Swine vaccine developed, approved

By Jeffrey S. Douglas
A genetically altered vaccine developed by a researcher in the Virginia-Maryland Regional College of Veterinary Medicine has received approval from the United States Department of Agriculture (USDA) and is now being commercially marketed as an agent to prevent pneumonia in pigs.

The vaccine, marketed under the trade name “Actinobacillus pleuropneumoniae Attenuate Live Culture” (APP-ALC) by Boehringer Ingelheim/NOBL Laboratories, is the first avirulent live vaccine ever approved for preventing bacterial respiratory disease in animals, according to microbiologist Thomas Inzana of the college’s Department of Biomedical Sciences and Pathobiology.

Swine pleuropneumonia causes millions of dollars in production losses a year and is one of the most significant bacterial respiratory diseases in the swine industry, Inzana said.

“It can really wipe out a non-immune herd,” he said, adding that an infection can destroy up to half of the herd and sicken most of the others. “It’s highly virulent characteristics pose a special threat for modern swine-production centers where animals are highly concentrated.

The product development and licensing saw a several-year research effort which was made possible by the dramatic scientific advancements in the field of molecular biology over the past 10 years.

The best immune response is elicited by natural exposure to the pathogenic organism itself. Inzana said unfortunately, many vaccines evoke an inflammatory response and infection in the people and animals they are designed to protect.

Working in the college’s Center for Molecular Medicine and Infectious Disease, Inzana and colleagues sought to create a

(See SWINE on 4)

ACS funds Tech cancer research

By Jeffrey S. Douglas
An institutional research grant awarded to the Virginia-Maryland Regional College of Veterinary Medicine by the American Cancer Society (ACS) has provided several new funding opportunities for junior faculty members and professional students at Virginia Tech interested in conducting cancer research.

The $127,500 grant will fund two junior faculty researchers at a level of up to $20,000 each and a professional student at a level of up to $2,500 for one-year periods during each year of the three-year grant cycle, according to Mitzi Nagarkatti, a professor in the Virginia-Maryland Regional College of Veterinary Medicine’s Department of Biomedical Sciences and Pathobiology.

The grant is designed to provide seed money for junior investigators in departments across the university who wish to conduct studies on cancer-related topics to generate the preliminary data required to successfully compete for national funding, according to Nagarkatti.

ACS institutional research grants are normally made to medical schools to support cancer research. Nagarkatti said the VMRCVM is the only veterinary college currently funded with one.

Nagarkatti and husband Prakash of the Department of Biology are among a number of researchers conducting cancer research at Virginia Tech. The Nagarkatti program has received about $6 million in external funding since the husband and wife team joined the Virginia Tech faculty in 1986.

Details on the funding provided by the grant are available at the American Cancer Society web page (www.cancer.org/bottomresearchprograms.html) or at www.vetmed.vt.edu/college/forms/techcamp/grantform.html.

Applications should be forwarded to Mitzi Nagarkatti, Department of Biomedical Sciences and Pathobiology, VA-MD Regional College of Veterinary Medicine by August 23.

University helps make companies competitive

By Catherine Doss
Working in partnership, Virginia Tech’s Public Service Programs (PSP), a unit of the university’s Outreach Division, American Electric Power (AEP), Wiley and Wilson Corporation, and the Virginia Department of Business Assistance have established three International Organization for Standardization (ISO) 9000 networks of quality-assurance professionals from service industries and manufacturers in southwest Virginia. These networks, located in Roanoke, Christiansburg, and Abingdon, meet quarterly to discuss various aspects of quality standards, to learn from their colleagues, and hone their international quality-standards skills.

“Like beauty, everyone may have his or her own idea of what quality is,” said Chad Miller, economic-development specialist with PSP.

“The standardized definition of quality in ISO 9000 refers to all those features of a product or service that are required by the customers.”

Since the early 1990s, quality-assurance professionals have formed ISO 9000 networks in Virginia, Lynchburg, Richmond, and Norfolk. “These networks have evolved to the point where quality-assurance professionals from non-competitive companies and related ‘quality’ systems,” said Roger Recker, lead ISO assessor for Wiley and Wilson. “This ensures the

(See UNIVERSITY on 2)
Moses wins 1999-2000 Udall scholarship

Shelly Moses, a biology major with minors in environmental science and environmental studies, has won the 1999-2000 Morris K. Udall Scholarship.

The award was presented in Atlanta at the national convention on March 22.

Joan B. Hirt, associate professor in educational leadership and policy studies, has been an active writer. A book review of “Student Development in College: Theory, Research, and Practice” was published in the Journal of College Student Development. She also co-authored journal articles pertaining to “How Students Manage Money” and “An Assessment of Technology Education for Children Council (TECA). This is presented to a local TECA chapter member for significant dedication, academic achievement, and professionalism a student who has done the most within their local chapter to foster technology education through local activities. Only one award is presented nationally each year. Hirt is also beginning her term as president of TECA at the international level.

and board up to $5,000.

This summer, Moses took part in a Tropical Ecology class taught in Costa Rica. Arthur Buikema, who taught the course, said Moses’s “background in science and philosophy will make him a formidable leader.” Moses, Buikema said, “will be an effective leader in creating change in attitudes about environmental preservation.”

Charles Dudley, director of the University Honors Program, says, “Shane is an artist and a scientist who has a love of the outdoors that takes him regularly to his beloved mountains. He has the maturity to discuss these aspects of his life with modesty, even though his accomplishments are well beyond the work of most people his age.” Further, Dudley said, “I suspect that one day he will become one of those strong voices for environmental protection—well versed not only in the science, but also in the law.”

Moses is a Dean’s List student who was named to the President’s List for National Achievement in 1997. He has been a National Merit Finalist and a Virginia Tech National Merit Scholarship recipient. He has earned awards in engineering from the Virginia Junior Academy of Science, the Blue Ridge Highlands Regional Science Fair, the United States Air Force, and the United States Army Award. He also received the Yale University Science and Engineering Award.

By Sally Harris

Continued from I

continual-improvement process, which is the foundation of ISO certification.

The next topic for the southwest Virginia ISO 9000 networks is “Year 2000 Quality Standards.” Participants will explore changes that will be required by the year 2000 for ISO certification.

Meetings will be held June 25 in Roanoke, July 30 in Christiansburg, and August 27 in Abingdon. For more information, contact Miller at 1-8324 or by e-mail at shadude@vt.edu.
Fear becomes fascination for entomology grad student

By Susan Trulove

"I'm living proof that people can get over their fear of insects," says Colleen Cannon. Cannon was in art school when she took a book out of the library that had nice illustrations of insects. In addition to studying the pictures, she read the text. "I learned how interesting insects were."

That same year, she took an entomology course that had her in the field collecting bugs. "It was so much fun."

That was it. She'd been bitten by a bug—"so to speak—to study the life sciences. Cannon went on to earn a bachelor's degree in biology at Virginia Tech, enjoyed the camaraderie in the entomology department, and became a graduate student.

Entomology Professor Rick Fell suggested Cannon study carpenter ants.

After doing her master's degree research on the warning behavior of carpenter ants, Cannon decided to bring the insects into a Virginia Tech lab to study for her doctoral degree research on the insects' foraging behavior. Her desire to maintain colonies of carpenter ants in the lab has resulted in an effective bait to control carpenter ants.

"To maintain colonies in the lab, we had to develop a diet we could feed them," Fell said.

"We had something that was working well when a visitor from the Clinton Company commented on the ants' enthusiasm. I told him that we were working on developing a bait and they asked to become partners in the effort."

That was 1990.

"We were interested in doing this research because it's useful. Fell said. "They use small amounts of attractants and direct them to the target insects. Bush is the growing insect-control technology, but to be effective, you have to understand the insect. It takes basic research on feeding, foraging, and physiology."

For six more years, with funding from the Clinton Company, Fell and a team of students studied the life history and behavior of carpenter ants to determine their favorite food, how they eat, how they distribute food to the colony, and how an insecticide could be incorporated.

"To determine their preferences, we looked at all types of sugars, the impact of salts, and various fatty acids, to characterize the things that stimulate them to feed," Fell said. "Then, to determine how big a particle an ant can eat, we fed them different sizes of fluorescent beads so we could see how small it had to be to pass through their digestive systems. We found they could filter particles down to a micron, which is very small," Fell said.

Another important facet in understanding the process is how food is distributed among nest members. The team used low level radioactivity to trace food distribution in the nest. The researchers began to incorporate an insecticide. "Our sponsor had one already approved for indoor use and they increased the particle size. We began to incorporate it at very low levels—parts per million—so the ants would have time to carry it back to the nest."

The researchers created a formula that doesn't kill the ants for 10 to 12 hours. Fell said, "We didn't work on the insecticide, but on attraction, dosage, and delivery."

By 1996, a bait was ready to test. The results made some local homeowners very happy. Household tests were done using people who had had problems with carpenter ants for years. The Clinton Company was convinced and applied for the pesticide registration to use the safe bait to control carpenter ants. Patent No. 5,850,707 was issued to Fell and Cannon in 1998. The company waited for years until it was commercially released. A product, Maxforce, has recently been released.

Executive Secretary, W022303C, Grade 6, University Development, Virginia Tech, 1080 S. Main St., Blacksburg VA 24061. Phone: 1-3896. Interviews begin immediately and continue until position is filled.

Office Services Specialist, W022170M, Grade 5, Veterinary Teaching Hospital.

Radiologic Technologist, W022042M, Grade 7, Veterinary Teaching Hospital.

Outpatient Department Manager, W022114G, Grade 1, Infectious Diseases, Department of Biomedical Sciences.

Research Associate Senior, W022044M, Grade 5, Virginia Cooperative Extension-King George County.

Secretary Senior, W022203M, Grade 9, Virginia Cooperative Extension-City of Norfolk.

Faculty Positions

Full position descriptions for faculty listings are available at http://www.pvts.vt.edu.

INSTRUCTIONAL

President of the University. All correspondence should be received by July 15 and should be directed, in confidence, to Executive Recruitment Consultant: Mr. John Cook, 1138G, Grade 14, Research Services Manager, Virginia Tech, 1080 S. Main St., Blacksburg VA 24061. Fax: 1-7487. Email: jcook@vt.edu.

Department of Biomedical Sciences and Pathobiology, Postdoctoral Associate (2), Svend cursor and names of three references to Hara P. Misra, Center for Molecular Medicine and Embryology, University of Virginia, 13811 Old Farm Road, Suite 330, Chevy Chase, MD 20815. Fax: 1-3921. Email: hmisra@vt.edu.

Virginia Cooperative Extension. Agriculture and Natural Resources Extension Agent, Position #FA616, Environmental Horticulture, in Rockingham County. Submit letter of intent, complete resume, official undergraduate and graduate transcripts (copies are acceptable), and three letters of reference. Applications reviewed by July 16. Position open until filled.

Department of Animal Science, Department of Biomedical Sciences and Pathobiology, Postdoctoral Associate (2), Svend cursor and names of three references to Susan R. Wilcox, Department of Animal Science, University of Virginia, 13811 Old Farm Road, Suite 330, Chevy Chase, MD 20815. Fax: 1-3921. Email: swhitlock@vt.edu.

Department of Animal Science, Department of Biomedical Sciences and Pathobiology, Postdoctoral Associate (2), Svend cursor and names of three references to Susan R. Wilcox, Department of Animal Science, University of Virginia, 13811 Old Farm Road, Suite 330, Chevy Chase, MD 20815. Fax: 1-3921. Email: swhitlock@vt.edu.

Department of Animal Science, Department of Biomedical Sciences and Pathobiology, Postdoctoral Associate (2), Svend cursor and names of three references to Susan R. Wilcox, Department of Animal Science, University of Virginia, 13811 Old Farm Road, Suite 330, Chevy Chase, MD 20815. Fax: 1-3921. Email: swhitlock@vt.edu.
Giovanni publishes Grand Fathers

By Sally Harris

“Open this book, and forty-seven grandfathers come into your life . . .”


The collection is diverse, personal and intergenerational. In it, grandfathers talk about all sorts of grandfathers. “Grandfathers have seen it all,” Giovanni said in the introduction. “The wars and the weapons of war. The hurts and the harm of hate. Grandfathers hope for us. Wish for us. Sing our song. Cross their fingers that they will be good grandfathers. Cross their fingers that they will be good.”

The book contains stories of Giovanni’s own grandfather, the gatherings of poets and prints, writers and scholars, radio hosts and lawyers, librarians and photojournalists, record producers and chemists. The writers include famous people such as poets Giovanni and Rita Dove and people from all walks of ordinary life, including 67-year-old Elizabeth H. Heath, a Retirement Village where Giovanni conduct a writers’ workshop. Heath’s introduction is definitive, Giovanni said: “It is not all grandfathers. But it does show us the mostly good, sometimes not-so-good person we love.”

The grandfathers come in all types. There’s the one who exhibits the “silliness of love that gentles the heart and makes the voice stick in the throat.” There is the granddad who “must have been born a saint,” who “was deeply religious and probably never broke a law—God or man.” There’s the grandfather whose “life bridges the gap between slavery and African-American determination to move from backseats.”

And the one who left his grandfather memories of dancing. One day she was four when he grabbed his little hand and did the schottische in the living room, a kind of summy music in the morning. Another is coming from the old Victrola, tickling our hearts.

One writer describes the devastation of his grandfather’s becoming blind, unable to “see the usefulness of his children or behold the beauty of nature again,” but using his grandson’s “mind as a tape recorder.” One person wrote of his grandfather. “Just before he died at the age of eighty-five, my grandfather began to reminisce of Yoda, the Jedi Master of the Star Wars trilogy. Not only did he look a little like Yoda, he seemed to have some of Yoda’s crankiness, not to mention his wisdom.”

“I hope,” Giovanni wrote, “this collection will encourage young people to solve some of their families’ mysteries. I hope that young people will ask questions and listen to answers spoken or unspoken.” Grandfathers, Giovanni said, more than any other males, “let us see what loving relationships should be.”

Grand Father was published by Henry Holt and Company, Inc. of New York and is available at bookstores.

Dennis L. Eavey, 50

By Gary M. Woylo, director, Production Services

Dennis L. Eavey, a senior manager in Personnel Services, died Sunday, June 13 at the age of 50.

Eavey graduated with a B.A. in economics from Emory and Henry College 1971. Before coming to Virginia Tech in December 1977, he worked for Smith’s Transfer Corporation and Electro-Tech. At Tech, he started as a training supervisor in Personnel Services.

Eavey was one of the originators of the university’s service-awards program, which recognizes 25 years of service and is administered by the personnel department.

Eavey was also an active member in New River Valley Society for Human Resource Management, and has served on a number of state advisory committees.

Theatre alum returns for research

By Sally Harris

With the touch of a computer key, Michael Chien can change the brightness of an entire stage. Another keystroke and the scene changes. Another brings a character to the stage to interact with the play, and cinema from the Chinese Culture University.

This year; but he has had a wealth of experiences. And this year, Randy Ward pushed me toward set design and technical directing. “But throughout my years here, Randy Ward pushed me toward design, so I did drawings and paintings, took classes from art and agriculture (welding). It was fun to have a variety of options that I could learn from more than regular theater programs.”

In 1991, Chien earned an M.F.A. degree in lighting and design, moved to Los Angeles for six months, then returned to Taiwan. By February, he had a full-time job as director for the National Theatre in Taipei. In six months, he was promoted to head of the performance section, which included four spaces for opera, experimental theater, concerts, and recitals. “Performance section maintained all the equipment and crews to run the shows,” Chien said. “I had 70-75 people working under me.” The complex ran round and offered about 500 shows per year.

After that, Chien taught drama and television at the Chinese Culture University, teaching lighting, acting, and stagecraft. He came to Virginia Tech in 1988 to serve an assistantship with Randy Ward of the theatre arts department.

“Grand Fathers, Giovanni said, “is that it is individually designed for students instead of having set classes they have to take.” The students build a program according to their abilities, weaknesses, and strengths, he said. And this year, Chien said, he has a wealth of experiences. And this year, Randy Ward pushed me toward design, so I did drawings and paintings, took classes from art and agriculture (welding). It was fun to have a variety of options that I could learn from more than regular theater programs.”

In 1991, Chien earned an M.F.A. degree in lighting and design, moved to Los Angeles for six months, then returned to Taiwan. By February, he had a full-time job as director for the National Theatre in Taipei. In six months, he was promoted to head of the performance section, which included four spaces for opera, experimental theater, concerts, and recitals. “Performance section maintained all the equipment and crews to run the shows,” Chien said. “I had 70-75 people working under me.” The complex ran round and offered about 500 shows per year.