

V M M

MAGAZINE

Issue No. 3 Summer/Fall 2007



Researchers lead pioneering study in equine obesity

Subbiah investigates NDV as treatment for prostate cancer

EMC triumphs over quarantine challenges

College maps out expansion plans

UMCP opens BSL-3 lab

News magazine for the Virginia-Maryland
Regional College of Veterinary Medicine





Virginia-Maryland Regional College of Veterinary Medicine

Managing Editor Jeffrey S. Douglas, APR
Designer Terry A. Lawrence
Photography Jerry Baber, Don Massie
Writers Christy Jackson, Marjorie Musick

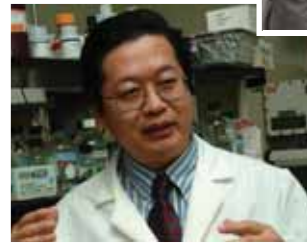
Virginia Tech does not discriminate against employees, students, or applicants for admission or employment on the basis of race, gender, disability, age, veteran status, national origin, religion, sexual orientation, or political affiliation. Anyone having questions concerning discrimination should contact the Office for Equal Opportunity.



The Virginia-Maryland Regional College of Veterinary Medicine is a two-state, three campus professional school operated by Virginia Tech in Blacksburg and the University of Maryland at College Park. The Marion duPont Scott Equine Medical Center in Leesburg, Virginia serves as the college's third campus.

Questions and comments should be addressed to: Office of Public Relations and Communications, VMRCVM, Duck Pond Drive, Virginia Tech, Blacksburg, Virginia, 24061. Phone us at 540/231-4716 or visit us online at www.vetmed.vt.edu

CONTENTS



- UMCP opens BSL-3 lab ...3*
- Meng awarded prestigious Pfizer award ...9*
- NDV as treatment for prostate cancer ...10*
- Pioneering study in equine obesity ...11*
- Informatics lab and homeland security ...13*
- EMC triumphs over quarantine challenges ...17*
- Alumni body surpasses 2,000 ...22*
- College maps out expansion plans ...26*



Dean Gerhardt Schurig

Greetings from Blacksburg:

Investing in the Future of Veterinary Medicine

It is often noted that one of our college's most enduring strengths is its strong heritage of "grassroots" support. In the 1970's and early 1980's, people from throughout the region worked hard to convince lawmakers in Richmond and Annapolis to establish the college. Many supporters also invested in the "Campaign for the Veterinary College," an \$8 million campaign that was Virginia Tech's first organized capital campaign.

We have a long history of engagement and being responsive to stakeholders who share our goals of creating a better future for all through excellence in veterinary medicine. Today, our college is working more closely than ever with private practitioners, pet-owners, agricultural producers and others who care about our profession and those it serves. Veterinary medicine faces major challenges, as many of you know, in both public and animal health areas, and there is much work to be done.

Here in the college, we are in the process of building our translational medicine programs. Our overall goal with this is to increase the relevance and the speed with which we develop and export new products, services and protocols from our college laboratories, thereby making college programs a more viable and productive part of the world of business and the private practice community. As part of this effort, we are also seeking synergistic development through collaboration with other agencies and organizations, both in the public and private sectors. Modern organizations operate in an increasingly interdependent environment, and strategic partnerships and collaborations are a vital part of performance and achievement.

We are also evaluating strategies to help the profession meet society's future needs. It is well documented that we are facing immediate shortages in the public health and food animal sectors of our profession, and those shortages will exist more broadly throughout the profession in the very near future. The Association for American Veterinary Medical Colleges (AAVMC) and the American Veterinary Medical Association (AVMA) have launched an unprecedented lobbying effort in order to gain federal support to increase our capacity to train veterinarians by seeking federal support for the Veterinary Public Health Workforce Expansion Act of 2007.

But the probabilities for success with this federal initiative remain unknown at this time. In order to ensure the success of our college in the future, we must take steps to help ourselves. Our ten-year, \$90 million building program is outlined on page 26 of this magazine, and we are working with university leaders to seek state government support for some aspects of this building program.

How much assistance we will receive from the state is also unknown, although we do know that state government will not be capable of providing all of the funding that we need and that private support will be an essential component of our plans to finance this critically needed building program. How can you help? Many of you, whether you are practitioner colleagues or friends, know people who have both the philanthropic capacity and the desire to make a difference in the world. Help them understand that investment in veterinary medicine is honorable, noble and urgent. Help us reach out to them.

Private sector investment in college programs is a tradition that dates back to our origins. Clearly, it is a tradition that our future depends upon.

VMRCVM Hosts Parasitology Meeting

Worms and parasites present a major health and productivity threat for both companion and agricultural animals.

Veterinarians have a variety of “de-worming” agents at their disposal, yet these organisms often develop a resistance to the drugs that have been devised to control them

Strategies for dealing with this drug resistance were discussed when more than 30 scientists from scientific and educational institutions from throughout the southeastern United States and Caribbean convened at the college for the 2007 spring meeting of the Southern Consortium for Small Ruminant Parasite Control (SCRPC).

The SCSRPC seeks to develop and validate novel methods for sustainable control of gastrointestinal nematodes in small ruminants and raise awareness, according to consortium participant Dr. Anne Zajac, associate professor, Department of Biomedical Sciences and Pathobiology.

“Internal parasites of small ruminants are the biggest health problem goat and sheep producers in the U.S. face,” said Zajac.

VMRCVM's Electronic Stallion Service Auction Benefits Equine Reproductive Research

For the second year the college conducted an Internet-based stallion service auction to benefit equine reproductive programs in the college and about \$6,000 was raised during the four-month auction season.

The electronic auction was developed to help raise funds to support equine reproduction research by Dr. John Dascanio, an associate professor in the Department of Large Animal Clinical Sciences, and a board certified equine reproductive specialist (theriogenologist).

Auction participants bid up the services for a particular stallion until the winning bid is announced at the end of the auction. The entire bid then goes to support the college's equine reproductive research, education and service programs.

Auction proceeds went toward the establishment of a student scholarship, research and laboratory support, Dascanio said.



Fourth Annual Dog Walk Against Cancer

For the fourth year in a row, the VMRCVM's Center for Comparative Oncology (CeCO) sponsored a “Dog Walk Against Cancer.”

More than 80 people participated and about \$4300 was raised to support cancer research, according to Dr. John Robertson, a professor in the college's Department of Biomedical Sciences and Pathobiology and director of CeCO.

Highlights of the event included a kick-off informational session on cancer in animals and a survivor and remembrance walk around the flowers in The Grove to honor both two- and four-legged cancer survivors and victims.

VMRCVM Co-hosts HIV/AIDS Lecture Series

The VMRCVM and the Association for India's Development recently presented a two-part lecture series on the crisis of AIDS in developing countries around the world on the

Virginia Tech campus as part of the Women's Month Celebration at Virginia Tech.

Dr. Vineeta Gupta, founder-director of the Stop HIV/AIDS in India Initiative (SHAII), presented both lectures. Dr. Gupta has a medical degree and law degree and has twenty years experience as a grassroots human rights activist and community organizer both in India and in the United States.

VMRCVM's Schurig Elected Treasurer of National Veterinary Organization

Dean Gerhard Schurig has been elected treasurer of the Association of American Veterinary Medical Colleges (AAVMC), a Washington, D.C. based organization that represents academic veterinary medicine in North America.

As treasurer, Schurig will serve on the AAVMC Board of Directors and preside over the financial affairs of the organization.

“I'm honored to be elected and looking forward to serving,” said Schurig. “The AAVMC is providing strong leadership during a very critical time in the history of the profession.”

The AAVMC seeks to improve the quality of life for people and



Dr. Robert Martin, professor, Department of Small Animal Clinical Sciences, shares a light moment with Mrs. Joyce Morgan, administrative manager/assistant to the dean during a recent reception honoring Martin's 14 years of service as director of the Veterinary Teaching Hospital. Martin, who joined the VMRCVM in 1983, and Morgan, who was the first employee hired by VMRCVM Founding Dean Dr. Richard B. Talbot in 1974, have a combined 57 years of experience serving the college. Martin has returned to full-time teaching, research and clinical activities in the department.

animals by advancing veterinary medical education, improving animal health and welfare, strengthening biomedical research, promoting food safety and food security, and enhancing environmental quality.

The organization coordinates the affairs of all 28 U.S. veterinary medical colleges, four Canadian colleges of veterinary medicine, U.S. departments of veterinary science and comparative medicine, animal medical centers, and three international veterinary schools. The association represents more than 4,000 faculty, 5,000 staff, 10,000 veterinary students, and 3,000 graduate students at these institutions.



Dr. Ashish Ranjan

VMRCVM Student Receives First Place Award at Research Recognition Day

Dr. Ashish Ranjan, a Ph.D. candidate in the Department of Large Animal Clinical Sciences (DLACS), recently received first place for his research poster during the two-day Edward Via Virginia College of Osteopathic Medicine Via Research Recognition Day.

The focus of the competition was nanomedicine research and its application. The competition was divided into biomedical sciences and clinical sciences. Ranjan won in the biomedical sciences category for his poster entitled "Targeted Delivery of Antimicrobials Using Functionalized Carbon Nanotubes to Control Intracellular Bacterial Infections."

The Research Recognition Day awards were presented by Sir Harold Kroto, Ph.D. and 1996 Nobel Prize winner in chemistry, who also served as keynote speaker for the event.

Ranjan was joined in this project by Dr. Ramanathan Kasimanickam, assistant professor, DLACS; Dr. Nammalwar Sriranganathan, professor, Department of Biomedical Sciences and Pathobiology; Dr. Gary Pickrell, assistant professor, Materials Science and Engineering (MSE), College of Engineering; and Navin Manjooran, a graduate student from MSE.

Ranjan received his B.V.Sc. in 2005 from Madras Veterinary College in India. He serves as the president of the Biomedical and Veterinary Science Graduate Student Association and as the social director of the Council of International Students Organization.

University of Maryland-College Park President Mote Visits New Gudelsky Center BSL-3 Lab



Dr. Dan Mote, president of the University of Maryland at College Park, VMRCVM Associate Dean-Maryland Campus Dr. Siba Samal, and Dr. Cheng-I Wei, dean of the UMCP College of Agriculture and Natural Resources, recently toured the new BSL-3 laboratory.

A new Biosafety Level 3 containment (BSL-3) Laboratory has been constructed on the VMRCVM's Maryland Campus at the University of Maryland-College Park (UMCP).

Dr. Dan Mote, president of the UMCP, recently visited and toured the facility and met with the faculty.

President Mote was extremely positive about his tour of the facility and the work being done there, according to Dr. Siba Samal, associate dean of the UMCP Campus.

"We were very honored by his visit and happy to see Dr. Mote so interested in the Virginia-Maryland Regional College of Veterinary Medicine and our faculty's research," said Samal. "It means a lot to have the university

president show such an interest in our department, faculty, and work."

The designation of BSL-3 is given only to laboratories that meet very strict United States Department of Agriculture (USDA) standards for handling infectious agents that pose serious or potentially lethal diseases as a result of inhalation.

VMRCVM researchers at College Park are investigating Avian Influenza (H5N1) and Newcastle Disease, two of three animal diseases designated as priorities by the USDA.

The new lab is an enhanced BSL-3 facility. This means there are features of BSL-4 containment, the highest designation a facility can receive, incorporated into the lab's design.



Dr. Jeff Wilcke

Wilcke Elected to Global Medical Informatics Organization

Dr. Jeff Wilcke, the MetCalf Professor of Veterinary Informatics in the Department of Biomedical Sciences and Pathobiology, has been elected to represent the United States on the Content Committee of the Copenhagen, Denmark based International Health Terminology Standards Development Organization (IHTSDO).

The 12 nations participating in the consortium seek to improve the health of people

around the world through the development and implementation of a semantically accurate and interoperable system of health terms.

Wilcke is one of the nation's leading medical informaticists and heads the college's Veterinary Medical Informatics Laboratory (VMIL), which develops information technology to create efficient systems for managing vast amounts of medical and health data.

"I'm honored to serve in this capacity," said Wilcke, whose nomination was supported by the National Institute of Health's National Library of Medicine. "This makes a statement about the credibility of our program."

Among other programs, VMIL has managed the on-line version of the Food & Drug Administration's "Greenbook," a database of all of the pharmaceuticals approved for use in animals.



Hokie Spirit Memorial Fund - The Run for 32

Several members of the VMRCVM recently helped raise funds to honor and support the victims of the April 16 tragedy at Virginia Tech by running in the "Virginia Beach Rock 'n Roll" half-marathon. The group ran with "The Run for 32" which is an official charity established by Joel Kelly, a 1990 graduate of Virginia Tech. About 150 runners raised over \$13,000 for the scholarship portion of the Hokie Spirit Memorial Fund, according to Dr. Tanya LeRoith (bottom right), an assistant professor in the Department of Biomedical Sciences and Pathobiology. Other participants from the vet school included Ron Tyler (top left), anatomic pathology resident; Ellen Binder (bottom left), a fourth year DVM student; and Andreas Bucher (top right), PMM intern. The fifth person in the photo is Carla Tyler (bottom center), a graduate student in the College of Agriculture and Life Sciences.



Sandy Hancock

Hancock Honored by Society of Quality Assurance

Sandy Hancock, quality assurance officer for the VMRCVM's Good Laboratory Practice (GLP) Program, was recently honored by the Society of Quality Assurance (SQA) as the first recipient of the University Specialty Section Scholarship. This scholarship helped to defray the costs of Hancock's attendance at the 2007 SQA Annual Meeting in Austin, Texas.

The SQA meeting allows quality assurance officers from all over the world to come together to network, continue their education, and share ideas for advancing their profession. A quality assurance officer is responsible for assuring laboratory tests are conducted properly in both industry and academic laboratories.

"This award is well deserved," said Associate Dean for Research and Graduate Studies Roger Avery. "Sandy's dedication

to her job is evident to all of her colleagues in the VMRCVM. Her commitment to quality assurance continues to strengthen and advance the college's Good Laboratory Practice Program."

Good Laboratory Practice is a set of principals set forth by the Food and Drug Administration and the Environmental Protection Agency for non-clinical studies involving products that will affect humans, animals, or the environment. The principals outline how a study is planned, performed, monitored, recorded, reported, and archived. These principals help increase the validity and credibility of a study. While it is not mandatory, the inclusion of a GLP program can be very beneficial to a college.

GLP allows colleges to perform contracted work for outside projects. "Our GLP program demonstrates we are serious about our research program and serious about bringing resources into our college," said Hancock. The program also gives students the opportunity to be exposed to the lab standards that are commonplace in industry laboratories, she added.

Hancock, who has been with the college 18 years, also serves as the lab manager for the Laboratory for Neurotoxicity Studies in the VMRCVM. She holds B.S. and M.S. degrees in biology from the University of Dayton and specializes in electron microscopy.



Dr. Gregory Daniel

Daniels Appointed New DSACS Head

Dr. Gregory B. Daniel, a noted veterinary radiologist, has been appointed head of the Department of Small Animal Clinical Sciences. Most recently, he served as professor and director of Radiological Services at the University of Tennessee's College of Veterinary Medicine in Knoxville.

"We're very pleased to recruit an academic leader of Dr. Daniel's caliber to this important leadership position in our college," said Dean Gerhardt Schurig. "In addition to the vision and leadership capacity he will bring to the college, he will also bring additional depth to our already impressive clinical programs in diagnostic imaging."

Daniel earned an undergraduate degree in animal sciences from the University of Kentucky, the DVM degree from Auburn University, and a M.S. degree in veterinary medical science from the University of Illinois. He is a diplomate in the American College of Veterinary Radiology (ACVR).

Daniel is the recipient of numerous awards and recognitions, including the Pfizer Award for Research Excellence, the University of Tennessee Chancellor's Award for Research Excellence, the Dean's Special Citation Award, among others.



Dr. Sandra Diaz

Dermatology Services Restored

With the addition of Dr. Sandra Diaz as an assistant professor in the Department of Small Animal Clinical Sciences, the college is again offering dermatological services for its clients. These services were temporarily suspended following the departure of a former faculty member.

Skin disorders are some of the most common problems that affect animals and they often manifest themselves in much the same way for very different underlying reasons, according to Dr. Diaz. Allergic reactions are the most frequent cause for a dermatological reaction in pets. Animals can suffer from environmental allergies or even allergies to their food. Symptoms of an allergic reaction or other dermatological problems include year-round itching, consistent licking of feet and other parts of the body, and reoccurring skin and ear infections.

"While skin disorders are rarely life-threatening, we can dramatically improve the quality of life for the animal with proper diagnosis and treatment," said Dr. Diaz.

Dr. Diaz will offer numerous dermatology procedures to VMRCVM patients including video otoscopy and deep ear flushes, formulation of short and long term diets for food allergies, punch, wedge & excisional biopsies and interpretation of dermatohistopathology, and therapeutic bathing. She will also offer treatment and management of a variety of disorders including food, flea and contact allergies, chronic ear infections, and skin tumors.

"We are very pleased to welcome Dr. Diaz," said Dean Gerhardt Schurig. "Her knowledge and expertise in dermatology allows us to further expand the quality care and treatment we give to our patients."

Dr. Diaz received her Bachelor in Veterinary Sciences degree in 1994 and her DVM in 1996 from the Universidad Santo Tomas in Santiago, Chile. She received her Master of Science degree in 2006 from the University of Minnesota where she also completed her residency. Prior to joining the faculty of the VMRCVM, she was on staff at the NYC Veterinary Specialists and Cancer Center in New York, New York.



College Dealing with Aftermath of Virginia Tech Tragedy

Faculty, staff and students in the VMRCVM, as well as those from throughout the Virginia Tech community, are continuing to deal with the aftermath of the April 16 tragedy.

As was the case around the university, many people rose to respond to the demands of the emergency with acts of selfless dedication and compassion.

"I am very proud of how our people responded to this emergency," said VMRCVM Dean Gerhardt Schurig. "Many of our faculty, staff and students rose to do whatever it took to keep our essential services in operation under extremely difficult circumstances, and many others reached out to help others affected more directly by this catastrophe."

While the university was closed for a week, the college's Veterinary Teaching Hospital, like any other hospital, had to continue operations and care for sick and injured animals. Many employees devoted extra time to make sure all duty stations were covered.

Students involved in the Animal Welfare Foster Program took animals over to West Ambler Johnston, the residence hall that was the site of the first two murders, to provide informal pet therapy for some of the students, according to Anna Barnes, a member of the Class of 2008.

The college is conducting a review of internal communication procedures in an effort to determine if any improvements in protocols and employee training can refine its emergency response systems.



Dr. David Hodgson

Hodgson Assumes Reins in DLACS

Dr. David Hodgson has joined the college as head of the Department of Large Animal Clinical Sciences. He comes to the VMRCVM from the University of Sydney in Sydney, Australia where he served as professor and head of the Faculty Horse Unit.

"We are pleased to welcome Dr. Hodgson," said VMRCVM Dean Gerhardt Schurig. "He brings with him an impressive combination of clinical and academic experience as well as a very strong record of accomplishment in equine research. I am confident he will

provide exemplary leadership and vision for the department."

Hodgson earned a B.V.Sc. and a Ph.D. from the University of Sydney. He is a diplomate in the American College of Veterinary Internal Medicine (ACVIM) and a Fellow in both the Australasian College of Biomedical Scientists and in the American College of Sports Medicine.

In addition to his immediate past position, Dr. Hodgson also served as head of the Department of Veterinary Clinical Sciences and veterinary hospital director at the University of Sydney. He has also held positions at the University of Pretoria in South Africa and Washington State University.

Hodgson has published numerous academic papers and has received many awards for his work, including the Ian Clunies Ross Medal which is awarded by the Australian College of Veterinary Surgeons for contributions to veterinary research during the honoree's first decade after graduation.



Dr. Bill Pierson

Pierson Named as Interim VTH Director

Dr. F. William "Bill" Pierson has been appointed interim director of the Veterinary Teaching Hospital (VTH). Dr. Pierson fills the vacancy left by Dr. Bob Martin, who has returned to full-time faculty status after fourteen years in the position.

"Dr. Pierson has distinguished himself as a capable and effective professional who has worked closely with the poultry industry, the United States Department of Agriculture, the Virginia Department of Agriculture and Consumer Services, the Virginia Department of Emergency Management and other organizations," said VMRCVM Dean Gerhardt Schurig. "He has provided important leadership in establishing and managing our college's biosecurity programs and I am confident in his ability to step into this key leadership position."

In his new position, Dr. Pierson will be responsible for developing and implementing VTH policy and procedure, insuring state-of-the-art care for patients, and providing a dynamic and continually improving clinical environment that promotes scholarly and educational activities.

Prior to his appointment as interim director, Pierson served the college as an associate professor of biosecurity and infection control and a clinical specialist in avian medicine in the Department of Large Animal Clinical Sciences. He received his DVM as a member of the VMRCVM's charter class in 1984 and his Ph.D. in avian medicine from Virginia Tech in 1993.

He is board certified as a diplomate by the American College of Poultry Veterinarians and is a member of the American Association of Avian Pathologists, the Association of Avian Veterinarians, the Poultry Science Association, the North Eastern Conference on Avian Diseases, and Phi Zeta.

New Security Protocols Being Implemented

The initial components of a comprehensive new security program have been implemented in the college.

"We are a biomedical research institution and medical center," notes VMRCVM Dean Gerhardt Schurig. "Unfortunately, we live in an era when we need to be more vigilant

in protecting our college from threats ranging from activists to terrorists."

A central component of the new security program is to have every employee and student realize the personal responsibility they have to help maintain a safe and secure environment in the college.

Employees and students will be encouraged to recognize and address outsiders on premise who are not wearing an appropriate identification badge.

All employees have been issued identification badges with magnetized strips for electronic lock deactivation that are very similar to the Hokie Passport identification cards. Employees are being required to wear them at all times in all places while in the VMRCVM. Plans call for the installation of seven to eight new doors that will require badges for activation.

Visitors have to sign in and sign out through various entry points in the complex and are escorted while they are on the premises.

Management of Retrovirus-Positive Cats Seminar Presented at College Park

A seminar on the management of retrovirus-positive cats presented by the VMRCVM's Maryland Campus at the University of Maryland at College Park and IDEXX Laboratories shared current information on this important topic in veterinary medicine for dozens of private practitioners.

The seminar featured Dr. Susan Little, a feline practitioner who is a diplomate in the American Board of Veterinary Practitioners (Feline).

This seminar included current information on the treatment and prevention of disease transmission. Topics ranged from general background information on feline retrovirus to more specific strategies for the clinical management of retrovirus-infected cats.

Center for Public and Corporate Veterinary Medicine Offers Online Prep Course

The college's Center for Public and Corporate Veterinary Medicine (CPCVM) recently conducted an online preparatory course for veterinarians preparing for board certification by the American College of Veterinary Preventive Medicine (ACVPM) in collaboration with Western Kentucky University.

"We recognize that many of the diplomates of the ACVPM are in public and corporate veterinary medicine," said Dr. Katherine Feldman, former assistant director of the CPCVM and a leader of this prep course.

Thirty-eight veterinarians participated from around the nation and the globe, including registrants from Kuwait, Iraq, and Australia.

Topics that were covered include epidemiology and biostatistics; food safety; environmental health; toxicology; public health policy and administration; infectious diseases; and current topics in veterinary preventive medicine.



Dr. Scott Pleasant, associate professor, Department of Small Animal Clinical Sciences, is depicted on the Lane Stadium Jumbotron as part of a profile of Virginia Tech that ran during a recent football game. The powerful and inspiring video spot, which is also running on national television during selected football telecasts, features several different members of the "Virginia Tech family" proudly proclaiming the phrase "We are Virginia Tech!" An avid Hokie football fan, Pleasant was a member of the college's charter DVM class in 1984. He joined the faculty in 1991 and earned board certification from the American College of Veterinary Surgeons in 1993.

EMC Helps Sponsor Horse Council's Legislative Trail Ride

Virginia Tech's Marion duPont Scott Equine Medical Center recently helped sponsor the Virginia Horse Council's 2007 Legislative Trail Ride at historic Morven Park in Leesburg. As part of the Legislative Trail Ride, legislators and other invited guests attended a barbecue at the center on the evening of Friday, May 11. Remarks were shared by EMC Council Chair Mrs. Shelley Duke and the event featured, food, fellowship, tours of the facility and educational activities for children with a focus on veterinary medicine. About a dozen members of the Virginia General Assembly attended the event, as well as more than 20 officials from Loudoun County, Facquier County and the City of Leesburg.



Center for Public and Corporate Veterinary Medicine Presents SAVMA Symposium

The college's Center for Public and Corporate Veterinary Medicine (CPCVM) recently presented a seminar focused on veterinary careers in the federal government as part of the annual meeting of the Student Chapter of the American Veterinary Medical Association (SAVMA) held at North Carolina State University in Raleigh, North Carolina.

The federal government is an area historically underserved by the veterinary profession, according to Dr. Bettye Walters,

former director of the Maryland campus based CPCVM. In view of the recent threat posed by Avian Influenza H5N1 and the possibility that zoonotic disease agents might be used as bioterrorism weapons, there is an urgent need for more veterinarians to serve in the federal government.

The symposium -the second of its kind- is designed to provide information to veterinary students on the opportunities and benefits a career in government practice has to offer and it is sponsored through grants awarded to the center by the Animal and Plant Health Inspection Service to recruit veterinarians for their agency and others in the federal government.

"The impact a veterinarian can have in federal government is quite significant," said Dr. Walters. "You have the potential to help animals all across the nation at one time."

This year's presenters included representatives from the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) and Food Safety Inspection Service (FSIS), the Food and Drug Administration (FDA), the Centers for Disease Control (CDC), the Department of Homeland Security (DHS) and other branches of the U.S. Government.

Dr. Linda Detwiler, assistant director of the CPCVM, provided opening remarks for the symposium and another featured presenter was Dr. Michelle Colby (VMRCVM '99), a policy analyst with the Office of Science and Technology Policy (OSTP) with the Executive Office of the President of the United States of America.



Several virologists recruited as part of a “cluster hire” project supported by the Commonwealth Research Initiative made presentations during the opening phases of the symposium.

19th Annual Research Symposium Focuses on Virology

Virginia Tech has made a commitment to develop academic depth in the study of host-pathogen-environment interactions as an approach to infectious disease control and the college is playing a central role in that effort.

So choosing virology as the theme of the college’s 2007 Research Symposium was a timely and natural thing to do.

Several virologists recruited as part of a “cluster hire” project supported by the Commonwealth Research Initiative made presentations during the opening phases of the symposium, and appropriately, Dr. X. J. Meng, one of the college’s leading scientists in this effort, was awarded the annual Pfizer Award for Research Excellence during related ceremonies.

After opening comments from Dean Gerhardt Schurig and Associate Dean for Research and Graduate Studies Dr. Roger Avery, four members of the Department of Biomedical Sciences and Pathobiology (DBSP) made presentations on some of their research initiatives.

Dr. Chris Roberts, associate professor, DBSP, began the faculty seminars with a presentation entitled “The Viral ‘Predisposed State’: Host Pathogen Responses Leading to Viral: Bacterial Synergistic Enhancement of Disease.”

Dr. Lijuan Yuan, assistant professor, DBSP, followed with “Determinants of Protective Immunity Against Rotavirus Studied in the Gnotobiotic Pig Model of Human Rotavirus Infection and Disease.”

Dr. X.J. Meng, professor, DBSP, then gave a presentation entitled “Emerging and Zoonotic

Viruses of Veterinary and Public Health Importance: Mechanisms of Replication and Pathogenesis and Vaccine Developments.”

Finally, Dr. Elankumaran Subbiah, assistant professor, DBSP, concluded the faculty seminars with his presentation entitled “Genetically Engineered Newcastle Disease Virus as an Oncolytic Agent.

As is traditional, graduate students in their last year of study presented their research in fifteen-minute time slots in the morning as part of a faculty adjudicated awards competition and other students participated in a poster session. Awards were provided for best presentations and best poster session in the Basic and Clinical Science categories.

The first place award for graduate student presentations went to Oscar Peralta; second place was awarded to Jennifer Gillespie; and the third place award was presented to Amy Wang.

The first place award for the graduate student poster session competition went to Claudio Gutierrez; second place went to Murali Mallela; and third place went to Naveen Surendran.

Two other awards which recognize staff performance and achievement within the research and graduate studies division were presented during the concluding ceremony. Cindy Booth was honored with the Research & Graduate Studies Dedicated Service Award and Alba Hall was honored with the Outstanding Co-Worker Award.

Begun in 1989 to showcase the college’s research accomplishments and activities, the college’s annual research symposium is one of the oldest continuing research symposia at the university.



VMRCVM Professor Honored for Achievement in Poultry Research

Dr. Nathaniel Tablante

Dr. Nathaniel Tablante, an associate professor, extension specialist, and director of the Veterinary Medical Sciences Graduate Program on the VMRCVM's College Park campus, has been awarded the Bruce W. Calnek Applied Poultry Research Achievement Award.

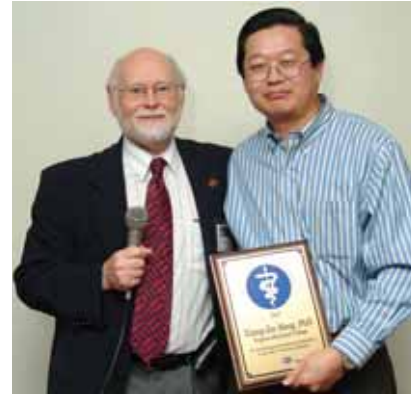
This award is given by the American Association of Avian Pathologists to a researcher whose outstanding professional contributions have resulted in a measurable impact on the control of important poultry diseases. Dr. Tablante was honored for the pioneering work he and his colleagues are doing in the development of an in-house composting method that is used to control the spread of infectious materials during disease outbreaks in broiler flocks. This work is especially important during an era when infectious diseases, like Avian Influenza, present such a threat to international health and well-being.

"In house composting averts potential groundwater pollution from burial, avoids high fuel costs and potential air pollution with incineration, and prevents potential disease spread associated with transportation to landfills and the high transport costs and tipping fees," said Tablante. "Because the infected carcasses are composted inside the poultry house, the risk of spreading infectious agents to people and animals is greatly reduced. The high temperatures generated by the composting process also inactivate most pathogens, including Avian Influenza virus."

This innovative method was initially developed during an Avian Influenza outbreak that occurred on the Delmarva Peninsula in 2004. Utilizing the in-house composting method developed by Tablante and his colleagues, the outbreak was contained to only three farms. Had it been necessary to transport the birds to landfills or other mass disposal facilities, the chance of further spread of the disease would have been significantly increased, according to Tablante.

Dr. Tablante is currently collaborating with George "Bud" Malone of the University of Delaware on a "National Training Program on Mass Euthanasia and Disposal Procedures for Catastrophic Poultry Disease Events," which combines Tablante's in-house composting procedure with an innovative depopulation method that Malone has developed. The program is designed to prepare the poultry industry, government officials, and extension agents to respond quickly and efficiently in cases of catastrophic disease or disaster. The work is funded by portions of a three-year, five-million dollar education and outreach grant from the United States Department of Agriculture (USDA) awarded to the University of Maryland.

Dr. Tablante earned his degree in veterinary medicine in 1976 from the University of the Philippines. He received his first master's degree from the University of California-Davis in 1985 and his second master's degree from the University of Guelph in 1995. He is also a diplomate of the American College of Poultry Veterinarians and has been with VMRCVM since 1997.



Assistant Dean for Research and Graduate Studies Dr. Roger Avery (left) presents Dr. X. J. Meng (right) with the Pfizer Award for Research Excellence

Dr. X. J. Meng Honored with Pfizer Award for Research Excellence

Dr. X.J. Meng, a physician and Ph.D. virologist in the Department of Biomedical Sciences and Pathobiology (DBSP), has been awarded the prestigious Pfizer Award for Research Excellence.

"Dr. Meng is a prolific researcher whose work enjoys an international reputation," said VMRCVM Dean Gerhardt Schurig. "His research initiatives in virology serve at the nucleus of a major research initiative at Virginia Tech and we are very pleased to see him honored in this way."

Meng, a professor in the DBSP, operates a world-renowned laboratory in the college's Center for Molecular Medicine and Infectious Diseases (CMMID) that is exploring Hepatitis E virus as well as several other zoonotic diseases.

His research interests include studying the molecular mechanisms of viral replication and pathogenesis, developing vaccines against viral diseases, the study of emerging and re-emerging zoonotic viral diseases, human, swine and avian Hepatitis E viruses, porcine reproductive and respiratory syndrome virus and porcine circovirus.

Meng is also serving on a National Institutes of Health (NIH) Scientific Review Team for the Drug Discovery and Mechanisms of Antimicrobial Resistance Study Section. Members of study sections review grant applications submitted to NIH, and make recommendations to the appropriate NIH committees and advisory boards.

Prior to joining the VMRCVM in 1999, Meng served as Senior Staff Fellow of the Molecular Hepatitis Section of the Laboratory of Infectious Diseases at the National Institutes of Health's National Institute of Allergy and Infectious Diseases (NIAID).

Dr. Meng earned an M.D. from Binzhou Medical College in Binzhou, Shandong, People's Republic of China; a M.S. in microbiology and immunology from the Virus Research Institute, Wuhan University College of Medicine, Wuhan, Hubei, Peoples Republic of China; and a Ph.D. in immunobiology from the Department of Microbiology, Immunology and Preventive Medicine at the Iowa State University College of Veterinary Medicine.



“We believe this novel concept of altering Newcastle disease virus to selectively replicate and kill only cancer cells that secrete PSA will pave the way for several radical treatment approaches not only for prostate cancer, but for many different types of cancer.”

Dr. Elankurmaran Subbiah

Veterinary Scientists Explore Poultry Virus Approach to Human Prostate Cancer

VMRCVM virologists are looking at how a genetically modified variant of Avian Newcastle disease virus (NDV) can treat human prostate cancer.

Dr. Elankurmaran Subbiah, assistant professor, Department of Biomedical Sciences and Pathobiology, was recently awarded a prestigious research grant by the Department of Defense. This “Congressionally Directed Medical Research Program” award will support the exploration and hypothesis development for an innovative approach to treating prostate cancer.

Subbiah and his co-investigator, Dr. Siba K. Samal, associate dean of the college’s Maryland campus, were awarded a \$113,250 grant for their ongoing work using a genetically modified version of NDV to treat prostate cancer in humans.

Prostate cancer is the second most common type of cancer in men, according to the American Cancer Society (ACS). The ACS estimates there will be almost 219,000 new cases of prostate cancer reported in the United States in 2007.

According to Subbiah, the use of poultry viruses as cancer therapy poses no threat to humans and several other oncolytic viruses are currently being explored to treat cancer. However, Subbiah’s work is the first to alter Newcastle disease virus through a reverse genetic system to target prostate cancer specifically.

Reverse genetics (RG) is the process of generating a recombinant virus from cloned complimentary DNA (cDNA), explains Subbiah. Through the RG system, recombinant viruses can be designed to have specific properties that make them attractive as biotechnological tools, live vaccines, and cancer thera-

pies. This is achieved through the introduction of the desired changes in the cDNA, which are then transferred faithfully to the recombinant virus.

In the current investigation, Dr. Subbiah and his associates are altering the fusion protein of NDV to replicate only in the presence of prostate specific antigen (PSA), which is found exclusively in cancerous prostate cells.

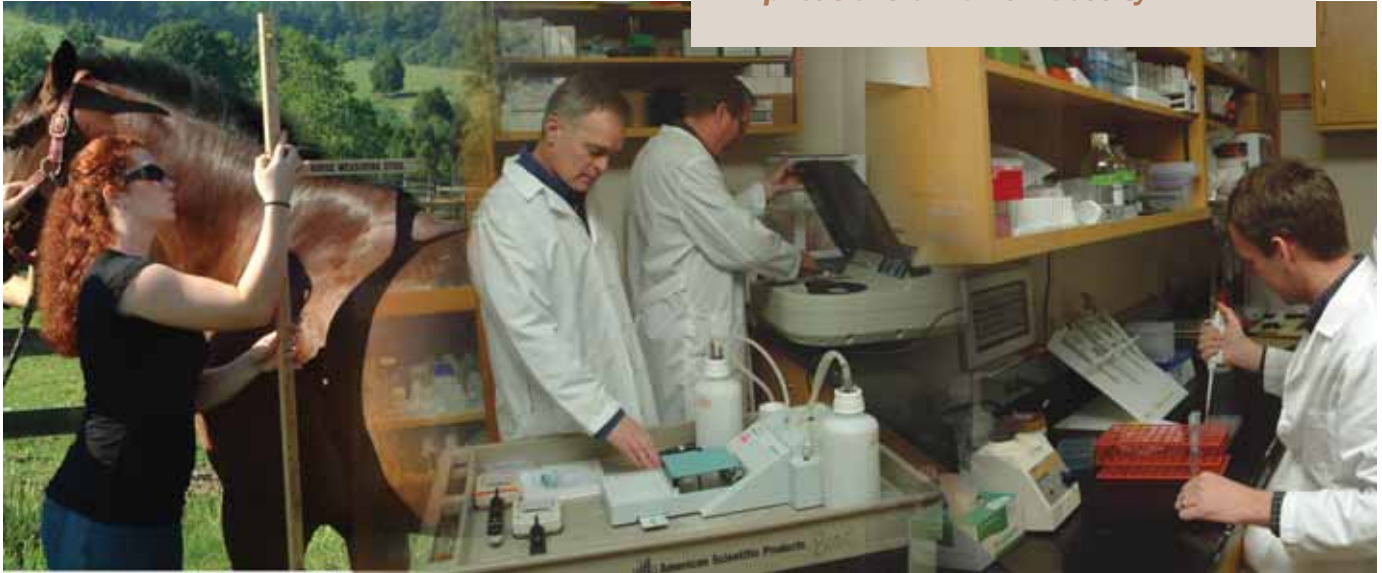
Normal, healthy cells have an interferon antiviral system that activates upon infection with NDV preventing replication of the virus, explains Dr. Subbiah. Cancer cells, however, have defective interferon antiviral systems, he said. NDV utilizes the defects to replicate in the diseased cells. The replication of NDV generates apoptosis - also known as programmed cell death or cell suicide- in the cell.

“We believe this novel concept of altering Newcastle disease virus to selectively replicate and kill only cancer cells that secrete PSA will pave the way for several radical treatment approaches not only for prostate cancer, but for many different types of cancer,” said Subbiah. “We are excited about the endless possibilities this approach offers to treat cancer.”

Dr. Subbiah received his B.V.Sc. in 1984, M.V.Sc. in 1989, and Ph.D in veterinary microbiology in 1996 from the Madras Veterinary College in Madras, India. He was a research assistant professor at the VMRCVM’s University of Maryland-College Park campus prior to joining Virginia Tech in 2006.

In 2000, he was a finalist for the Invention of the Year Award in Life Sciences for his work on dermal immunization of chickens with a unique plasmid DNA.

VMRCVM Researchers Lead Pioneering Study in Equine Obesity



Thatcher and his colleagues believe the study results suggest that horse-owners should change some of the ways in which they care for their horses – and hinted that horses could emerge as an important model for studying the health implications of human obesity.

America's growing obesity problem has alarmed physicians and public health officials, and veterinarians have recently focused their attention on fat dogs and cats. Now, a team of researchers from the VMRCVM and the College of Agriculture and Life Sciences (CALs) at Virginia Tech has determined that horses are also facing serious health risks because of obesity.

Fifty-one percent of the horses evaluated during the pioneering investigation were determined to be overweight or obese – and subject to serious health problems like laminitis and hyperinsulinemia. And just like people, it appears as though the culprits are over-eating and lack of exercise.

Overweight horses can suffer from insulin and sugar imbalances, chronic inflammation, and oxidative stress, a malady that occurs as a result of changes to metabolic processes that alter the delicate balances between the destruction and creation of new cells in the body.

"This study documented that this is an extremely important problem in horses that has been under-reported," said Dr. Craig Thatcher, a professor in the VMRCVM's Department of Large Animal Clinical Sciences (DLACS) and diplomate in the American College of Veterinary Nutrition. Thatcher and his colleagues believe the study results suggest that horse-owners should change some of the ways in which they care for their horses – and hinted that horses could emerge as an important

model for studying the health implications of human obesity.

"Obesity, over the past decade, has become a major health concern in horses," said Dr. Scott Pleasant, an associate professor in the DLACS and diplomate in the American College of Veterinary Surgeons. "This is primarily because of its association with problems such as insulin resistance, oxidative stress and inflammation, and laminitis."

In fact, it was a spike in pasture-associated laminitis cases that led Dr. Pleasant to grow curious and seek the collaboration of Dr. Thatcher, an internationally renowned veterinary nutritionist, on the innovative research project. Dr. Ray Geor, the Paul Mellon Distinguished Professor of Agriculture in the College of Agriculture and Life Sciences and director of the Middleburg Agricultural Research and Extension Center in Middleburg, Va., and Dr. Francois Elvinger, an epidemiologist and associate professor in the DLACS, were also enlisted as co-investigators.

"Laminitis is a failure of the connective tissue bond between the horse's hoof and the bone within the hoof," explains Dr. Pleasant, noting the highly publicized struggle the racehorse Barbaro had with the disorder as a result of his catastrophic injury at the 2006 Preakness. "When that bond fails, and the hoof and bone start to pull apart, it is extremely painful to the horse," he continued. "Laminitis is one of the most devastating and debilitating problems that we see with the horse."

Funded by the Virginia Horse Industry Board, the study also suggested that overweight horses can suffer from insulin and sugar imbalances, chronic inflammation, and oxidative stress,

a malady that occurs as a result of changes to metabolic processes that alter the delicate balances between the destruction and creation of new cells in the body.

“Oxidative stress is an imbalance between the production of free radicals and reactive oxygen species and the body’s antioxidant defense mechanisms, and that imbalance is in favor of the oxidants,” said Thatcher. “Those free radicals and reactive oxidant species can affect macromolecules in the body such as lipids, DNA and proteins, ultimately causing cell death or changing the functionality of these macromolecules.”

Other problems caused by equine obesity are heat stress, increased bone, tendon, and joint injuries, and reduced performance levels.

After surveying the academic literature the researchers discovered that only one documented study on equine obesity existed prior to this research, according to Thatcher. It was an owner-reported survey done in 1998 by the National Animal Health Monitoring System (NAHMS) through the United States Department of Agriculture. This study reported the prevalence of overweight or obese horses to be five percent.

However, based on the horses seen routinely in clinical practice at the VMRCVM, the research team hypothesized the prevalence of overweight and obese horses was much higher than the reported five percent. “We thought it was at a level of at least fifteen percent,” said Dr. Thatcher.

The research team designed a prospective study and conducted it over the course of 60 days from June 19, 2006 through August 17, 2006. They studied 300 horses, ranging from 4 to 20 years old from 114 farms, chosen randomly from over 1,000 horses in the VMRCVM’s Equine Field Service horse population.

The horses were studied between 6 a.m. and 12 noon, prior to any grain or concentrate consumption, which can alter glucose and insulin levels.

The researchers are now focusing more specifically on the role of hormone levels, oxidative stress, inflammatory biomarkers, and antioxidant mechanisms. However, the preliminary data clearly demonstrates that this research has important implications for both equine and human health.

Two independent body-conditioning scores, which assess the amount of fat cover of the horses, were assigned to each animal. The scores range from 1 to 9 and a score of 8 or 9 signifies obesity. Morphometric measurements were also taken to allow the research team to calculate body weight and body mass index (BMI). These measurements include girth circumference, neck circumference, body length, and height.

Each horse was checked for signs of laminitis and blood was drawn to assess glucose and insulin levels as well as other hormones, cytokines, and oxidative biomarkers. A questionnaire was also completed by each horse’s owner to gather background information on breed, gender, health history, feed, and exercise. Ponies, minis, donkeys, draft breeds, and their

crosses were excluded from the study, as were pregnant and lactating mares, and horses undergoing treatment for medical problems.

While laboratory testing and data analysis are still underway, the research team has already made some alarming discoveries.

Fifty-one percent of the horses in the study were found to be overweight and nineteen percent were found to be obese. Eighteen percent of the overweight horses and thirty-two percent of obese horses were hyperinsulinemic, findings which support the researchers’ hypothesis that the rate of overweight and obese horses is greater than the five percent figure reported in the 1998 NAHMS study.

The study also suggests that equine obesity may result from natural grazing behavior instead of the over use of grains and other feed supplements, which defies conventional thinking on equine weight matters. The majority of horses examined in the study were fed primarily pasture and hay with very little grain and concentrate.

Instead of overfeeding of grain and concentrates, the evidence indicates that improved forage and lack of exercise are the two most common contributing factors in equine obesity. Thatcher believes this may result from the fact that many pasture forages have been fortified with the goal of improving weight gain and productivity of cattle and other food animals, with little thought given to how these forages might affect horses, which often share the same pastures. In addition, the majority of the horses studied were under-exercised. They were left on pastures to eat, but did not have an actual exercise regimen.

Horses today are managed much differently from their evolutionary roots, indicated Dr. Pleasant. “The horse evolved as a free-roaming grazer on sparse pasture types,” he said. Later the horse served primarily as a work animal, serving as a source of transportation and draft power. Today, most horses serve as companions and light performance animals, he said.

“We can see with increased nutrition and lack of exercise how these animals could drift toward being overweight,” he said.

This research project remains underway, and has laid the groundwork for a series of provocative new studies. The researchers are now focusing more specifically on the role of hormone levels, oxidative stress, inflammatory biomarkers, and antioxidant mechanisms. However, the preliminary data clearly demonstrates that this research has important implications for both equine and human health.

For example, the knowledge gained concerning the correlation between fortified forage and lack of exercise and obesity in the horse can be immediately utilized by veterinary clinicians and owners who can now consider altering their existing feeding and management programs.

Human health may also substantially benefit from this study, according to Dr. Thatcher, because humans suffering from obesity experience chronic inflammation. If obese horses are also found to suffer from chronic inflammation, the possibility would then exist for the horse to serve as an animal model for the study of obesity in people for the very first time.

MetCalf Professor Focused on Need for Animal, Human Medical Informatics



Dr. Jeff Wilcke, the Metcalf Professor of Veterinary Informatics, participates in a videoconference while working in the Veterinary Medical Informatics Laboratory.

Dr. Jeff Wilcke quips from time to time that he feels like he is being asked to write "War and Peace" using only the words found in "Fun with Dick and Jane."

That statement describes the occasional frustration he feels about his efforts to get U.S. government agencies and colleagues alike to accept the complexity that functional medical terminologies impose on health information systems for humans and animals.

Developing the appropriate software systems and gaining universal acceptance of common - or at least interoperable - nomenclature systems has startling implications for public health, food safety, and homeland security, according to Wilcke, who serves as the Metcalf Professor of Veterinary Informatics in the college's Department of Biomedical Sciences and Pathobiology.

There needs to be an integrated, national approach to building the program and it needs to happen yesterday, not today, according to Wilcke. Ironically, he admits, the medical information networks that are ultimately being developed to improve communication are in themselves difficult to describe because of their complex blend of terminology, semantics, and communications protocols.

Wilcke is an affable veterinary pharmacologist whose academic interests began migrating into this area about 15 years ago while he was working with VMRCVM Founding Dean Dr. Richard B. Talbot. Talbot, who spent several years working with the Food & Drug Administration's Center for Veterinary Medicine, was considered one of the nation's pioneers in veterinary informatics. When Talbot perished in a 1994 plane crash near Pittsburg, Wilcke picked up his work.

Today, the college's Veterinary Medical Informatics Laboratory (VMIL) is acknowledged as the nation's

leading resource for animal medical terminology standards. Wilcke has led the American Veterinary Medical Association's efforts to strengthen animal medical terminology resources for 12 years as their liaison to the American College of Pathologists, creators of SNOMED[®], one of the most sophisticated of the medical nomenclature systems in current use.

Wilcke's laboratory has operated the on-line Food & Drug Administration Database of Approved Animal Drugs, an anthology of pharmaceuticals approved for use in animals in the United States. The lab has also developed an Internet browser for the SNOMED[®] system, an online terminology resource for bio-defense networks and several novel contributions to medical informatics.

Current projects in the laboratory center on fostering the creation of information networks designed to facilitate acquisition and analysis of data generated by veterinary diagnostic laboratories, clinics and hospitals. According to Wilcke, proper application of medical terminology is among the most difficult obstacles remaining if these networks are to function as expected to safeguard human and animal health as well as the nation's food supply. The lab has been working with the United States Department of Agriculture (USDA) and other federal agencies that gather vital data about the health of animal populations in the United States.

Working amidst an array of computers in Virginia Tech's Corporate Research Center, Wilcke keys the word "pneumonia" into a field during a demonstration of VMIL's SNOMED[®] browser for two visitors. Instantly, 640 medical phrases that contain the word "pneumonia" appear in a list.

The speed of that response is something that most people take for granted in an age where keyword-based Internet searching is as common as a toaster in a kitchen. But imagine the complexity that occurs when different systems interpret the keywords in different ways.

The list, which includes phrases that are synonyms for each other, represents 244 concepts related to pneumonia. The SNOMED® knowledge base links each synonym to a single medical concept. Selecting one of the concepts produces a display of its SNOMED® “definition.” Machine processable definitions, an additional feature of the knowledge base, connects disease concepts like pneumonia to concepts for the part of the body affected, the pathologic change produced and even the cause.

“The generation, transmission and integration of human and animal biomedical information requires capable vocabulary and messaging standards to ensure the accurate transmission of meaning,” said Wilcke.

The challenges related to the perfection of a unified, powerful, semantically accurate, “ultimate” system in medical informatics is based upon the fact that there are three major medical standards in play: SNOMED®, LOINC and HL7. The federal government generally supports use of these three systems for electronic medical records and for large-scale biodefense information networks.

Fifteen years ago, Wilcke explains, the profession of veterinary medicine determined that they would adopt the SNOMED® system, in recognition of the linkages between human and veterinary medicine in public health and because the profession could not afford to develop its own systems.

Under the leadership of the National Institutes of Health and the National Library of Medicine, human medicine has made substantial progress in medical informatics in recent years.

Now, considering the major challenges the nation faces as a result of global trade, infectious diseases, and bioterrorism, Wilcke believes it is time for the nation to move quickly to establish medical information standards for the integration of animal and human medical information.

And Wilcke believes that need is becoming more urgent everyday. “Animal and human medical information networks need to be strengthened in order to facilitate the rapid identification of disease outbreaks threatening agriculture and public safety,” he said.

“Animals are effective vectors for some human pathogens and new human pathogens potentially arise from animal pathogens like Avian Influenza,” he said. “At present, major barriers exist in communication among and between physicians and veterinarians.”

Currently, Wilcke’s laboratory is focused on improving the SNOMED® knowledge base so that it can incorporate the similarities and differences between animal and human medicine. The eventual perfection of this system will pay huge dividends in terms of fostering national biological and economic security as well as public health, according to Wilcke.

“One of the most important goals of our research is to enhance the capacity to simultaneously analyze biomedical data from animal and human sources,” said Wilcke, adding that assessing and managing data from each on large-scale, multi-user networks will be critical in the event of a naturally occurring or deliberately introduced infectious disease outbreak that affects agriculture or public health.

Wilcke is currently meeting with officials from various federal government offices, ranging from the Department of Homeland Security to the Food & Drug Administration and other agencies in an effort to develop an integrated, national approach to funding this critical program.



Exchange Program with Chilean University Enhanced

Three senior VMRCVM officials recently traveled to Valdivia, Chile as part of the continued development of a comprehensive exchange program with the University of Austral.

VMRCVM Dean Gerhardt Schurig, Associate Dean for Research and Graduate Studies Dr. Roger Avery and Dr. Bettye Walters, director of international programs, met with their counterparts to refine a November 2005 memorandum of understanding that created a comprehensive exchange program.

The exchange program will now include three components, according to Dr. Walters, who is based on the VMRCVM’s College Park, Maryland campus.

One phase is designed to create an “Honors Research Program” that encourages University of Austral students to become more interested in research.

The Veterinary Clinical Student Exchange Program is designed to enable veterinary students at each institution to undertake clinical experiences through programs operated at the counterpart school, according to Dr. Walters.

For example, VMRCVM third year student Melinda Cep spent six weeks in Chile this summer working with an aquaculture program that produces salmon. Similarly, Chilean veterinary students might undertake clinical experiences with American based Banfield hospitals and others.

A third component of the program is designed to foster exchange experiences for graduate students studying at each university, Walters said.

Dean Schurig began working on the exchange relationship with the University of Austral several years ago. Both the College of Agriculture and Life Sciences and the College of Natural Resources at Virginia Tech are now involved with the program.

Communications Scholar Challenges Profession During Virginia Veterinary Conference



Dr. Wes Jamison

Veterinarians were challenged to become the “priests” that will help society come to grips with the role animals play in the modern world by communications scholar Dr. Wes Jamison during a presentation he made at the Virginia Veterinary Conference in Roanoke.

Jamison, presently working on a second Ph.D. at the University of Florida’s College of Communications, argues that the present animal rights movement is being empowered by an undercurrent of social conflict in our society wrought from our inability to resolve the issue of why some animals end up on the plate while others end up in the parlor.

While the animal rights movement in this country can be traced back more than 100 years, he said, the real activism began about 20 years ago after the passage of the Animal Welfare Act in 1985 and subsequent amendments in 1987.

Jamison contends that the societal cognitive dissonance between a culture that sees some animals as pets and some animals as food creates a dichotomy which animal rights activists are successfully exploiting.

Activist groups that have advocated measures as extreme as elevating the status of companion animals to “canine Americans” have recently found their efforts thwarted at the national level, and have increasingly focused their activism at the local and state level.

“This is not a scientific debate,” he said. “It is a social movement.”

Jamison identified four societal and cultural phenomena that have led up the present state of activism. These include increased urbanization, where animals have moved from the fields into the house; anthropomorphism, where people project human qualities upon animals; growing acceptance of theories of evolution, which suggests people and animals arose from similar organisms eons ago; and egalitarianism, which suggests that the sense of equal rights established for gender and race as civilization has advanced should now be extended toward other species.

“Animal rights is not about animals,” he said. “And if you want to argue that on the basis of empiricism you’re going to get body-slammed.”

Jamison acknowledged that another reason for the growing animal rights movement is because of the growing intensity of the human-animal bond. Pets are the perfect vessels for our

love because they offer unconditional love in response, they never put us in nursing homes, they never divorce us and they never break our hearts by growing up and leaving the home like children do, he said.

“They supplement what is lacking in our lives from our human relationships,” he said.

Jamison contends that the societal cognitive dissonance between a culture that sees some animals as pets and some animals as food creates a dichotomy which animal rights activists are successfully exploiting.

On the one hand, veterinarians are providing expensive and sophisticated diagnostic and therapeutic protocols for animals we deign to be viewed as pets, and on the other hand, veterinarians are working to maximize the growth and productivity of the animals grown for human consumption. The irony, he said, is that those animals are culturally interchangeable; one culture might eat cattle and another might see them as sacred.

Jamison warned that continued reticence on the part of the profession to more actively define the role of animals in society could lead to a “Balkanization” of the profession and open the door for activist groups to move in and frame the debate.

“Are animals family or food,” he asked. “You are being called upon by society to take the leading role in this debate,” he said. “You have the authority and credibility to interpret and mediate a tenuous and irreconcilable relationship.”



More Owners Selecting Equine Elective Surgery

A greater number of owners are choosing to have elective surgeries, typically defined as non-emergency procedures, performed on their horses at Virginia Tech's Marion duPont Scott Equine Medical Center. The center's five board certified surgeons completed almost 500 such treatments in 2006 as compared to only 400 similar operations one decade earlier – a 20 percent increase since 1996.

Dr. Nat White, Jean Ellen Shehan Professor and Director of the Marion duPont Scott Equine Medical Center, reports that clients now have a variety of options for addressing ailments and afflictions that, although not life-threatening, can inhibit their horse's performance or reduce the quality of the animal's life.

The unique university setting allows faculty members at the Marion duPont Scott Equine Medical Center to pursue cutting-edge treatments that may not be found in a standard practice.

“Non-emergency conditions such as bone chips and ligament injuries, can be treated more effectively than in the past,” said White. “This is an exciting time for equine surgeons because new technologies and techniques are allowing us to correct many of these abnormalities and return horses to full health.”

According to Dr. Kimberly May, medical/science writer for the American Veterinary Medical Association, the ease with which information concerning these modalities can be accessed through resources such as the Internet has contributed to the rising number of clients opting for elective treatments.

“Animal owners are becoming more educated about their animals' health and well-being, and they may be more likely

now to opt for a surgery that may not be life-saving, but will improve the animal's quality of life,” said May.

Advancements in both diagnostic technology and clinical application have made it easier for surgeons to diagnose and correct equine maladies through various means including arthroscopy, tumor excision, cisplatin bead implantation, ventriculocordectomy, enucleation and suspensory tendon splitting. New anesthetics and modern monitoring techniques make elective surgery safe with improved prognosis.

“We are discovering injuries that previously went unnoticed because we did not have the diagnostic capabilities that are available today such as MRI,” said Dr. Ken Sullins, professor of equine surgery. “New surgical tools, including lasers and scopes, are making these injuries much easier to detect and treat.”

Also adding to the appeal of elective surgeries is the expanded availability of minimally invasive surgical methods.

“Not only are the patients more comfortable, but these minimally invasive techniques cause considerably less damage to soft tissue and involve a shorter recuperation time,” said Dr. Sarah Dukti, clinical assistant professor in emergency care and equine surgery.

The unique university setting allows faculty members at the Marion duPont Scott Equine Medical Center to pursue cutting-edge treatments that may not be found in a standard practice.

“All patients are different,” said Dr. Alison Smith, clinical assistant professor in anesthesia. “You need people with different experiences and educational backgrounds to maximize care and to introduce new and innovative techniques for the horse world.”



With several American College of Veterinary Surgeons certified faculty on staff, the Equine Medical Center specializes in emergency and elective surgeries.



An outbreak of EHV-1 closed the center for 40 days, but an expert response to the infectious disease crisis averted a more widespread problem.

Equine Medical Center Successfully Manages EHV-1 Outbreak

Virginia Tech's Marion duPont Scott Equine Medical Center in Leesburg, Va., was closed from February 19, 2007, through March 29, due to an EHV-1 outbreak. Led by Dr. Nat White, Jean Ellen Shehan Professor and Director, the center's faculty and staff expertly managed the situation, avoiding what had the potential of becoming a much bigger crisis for the hospital and the equine industry.

On Wednesday, February 7, a horse was admitted to the Marion duPont Scott Equine Medical Center for colic. The surgery was successful and the horse was hospitalized for postoperative care. On Sunday, February 11, while being stalled in the hospital barn, the same horse developed a fever and neurologic signs. The patient was immediately placed in the EMC's isolation unit and tested for several conditions including equine herpesvirus type 1 (EHV-1). Early results from these tests indicated that the horse was suffering from bacterial meningitis, a condition which can cause neurological symptoms.

However, on Friday, February 16, a positive polymerase chain reaction (PCR) test for EHV-1 was received and it was deemed likely that the patient was infected with EHV-1 rather than bacterial meningitis.

EHV-1 is highly contagious between horses and normally affects the upper respiratory system causing a fever, nasal discharge and depression. Horses exposed to it develop immunity for a brief period of time but the immunity does not protect against re-infection. The neurologic form of EHV-1 is a mutant form of the respiratory virus. It affects the blood vessels in the brain and spinal cord causing inflammation in those areas resulting in fever, ataxia, bladder paralysis and recumbency. The cause of the mutation has not been identified but horses that are stressed appear to be more susceptible to this strain.

After the positive PCR test was received, White met with boarded internal medicine specialists Dr. Martin Furr, professor and Adelaide C. Riggs Chair in Equine Medicine; Dr. Harold

McKenzie, assistant professor of equine medicine; and Dr. Anne Desrochers, clinical assistant professor in equine medicine. The group discussed the implications and risks related to those test results and brainstormed about the best and worst possible scenarios of a herpesvirus epidemic. A preliminary plan to contain the suspected infection was established during this meeting.

Immediately after the planning session, testing of all current patients for EHV-1 was initiated, the facility was divided into isolated biosecurity perimeters in order to restrain movement of animals, and new cases were restricted to emergencies and elective outpatients. In addition, the center's medical records system was used to generate a report containing each horse's movement within the hospital beginning at 5 p.m. on Wednesday, February 7 (when the index case arrived). Owners of potentially exposed horses were instructed in methods for preventing the possible spread of the virus at their homes.

On Monday, February 19, a second horse in the hospital exhibited neurologic signs, a development which confirmed virus transmission. Because continued movement of horses would only increase the risk of spreading the infection inside of the hospital and potentially throughout the Mid-Atlantic region, a self-imposed closure was implemented. No new admissions were accepted and current patients could not be released.

Virginia State Veterinarian Dr. Richard Wilkes was contacted by White and agreed that quarantine of the EMC was the most prudent action. The official quarantine order that was issued by the state on Tuesday, February 20, was an essential step for bringing attention to a disease that had the capability of

Please see **EHV-1 Outbreak**: page: 19



MRI is primarily used for the diagnosis and treatment of injuries and diseases of the spinal cord and brain.

Magnetic Resonance Imaging Installed in the VMRCVM

The VMRCVM has expanded the range of non-invasive procedures available in the Veterinary Teaching Hospital with the acquisition of a Magnetic Resonance Imaging (MRI) unit.

Unlike conventional x-rays and computed tomography (CT) which use ionizing radiation to create diagnostic images, MRI uses a strong magnetic field and radio waves to create detailed images of internal structures, according to veterinary radiologist Dr. Jeryl Jones, an associate professor in the Department of Small Animal Clinical Sciences.

MRI is considered the most sensitive diagnostic imaging test for brain and spinal cord diseases since it can detect extremely subtle abnormalities.

“We are very happy and excited to now have an in-house MRI scanner in the VMRCVM,” said Dr. Jones, who is board certified by the American College of Veterinary Radiology. “This advanced imaging technology further increases our diagnostic capabilities and allows us to continue to provide outstanding care in a timely manner to our clients and patients. It is also a valuable teaching tool that will help us better serve the needs of our students, interns, and residents.”

When placed in a MRI unit, the hydrogen atoms within tissues align with a strong magnetic field generated by the instrument, according to Dr. Jones. Radio waves pulsed into the field then stimulate the hydrogen atoms to release energy, which is transmitted to a computer for analysis, she explains. Since the signals of abnormal tissues are different from those received from normal tissues, they will show up as either very white or very dark areas in the computer image display. Brain masses and spinal cord compression are the most common diagnoses made by the MRI unit. These conditions are most commonly treated through surgery or, in the case of tumors, radiation therapy.

While currently used primarily for the diagnosis and treatment of injuries and diseases of the spinal cord and brain, Dr. Jones predicts the unit will also likely be used to diagnose canine knee joint problems in the future.

The new unit is being leased with a current contract of three years. Leasing high-technology imaging equipment as opposed to purchasing allows lower up-front costs and more frequent upgrades, according to Dr. Jones. This benefits the patient, client, and clinician because it helps the VTH keep fees as low as possible while offering modern diagnostic and therapeutic technologies.



Dr. Stephen Boyle has spent a decade trying to develop immuno-contraceptive approaches to the animal over-population problem.

Boyle Focused on Immuno-Contraceptive Approach to Animal Population Explosion

The population explosion of stray and feral cats and dogs has become a worldwide epidemic that cannot be constrained by traditional methods of surgical sterilization.

Immunocontraceptive approaches represent the only viable approach to solving the problem, according to Dr. Stephen Boyle, a professor of bacteriology in the college’s Department of Biomedical Sciences and Pathobiology (DBSP), and for the last ten years he has been diligently working on finding a solution.

Boyle has been working in his lab to develop immuno contraceptive vaccines and he has helped found an international professional society that is dedicated to raising money and interest to support additional research.

Every year over five million stray and feral animals (mostly cats and dogs) are euthanized in the United States alone, according to Dr. Boyle, and that number continues to grow. There is simply not enough shelter space and economic resources to house the millions of lost and abandoned animals, said Boyle, and sadly, most endure a life of suffering. In addition, stray and feral animals can carry rabies and other zoonotic diseases that present a threat to domestic animals and people.

Sterilization is the key to humanely solving this global problem. However, the number of animals currently sterilized each year is not nearly enough to control the ever-expanding number of stray and feral animals, he said. There are not enough veterinarians to conduct the time-consuming surgeries for all of the animals that need it and the cost of the surgery is often beyond the means of many pet owners and animal shelters.

Those realities underscore the viability of developing permanent, affordable, injectable or implantable immuno contraceptives, explains Dr. Boyle, who is currently working in his laboratory in the VMRCVM's Center for Molecular Medicine and Infectious Disease (CMMID) to find potential solutions that are economical for immediate production and distribution.

Convinced that more could be accomplished with increased collaboration, Dr. Boyle established the Alliance for Contraception in Cats and Dogs (ACC&D) in 2000 with Drs. Henry Baker and Brenda Griffin at Auburn University's College of Veterinary Medicine.

Immunocontraceptives stimulate natural responses in an animal's immune system to render them sterile. If such an approach could be perfected, the ease of administration and cost-savings over surgical sterilization would enable it to be applied on a scale that could make an impact on the spiraling over-population problem, Boyle said.

"Immunocontraception represents a very promising approach to solving the global animal over-population problem," said Dr. Boyle. "I am pleased to help develop this research approach and gratified by the growing interest from so many scientists at other institutions."

Advancements in molecular biology that enable scientists to alter the genetic structure of life have provided the scientific capacity to perfect this approach.

In fact, Boyle's quest for affordable, non-surgical contraception for all cats and dogs was inspired by a veterinary student who suggested, in jest, that he do "something useful" with the technology at his disposal and urged him to consider non-surgical contraception for companion animals.

Boyle initially experimented with a genetically altered strain of salmonella as a carrier agent for his first vaccine, which basically sought to create conditions that prevented the fertilization of an egg.

Boyle also took a look at what was being done in the field at other universities. During his investigation, he found there were numerous labs across the country researching non-surgical contraceptive approaches, but there was very little collaboration between scientific investigators, animal shelters, welfare and philanthropic organizations, and other interested parties.

Convinced that more could be accomplished with increased collaboration, Dr. Boyle established the Alliance for Contraception in Cats and Dogs (ACC&D) in 2000 with Drs. Henry Baker and Brenda Griffin at Auburn University's College of Veterinary Medicine.

The mission of the ACC&D is to "expedite the successful introduction of methods to non-surgically sterilize dogs and cats and to support the distribution and promotion of these products to humanely control cat and dog populations worldwide." The alliance draws hundreds of attendants from around the globe to

its symposiums and is currently sponsoring trials of potential immuno contraceptives.

"We are looking forward to finding an affordable, non-surgical method to help control cat and dog overpopulation," said Dr. Boyle. "I would encourage anyone interested in helping further the goals of the ACC&D to go to our web site (<http://www.acc-d.org/>) and consider joining in order to contribute your time and talents."

EHV-1 Outbreak: continued from page 17

crippling the industry for months. By closing the hospital and preventing horses from leaving, the infection was contained.

Immediate action was taken by the EMC to ensure that the public received accurate and timely information concerning the situation. Two open meetings were held—one for veterinarians and one for horse owners—at which the internal medicine faculty, along with the state veterinarians from Virginia and Maryland, spoke and answered questions. Postings on the center's Web site were updated daily and a toll-free hotline was established so that questions from owners and concerned industry representatives could be answered in an accurate and timely manner. Daily conference calls between White and Furr and the state veterinarians' offices confirmed that all information released was correct and consistent.

The Marion duPont Scott Equine Medical Center was closed for a total of 40 days with eighteen patients held at the hospital during the restriction. During that time, three horses at the facility tested positive for EHV-1. One of these horses was euthanized for a different problem, while the other two were treated and eventually recovered. Three additional horses, that were released from the hospital prior to initiation of testing, tested positive by PCR and were quarantined on their respective farms. One of these horses was euthanized for an unrelated condition.

The hospital reopened on Friday, March 30, after all of the horses housed there during the quarantine had been released and cleaning of the facilities was completed. Many owners immediately made appointments and activity levels returned to normal. Despite this support from the center's clients and the horse industry, the closure created a huge economic deficit for the hospital. In addition, the financial impact sustained by the horse industry in the Mid-Atlantic region due to limitations on horse movement and equine services during the outbreak was likely in the millions of dollars.

Equine herpesvirus is a common virus that occurs in horse populations worldwide. It has been estimated that up to 70 percent of healthy adult horses may have the latent virus in their system and there appears to be an increase in the number of outbreaks of the neurologic form of the disease. While equine researchers work toward better methods of treatment and testing, individuals and organizations dealing with horses at any level need to be ready to respond quickly and openly in order to prevent a major epidemic.

College Graduates Class of 2007



The number of veterinarians trained by the college surged past the 2,000 mark during recent graduation ceremonies honoring the class of 2007.

Eighty-eight new veterinarians were awarded diplomas and sworn into the profession, bringing the total number of VMRCVM DVM graduates to 2,020. The college also awarded nine Ph.D. degrees, 14 M.S. degrees and seven Certificates of Residency during the ceremony. That brings those totals to 89 Ph.D. degrees and 188 M.S. degrees.

After opening the ceremony with a moment of silence in honor of Dr. Bob Duncan, a faculty member who died suddenly on May 3, VMRCVM Dean Gerhardt Schurig briefly addressed the catastrophic events of April 16 at Virginia Tech when a deranged gunman shot more than 50 people, killing 32.

"Sorrow will live in our hearts and our memories for a long time, but we will also remember the inspiring examples of courage, strength, resolve, and humanity that are also a part of this," he said.

Schurig predicted that after the university community has time to heal, it will once again be able to focus on the great achievements in discovery, learning and engagement that have made Virginia Tech a world-class university.

Schurig suggested that one way to honor the victims of the tragedy is to focus on achievement and enhancing the university that the victims had chosen to invest their education and their careers in.

Eighty-eight new veterinarians were awarded diplomas and sworn into the profession, bringing the total number of VMRCVM DVM graduates to 2,020.

AVMA President Dr. Greg Hammer addressed the Class of 2007.



LEARNING

LEARNING

"Perhaps by reaching for even higher levels of performance and achievement we can truly pay tribute to those who have perished," he said. "This seems a noble goal."

Following those remarks, Schurig introduced Dr. Greg Hammer, a long-time friend of the college and president of the American Veterinary Medical Association. Dr. Hammer congratulated the graduates, discussed the importance of the modern veterinary profession, and urged them to become active community leaders in addition to accomplished professionals.

The colorful pageant continued with rituals such as the administration of the "Veterinarian's Oath," the "Hooding Ceremony," and the presentation of numerous awards and honors.

Dr. David Panciera, professor, Department of Small Animal Clinical Sciences, was invited to address the graduating class and he shared anecdotes and advice that brought laughter and reflection.

Dr. Greg Svoboda, president of the Maryland Veterinary Medical Association, welcomed the new graduates into the profession on behalf of organized veterinary medicine and Dr. Lauren K. Keating, president of the Virginia Veterinary Medical Association, administered the "Veterinarian's Oath."

Hillary H. Chase, the valedictorian of the class of 2007, was honored with the presentation of the Richard B. Talbot Award.

Dr. Lesley Ann Colby Named Outstanding Recent Alumna



Dr. Lesley Ann Colby has been named the recipient of the college's 2006-2007 Outstanding Recent Alumni Award.

Dr. Colby epitomizes the best qualities of a graduate of the VMRCVM, according to Dr. David Moore, assistant vice-provost for research compliance for Virginia Tech and associate professor in the VMRCVM's Department of Biomedical Sciences and Pathobiology.

"Dr. Colby has garnered national and international recognition for her tireless efforts on behalf of veterinary medicine in general, and the specialty of laboratory animal medicine in particular," said Dr. Moore. "Her actions have influenced veterinary students across the United States, Canada, and the Caribbean, and set the mark for future generations to aspire to, in service to the next generation of lab animal veterinarians."

Dr. Colby is a three-time graduate of Virginia Tech. She received her B.S. in animal science in 1992, her DVM in 1996 and her M.S. in veterinary science-bacteriology/immunology in 1997. She was also a post-doctoral fellow in laboratory animal science in the VMRCVM from 1999-2002. In 2005, she was board certified as a diplomate by the American College of Laboratory Animal Medicine.

Since 2002, she has been a clinical assistant professor in the Unit for Laboratory Animal Medicine in the University of Michigan Medical School, Ann Arbor, Michigan. She also held teaching appointments during her time at the VMRCVM. In addition, she has practiced mixed, small animal and exotic veterinary medicine.

"Dr. Colby throws herself into multiple projects and she sees all of those projects through to completion, assuring that the results are laudable, and something she can be proud of," said Dr. Moore.

Dr. Colby is actively engaged in the veterinary profession through membership in a range of professional societies, serving as a reviewer on three different editorial boards of professional journals, organizing national seminars and forums, and serving in various administrative, clinical, and committee capacities at the University of Michigan. She has authored numerous articles in scientific journals and has been invited to give presentations around the country. She also serves as a consulting veterinarian to Molecular Imaging Research, Inc. in Ann Arbor.



Binder Receives Outstanding Student Award and Others

Daniel Binder (VMRCVM '07), was honored by the university as the college's outstanding student for the 2006-2007 academic year.

The Virginia Tech Alumni Association annually sponsors the Outstanding Student Awards, which recognize exceptional performance by a graduating student from each college within the university. Students and faculty of each of the eight colleges select the recipients.

Binder, who previously earned a Ph.D. in Neuroscience from the University of Virginia, served as a research assistant in the Center for Comparative Oncology and conducted research projects in veterinary clinical ophthalmology.

Binder has excelled academically and ranked fourth in his graduating class. In addition to the Outstanding Student Award, he was presented with several additional awards during the VMRCVM Graduation Awards Luncheon.

These awards include: the American College of Veterinary Ophthalmologists' Senior Award, the Auxiliary to the American Veterinary Medical Association Award, the Charles J. Gose, Jr. Endowed Award, the Jefferson Area Veterinary Medical Association Award, and the Roseanne Robertson Memorial Award for Ophthalmology. He has also been elected to membership in the National Society of Phi Zeta, Chi Chapter.



Veterinary students in the VMRCVM swear an oath to the profession at both the beginning and the conclusion of their studies.

Class of 2011 Admitted

The Class of 2011 was formally admitted to the college following a “White Coat Ceremony” at Virginia Tech in which the 91 new students were issued white laboratory coats and administered the “Veterinary Student’s Oath.”

Attended by almost 300 family, friends, and others, the matriculation ceremony followed a week-long orientation program filled with events as varied as leadership and communications training on “ropes” courses in Shawsville’s Camp Altamont to behavioral and personality inventories.

During the ceremony, VMRCVM Dean Gerhardt Schurig spoke with the students about the human-quality healthcare people demand for their animals and the profession’s responsibilities in fostering human health.

“Our historic role in public health, though often misunderstood, has become more important than ever,” said Schurig. “Infectious diseases, bioterrorism, food safety, these are all critical areas for veterinary medicine. Much of what is happening in public health today is at the intersection of veterinary medicine and human medicine.”

Admission to one of the nation’s 28 colleges of veterinary medicine is very competitive. Over 914 individuals from 46 undergraduate institutions applied for admission to the VMRCVM’s Class of 2011 and 200 personal interviews were conducted to select the 91 new students.

Dr. Lauren Keating, president of the Virginia Veterinary Medical Association (VVMA), and Dr. Jack O’Mara, president of the Maryland Veterinary Medical Association (MVMA), participated in the ceremony.

Dr. Ed Jendrek, the MVMA’s Delegate to the American Veterinary Medical Association, presented each of the students with a Littmann stethoscope as a gift from the MVMA, the VVMA and Professional Veterinary Products, Ltd. MVMA Executive Director Ron Sohn also attended the ceremonies.

The ceremony included several highlights, including the introduction of Dr. Larry Giebel, a prominent veterinarian from Gaith-

ersburg, Maryland, whose three daughters have each attended the VMRCVM. Lauren is a member of the incoming class, Erin earned her DVM in 2004, and Meghan earned her degree in 2005.

The Class of 2011 also boasts another first: for the first time the child of a VMRCVM alumnus has been admitted to the college. Keelan Anderson is the daughter of Dr. Arn Anderson, a member of the Class of 1991.

For only the second time in college history, the child of a VMRCVM faculty member was admitted to the DVM program. Rennie Waldron is the daughter of Dr. Don Waldron, a professor in the Department of Small Animal Clinical Sciences.

Drs. Waldron and Geibel, as well as Dr. Max Poffenbarger, a veterinarian who is father of Class of 2011 member Hope Poffenbarger, each assisted in the ceremonial presentation of the white laboratory coat to their child.

Admission to one of the nation’s 28 colleges of veterinary medicine is very competitive. Over 914 individuals from 46 undergraduate institutions applied for admission to the VMRCVM’s Class of 2011 and 200 personal interviews were conducted to select the 91 new students.

Incoming students represented 46 different undergraduate institutions, with 35 students hailing from undergraduate programs at the VMRCVM’s parent institutions, Virginia Tech and the University of Maryland at College Park. Those students majored in 22 different academic disciplines, with 62 of them studying either biology or animal science prior to admission. The Class of 2011 also includes an attorney.

The incoming class also included 23 men, which represents a slight increase in male enrollment over recent years. There are more women in practice today than men, and almost 80 percent of the estimated 10,000 students studying veterinary medicine in America’s 28 colleges of veterinary medicine are female, according to the Association of American Colleges of Veterinary Medicine (AAVMC).

Faculty and Staff Achievement

Drs. Jolynne Tschetter, research assistant professor, DLACS, **Bill Huckle**, associate professor, DBSP, and **Willard Eyestone**, research associate professor, DLACS, were awarded funding by the VMRCVM Internal Research Grants Competition for their proposal entitled "Reprogramming Somatic Cells to Pluripotency by Forced Expression of Oct4 and Nanog."

Dr. Iveta Becvarova, clinical instructor, DLACS, has passed her board examination and is now a diplomate in the American College of Veterinary Nutrition.

Dr. Tom Caruso, director of research initiatives, has become a paid participant in the NIH National Cancer Institute's Cancer Biomedical Informatics Grid (caBig™) Data Sharing and Intellectual Capital (DSIC) workspace.

Dr. Philip Sponenberg, professor, DBSP, recently traveled to Bulgaria to help with dog, sheep, goat, and horse conservation projects.

Drs. Bill Pierson, associate professor, DLACS, and interim director of the VTH, and **John Dascanio**, associate professor, DLACS, recently participated in the International Faculty Development Program at Virginia Tech's Center for European Studies and Architecture in Riva San Vitale, Switzerland.

Dr. Dee Whittier, professor, DLACS, recently received the Distinguished Service Award from the National Association of County Agents Association in Grand Rapid, MI.

Dr. Fernando Castro, clinical assistant professor, DLACS, presented two lectures, "Evolution of the clinical and surgical management of equine colic: a review of the last 30 years," and "Diagnosis and treatment of suspensory desmitis in horses;" and served as an evaluator during the 3rd International Symposium on the Equine Athlete in Belo Horizonte, Brazil.

Dr. Philip Sponenberg, professor, DBSP, gave two presentations at the 114th Annual AVMA Convention: "Using Livestock Guardian Dogs Successfully" and "Veterinary Needs of Rare Breed Small Ruminants."

Drs. Willard Eyestone, research associate professor, DLACS, and **Oscar Peralta**, a Ph.D. student in Dr. Eyestone's lab, attended the Annual Meeting of the Society for the Study of Reproduction in San Antonio, Texas where Oscar presented his abstract entitled "Prion Expression in Male and Female Ruminant Reproductive Systems" and Dr. Eyestone presented his abstract "Quantitative Expression Analysis of Oct4 and Nanog in Day 8 vs. 14 Bovine Embryos."

Dr. Willard Eyestone, research associate professor, DLACS, delivered an invited talk entitled "Pluripotent and Multipotent Stem Cells" at the Annual Meeting of the American College of Veterinary Pathologists in Tucson, Arizona.

Dr. Michael Leib, C.R. Roberts Professor of Small Animal Medicine, presented six and a half hours of continuing education at the 144th AVMA Annual Convention on July: Introduction to GI endoscopy, Upper GI endoscopy, colonoscopy, therapeutic endoscopy, and How I diagnose Giardia.

Drs. Philip Pickett, professor, DSACS, and **Jonathan Abbott**, associate professor, DSACS participated in the James River Kennel Club Dog Show in August. Dr. Pickett conducted a Canine Eye Registration Foundation (CERF) clinic and Dr. Abbott conducted a heart screening clinic.

Ms. Lynn Young, director of alumni relations and student affairs, recently received the 2007 Friend of the VVMA Award.

Dr. Daniel Perez, a faculty member on the VMRCVM's College Park Campus, was recently promoted to assistant professor with tenure.

Dr. Beverly Purswell, professor, DLACS, was recently honored with the Distinguished Alumnus Award from the University of Georgia's College of Veterinary Medicine.

Dr. Edward Monroe, professor, DSACS, was recently named a Virginia Tech Scholar of the Week.

Mr. Jeffrey S. Douglas, director of public relations and communications, recently received the Council for Advancement and Support of Education 2006 Award of Excellence: Tabloid and Newsletter Publishing Improvement.

Dr. Nammalwar Sriranganathan, professor, DBSP, recently received the Virginia Tech Outstanding Dissertation Advisor Award in the "Science and Engineering" category.

Former Dean Peter Eyre was recently named Professor and Dean Emeritus of Veterinary Medicine by the Virginia Tech Board of Visitors.

Dr. Michael Leib, C.R. Roberts Professor of Small Animal Medicine, recently presented five hours of continuing education with the Maryland Veterinary Medical Association 14th Annual Ski Seminar.

Dr. Martin Furr, the Adelaide C. Riggs Associate Professor of Internal Medicine at the Marion duPont Scott Equine Medical Center, was recently promoted to professor and named to the endowed professorship.

Dr. X.J. Meng was recently promoted from associate professor to professor in the Department of Biomedical Sciences and Pathobiology.

Dr. Stephen Smith, professor, DBSP, recently served as the issue editor for the June 1 edition of the Institute for Laboratory Animal Research Journal entitled: "Use of Amphibians in the Research, Laboratory, or Classroom Setting."

Dr. Siba Samal, associate dean, UMCP campus, received the University of Maryland's College of Agriculture and Natural Resources (AGNR) Alumni Chapter 2007 Excellence in Research Award and the AGNR 2007 Dean Gordon Cairns Award for Distinguished Creative Work and Teaching in Agriculture.

Mr. Jeffrey S. Douglas, director of public relations and communications, made presentations on institutional advancement at the annual meeting of the Association of American Veterinary Medical Colleges (AAVMC) in March and the Association of Veterinary Advancement Professionals (AVAP) in July. Both meetings were held in Washington, D.C.

Alumni Achievement

Dr. Shireen A. Hafez, who received her Ph.D. from the VMRCVM in 2005, had one of her images from her dissertation selected as the cover illustration for *Anatomical Record*, the most prestigious and widely-read anatomy journal in the world.

Dr. Sara Salmon ('98) recently received the Virginia Veterinary Medical Association Paul F. Landis Veterinarian of the Year Award.

Dr. Steve Escobar ('90) recently received the Virginia Veterinary Medical Association Distinguished Virginia Veterinarian Award.

Dr. Cheryl D. Simpson-Freeman ('05) recently received the Virginia Veterinary Medical Association Recent Graduate Leadership Award.

Dr. Brenda Austin Simmons ('02) recently passed her surgical boards and was named a Diplomate of the American College of Veterinary Surgeons.

Student Achievement

Alicia Feagins, a Ph.D. student in the lab of Dr. X.J. Meng, recently received a student travel award to attend the 2007 American Society for Virology 26th Annual meeting at Oregon State University to present her research on Hepatitis E Virus.

Dr. Oscar Peralta, a Ph.D. student in the lab of Dr. Willard Eyestone, recently won a competitive fellowship to attend the NIH-sponsored national Graduated Research Festival where he presented "Characterization of Prion Gene Expression in Bovine Embryonic, Fetal and Adult Tissues."

Dr. Oscar Peralta, a Ph.D. student in the lab of Dr. Willard Eyestone, received First Place Honors in the Graduate Student Oral Presentation Competition at the VMRCVM's Annual Research Symposium.

Tonya Sparks is serving as the president of the Veterinary Business Management Association. She was also featured as a Virginia Tech "Spotlight" recipient for her new leadership position in this national organization.

Shaadi Elswaifi was recently named the Virginia Tech 2007 Outstanding Doctoral Student.

Kara Kolster was recently named the Virginia Tech 2007 Outstanding Master's Student.

Mohamed Seleem recently received the Virginia Tech Outstanding Dissertation in Science and Engineering award.

Jonathon Miller recently received the 2007 D.C. Academy Companion Animal Resident Clinical Teaching Award.

Christopher Paige recently received the 2007 Bente Flatland Resident Award.

Recent Publications by Faculty

Drs. D. P. Sponenburg, F.W. Pierson, R. Gogal, L. Queral-Kirkpatrick, M. Bender, and E. Smith recently co-authored "Variedades de pavos en los Estados Unidos" in *Usos de los Recursos Zootecnicos*.

Dr. David Lindsay recently authored "Intestinal Coccidiosis" in Cote edition of *Clinical Veterinary Advisor: Dogs and Cats*.

Drs. D. S. Lindsay and C. A. Sunderman recently co-authored "Biology of the Protozoa" Chapter 2 in Flynn's *Parasites of Laboratory Animals*.

Drs. D. S. Lindsay, S. J. Upton, and L.M. Weiss recently co-authored "Isospora, Cyclospora, & Sarcocystis" Chapter 141 in *Manual of Clinical Microbiology*, 9th Edition, Volume 2.

Drs. A.M. Zajac, D.S. Lindsay, D. S. Goodwin, S. M. Gennarib, D.K. Howe, and J.P. Dubey recently co-authored "Prevalence of antibodies to *Encephalitozoon cuniculi* in horses from Brazil" which was published in *Veterinary Parasitology*.

Drs. A. M. Zajac, D. S. Lindsay, J.P. Dubey, W. Davis, T. Kennedy, and S.M. Mitchell recently co-authored "Prevention of recrudescence of Toxoplasmic encephalitis using ponazuril in an immunodeficient mouse model" which was published in the *Journal of Eukaryotic Microbiology*.

Drs. D. S. Lindsay, M.J. Yabsley, C.N. Jorda, S.M. Mitchell, and T.M. Norton recently co-authored "Seroprevalence of *Toxoplasma gondii*, *Sarcocystis neurona*, and *Encephalitozoon cuniculi* in three species of lemurs from St. Catherine's Island, Georgia, USA" which was published in *Veterinary Parasitology*.

Drs. D. S. Lindsay, A.C. Royspal, D.D. Bowman, D. Holliman, and G.J. Flick recently co-authored "Effects of high hydrostatic pressure on embryonation of *Ascaris suum* eggs" which was published in *Veterinary Parasitology*.

Dr. Martha Moon-Larson recently published "The Liver and Spleen" which was included in the *Textbook of Veterinary Diagnostic Radiology*, 5th edition.

Drs. I.P. Herring, D.R. Binder and T. Gerhard recently co-authored "Outcomes of nonsurgical management and efficacy of demecarium bromide treatment for primary lens instability in dogs: 34 cases (1990-2004)" which was published in the *Journal of the American Veterinary Medical Association*.

Drs. P.K. Shires, T.C. Tromblee, C.J. Jones, A.M. Bahr, and S. Aref recently co-authored "Effect of computed tomography display window and image plane on diagnostic certainty for characteristics of dysplastic elbow joints in dogs" which was published in the *American Journal of Veterinary Research*.



**Development Report
from the Blacksburg Campus
– Frank Pearsall – DVM '84**

Dr. Frank Pearsall

This has been our best year ever; \$6,736,848 in outright and deferred giving! Thank you to the many who have been so generous. A few are listed below.

As you have read in other sections of this magazine, to meet the needs of pet owners, the public, and the nation, we need to educate more vets. There is a shortage now and it is going to become acute if all schools do not respond. We have plans to grow our class size soon, which in turn requires that we grow all of our facilities. This is all encompassed in a \$90 Million Translational Medicine Complex. We hope to break ground on the first of three buildings next year. Your continued help is needed. We invite you to join with us to invent the future for our pets.

Gifts of \$25,000 or above July 1, 2006 – June 30, 2007 (includes Deferred Giving)

\$2,165,700 additional funding from the estate of **Tyler J. and Frances F. Young** of Auburn, Alabama to benefit their named Scholarship Endowment and their named Professorship in Bacteriology held by Dr. Thomas Inzana. When fully realized, this professorship will become a chair. Dr. Young was a proud Hokie twice: in '34 and '38.

\$2,000,000 bequest provision from **Janice Lynn Delaval** of Alexandria, a new friend to the college and great dog lover, to support both second year DVM students and the college library.

\$699,990 in outright and deferred gifts from **Dr. JoAnne S. O'Brien**, one of the first female veterinarians in D.C., former member of the Board of Veterinary Medicine, and a leading Chow Chow judge and breeder, in continued support of C.A.R.E.S. (Companion Animal Reproduction and Endocrinology Studies), a lab started with her gifts.

\$500,000 in a bequest from **Bernardine Cornelison** of Parksville, MD, another new friend of the college and an advocate against animal cruelty, in DVM student support with a focus on students who have special interest in surgery or shelter medicine.

\$210,810 outright from **Freda Bullington Johnson** and **W. Stuart Johnson** '52 of Keswick, VA in continued support of their Animal Compassion Fund to help patients in our Teaching Hospital and as the first major gift towards our \$90 Million Translational Medicine Complex. The

Johnson's are great animal lovers, great and generous Hokies, and now grandparents to a member of our DVM class of 2011.

\$200,000 in additional deferred support from **Dr. Wayland D. Andrews** of Richmond, Virginia, a Hokie class of '51, a great friend of the college, and Assistant State Veterinarian for Virginia for 33 years, for his Endowed Fellowship for Veterinary Students.

\$100,000 in continued support from the late **Dorothy A. Metcalf's Foundation** of Cambridge, MD, in support of the Dorothy A. and Richard G. Metcalf Human-Animal Interaction Funds and their Endowed Professorship of Informatics, held by Dr. Jeff Wilcke. Mrs. Metcalf was a great competitor in the world of canine field trials, a member of the Retriever Field Hall of Fame, and a visionary supporter of veterinary medicine in our college and across the country.

\$50,000 in outright support from **Dr. James B. Bostic, Jr.** and his wife **Lois**, both leaders in veterinary medicine from Virginia Beach, VA, great Hokies ('52), and great friends of the college, for our Translational Medicine Complex.

\$50,000 from the **Olive K. Britt Trust** through trustee Jennifer Bell Newton in additional support of Dr. Britt's endowed scholarship supporting DVM students in their clinical year pursuing equine practice. Dr. Britt was renowned in equine veterinary medicine far beyond her practice area shared with Dr. Tom Newton surrounding Manakin-Sabot, VA.

\$50,000 as a bequest from **Paul and Shelley Seifert** to endow the memorial scholarship for Dr. Claire Leah St. Sauver Seifert '96 for the Overcoming Award recognizing maturity, leadership, grace, good humor, and perseverance.

\$50,000 as a bequest from **Col. Lemuel Wilmer (Chip) Houston** and **Susan McCulley Houston**, great Hokies ('61) and great animal lovers from Chesterfield, VA for unrestricted support of the college.

\$39,807 in outright gifts from **Mary Jane Talbot** in memoriam of her husband, the late Dr. Richard B. Talbot, founding Dean of the college, in continuing support for the 25th Anniversary Sculpture, "Running Together", which graces the entrance to the college complex.

\$25,000 pledge from Hokies **Michael William Hopke** '79 and his wife **Ann Runge Hopke** '82 of Alexandria, VA for support of the Center for Comparative Oncology (CeCO), specifically for the Summer Cancer Fellowship Program, to enable DVM students to gain valuable experience in this exciting and vital area of research.

\$25,000 outright in additional funding from the **John G. and Doris J. Salsbury Trust** by Dr. Salsbury as Trustee in memory of his father, the late Dr. John E. Salsbury, a pioneer in veterinary biologics, for continued support of the J. E. Salsbury Endowment for Veterinary Scholarships.

Focus on the Future



A Three Phase Building Program Takes Shape

Physical plant and facilities constraints are one of the most difficult challenges faced by the college. The space crunch is becoming a critical issue in many sectors of the college's academic, research and clinical programs. But important signs of progress are emerging in the college's long-term capital development plan.

Three projects, each designed to enhance strategic programmatic development, are now in various phases of planning, design and budgeting. Funding to support the expansion of the college's physical plant complex will come from a variety of public and private resources.

The first of these is an \$8 million research facility that is presently configured to be sited adjacent to the teaching hospital complex. Once termed the "NIH building" because of a funding formula that involved a \$4 million investment from the Commonwealth of Virginia to support infectious disease research and matching funds from the National Institutes of Health, this building is now being funded exclusively from state and university funds as a result of NIH construction program funding problems.

As presently conceived, this building will include BSL-2 research facilities on the second floor, and include additional clinical and instructional space on the first floor. Groundbreaking for this project could come as early as Fall 2008.

Probably the most severe and the most visible space problems facing the college are in the instructional areas. The second major building project will involve the addition of a \$12 million instructional facility that will help alleviate two major problems: a lack of instructional space and an inadequate faculty office situation.

The nation's 28 colleges of veterinary medicine produce only about 2600 graduates per year, and experts predict a shortage of up to 15,000 veterinarians by 2025. Clearly, the colleges must increase their capacity to train and produce additional numbers of veterinarians.

Increasing the college's instructional space will enable it to increase the number of students in each class from 90 to up to 130 students in the years ahead. It will also help resolve a problematic office situation that underserves our faculty, is causing recruitment and retention problems and could become an AVMA accreditation issue.

This new building will include space for approximately 40 new faculty offices and enable the college to upgrade and renovate the existing offices.

Final architectural planning is underway and the university is requesting funding for the Instructional Building from the state in the university's capital outlay plan for the 2008-2010 biennium. The college expects to begin construction in 2010. Partial funding will also come from capitation funds ("rent" paid by the state of Maryland for Virginia to educate Maryland students) and private funding raised through development.

The final building envisioned as part of the college's major capital development initiative is a \$70 million translational medicine building that will provide a significant expansion of the teaching hospital and introduce new research space that will support the development of the college's translational medicine programs.

The nation's 28 colleges of veterinary medicine produce only about 2600 graduates per year, and experts predict a shortage of up to 15,000 veterinarians by 2025. Clearly, the colleges must increase their capacity to train and produce additional numbers of veterinarians.

The expansion of VTH space will help alleviate general space shortages and provide room to train an enlarged senior class. Tuition revenues generated through increased class sizes are expected to support the hiring of additional faculty and staff and contribute to meeting the overall cost of the facility.

This complex will include a 20,000 square foot addition to the VTH on the first floor, and include basic and clinical research laboratories on the second and third floors.

The Translational Medicine building is on the university's capital outlay plan for the 2010 - 2012 biennium. The \$70 million cost of the complex will include \$35 million in state funding and \$35 million raised by development.



**From Alumni Society President
Dr. Douglas Graham '98**

The tragic events that took place this spring on the Virginia Tech campus were a sad reminder of just how precious life can be and what is truly important. As we move on from this tragedy, it's important to realize how great it is to be a part of the VMRCVM family and a part of our Alumni Society. We have dramatically improved our visibility and involvement with the VMRCVM in the past five years. To match this rising involvement, we have increased the number of alumni events. We cannot thank enough former Dean Peter Eyre for helping create a formal Alumni Society as well as Dean Schurig for his enthusiastic and continued support of the Alumni Society which continues to flourish. Perhaps the most important person to contribute to our success and progress has been Lynn Young, director of alumni relations & student affairs for the VMRCVM.

We want to remind all alumni that participation in our Alumni Society is easy—you need only to show up to events! There are no dues for membership. We have a great website which I encourage you

to check out periodically for the upcoming events... <http://alumni.vetmed.vt.edu/>

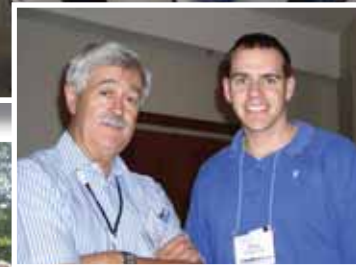
We realize some alumni are not in the Virginia or Maryland area, where admittedly a majority of our events have been. Luckily, at some of the national events, such as NAVC, AVMA, AAEP, and Western States, we now have alumni receptions regularly and will continue to do so. I also encourage alumni to come back to the VMRCVM facilities (Blacksburg, Equine Medical Center in Leesburg, or Avrum-Gudelsky in College Park) and see all the new changes that are occurring.

We are also always searching for alumni to become involved in our Alumni Society leadership positions. An easy way to get involved is to become part of the Alumni Council, where representatives from each class serve as liaisons for their graduating class. A few classes do not yet have a representative and all classes could use one or two more!

Veterinary medicine is playing a bigger role than ever in the world and all alumni have an opportunity to advance the profession to which we have devoted our lives. We are at a cross-roads and each of us can make a difference! Whether it's by helping support federal legislation like the Veterinary Public Health Workforce Expansion Act of 2007, more directly investing in the future of veterinary academia, or helping encourage budding veterinarians, I encourage you to become involved. Remember to speak proudly of your profession and our alma mater whenever the opportunity arises. Finally, make it a point to connect with your fellow alums at one of our many events!

**2007 - 08 Alumni Society
Board Members**

- Steve Escobar '90
- Megan Giebel '05
- Doug Graham '98
- Rob Johnson '00
- Margaret Jordan '97
- Beth Kirby '84
- Lisa Miller '87
- Sara Salmon '98
- Bill Tyrrell '92
- Brett VanLear '96
- Michael Watts '00



Top, alumni gather at D.C. Academy luncheon in Fairfax; center, Dean Schurig and Doug Graham chat at AVMA alumni reception; bottom, Class of '97 at "Homecoming 2007."

ALUMNI

In Memorium



VMRCVM Mourns Passing of Dr. Gordon Maclinnis

Dr. Gordon Allan Maclinnis, a retired faculty member in the Department of Large Animal Clinical Sciences at VMRCVM, passed away December 18, 2006 at the age of 84.

Dr. Maclinnis retired from the VMRCVM in 1983 following more than 20 years of service with Virginia Tech. He began his career with Tech as an extension veterinarian in 1962 and was one of the original faculty members of the VMRCVM. He was also a founding father and lifelong advocate for Virginia Tech's chapter of Alpha Gamma Rho, an agriculture fraternity.

He was born March 8, 1922 in Salem, Oregon and he earned his DVM in 1950 from Ohio State University. During World War II, Dr. Maclinnis served in the European Theatre of Operations with the 389th Field Artillery, 97th Infantry Division. Before coming to Blacksburg, he practiced veterinary medicine in Ohio and served on the faculty of Washington State University.



VMRCVM's Bob Duncan Passes Away

Dr. Robert Duncan, an associate professor in the Department of Biomedical Sciences and Pathobiology (DBSP) in the Virginia-Maryland Regional College of Veterinary Medicine at Virginia Tech, passed away suddenly on May 3.

Known to many in the college and university community as a congenial and engaging professional with a great enthusiasm for the outdoors, Bob is survived by his wife Susan and ten-year old daughter Taylor.

"Dr. Bob Duncan was a very capable and highly respected veterinary pathologist, and additionally, was an excellent teacher, mentor, and role model for our students and junior faculty," said Dr. Lud Eng, head of the DBSP. "He was both a friend and a colleague to everyone who knew him, and his absence from our college community will be grievously felt by all."

After earning his undergraduate and DVM degrees from The Ohio State University in Columbus, Bob spent several years in private practice in Pennsylvania. In 1986, he entered a combined graduate degree/clinical residency program at the University of Tennessee in Knoxville. He concluded a clinical residency in veterinary pathology and was awarded a Ph.D. in Comparative and Environmental Medicine from the University of Tennessee in 1991. He earned board certification from the American College of Veterinary Pathologists in 1993.

From 1991-1996, Bob served as director and diagnostician of the Virginia Department of Agriculture & Consumer Services Wytheville Regional Diagnostic Laboratory.

The Bob Duncan Memorial Diagnostic Pathology Award has been established in the Virginia-Maryland Regional College of Veterinary Medicine in order to honor Bob's life and contributions. Donations to the memorial scholarship fund should be made out to "VA Tech Foundation, Inc." (with "Bob Duncan Memorial" included on the check memo line) and forwarded to Dr. Frank Pearsall, director of development in the VMRCVM. For more information, call 231-4259.



April 16, 2007

The people of the Virginia-Maryland Regional College of Veterinary Medicine join Hokie Nation and the rest of the world in mourning the tragic events of April 16, 2007 at Virginia Tech. We extend our deepest sympathies to all of those whose lives have been affected by this terrible disaster and we wish them peace, strength and support as they attempt to heal. Our sorrows endure as we go forward to honor the lost and the suffering by committing ourselves to the highest ideals of achievement in service to others.



PURPOSE



"When I grow up, I want to change the world"



Help *invent the future* with a gift that will help her change the world.

Learn how to create a legacy, or advise us of your existing estate provision benefiting the Virginia-Maryland Regional College of Veterinary Medicine.

Call Frank Pearsall or Amanda Hall: 800/533-1144, email pearsall@vt.edu or halla@vt.edu, or visit www.givingto.vt.edu.



VirginiaTech
Invent the Future



Thousands gathered on the Virginia Tech Drillfield on Sunday, August 19 to dedicate an "intermediate" memorial for the victims of the April 16 tragedy. A memorial of 32 Hokie-stone blocks engraved with the names of the victims now arcs in a semi-circle adjacent to the reviewing stand in front of Burruss Hall. During the ceremony, a series of speakers paid tribute to the victims and the wounded before the names of the lost were called and an enormous brass bell was tolled. Discussions are still underway regarding the possibility of constructing a more permanent memorial for the April 16 victims.



VirginiaTech

Virginia-Maryland Regional College of Veterinary Medicine

Virginia Tech, Duck Pond Drive (0442)
Blacksburg, Virginia 24061

Invent the Future

NON-PROFIT
U.S. POSTAGE
PAID
BLACKSBURG, VA 24060
PERMIT #28