VBI scientists awarded $6.7 million to study soybean genetics

By Stewart MacInnis

Scientists at Virginia Bioinformatics Institute (VBI) at Virginia Tech, Virginia Tech, and Ohio State University have received a $6.74-million grant from the National Science Foundation to study the genetics of soybean root rot.

Soybean root rot, a disease caused by Phytophthora megasperma, costs US soybean growers millions of dollars each year. In some years, farmers have lost over 50 percent of their harvest due to this disease.

Since the first reported outbreaks of soybean root rot in the United States, traditional plant breeders have been struggling to identify and understand the genes that confer natural resistance in some soybean varieties.

Business Consultation Partnership project initiated

By Jason Risley, communications intern

Virginia Tech’s Family Therapy Center, the Office of Outreach and Extension, and the Department of Human Development have started a joint project called the Business Consultation Partnership (BCP).

Championing Virginia Tech’s outreach motto of “Putting Knowledge to Work,” the BCP is available to help local companies operate more effectively through improved management, workplace relations, and leadership, which could translate into increased profits and greater productivity.

Outreach to area businesses will be provided by regular workshops, forums, and a newsletter on healthy organizational relationships. The forums will facilitate education and discussion on a variety of business issues, including family roles within and outside of business, mentoring and transition planning for family and non-family workers, succession or transfer of ownership, compensation fairness, crisis management, and general interpersonal and organizational dynamics. Consultation is available to both struggling businesses and already successful companies.

“Virginia Tech’s Department of Human Development and its Marriage and Family Therapy program will stand out from other colleges and universities in the nation with the addition of this program,” said Anna Beth Benningfield, director of the Business Consultation Partnership.

A licensed marriage and family therapist and psychologist, Benningfield is the only person twice elected president of the American Association for Marriage and Family Therapy, the professional association for the field, and has more than 25 years of experience as a business owner and consultant.

For more information, contact Benningfield at 1-6807 or by e-mail at abenning@vt.edu.

Governor to Deliver State-wide Broadcast Address

Governor Mark Warner will deliver an address on Tuesday, Oct. 15 at 7 p.m. to announce spending reductions he will accept to address the current state budget shortfall.

During the address, Warner is expected to outline cuts of up to 15 percent for state agencies

WWTF 89.1 public radio will carry Warner’s speech, following an hour-long “Evening Edition” with Bob Gibson of the Charlottesville Daily Progress and U. Va. Political Science Professor Bill Wood discussing the speech and taking phone calls.

The speech will also be broadcast live on Roanoke television stations WDBJ (Channel 7), WSLS (Channel 10), and Blue Ridge Public Television. WBA. Satellite uplink information for the address is as follows: Telstar 6, C/11 [C Band, Transponder 11]; downlink frequency 3920, vertical polarization; window opens at 6:45 p.m.; “Governor Warner’s Address” screen up at 7 p.m.

Veterinary Memorial Fund showcased

By Jeffrey Douglas

A bronze statue depicting the relationship between pets and people was unveiled, and eight college faculty members were awarded research funding during the annual Fall Conference of the Virginia Veterinary Medical Association and the Virginia-Maryland Regional College of Veterinary Medicine.

The station, which will be installed in the public-entrance lobby of the college’s Veterinary Teaching Hospital, will serve as a symbol of the Veterinary Memorial Fund, a memorial fund/research program jointly operated by the state professional association and the college.

The life-size cast bronze statue depicts a young girl and a dog. A Hokie-stone base will be constructed in the hospital lobby for the permanent installation.

The college and state association are emphasizing the fund as part of an overall effort to elevate the college of veterinary medicine’s research program.

Since the program was created, about $646,000 has been raised and 88 different clinical markup.

See VETERINARY on 4)

Bond Referenda Video to Air on Area Cable Systems

Blacksburg’s Adelphia Cable System (WTOB, Channel 2) will air a video explaining the two bond referenda on the November 5 ballot.

Air times can be found at https://www.blacksburg.gov/calendar.php?WTOB=1.

The program will also air on Cox Cable of Roanoke on the system’s public-access channel, WCON, at the following times through Election Day:

Monday through Friday, 7-30 a.m.
Monday through Saturday, 3 p.m.
Daily, 1 a.m.

(See PHOTONICS on 4)
DNA lab-techniques seminar sharpens technicians’ skills

By Jennifer Sills, University Relations intern

Laboratories across campus are more prepared to conduct advanced genetic research, thanks to a Basic Recombinant DNA Techniques Workshop held recently to sharpen and update the skills of the university’s lab technicians.

The two-day workshop, led by Kristi DeCourney and Valerie Cash, was held in the Fralin Biotechnology Center. Among the research techniques learned were restriction enzyme digestion of DNA, and extraction of genomic DNA.

“Those of the various colleges involved have been extremely helpful,” said Delbert Jones, of the College of Veterinary Medicine, “especially in giving us the time needed to learn the skills taught at each seminar. They understand how valuable the hands-on training is; there just isn’t a substitute.”

Jones said it was very beneficial that the participants were able to take their technical training up a notch. He also said being able to learn from the in-house service workshops means the university does not have to rely on outside consulting firms.

The workshop was part of a series sponsored by University Leadership Development to provide continuing-education opportunities for laboratory specialists and technicians. Held quarterly, this is the fourth seminar set up to bring together laboratory technicians from different areas of campus. Previous seminars have included a plant tissue-culture workshop, a three-day short course on research statistics, and general lab practices certification training.

“The key to identifying people on campus who can provide training,” Steven Van Aken, of University Leadership Development said. Participants in the workshop at the Fralin Center and at other seminars said the efforts of the Employee Professional Development Network have been a great success. In addition to facilitating the workshops, the Network has established a listserv to help lab technicians connect with their peers, ask questions among the technical staff, learn from each other, and even share equipment.

As Kathy Reynolds of the Department of Human Nutrition, Foods and Exercise said, “When you come together with people doing similar kinds of work, you always find better and more efficient ways to do what you’ve already been doing.”

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2001-2002 ‘Student Success’ projects completed

By Juliet Crichton
An estimated 3,357 Virginia Tech students seeking to maintain their academic standing were helped during the past academic year through projects conducted under the university’s Student Success initiative, according to a report on the initiative just completed by Brian M. Johnson, coordinator of Student Success projects.

Student Success was developed in response to an academic-eligibility policy, enacted by the university’s Board of Visitors in 1996, that requires students to maintain at least a 2.0 quality-credit average (QCA). Fifteen Student Success projects were funded for the 2001-2002 academic year, all with the goal of contributing to student success by making available either a new opportunity or new information.

Of particular note among the 2001-2002 projects, Johnson said, was “Problem Solving Sessions in Chemistry,” which received $50,000 to increase student success rates in general chemistry by way of small-group problem-solving sessions facilitated by undergraduate science majors. Results reveal that those students in classes incorporating problem-solving sessions consistently scored higher on tests than those students not participating.

The sociology department’s “Peer Mentors to Improve Note-Taking and Study Skills,” awarded $11,400 to furnish peer mentors for students enrolled in introductory sociology, was similarly effective. The project’s evaluation indicates that mentored students earned an average course grade of 2.40, while non-mentored students compiled an average course grade of 1.93.

Other projects among the 15 successfully completed during the academic year included the biology department’s “Biological and Life Sciences Learning Community,” which received $10,000 in funding, and University Libraries’ “Information Skills Peer Advisory Project,” (See SUCCESS on 4)

H1B visa provides ready access to global experience

By Steve Conrad
The Cranwell International Center now acts as the resource for departments interested in the H1B Visa Program. The effort is to actively pursue international expertise and make a significant contribution to the University Strategic Plan. The H1B Visa is an employer-sponsored visa focused on occupational specialties and the employment of workers of exceptional caliber.

A program has been developed which enables university faculty and research staff members the option to recruit experienced personnel from essentially all points of the globe. A cooperative effort with university administration, Personnel Services and Controller’s Office has resulted in streamlined procedures to complete a visa petition and bring international talent to Blacksburg.

Any organization identifying a foreign national candidate as possessing specialized capability, knowledge, or experience can initiate the H1B Visa process. These individuals can be from the international academic community, and the corporate research world, as well as graduate and post-graduate students already here on campus.

At the point when the candidate is identified, the sponsoring agency can access the application information and forms from several sources. The H1B request form is available through campus mail or personal pick-up at the Cranwell Center. The same information is also available from the Cranwell web site at www. casa.vt.edu/cranwell under “Services.”

The requesting department is encouraged to contact the visa program coordinator directly. A file will be opened and personalized service provided through the entire application process.

The initial steps require the requesting department to submit a request form and approval form with the candidate’s background data to university administration. At the same time the visa coordinator clears the proposed wage through the State Employment Agency for ultimate certification by the Department of Labor.

After these steps have been accomplished, the department requests the filing fee of $130 using a standard accounting voucher. The visa coordinator gathers the information, certifies the hire through the Department of Labor, and finalizes the visa petition for INS.

Several departments have used the H1B Visa hiring option extensively, and found the process efficient and easily accomplished. The initiatives to bring the university with its numerous campuses to the status of a top-30 research institution focus strongly on an international research staff. The H1B Visa is a logical and versatile method to augment the university community with world-class talent and experience.

ESM student among first recipients of Cooke scholarships

By Liz Crambley
“College seemed like a brand-new adventure when I came back with a cast on one arm, a sling on the other, and a heightened sense of self-confidence,” Aaron Barr said, recounting his recovery after he stopped procrastinating and became committed to his studies.

Barr, now a junior studying engineering science and mechanics at Virginia Tech, is among the first recipients of Jack Kent Cooke scholarships, which provide $10,000 in funding, and University Libraries’ “Information Skills Peer Advisory Project,” (See SUCCESS on 4)

The following classified positions are currently available. Position details, specific application procedures/position-closing dates may be found on Personnel Services Web site http://www.ps.vt.edu. Positions are also listed on the Jobline, a 24-hour recorded message service. For information on all job listings, call 1-5300. Some positions include state benefits. Positions with numbers beginning with “W” are hourly positions. Information on all job listings, call 1-5300. Positions may be found on Personnel Services Web site http://www.ps.vt.edu. Positions are also listed on the Jobline, a 24-hour recorded message service. For information on all job listings, call 1-5300. Some positions include state benefits. Positions with numbers beginning with “W” are hourly positions.

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NIH awards fellowship to Tech veterinary-informatics researcher

By Jeffrey S. Douglas

A veterinarian and Ph.D. candidate working in the Virginia-Maryland Regional College of Veterinary Medicine’s Informatics Laboratory has been awarded a post-doctoral fellowship in medical informatics by the National Institutes of Health.

Funded by the National Library of Medicine, veterinary clinical pathologist Kurt Zimmerman will spend two years exploring the application of an internationally recognized medical-nomenclature system in a computerized decision-support system for clinical pathology.

Clinical pathology is a branch of medicine that diagnoses disease by analyzing fluctuations in a person or animal’s serum blood chemistry.

“Decision-support systems are typically comprised of an interface for data input and output, a knowledge base for the storage of facts, and an inference engine for deriving new information,” said Zimmerman, who completed a residency in veterinary clinical pathology and is board certified by the American College of Veterinary Pathology.

Zimmerman will examine the ability of a semantic network known as the Systemized Nomenclature of Medicine (SNOMED) to reliably function as a suitable knowledge base in the development of the medical decision-support system. The ability of nomenclature systems to precisely model specific concepts is a critical component in computer-based information-management systems.

Working with Jeff Wilcke, the Metcalf professor of veterinary medical informatics and the director of the American Veterinary Medical Association’s Secretariat to SNOMED International, Zimmerman will examine SNOMED’s suitability, establish a method for adapting SNOMED to a Bayesian analytic network, and finally, evaluate the performance of the resulting decision-support system using retrospective clinical chemistry data from drug-toxicity studies.

If SNOMED is determined to function well as a knowledge base in this analytic environment, Zimmerman said, it could pave the way for its application in a number of other domain specific decision-support systems such as in oncology treatment.

“Virginia Tech is one of the few universities to offer both a residency-training program in veterinary clinical pathology and graduate training in veterinary informatics,” Zimmerman said. “The disciplines complement each other well, with clinical pathology providing a data-rich environment and medical informatics providing the tools for data aggregation and analysis.”

In addition to Wilcke, Zimmerman will work with Loren P. Rees, Arthur Andersen alumni professor of management science and information technology in the Pamplin College of Business. Rees will provide expertise in machine learning, artificial intelligence and the creation of decision-support systems.

The National Library of Medicine is funding the work as part of a larger effort to encourage the training and production of health-care professionals who are capable of using health informatics to manage biomedical information management problems, thus improving the nation’s overall health-care system.

Solar house places fifth

The Virginia Tech house placed fifth out of the 14 competing teams from across the nation in the first Solar Decathlon competition sponsored by the Department of Energy. The University of Colorado at Boulder placed first and the University of Virginia finished second.

The Virginia Tech house took first place in two of the 10 categories—first in the Design Presentation and Simulation category, as well as first in Getting Around, where team members were judged on getting around in their solar car efficiently. The team also received the BP Solar Innovation Award for innovative use of materials, systems, and integration of the two.

The house returns to Blacksburg this week and will be re-assembled at the research center off Plantation Road for future research purposes, as well as public tours. Visit www.solardeca.com for more information about the contest, and visit the VT Solar page at http://www.caes.vt.edu/vtsolar/ for details about the team, the house, and diary entries while at the competition.

English Language Institute granted full accreditation

By Carey Mossor, University Relations intern

The English Language Institute of Virginia Tech (ELI) was granted full accreditation from the Commission on English Language Program Accreditation at its September meeting.

The ELI offers English language classes to prospective graduate and undergraduate students, community residents, and tourists. This program has offered students the opportunity to meet personal and professional goals since 1993. Classes offered include reading and writing, listening and conversation, grammar, and pronunciation. Most current students are preparing to enter Virginia Tech or another university and are currently strengthening their English-language and academic skills.

The ELI staff has been preparing for full accreditation from the commission for more than two years. ELI at Virginia Tech had previously been on provisional accreditation, which is granted for one year. During this time, it was to meet commission requirements to be granted full accreditation which is granted for five years. There are currently 34 fully accredited programs in the nation.

Accreditation is not now required for programs within an accredited institution like Virginia Tech. However, the process of accreditation stimulates a healthy review of policies, requires a focus on the program’s mission, results in program improvement and renewal, and provides a framework for the growth of the program.

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cal research programs have been funded. Nine teams of faculty members representing the departments of Small Animal Clinical Sciences, Large Animal Clinical Sciences, and Biomedical Sciences and Pathobiology were awarded almost $53,000 in funding during the event.

ESM

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“Aaron is truly passionate about the environment,” said University Honors Program Associate Director Barbara Cowles, who nominated Barr for the Cooke scholarship. “One day recently Aaron was walking through the Hillcrest living room, carrying two boxes and smiling. One of the other students said, ‘There goes Aaron with a smile on his face because he’s recycling.’”

In addition to majoring in ESM, Barr is working toward a minor in mathematics and a concentration in green engineering. He has maintained an overall GPA of 3.9 (out of a possible 4.0).

The Cooke scholarship will cover all of his tuition, room and board, student fees and book costs. The scholarship also includes an annual stipend of about $10,000.