DESTINATIONS’

Continued from 2

restaurant chains, amusement parks and tourist attractions. More than 25 companies compete for graduates majoring in residential-property management in the Department of Near Environments.

Students in the departments of Human Development; Human, Nutrition, Foods and Exercise; as well as Teaching and Learning also will find representatives from various organizations, including school districts from across the state.

A complete list of exhibitors is available at www.chre.vt.edu/destinations.