





## Virginia-Maryland Regional College of Veterinary Medicine

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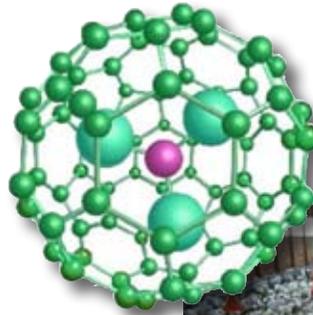
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The Virginia-Maryland Regional College of Veterinary Medicine is a two-state, three campus professional school operated by Virginia Tech in Blacksburg and the University of Maryland at College Park. The Marion duPont Scott Equine Medical Center in 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](http://www.vetmed.vt.edu)

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**Cover photo-illustration:** The VMRCVM is preparing to launch a major new building program. Construction will begin on a \$10.2 million, 16,000 square foot Infectious Diseases Research Facility and a \$12 million Instructional Building in 2010. A \$67 million, 130,000 square foot Translational Research Center could get underway just two or three years later. Funding will come from a variety of state, federal and private sources.



Dean Gerhard Schurig

## Greetings from Blacksburg:

DEAN'S MESSAGE

### Decades of Diligence

Thirty years ago, former Virginia Governor John Dalton, former Virginia Tech President William Lavery and founding Dean Richard B. Talbot gathered with hundreds of others on a cold, blustery April day to mark the beginning of an enterprise known and valued by millions today as the Virginia-Maryland Regional College of Veterinary Medicine.

The three “founders” ceremoniously guided an antique plow drawn by two Belgian draft horses across a patch of farmland on the edge of the Virginia Tech campus. The massive horses snorted and lunged, the plow blade ripped the earth and the crowd erupted in applause. The three, as well as many others, had been working diligently for most of the 1970’s to organize the political support and find the money to build the college.

It was a day of joy and celebration. But it was also a day of uncertainty. Governor Dalton and the Virginia General Assembly had appropriated \$8 million dollars toward construction of the school, providing that the college could identify a matching \$8 million from non-state sources. President Lavery had recruited Charles Forbes from the Memorial Sloan Kettering Cancer Center in New York and brought him to Virginia Tech to establish a formal development operation. His first order of business was to launch the “Campaign for the Veterinary College,” Virginia Tech’s first organized capital campaign.

Major gifts came in from William Latham, a revered philanthropist in the Hokie Nation, as well as many others. The “founders” then worked with the late U.S. Congressman J. Kenneth Robinson to procure a \$4.5 million dollar appropriation through the United States Department of Agriculture. Congressman Rick Boucher later delivered other essential appropriations from the USDA to help build our facilities

*This is an ambitious build-out. But I believe we will succeed precisely because it will be so challenging. It has taken creativity, resolve, persistence and collaboration to get us where we are today and these institutional values remain an essential part of our future.*

The college got underway, and the rest, as they say, is history. Unlike many colleges of veterinary medicine, the VMRCVM’s building program has been parsed and incremental. Our flagship campus’s existing physical plant was built in four separate phases and it took 16 years to complete. Finding the money to build our campus from a combination of state, federal and philanthropic sources was a job that required the very best of a lot of dedicated people.

Fifteen years after finished Phase IV, we stand on the verge of another major phase in our capital development program. Over the next several years we will construct three new buildings. A \$10.2 million, 16,000 square foot (check this) Infectious Diseases Research Facility (IDRF) and a \$12 million Instructional Building are expected to both commence construction in 2010. If all goes as planned, two years later we will begin construction of a \$76 million Translational Research Center that will serve as a major research and development center for colleges and departments across the university.

Consistent with our history, funding for these projects will come from a variety of state, federal and private resources. We are currently working to develop additional support from the National Institutes of Health, our “parent” state governments and the private sector. Private support, in particular, has become an ever more critical part of the funding stream that will be required to support this ambitious construction plan.

This is an ambitious build-out. But I believe we will succeed precisely because it will be so challenging. It has taken creativity, resolve, persistence and collaboration to get us where we are today and these institutional values remain an essential part of our future.

We mourn the recent passing of former Virginia Tech President William Lavery, the final member of that three-person team that played such a profound role in our creation. When we break ground on the first of these projects, just yards from where that historic ceremony took place 30 years ago, it will be a triumph that invokes the legacies of those visionary founders and all they sought to inspire.



Dr. Dee Whittier (left), professor, DLACS, is presented the Virginia Veterinary Medical Association's "Veterinary Service Award" by VVMA President-elect Dr. Bill Tyrrell ('92).

**VMRCVM Faculty, Alums, Honored During VVMA Conference**

One faculty member and two alumni from the VMRCVM were honored during the annual Virginia Veterinary Conference in Roanoke.

Dr. W. Dee Whittier, a professor in the Department of Large Animal Clinical Sciences and extension beef cattle specialist, was honored with a VVMA "Veterinary Service Award." Whittier, who has served at the college for the past 28 years, earned his DVM from the University of California at Davis in 1979 and a M.S. degree from Virginia Tech in 1983. Whittier was also on the founding committee of the Virginia Academy for Food Animal Practice.

In presenting the award, VVMA President-elect Dr. Bill Tyrrell ('92) said that Whittier had provided "inspiration and guidance to many of our graduates who have followed in his large footsteps in caring for our commonwealth's food animals."

Dr. Tom Massie ('95), who was installed as the president of the VVMA, was honored with the "Mentor of the Year" award. "Mentors like Tom Massie instill the confidence and enthusiasm in students that is necessary to ensure progressive interest in the field of veterinary medicine," wrote Class of 2011 student Nathaniel Burke in a letter of nomination. "He is truly an asset to the profession."

Dr. Travis Taylor ('03), a small animal clinician and hospital director at Centerville Animal Hospital, was presented the "Recent Graduate Leadership Award."

**College to Increase DVM Class Size by Five Seats**

Dr. Larry Freeman, associate professor, DBSP, works with students in an anatomy lab. Beginning this fall, the VMRCVM will increase its incoming class size to 95 students.



The VMRCVM will expand its DVM professional class from 90 to 95 students effective fall 2009, according to VMRCVM Dean Gerhardt Schurig.

This marks the first time that the college has increased enrollment in the DVM program since 1995, when the class size was expanded from 80 students to 90 students. That year, the college began accepting 10 students from around the country, in addition to the 50 students from Virginia and 30 students from Maryland it has accepted in each class since its inception.

The action was taken by the college's executive board for a number of reasons, according to Schurig. First, there is a general consensus that the academic veterinary medical community needs to increase enrollment size in order to

address a growing shortage of veterinarians in the United States.

Many colleges around the country, including the VMRCVM, are developing strategies to increase their class size. Once the college's new instructional building is constructed, for example, the VMRCVM is expected to increase enrollment to 120-130 students.

An additional reason for increasing the DVM class size by five students is to help offset statewide budget reductions that threaten to undermine the quality of college programs.

Increasing the class size will also enable the college to keep tuition increases below the national average, according to Schurig.



Veterinary technicians attend the wet lab on dentistry presented by Dr. James Brown at the Marion duPont Scott Equine Medical Center.

**Equine Veterinary Technicians Gather for Major CE Event in Leesburg**

The Marion duPont Scott Equine Medical Center recently hosted the American Association of Equine Veterinary Technicians' (AAEVT) Mid-Atlantic Regional Symposium in Leesburg.

Over 70 veterinary technicians who specialize in working with horses attended lectures and participated in labs in order to earn continuing education credit, learn about advances in equine veterinary care, and apply new skills.

A wealth of information was available to symposium attendees, beginning on Thursday evening as several administrative personnel from the EMC offered practice

management tips. Lectures presented by EMC faculty-members on Friday and Sunday covered topics such as equine emergencies, neonate critical care, pain management, cardiology, respiratory disease, dentistry, gait analysis, and other subjects.

"Wet labs," which offered hands-on opportunities for participants to learn more about a variety of subjects, took place at the EMC over the course of the day on Saturday. Wet labs topics covered the spectrum from nuclear scintigraphy, digital radiography, ultrasound techniques, equine dentistry, hoof care, diagnostic treadmill examinations, and more.

### Three Alums Return to College as Faculty



Dr. David Caudell

Two members of the college's Class of 2000 and one member of the Class of 1999 have recently returned to the college as faculty members.

Dr. David Caudell ('00) has joined the Department of Biomedical Sciences and Pathobiology as an assistant professor of anatomic pathology. He was most recently a molecular pathology fellow in the Comparative Molecular Pathology Laboratory in the National Cancer Institute.

In addition to his DVM, he received an A.A. in animal agriculture and agriculture technology from Virginia Tech in 1994 and a Ph.D. in pathology from the University of Maryland-College Park in 2008. He also completed a residency in anatomic pathology at Oklahoma State University in Stillwater, Okla.

In 2007, Caudell was the recipient of the American College of Veterinary Pathology's Young Investigator Award and was a finalist for the Merck-Merial Young Investigator award.

His research interests include mouse models of hematopoietic malignancies and immunodeficiency, immunopathology, and bone marrow biology.

He is a member of the American Society of Hematology, the Washington, D.C. Veterinary Medical Association, the American Association of Veterinary Diagnosticians, and the C. L. Davis, DVM Foundation.



Dr. Julie McGhee Settlage

Dr. Julie McGhee Settlage ('00) has joined the Department of Large Animal Clinical Sciences (DLACS) as a clinical assistant professor of surgery.

She was most recently an emergency veterinarian at Animal Emergency Hospital in Newton, N.J. and she also owned Jersey Shore Veterinarian Acupuncture in Ocean Grove, N.J. She also completed a residency at Virginia Tech's Marion duPont Scott Equine Medical Center. She has previously been with the VMRCVM as a clinical instructor and an adjunct professor of large animal surgery.

Settlage maintains a professional interest in colic and emergency/critical care.

She received her B.S. in biology from the College of William and Mary in 1995. She is a diplomate

of the American College of Veterinary Surgeons and is a member of Phi Zeta and Phi Sigma Honor Society.



Dr. Dana Reeder

Dr. Dana Reeder ('99) has joined the college as a clinical assistant professor of equine field services in the DLACS.

She comes to the college from Ranson, WV where she worked as an associate veterinarian at Valley Equine Associates PLLC. While there, Reeder focused heavily on racetrack work, lameness, and reproduction.

Reeder received her B.S. in agriculture engineering in 1994 from Virginia Tech. She is a member of the American Veterinary Medical Association and the American Association of Equine Practitioners.

Reeder has prepared show horses for competition at the highest level and has participated in fox hunting and trail riding. She is an avid endurance rider who trains, shoes, and competes on her own horses. In addition, she and her horses have thousands of miles of competitive endurance riding experience.

### Meng Named Inaugural Fralin Life Science Institute Senior Faculty Fellow



Dr. X.J. Meng

Veterinary virologist and physician Dr. X.J. Meng has been named Virginia Tech's inaugural Fralin Life Science Institute Senior Faculty Fellow.

Meng, a professor in the college's Department of Biomedical Sciences and Pathobiology, was honored for his outstanding scholarship and his sustained leadership within the life sciences in the university.

The Fralin Life Science Senior Faculty Fellow award was created to recognize contributions of senior faculty members beyond their scientific achievements and their regular faculty appointments.

The Fralin Life Science Institute's mission is to increase the breadth and quality of the life science research portfolio at Virginia Tech. There have been aggressive investments in both scientific infrastructure, such as proteomics

Please see **Meng**: page 31



A patient is evaluated with the new 16-slice CT scanner in the college's Horace E. and Elizabeth F. Alphin Radiology Center. The Veterinary Teaching Hospital is expected to introduce a new Outpatient Imaging Service for general practitioners and their clients in June 2009. MRI, CT scanning and ultrasound services will all be offered through the innovative new program. Modeled after similar programs in human healthcare, the new service will provide private practitioners with complete access to state-of-the-art, non-invasive imaging services while still retaining complete control over the management of their cases.

**Perez Named Recipient of Pfizer Award for Research Excellence**



Dr. Daniel Perez

Dr. Daniel Perez, an associate professor and virologist on the Virginia-Maryland Regional College of Veterinary Medicine's University of Maryland-College Park campus, was awarded the prestigious Pfizer Award for Research Excellence during ceremonies associated with the college's 2008 Research Symposium.

He was honored for his continuing work in influenza and, more specifically, with the lethal H5N1 avian influenza virus.

Perez, considered one of the nation's leading experts on the disorder, led a team from the University of Maryland that recently developed a vaccine component that can be used to immunize both birds and mammals from dangerous forms of the flu, including H5N1. While it could be several years before a human version of the vaccine is developed, Perez's discovery may delay or even prevent another human flu epidemic.

"Dr. Perez's research has great implications for human and animal health," said Dean Gerhardt Schurig. "His work is exceptional and urgent, on a global perspective."

Perez received his B.Sc. and master's degree from the College of Chemical Sciences at the National University of Cordoba, Argentina and completed his Ph.D. in molecular virology in the Department of Veterinary and Biomedical Sciences at the University of Nebraska.

**Kaur, Singh, Among Team Members Honored with University's XCaliber Award**

A team of three faculty members, including two from the Virginia-Maryland Regional College of Veterinary Medicine, and two graduate students at Virginia Tech received the university's 2009 XCaliber Award for excellence as a team on a large-scale project.

Dr. Taranjit Kaur, an assistant professor, and Dr. Jatinder Singh, an adjunct research assistant professor, both in the Department of Biomedical Sciences and Pathobiology, were recognized for their innovative approaches to teaching using technologies as they designed, developed and deployed the P.L.U.G. (Portable Laboratory on Uncommon Ground), a prototype laboratory that facilitates bioinformatics research in isolated settings around the world.

Other members of the team included Matthew Lutz, assistant professor of interior design, Nathan King, a graduate student in industrial design, and David Bradley Clark II, a graduate

Please see **Kaur**: page 31



Over \$2,000 was raised during this year's Bob Duncan Memorial 5K. All proceeds benefited the Bob Duncan Memorial Diagnostic Veterinary Pathology Scholarship.

**Second Annual Bob Duncan Memorial 5K Held April 4**

The second annual "Bob Duncan Memorial 5K" was held Saturday, April 4. All proceeds benefited the Bob Duncan Memorial Diagnostic Veterinary Pathology Scholarship. Duncan, a widely respected and much beloved veterinary pathologist on faculty, died suddenly on May 3, 2007.

"Dr. Duncan was a mentor and good friend," said Dr. Ellen Binder, an anatomic pathology resident in the college, who helped to organize the race. "He was an avid runner who loved challenges and was always ready for the next race."

He joined the faculty of the VMRCVM at Virginia Tech in 1996, where he spent 11 years teaching veterinary pathology in the DVM professional program, clinical residency, and graduate degree programs in the biomedical and veterinary sciences.

This year's entire run was on the Virginia Tech cross country course and awards were presented to top finishers.

The Bob Duncan Memorial Diagnostic Pathology Award has been established in the Virginia-Maryland Regional College of Veterinary Medicine in order to honor Duncan's life and contributions. The award is presented to a fourth year veterinary student with a commitment and zeal for diagnostic veterinary pathology.

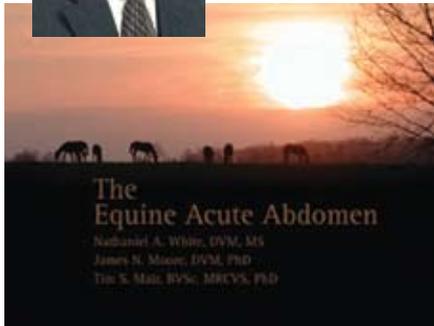
Donations to the memorial scholarship fund should be made out to "VA Tech Foundation, Inc." (with "Bob Duncan Memorial" included on the check memo line) and forwarded to Dr. Frank Pearsall, director of development in the VMRCVM. For more information, call 231-4259.



Virginia Tech has established a new South American Center at the University of Austral in Valdivia, Chile. For several years, the VMRCVM has been developing and refining a series of academic exchange and research programs in Valdivia. More recently, representatives from the College of Agriculture and Life Sciences, the College of Natural Resources and the College of Science, have traveled to the University of Austral to build programs in their own academic areas. The new center will operate under the purview of Vice Provost for Outreach and International Affairs Dr. John Dooley. Pictured are Dr. Juan Claudio Gutierrez, former VMRCVM graduate student and current faculty member at the University of Austral; German Reinhardt, newly appointed director of the center; VMRCVM Dean Gerhardt Schurig; Senior Associate Dean Roger Avery; and Robert Kenny, senior project associate with Virginia Tech's Office of International Research, Education, and Development.



Dr. Nathaniel White



### EMC's White Authors Comprehensive Book on Equine Colic

Dr. Nathaniel White, the Jean Ellen Shehan Professor and director of Virginia Tech's Marion duPont Scott Equine Medical Center, has authored and edited the second edition of *The Equine Acute Abdomen*.

The book provides a thorough discussion of normal and abnormal anatomy and physiology of the horse's gastrointestinal tract and includes surgical techniques and medical treatments for the diseases that cause colic.

*The Equine Acute Abdomen*, published by Teton New Media, was co-edited by Dr. James Moore and Dr. Timothy Mair. The book offers readers information that will help them effectively identify and treat any disease of the stomach, intestines, peritoneum, liver, and abdominal wall. Complications associated with colic are also described. With more than 410 illustrations contained in 44 chapters, the volume is a valuable compendium of information.

White has authored or co-authored 152 journal articles and 36 book chapters, has published 43 abstracts, and is the author and editor of *The Equine Acute Abdomen*, *Current Practice of Surgery*, *Current Techniques in Equine Surgery and Lameness* and the *Handbook of Equine Colic*. His clinical and research interests include pathophysiology of ischemia-reperfusion, epidemiology of colic, abdominal and orthopedic surgery, and treatment of orthopedic diseases.

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# NEWSMAKERS

## Faculty/Staff

**Dr. Willard Eyestone**, research associate professor, DLACS, was recently awarded a grant entitled "Identification of Potential Reprogramming Factors in Embryonic Stem Cells" through the VBI/Fralin Core Resources Exploratory Grant Program. His co-investigators are **Drs. Bill Huckle**, associate professor, DBSP, and Rich Helm.

**Dr. Bill Pierson**, director, VTH, recently presented two papers during the 80th Northeastern Conference on Avian Diseases held at the Pennsylvania State University: "Poult Immunosuppression Pancreatitis Enteritis Syndrome" and "Evaluation of Live-Bird Detection Methods for *Mycobacterium avium*." He also served as conference chair.

**Dr. Jonathan Abbott**, associate professor, DSACS, recently received the Class of 2010 Bayer Animal Health Faculty Recognition Award.

**Dr. Tisha Harper**, assistant professor, DSACS, recently received the Class of 2009 Bayer Animal Health Faculty Recognition Award.

**Dr. Gregory Daniel**, head, DSACS, recently presented "The use of hepatobiliary scintigraphy to assess acute liver injury from Aflatoxicosis in White Carneau pigeons" during the 2008 Annual Scientific Conference of the American College of Veterinary Radiology in San Antonio, Texas. The work was completed with T.L. Hadley, D.S. Rotstein, M.P. Jones, and J. Grizzle.

**Dr. Gregory Daniel**, head, DSACS, recently presented "Diuretic renal scintigraphy in normal cats" during the 2008 Annual Scientific Conference of the American College of Veterinary Radiology in San Antonio, Texas. The work was completed with S. Hecht, I.F. Lane, F.Morandi and D.E. Sharp.

**Dr. Gregory Daniel**, head, DSACS, recently presented "Diuretic renal scintigraphy in cats with urolithiasis" during the 2008 Annual Scientific Conference of the American College of Veterinary Radiology in San Antonio, Texas. The work was completed with S.M. Lawson, S. Hecht, I.F. Lane, and D.E. Sharp.

**Dr. Gregory Daniel**, head, DSACS, recently presented "Normal thoracic and abdominal distribution of 2-Deoxy-2-[18F]Fluoro-D-Glucose (18FDG) with positron emission tomography in adult cats" during the 2008 Annual Scientific Conference of the American College of Veterinary Radiology in San Antonio, Texas. The work was completed with F. Morandi, A.K. LeBlanc, J.S. Wall, S.J. Kennel, A. Stuckey, B. Jakoby, and D. W. Townsend.

**Dr. Gregory Daniel**, head, DSACS, recently presented "Scintigraphy features of multiple acquired portosystemic shunts using transplenic portal scintigraphy" during the 2008 Annual Scientific Conference of the American College of Veterinary Radiology held in San Antonio, Texas. The work was completed with F. Morandi, P.A. Sura, and D.E. Sharp.

**Dr. Jerri Jones**, professor, DSACS, **Dr. Sarah Davies**, resident, DSACS, **Dr. Stephen Werre**, research assistant professor, DBSP, and **Kristen Shackelford** ('11), recently co-authored "Effects of body position and clinical signs on L7-S1 intervertebral foraminal area and lumbosacral angle in dogs with lumbosacral disease as measured via computed tomography" in the *American Journal of Veterinary Research*.

**Dr. Gregory Daniel**, head, DSACS, recently co-authored "Diuretic renal scintigraphy in normal cats" in *Veterinary Radiology & Ultrasound*. The work was completed with S. Hecht, I. F. Lane, F. Morandi, and D. E. Sharp.

**Dr. Gregory Daniel**, head, DSACS, recently co-authored "Changes in hepatic gene expression in dogs with experimentally induced nutritional iron deficiency" in *Veterinary Clinical Pathology*. The work was completed with M.M. Fry, C.A. Kirk, J. L. Liggett, S.J. Baek, J.S. Gouffon, P.M. Chimakurthy, and B. Pekapalli.

**Dr. Otto Lanz**, associate professor, DSACS, recently co-authored "A Phantom Tissue System for the Calibration of Perfusion Measurements" in the *Journal of Biomechanical Engineering*. The work was completed with A.V. Mudaliar, B.E. Ellis, P.L. Ricketts, E.P. Scott, and T. E. Diller.

**Dr. Martha Larson**, professor, DSACS, has been elected president-elect of the American College of Veterinary Radiology during their recent Annual Meeting.

**Dr. Jonathan Abbott**, associate professor, DSACS, recently co-authored "Retrospective description of canine ventricular septal defect" in the *Journal of Veterinary Internal Medicine*. The work was completed with K. Hawkes, M.T. Small, et al.

**Dr. David Grant**, assistant professor, DSACS, **Dr. Stephen Werre**, research assistant professor, DBSP, and **Melanie Gevedon**, medical technologist, VTH, recently co-authored "Holmium : YAG laser lithotripsy for urolithiasis in dogs" in the *Journal of Veterinary Internal Medicine*.

**Drs. David Panciera**, professor, DSACS, and **Beverley Purswell**, professor, DLACS, recently co-authored "Effect of hypothyroidism on reproduction in bitches" in the *Journal of Veterinary Internal Medicine*. The work was completed with K. A. Kolster.

**Drs. David Panciera**, professor, DSACS, and **Ed Monroe**, professor, DSACS, recently co-authored "The effect of hypothyroidism on insulin sensitivity in dogs" in the *Journal of Veterinary Internal Medicine*. The work was completed with N. Inteeworn and K. Saker.

**Drs. Philip Sponenberg**, professor, DBSP, and **Karen Inzana**, professor, DSACS, recently co-authored "Polymicrogyria in four standard poodles: A case series with histopathologic, electroencephalographic and magnetic resonance imaging findings" in the *Journal of Veterinary Internal Medicine*. The work was completed with C. Journey, J. Haddad, N. Crawford, A.D. Miller, A.M. Komaromy, T. J. Van Winkle, C.H. Vite, G.C. Johnson, and D.P. O'Brien.

## Newsmakers

**Drs. John Rossmelsl**, assistant professor, DSACS, **Karen Inzana**, professor, DSACS, and **David Panciera**, professor, DSACS, recently co-authored "A longitudinal study of the effects of chronic experimental hypothyroidism on canine skeletal muscle" in the *Journal of Veterinary Internal Medicine*. The work was completed with G.D. Shelton.

**Dr. Carolina Ricco**, assistant professor, DSACS, recently co-authored "Assessment of brachial plexus blockade in chickens by an axillary approach" in *Veterinary Anesthesia and Analgesia*. The work was completed with J.P. Figueiredo, M.L. Cruz, G.M. Mendes, R.L. Marucio, and D. Campagnol.

**Dr. Otto Lanz**, associate professor, DSACS, recently co-authored "Granulocytopenia associated with thymoma in a domestic shorthaired cat" in the *Journal of the American Animal Hospital Association*. The work was completed with M.L. Green and J.M. Miller.

**Drs. Michael Leib**, C.R. Roberts Professor of Small Animal Medicine, DSACS, and **Don Waldron**, former professor, DSACS, recently co-authored "Primary tracheal collapse in a cat" in the *Journal of the American Animal Hospital Association*. The work was completed with H.L. Mims and R.B. Hancock.

**Drs. John Rossmelsl**, assistant professor, DSACS, and **Geoffrey Saunders**, associate professor, DBSP, recently co-authored "B-Cell lymphoma in the peripheral nerves of a cat" in *Veterinary Pathology*. The work was completed with M.A. Higgins, S. Hayes, and M. Kiupel.

**Dr. Philip Sponenberg**, professor, DBSP, recently co-authored "Persistent vulvar hemorrhage secondary to vaginal hemangioma in dogs" in the *Journal of the American Animal Hospital Association*. The work was completed with J.M. Miller, N.E. Lambrechts, R.A. Martin, and M. Subasic.

**Drs. Michael Leib**, C.R. Roberts Professor of Small Animal Medicine, DSACS, and **John Rossmelsl**, assistant professor, DSACS, recently co-authored "Safety and efficacy of oral low-volume sodium phosphate bowel preparation for colonoscopy in dogs" in the *Journal of Veterinary Internal Medicine*. The work was completed with M.A. Daugherty, F.S. Almy, and D.L. Ward.

**Dr. Natalia Henao-Guerrero** recently co-authored "Bispectral index in dogs at three intravenous infusion rates of propofol" in *Veterinary Anesthesia and Analgesia*. The work was completed with P.C.F. Lopes, N. Nunes, D.P. Paula, C.T.D. Nishimori, and E.D.V. Conceicao.

**Dr. Gregory Daniel**, head, DSACS, recently co-authored "Diffuse intestinal T-cell lymphosarcoma in a yellow-naped Amazon parrot (*Amazona ochrocephala aurocollariata*)" in the *Journal of Veterinary Diagnostic Investigation*. The work was completed with M.J. Souza, S. J. Newman, C.B. Greenacre, A.S. Avenell, J.S. Wall, J.C. Phillips, M.M. Fry, and R.L. Donnell.

**Drs. Martha Moon Larson**, professor, DSACS, and **Jeri Jones**, associate professor, DSACS, recently participated as examiners for the American College of Veterinary Radiology Board Exam in Chicago, Ill.

**Dr. Dee Whittier**, professor, DLACS, was recently an adjudicator, referee and evaluator during the V Congress of the Faculty for Veterinary Medicine and Zootechnology at the Autonomous University of Mexico (UNAM) in Mexico City, Mexico. He also made a presentation to the faculty and graduate students entitled "The Effect of Vaccination for *Leptospira hardjo* bovis and Treatment with Oxytetracycline on the Reproductive Performance of Beef Cows."

**Dr. Philip Pickett**, professor, DSACS, recently delivered his lab animal ophthalmology short course

"Ophthalmology for Industrial Veterinarians" to Sanofi-Avantis in New Jersey, Charles River Laboratories in Massachusetts and Covance Laboratories, Inc. in Vienna, Va. Each course is a four-day, 32-hour course for laboratory animal veterinarians on ophthalmic examination techniques used in toxicology studies for the pharmaceutical industry.

**Dr. Lijuan Yuan**, assistant professor, DBSP, recently published "Next-Generation Vaccines – An IBC Conference. Harnessing Innovative Technologies and Processes to Speed Up Your Research, Development & Production of Novel Vaccines. Part I and Part II" in *IDrugs*.

**Dr. Thomas Inzana**, Tyler J. and Frances F. Young Chair of Bacteriology, DBSP, authored "Comparative Genomics of *Pasteurellaceae*" and "Lipopolysaccharides, Biofilms and Quorum Sensing in *Pasteurellaceae*," two chapters in *Pasteurellaceae: Biology, Genomics, and Molecular Aspects* which was recently published by Horizon Scientific Press. The latter chapter was co-authored with **Dr. Indra Sandal**, a research scientist in Inzana's lab, and Shivakumara Siddaramappa, a former graduate student in Inzana's lab.

**Dr. Christopher Ober**, resident, DSACS, was recently named the recipient of the 2008 Resident Author Award for his paper entitled "Comparison of Ultrasound, Computed Tomography, and Magnetic Resonance Imaging in Detection of Acute Wooden Foreign Bodies in the Canine Manus" which appeared in *Veterinary Radiology & Ultrasound*. There were 28 entrants for this award – an all time high. The work was completed with **Drs. Jerri Jones**, associate professor, DSACS, **Martha Moon**, professor, DSACS, **Otto Lanz**, associate professor, DSACS, and **Stephen Werre**, research associate professor, DBSP.

**Dana Calicott**, LVT, VTH, recently authored "Jugular Venocath Placement: Peel-A-Way Introducer Technique" in *The NAVTA Journal*.

**Dr. Philip Sponenberg**, professor, DBSP, recently gave an invited lecture entitled "Livestock and the American Experience" at the Linnean Society of London in the same location Charles Darwin read his papers approximately 150 years ago. The presentation was part of the 150th year celebration.

**Dr. Philip Sponenberg**, professor, DBSP, recently presented two invited papers "Genética de los Colores de Caballos" (Horse Color Genetics) and "La Conservación de los Caballos Criollos en los EEUU" (Conservation of Colonial Spanish Horses in the USA) during the V Jornadas para el Estudio y la Conservación del Caballo Criollo Venezolano (Fifth Meeting for the Study and Conservation of the Venezuelan Criollo horse) in Venezuela.

**Dr. Stephen Smith**, professor, DBSP, recently attended a 2-week O.I.E. course in shrimp pathology at the University of Arizona. He was the only American representative to be invited in a total of 19 participants from other countries.

**Drs. Ramanathan Kasimanickam**, assistant professor, DLACS, **John Currin**, clinical associate professor, DLACS, and **Dee Whittier**, professor, DLACS, recently co-authored "Pregnancy rates in Angus cross beef cows bred at observed estrus with or without second GnRH administration in fixed time progesterone supplemented Ovsynch and CO-Synch protocols" in *Reproduction in Domestic Animals*. The work was completed with J.B. Hall, B. Inman and J.S. Rudolph.

**Drs. Ramanathan Kasimanickam**, assistant professor, DLACS, and **Dee Whittier**, professor, DLACS, recently co-authored "Two doses of prostaglandin improve pregnancy rates to timed-AI in a 5-day progesterone-based synchronization protocol in beef

cows" in *Theriogenology*. The work was completed with M.L. Day, J.S. Rudolph, and J.B. Hall.

**Dr. Thomas Inzana**, Tyler J. and Frances F. Young Chair of Bacteriology, DBSP, was the head organizer for the 2008 International *Pasteurellaceae* Society Conference held in Sorrento, Italy. He also presented two posters at the meeting entitled "Biofilm formation by *Histophilus somni*," completed with **I. Sandal**, J. Shao, and M. Apicella, and "Identification of an *Histophilus somni* (*Haemophilus somnus*) exopolysaccharide, a component of the *H. somni* biofilm," completed with **I. Sandal**, S. Siddaramappa, A. Cox, F. St. Michael, and G. Berg.

**Dr. Ramanathan Kasimanickam**, assistant professor, DLACS, was recently recognized by the American College of Theriogenologists at the 2008 Annual Conference for the Society for Theriogenology in St. Louis, Mo. for his contributions on the Scientific Information Committee from 2004-2008.

**Dr. Ramanathan Kasimanickam**, assistant professor, DLACS, recently presented "Comparison of one vs. two dose of prostaglandin F2 alpha in a 5 Day progesterone-based synchronization protocol in Angus cross beef cows" and "An estimate of the normal variation in the sperm DNA fragmentation index of Holstein bulls and its association with serum testosterone and prolactin over 2 spermatogenic cycles" during the 2008 Annual Conference for the Society for Theriogenology held in St. Louis, Mo.

**Dr. Otto Lanz**, associate professor, DSACS, recently served as a presenter during the Wild West Veterinary Conference.

**Dr. Michael Leib**, C.R. Roberts Professor of Small Animal Medicine, DSACS, recently served as a presenter during the Atlantic Coast Veterinary Conference.

**Dr. Natalia Henao-Guerrero**, assistant professor, DSACS, recently co-authored "Clinical Technique: Use of Capnography in Small Mammal Anesthesia" in the *Journal of Exotic Pet Medicine*. The work was completed with J. Swenson and J.W. Carpenter.

**Dr. Bettye Walters**, director, CPCVM, recently co-authored "Veterinarians and Public Practice at the Virginia-Maryland Regional College of Veterinary Medicine: Building on a Tradition of Expertise and Partnership" in the *Journal of Veterinary Medical Education*. The work was completed with K. Feldman.

**Dr. Dee Whittier**, professor, DLACS, recently traveled to the Dominican Republic to consult with the Dominican dairy industry. While there, he provided service to the large national milk processor, Leche Rica. He also met with national dairy leaders and faculty from the College of Veterinary Medicine from the National Autonomous University of Santo Domingo regarding the development of a national veterinary reproductive center.

**Jeffrey Douglas**, director, OPRC, recently made a presentation on crisis communications at the annual meeting of the Student Chapter of the Public Relations Society of America in Detroit, Mich.

**Dr. Rujuan Dai**, research scientist, DBSP, **Rebecca A. Phillips**, Ph.D. candidate, DBSP, **Dr. Deena Khan**, Ph.D. candidate, DBSP, and **Dr. Ansar Ahmed**, head, DBSP, recently co-authored "Suppression of LPS-induced IFN-gamma and nitric oxide in splenic lymphocytes by select estrogen-regulated miRNA: A novel mechanism of immune modulation" in the high impact journal, *Blood*. The work was completed with Y. Zhang and O. Crasta.

**Ke Wen**, Ph.D. candidate, DBSP, **Dr. Guohua Li**, research scientist, DBSP, and **Dr. Lijuan Yuan**,

assistant professor, DBSP, recently co-authored "Toll-like receptor and innate cytokine responses induced by *Lactobacilli* colonization and human rotavirus infection in gnotobiotic pigs" in *Veterinary Immunology and Immunopathology*. The work was completed with M.S.P. Azevedo, A.M. Gonzalez, W. Zhang, L.F. Saif, and A.E. Yousef.

**Dr. Lijuan Yuan**, assistant professor, DBSP, recently attended the 3rd International Workshop on Rotavirus Vaccine in China. Yuan also presented a poster during the workshop.

**Dr. Carolina Ricco**, assistant professor, DSACS, recently co-authored "Use of a wireless system to measure invasive arterial blood pressure in ponies – preliminary study" in *Veterinary Anaesthesia and Analgesia*. The work was completed with J. E. Quandt, R.E. Novo, M. Killos, and L. Graham.

**Dr. Grant Turnwald**, professor, DSACS, recently co-authored "Assessing Clinical Competency: Reports from Discussion Groups" in the *Journal of Veterinary Medical Education*. The work was completed with E. Stone, D. Bristol, C. Fuentealba, L. Hardie, P. Hellyer, L. Jaeger, S. Kerwin, D. Kochevar, K. Lissemore, C. Olsen, K. Rogers, B. Sabin, C. Swanson and A. Warner.

**Dr. Michael Leib**, C.R. Roberts Professor of Small Animal Medicine, DSACS, and others recently presented 16 hours of continuing education during Intermediate Gastrointestinal Endoscopy for Internal Medicine Residents held at the VMRCVM. Twenty residents from six universities, the Animal Medical Center, Agell Memorial Hospital, and two other private specialty practices attended. Funding and support were provided by Pfizer, Endoscopy Support Services and Kark Storz Veterinary Endoscopy.

**Drs. John Dascanio**, associate professor, DLACS, and **Ramanathan Kasimanickam**, assistant professor, DLACS, recently co-authored "Breeding the mare with frozen semen" in the *Equine Veterinary Education Journal*.

**Dr. John Dascanio**, associate professor, DLACS, was recently selected to the board of directors of the Northeast Association of Equine Practitioners.

**Dr. John Dascanio**, associate professor, DLACS, presented a table topic, "ABVP certification workshop," during the recent meeting of the American Association of Equine Practitioners in San Diego, Calif.

**Dr. Jennifer Barrett**, assistant professor, EMC, recently presented six lectures at the Maryland Veterinary Medical Association Conference as part of their continuing education program.

**Dr. Harold McKenzie**, assistant professor, EMC, recently gave several presentations including "Equine Intestinal Parasites. Keeping Horses Healthy, Happy, and Whole: Advances in Equine Health Care Management," at Virginia Tech's MARE Center's 4th Annual Educational Seminar in Middleburg, Va.

**Dr. Harold McKenzie**, assistant professor, EMC, recently presented a table topic, "The Heavily Horse," during the 54th Annual Convention of the American Association of Equine Practitioners in San Diego, Calif.

**Dr. Harold McKenzie**, assistant professor, EMC, recently served as the moderator for the cardio-pulmonary/exercise session at the AAEP Annual Convention in San Diego, Calif.

**Dr. Kenneth Sullins**, professor, EMC, recently taught a laser surgery course in Virginia and California for the American College of Veterinary Surgeons.

**Dr. Jennifer Brown**, clinical assistant professor, EMC, was recently nominated to the American Veterinary Medical Association Committee on Disaster and Emergency Issues for a three-year term.

**Dr. Jennifer Brown**, clinical assistant professor, EMC, recently delivered nine hours of continuing

education during the Central Veterinary Conference in Kansas City, Kan.

**Dr. Jennifer Brown**, clinical assistant professor, EMC, recently lectured on "Physical Exams and First Aid for Working Dogs" and taught a wetlab at the University of Pennsylvania.

**Dr. David Lindsay**, professor, DBSP, was recently appointed to the editorial board of the *Journal of Parasitology Research*.

**Dr. Iveta Becvarova**, clinical assistant professor, DLACS, recently co-authored the chapters "Nutritional Management of the Starved Horse" and "Prevention of Pasture-Associated Laminitis" in *Current Therapy in Equine Medicine, 6th edition*. The work was completed with C. Thatcher.

**Dr. Scott Pleasant**, associate professor, DLACS, recently co-authored the chapter "Disorders of the Gluteral Pouch" in *Current Therapy in Equine Medicine, 6th edition*. The work was completed with D. Berry II.

**Dr. Jennifer Brown**, clinical assistant professor, EMC, recently authored the chapter "Efficacy of Surgery for Laryngeal Hemiplegia" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Virginia Buechner-Maxwell**, professor, DLACS, recently authored the chapters "Cough" and "Skin Tumors" in *Current Therapy in Equine Medicine, 6th edition*.

**Drs. Undine Christmann**, resident, DLACS, and **Virginia Buechner-Maxwell**, professor, DLACS, recently co-authored the chapter "Viral Respiratory Diseases" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Harold McKenzie**, assistant professor, EMC, recently authored the chapter "Antimicrobial Therapy of the Respiratory System" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Anne Zajac**, associate professor, DBSP, recently authored "Integrated Control of Equine Cyathostomes" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Linda Dahlgren**, assistant professor, DLACS recently authored the chapters "Wound Care and Management," "Skin Grafting," "Stem Cell Therapy" and "Management of Tendon Injuries" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Mark Crisman**, professor, DLACS, recently co-authored the chapter "Integrative Medicine: Applications of Acupuncture" in *Current Therapy in Equine Medicine, 6th edition*. The work was completed with R. Tan.

**Dr. Scott Pleasant**, associate professor, DLACS, recently co-authored the chapter "White Line Disease" in *Current Therapy in Equine Medicine, 6th edition*. The work was completed with S.E. O'Grady.

**Dr. John Rossmel**, assistant professor, DSACS, recently authored the chapter "Making a Neuro-anatomic Diagnosis" in *Current Therapy in Equine Medicine, 6th edition*.

**Dr. Philip Spenberg**, professor, DBSP, recently authored *Equine Color Genetics, 3rd Edition*.

**Dr. Philip Spenberg**, professor, DBSP, recently presented "La Conservación de Rumiantes Pequeños en los Estados Unidos" ("Conservation of sheep and goat breeds in the USA") and "La Conservación de Caballos Criollos en los EEUU" ("Conservation of Colonial Spanish Horses in the USA") during the VIII Congreso de la Federación Iberoamericana de Razas Criollas (Congress of the Iberamerican Federation of Local Breeds) in Valdivia, Chile.

**Dr. Philip Spenberg**, professor, DBSP, recently presented an invited plenary session "Conservación Sostenible en los EEUU" ("Sustainable Conservation in the USA") during the IX Simposio Iberoamericano Sobre Conservación y Utilización de Recursos Zootenéticos (Iberoamerican Symposium on

Conservation and Utilization of Zoogenetic Resources) in Argentina.

**Dr. Beverley Purswell**, professor, DLACS, has been named chair of the American College of Theriogenologists Exam Committee.

## Students

**Megan Lighty**, a graduate student working with **Drs. Bill Pierson** and **Tanya LeRoith**, recently presented "Turkey Cellulitis-Case Definition and Risk Factor Analysis" during the 80th Northeastern Conference on Avian Diseases held at the Pennsylvania State University. The paper was co-authored with **T. LeRoith**, R. Evans, **N. Sriranganathan**, **F. Elvinger**, and **F. Pierson**.

**Lori Settle**, a Ph.D. student working with **Drs. Bill Pierson** and **Nammalwar Sriranganathan**, recently presented "Isolated and Characterization of the Lys and rIIA Proteins of Bacteriophage Felix O1" during the 80th Northeastern Conference on Avian Diseases held at the Pennsylvania State University. The paper was co-authored with **Drs. N. Selem**, **N. Sriranganathan**, and **F. Pierson**.

**Megan Lighty**, a Ph.D. student working with **Drs. Bill Pierson** and **Tanya LeRoith**, recently received the Best Graduate Student Presentation award during the 80th Northeastern Conference on Avian Diseases held at the Pennsylvania State University. The paper, "Turkey Cellulitis-Case Definition and Risk Factor," was co-authored with **Drs. T. LeRoith**, R. Evans, **N. Sriranganathan**, **F. Elvinger**, and **F. Pierson**.

**Claudio Gúterrez**, a Ph.D. student working with **Drs. Renee Prater** and **Larry Freeman**, received the top award for a student poster presentation during the 48th Annual Meeting of the Society of Teratology held in Monterey, Calif. His paper was entitled "Maternal hyperglycemic impact on fetal myocardial apoptosis gene expression: potential relationship to cardiac defects."

**Ashley Fitzgerald** ('10), recently won second place in the student research presentation at the American Association of Bovine Practitioners' Annual Conference held in Charlotte, N.C.

**David Geiger** received the first place award for master's student presentations during the college's 20th Annual Research Symposium.

**James Cissell** received the second place award for master's student presentations during the college's 20th Annual Research Symposium.

**Sarah Davies** received the first place award for master's student poster session competition during the college's 20th Annual Research Symposium.

**Vrushali Chavan** received the second place award for master's student poster session competition during the college's 20th Annual Research Symposium.

**Pergentino Balbuena** received the first place award for Ph.D. student presentation during the college's 20th Annual Research Symposium.

**Parthiban Rajasekaran** received the second place award for Ph.D. student presentation during the college's 20th Annual Research Symposium.

**Murali Mallela** received the first place award for Ph.D. student poster session during the college's 20th Annual Research Symposium.

**Deena Khan** received the second place award for Ph.D. student poster session during the college's 20th Annual Research Symposium.

## Alumni

**Dr. Chris King** ('87) has been elected to the American Association for Laboratory Animal Science Board of Trustees. King is assistant vice president for research and director of the University of Georgia's Office of Animal Care and Use.

## VMRCVM Helping Shape New Virginia Tech-Carilion Medical School



**E**stablishing a new medical school is a daunting task. From the conception of architectural blueprints to the design of a curriculum, it is a process that requires teamwork, experience and broad expertise in a variety of the biomedical sciences.

Given that requirement, it's no surprise that several faculty members and administrators from the Virginia-Maryland Regional College of Veterinary Medicine are among the many at Virginia Tech who are actively involved with the development of the new Virginia Tech-Carilion School of Medicine.

VMRCVM Dean Gerhardt Schurig is a member of the new medical school's board of directors.

"Conceptually, this is a very logical collaboration for a world-class research university and a major hospital system like The Carilion Clinic," said Schurig. "The physician-researcher model is a key component of the emerging world of translational medicine. This project will not only produce a critically needed new breed of physician, it will be a major economic development force for western Virginia."

Two other administrators, Dr. Lud Eng, assistant dean for strategic innovation, and Dr. Greg Daniel, head of the Department of Small Animal Clinical Sciences, are playing a crucial role in the development of the new medical school's curriculum.

In fact, Eng, a former head of Virginia Tech's Faculty Senate, was asked by Virginia Tech Provost Dr. Mark McNamee to serve as the university's chief official on the development of the new medical school's educational mission.

Eng, a cell biologist and former head of the Department of Biomedical Sciences and Pathobiology who has been with the VMRCVM since 1981, sees the collaboration between veterinary medicine and human medicine as a natural fit, especially now.

"Over the past several years, infectious diseases issues, public health issues and other factors have created more common ground for each sector of medicine," said Eng, noting that an American Medical Association

House of Delegates resolution recently called for greater engagement with veterinary medicine. "If we really believe that there is just 'one medicine' then we should behave like there is 'one medicine'."

*Several faculty members and administrators from the Virginia-Maryland Regional College of Veterinary Medicine are among the many at Virginia Tech who are actively involved with the development of the new Virginia Tech-Carilion School of Medicine.*

For Eng and for Daniel, that has meant countless jaunts down Interstate 81 for planning and development meetings with Carilion-based physicians and administrators who are all working hard to create the nation's newest research-based medical school. The school, which will enroll 42 students in each class, is expected to open its doors in fall 2010.

The new medical school's four-year curriculum will include about two years of didactic work and about one and three-quarters year of clinical rotations. The didactic work is structured around a body system based "block system," which includes two blocks per semester and four blocks per year.

"It's a pretty densely packed curriculum," Eng noted. "But it's doable."

Eng has provided leadership for the curriculum development team designing the "Fundamental Biology of Cells and Tissues" block of the new medical school's four-year curriculum. That component includes biochemistry, genetics, anatomy, histology and other areas.

Daniel is providing leadership for the Block 2 component of the curriculum which is entitled "Biology of Organ Systems 1." He and his team are working on curriculum development in the area of cardiovascular systems, respiratory systems, immune system, musculoskeletal, peripheral nervous system and other areas.

Please see **Medical School**: page 10

LEARNING



## VMRCVM's Dr. Bonnie Smith Earns Nation's Top Teaching Award

**D**r. Bonnie Smith's passion for teaching is as core to her being as bones are to a vertebrate.

The veterinary anatomist in the Virginia-Maryland Regional College of Veterinary Medicine's Department of Biomedical Sciences and Pathobiology (DBSP) has earned more than 20 teaching awards during her 23-year career.

Now, Smith has been awarded the national Carl J. Norden-Pfizer Distinguished Teaching Award, an honor that celebrates her as the best among the thousands of professors teaching in the nation's 28 colleges of veterinary medicine.

"I feel tremendously honored," said Smith, who is the third VMRCVM faculty member to be recognized with the national veterinary profession's most prestigious teaching award in the past 10 years. "I feel tremendously humbled."

Smith was formally apprised of the honor in a letter sent from Dr. Marguerite Pappaioanou, executive director of the Association of American Veterinary Medical Colleges (AAVMC). "You have the heartfelt congratulations and enduring gratitude of the entire veterinary profession," wrote Pappaioanou in the letter. "You hold a very special place in our profession as an educator of the next generation of veterinarians, and you have shown yourself to be competent, caring and expert in your teaching ability."

"This is our profession's most prestigious teaching award and it commends a professor who has been recognized for teaching excellence throughout her career," said VMRCVM Dean Gerhardt Schurig, noting her achievement also speaks of the quality of instruction in the VMRCVM. "We're very proud of her."

As a professor of anatomy and physiology, Smith teaches aspiring veterinarians gross anatomy, physiology, embryology, and morphology. Presented early in the curriculum, these courses are so sweeping in scope and detail that they can sometimes be overwhelming. Smith is well known for her ability to simplify the material and make it clinically applicable for students.

"I try to find a balance between teaching too much and teaching too little," said Smith, adding that her goal is to provide her students with a level of understanding that will enable them to be successful in school and in their professional careers. "I try to remember that I'm teaching DVM students. I'm not teaching veterinary anatomists and I'm not teaching veterinary technicians."

Smith sees the teaching process as a "partnership" between herself and her students. Her passion for teaching is fueled by her students' "willingness and hard work," she said, and she believes the national award is as much a recognition of the partnership between teacher and student as it is a recognition of her.

"Let's face it," said Smith, whose clothing and jewelry often features Celtic knots because of the wholistic, integrated nature of life that they symbolize. "The students are the reason that we're here. The students need to matter. They must matter."

Please see **Dr. Smith:** page 10



Dr. Bonnie Smith (center), recipient of the 2009 national Carl J. Norden-Pfizer Distinguished Teaching Award, is pictured with Dr. Marguerite Pappaioanou, executive director of the Association of American Veterinary Medical Colleges (AAVMC) and Dr. James Fox, president of the AAVMC.

## Medical School: continued from page 8

Other faculty members, including histologist Dr. Tom Caceci and anatomist Dr. Bonnie Smith, have also been participating with the curriculum development project.

Virginia Tech and the Commonwealth of Virginia will own the \$59 million state financed medical school complex, which will include the Virginia Tech-Carilion Research Institute and the new school of medicine. About 75 percent of the building will be dedicated toward research and scholarship and about 25 percent will be dedicated toward the educational mission of the medical school, according to Eng.

Eng and other Virginia Tech and Carilion officials have traveled to investigate several other new medical schools as part of the development process, including the massive Cleveland Clinic, which has two medical schools associated with it.

## Dr. Smith: continued from page 9

Based upon the rapport she seems to have with her students, they certainly do. Smith can't walk down a hall without veterinary students coming up to ask her how she is doing with her battle against cancer and giving her the occasional hug. It is apparent her students respect her as a mentor but trust her as a friend.

During Smith's tenure in the VMRCVM, her student reviews have consistently placed her in the top three to four faculty members in the college, according to Dr. Blair Meldrum, a professor in DBSP, a former associate dean for academic affairs in the college, and a person who participated in her nomination for the award.

"Bonnie epitomizes the qualities we have come to associate with teaching excellence," said Meldrum. "She has the uncommon ability to reach into students' minds and hearts to tailor instruction to meet individual learning styles and needs."

"She is a colleague for whom I have the highest regard," stated Meldrum. "Her actions are truly an example to those around her."

Sponsored by Pfizer Animal Health, this national award honors faculty members who have displayed outstanding teaching ability.

Smith received B.S. and M.S. degrees in zoology, a DVM and a Ph.D. in veterinary anatomy with a minor in human anatomy from The Ohio State University. Before joining the college in 1991, Smith was a visiting assistant professor at North Carolina State University's College of Veterinary Medicine.

## Grant Wins College Teaching Award



Dr. David Grant (left) has been named the 2008 recipient of the Virginia-Maryland Regional College of Veterinary Medicine's College Teaching Award. He was presented the award by former Associate Dean of Academic Affairs Dr. Grant Turnwald (right).

**D**r. David Grant, an assistant professor in the Department of Small Animal Clinical Sciences (DSACS), has been named the 2008 recipient of the Virginia-Maryland Regional College of Veterinary Medicine's College Teaching Award.

The award honors a faculty member who has made exceptional contributions to the college's instructional program. Grant was recognized for his deep involvement with students and his dedication to each student's understanding of the information he covers in his classes.

"Dr. Grant is a great role model for the students," said Dr. Greg Daniel, head of the DSACS. "He enjoys teaching and that is reflected in student comments indicating their sense that he cares about them and their education." Daniel also noted Grant's student evaluations are consistently above the departmental average.

Grant's high ratings come as no surprise to Dr. Martha Larson, a professor in the DSACS, who has worked with Grant since his time as a resident in the college.

"He is completely professional, and treats student, staff, house officers, and faculty with respect and collegiality. While he is quietly confident in his medical judgment, he is quick to listen to other opinions,"

wrote Larson in her letter of nomination for Grant. "I am very happy to work with him as a colleague."

**"Dr. Grant is a great role model for the students. He enjoys teaching and that is reflected in student comments indicating their sense that he cares about them and their education." – Dr. Greg Daniel, head, DSACS.**

Grant earned his DVM in 1999 from the University of Florida and his M.S. in veterinary medical sciences in 2003 from Virginia Tech. He completed his residency in small animal internal medicine in the VMRCVM prior to joining the faculty in 2003 as a clinical instructor.

Grant's research and teaching interests are in the field of urology. His research and clinical services have focused on evaluating urinary markers of glomerular disease and application of laser lithotripsy for canine urinary stones. He is board certified by the American College of Veterinary Internal Medicine and is also a member of the American Veterinary Medical Association.



Dr. Marion Ehrich (left) works with laboratory specialist Kristel Fuhrman in the laboratory.

## VMRCVM, Luna Innovations Partner on NIH Funded Nerve Gas Program

**A** veterinary pharmaco-toxicologist in the Virginia-Maryland Regional College of Veterinary Medicine is leading a team that has been awarded almost \$1 million from the National Institutes of Health (NIH) to explore the development of a nanotechnology-based approach for protecting people from the deadly affects of nerve gases like Sarin, VX and others that can be used as agents of terror.

Dr. Marion Ehrich, a professor in the college's Department of Biomedical Sciences and Pathobiology (DBSP) and co-director of the Laboratory for Neurotoxicity Studies, will spend three years developing novel methods for delivering chemical antidotes that can mitigate the devastating effect of organophosphate-based neurotoxicants.

The experiments will involve the use of nanoparticles called fullerenes - commonly known as "Buckyballs" - that have been modified to enhance their water solubility and catalytic and antioxidant properties. The nanoWorks and Biomedical Technologies Group of Luna Innovations Inc. of Roanoke, Va., the company that is partnering with Ehrich on the work, are developing the fullerene derivatives and supporting immunoreagents.

"Organophosphorous compounds represent a class of extremely potent chemical warfare agents that can cause incapacitation and death within minutes of exposure," said Ehrich. The 1994 and 1995

Japanese subway attacks conducted by terrorists using sarin gas and the attacks on the northern Iraqi Kurds perpetrated by former dictator Saddam Hussein are both examples of chemical terrorism and warfare using organophosphate compounds, according to Ehrich.

These agents work by inhibiting the production of the enzyme acetylcholinesterase, which metabolizes the neurotransmitter acetylcholine, an agent that plays a critical role in movement and other physiological processes like respiration and digestion.

The resulting proliferation of the neurotransmitter acetylcholine unleashes a cascading sequence of clinical problems, including salivation, lacrimation or tearing of the eyes, urination, defecation, tremors, seizures, and eventually paralysis as the wildly firing synaptic junctions eventually cause muscle exhaustion, paralysis and death.

The conventional therapeutic approach for treating nerve gas exposure is to administer atropine, which blocks cholinergic receptors, and pralidoxime or 2-PAM, which can remove the organophosphate compounds from the acetylcholinesterase, explains Ehrich, provided it is administered in time.

But there are inherent limitations on the effectiveness of atropine against nerve gases that depend largely upon the amount of the agent the victim is exposed to and the

*continued next page*

amount of time that passes between the toxic insult and the time that the atropine is administered. Also, while the atropine can be effective in dealing with what is commonly referred to as the SLUD effects (salivation, lacrimation, urination and defecation), it is not effective in dealing with the brain damage that is caused by oxidative stress, or the tissue-destroying oxygen-free radicals that are generated by the toxicants.

This is because the atropine cannot pass through the "blood-brain barrier," a vascular network of brain capillaries with dense intercellular junctions that combine to create a biologically protective "sheath" that permits some molecules to pass but inhibits others.

The inability of the atropine to pass through the blood-brain barrier substantially limits the ability to prevent the critical neurologic threat caused by the uncontrolled seizures, and the secondary neurological damage that is caused by the oxygen free-radicals generated following the seizures.

"The water-soluble fullerenes developed by Luna Innovations are an absolutely critical part of this novel approach to developing better counter-measures," said Ehrich. "We're delighted to be collaborating with them." Luna Innovations engages in the research, development, and commercialization of technologies in the areas of test measurements, sensing instrumentation and health care.

Ehrich hopes the research will be effective in two ways. First, and most important, she has preliminary results that suggest the fullerene derivatives will bind with the free organophosphate compounds. This would protect the body because the toxicants have not yet begun to exert their toxic affect.

"I want something that is going to scavenge the organophosphates," said Ehrich, who is a past president of the 6300-member national Society of Toxicology, underscoring the importance of developing countermeasures that are more effective than just atropine.

Second, since the fullerenes should be effective in crossing the blood brain barrier, she believes they should be effective in mitigating the oxygen free-radicals that play a role in the development of seizures.

The National Institutes of Health R21 grant provides \$946,432 in funding, including the Luna Innovations sub-contract. It is expected to support a three-year research effort. The researchers hope to identify two effective fullerenes by May 2009 using in vitro experiments, and focus future study on those.



Dr. Thomas Inzana



Dr. Chris Roberts

## Veterinary College Receives Two of Five Virginia Tech-Carilion Grants

Two of the five seed grants recently awarded by the Virginia Tech-Carilion Research Institute were awarded to faculty members in the Virginia-Maryland Regional College of Veterinary Medicine.

The \$30,000 grants are to support collaborative research between Virginia Tech and Carilion Clinic researchers on medical challenges that include heart care, cancer, infectious disease, obesity, and technology.

"As the Virginia Tech-Carilion enterprise grows, these joint efforts will become very important to the success of our educational and research efforts," said Tom Campbell, assistant director for research and operations for the Virginia Tech-Carilion Research Institute.

Drs. Thomas Inzana, the Tyler J. and Frances F. Young Chair of Bacteriology, and Chris Roberts, an associate professor, both in the Department of Biomedical Sciences and Pathobiology (DBSP), were each awarded funding.

Inzana, who is also the associate vice president for research programs for Virginia Tech, was awarded funding for "Development of nanoscale optical fiber biosensor assays to detect and differentiate *Staphylococcus aureus* and Methicillin-Resistant *S. aureus* (MRSA)." His co-investigators are Tom Kerkerling, M.D, infectious disease section chief, Carilion Clinic; J.R. Heflin, professor of physics in the College of Science, Virginia Tech; and A.B. Bandara, research assistant professor in the DBSP in the VMRCVM.

Roberts was awarded funding for "Characterization of Early Defects in Immunosurveillance Mechanisms during Ovarian Cancer Progression." He is completing the work with Eva Schmelz, human nutrition, food, and exercise associate professor at Virginia Tech; and Dennis Scribner, M.D, gynecological oncology section chief, Carilion Clinic.

"We are extremely pleased with Dr. Inzana and Dr. Roberts' grants," said Dr. Gerhardt Schurig, dean of the veterinary college. "Our college has a strong commitment to translational medicine and these collaborations with Carilion further strengthen that program."

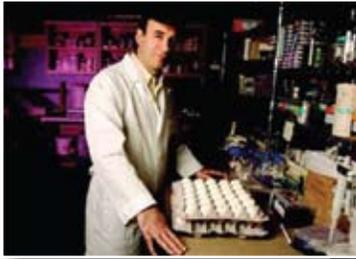
Carilion Clinic also provides Research Acceleration Project grants and Daniel Harrington, M.D., vice president for academic affairs for Carilion Clinic and associate dean for clinic and regional integration for the Virginia Tech-Carilion School of Medicine, reports there have been several where Virginia Tech faculty members were partners.

"We are starting to see increased interest and activity, with both Carilion physicians and Virginia Tech researchers seeing value in the Virginia Tech-Carilion enterprise," said Harrington.

During the recent round of funding, 14 projects were submitted for consideration. The Virginia Tech-Carilion School of Medicine and the Virginia Tech-Carilion Research Institute comprise a unique partnership to establish a new generation of health care professionals and leaders in their chosen fields.

Originating from the Carilion Clinic, one of Virginia's largest health care providers, and Virginia Tech, the Commonwealth of Virginia's leading research university, the school and institute will meld results-driven medical training with applications-oriented research.

## Maryland Researchers Pursuing Development of Avian Flu Vaccine



Dr. Daniel Perez is leading a University of Maryland team that has developed a universal influenza vaccine for animals that may help prevent or delay another human flu pandemic.



**A** University of Maryland-led science team has developed a universal influenza vaccine for animals that may help prevent or delay another human flu pandemic.

Led by Dr. Daniel Perez, a University of Maryland associate professor and virologist in the Virginia-Maryland Regional College of Veterinary Medicine, the team has developed a vaccine component that can be used to immunize both birds and mammals from dangerous forms of the flu, including the highly lethal H5N1 avian influenza strain.

*They isolated genes from the H9N2 virus to make up a “backbone” that consists of internal genes common to other flu strains. The backbone can be used as a starting point from which to quickly create other live, weakened flu vaccines because it can be genetically modified at the surface to resemble particular flu viruses for the purposes of vaccination.*

This new universal influenza component promises to make it much easier to create a human vaccine capable of protecting humans against lethal avian bird flu strains. In addition, it can be used to vaccinate wild and domestic birds or other species, thus reducing the spread of flu viruses among these populations and decreasing the chance that deadly new human flu strains will spring from these animal reservoirs.

“We now have a vaccine that works in many animal species and can protect against any type of influenza that we want,” Perez said, who does his research at the College Park campus of the veterinary college.

The vaccine for a virus is derived from the virus. The vaccine mimics the presence of the virus without causing disease, priming the body’s immune system to recognize and fight against the virus. The immune system produces antibodies against the vaccine that remain in the system until they are needed. If that virus, or in some case a closely similar one is later introduced into the system, those antibodies attach to viral particles and remove them before they have time to replicate, preventing or lessening symptoms of the virus.

Perez and his team used genes from the avian flu virus H9N2 to create a live, weakened flu vaccine. This type of vaccine consists of a living but weakened form of a virus that is generally harmless.

“H9N2 is another avian influenza virus with a broad host range. It can infect both birds and mammals,” Perez said. “We wanted to

try to use the backbone of that virus to create a live but weakened form of the virus and make a one-size-fits-all universal vaccine.”

They isolated genes from the H9N2 virus to make up a “backbone” that consists of internal genes common to other flu strains. The backbone can be used as a starting point from which to quickly create other live, weakened flu vaccines because it can be genetically modified at the surface to resemble particular flu viruses for the purposes of vaccination.

“We can attach any surface proteins to this backbone to make a vaccine specific for almost any another influenza virus,” Perez said.

Most currently used vaccines offer protection for a specific animal species against a small range of virus strains. These vaccines take a long time to make (about six months for a vaccine tailored for humans) and they generally cannot be shared between species.

Avian flu viruses are so lethal to humans because they are structurally different from human strains. The human immune system does not recognize these viruses and therefore cannot defend the body against them. Because there is little natural immunity to these strains of viruses in humans, a pandemic would likely result if one of these avian flu viruses mutated to spread easily among humans. Because of increased international travel, such a virus would likely spread more easily and quickly than in past influenza pandemics.

Some avian influenza strains, including the H5N1 and H9N2 strains have shown a limited ability to infect humans who have direct contact with birds, but these virus strains cannot be easily transmitted from human to human. However, 50 percent of humans recently infected with the H5N1 strain have died, sparking growing concern among world health officials about the potential for this strain to cause a human pandemic.

The Centers for Disease Control (CDC) says another strain of bird flu virus could mutate and become easily transmissible between humans, causing another pandemic. However, no one knows which influenza strain will undergo such a mutation. The H5N1 avian flu virus has recently caused an influenza pandemic in wild and domestic birds in Eurasian and African countries, and may be a likely candidate.

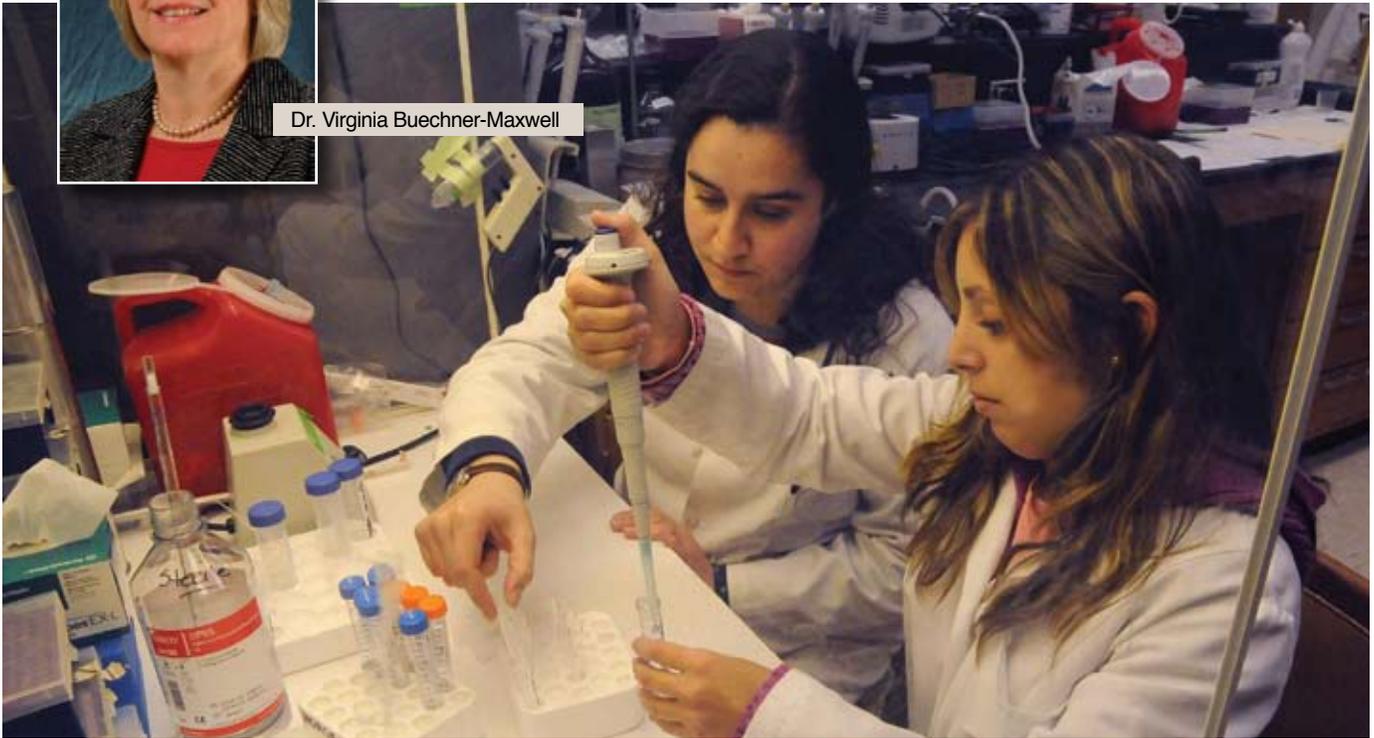
“In case of pandemic influenza, we will need a vaccine, but we cannot tell ahead of time what the virus is going to look like,” Perez said. “We may prepare a vaccine before the pandemic occurs, but we don’t know if that vaccine is going to be good enough.”

Please see **Vaccine:** page 31



Dr. Virginia Buechner-Maxwell

## With Help from Chilean Students, Treatment for Equine Heaves Could Bring Hope for Human Asthmatics



Dr. Marianne Werner (left), a veterinarian from Chile, and Sofia Oettinger (right), a veterinary student from the University of Austral in Chile who is conducting research as part of her senior thesis, work in Dr. Virginia Buechner-Maxwell's lab.

**M**uch like asthma in humans, equine heaves is a chronic, often debilitating disease in horses. The symptoms can range from coughing, exercise and work intolerance to, eventually, labored breathing even at rest.

Dr. Virginia Buechner-Maxwell, a professor in the Department of Large Animal Clinical Sciences (DLACS), is working at the molecular level to learn more about what causes this vexing disease.

*The results of these studies may be helpful to both horses and humans, since horses are one of the few animals that naturally develop an asthma-like syndrome. In addition, "heavy" horses also respond to all the same medications that asthmatic humans do.*

"We look very closely at the pathogenesis of the disease," said Buechner-Maxwell, who is board certified by the American College of Veterinary Internal Medicine (ACVIM). "We want to know why this happens. Specifically, what goes wrong in the horse to allow it to develop this disease?"

Currently, Buechner-Maxwell is hosting two exchange students from Chile who are helping her answer this question: Dr. Marianne Werner, a veterinarian who is here earning her M.S. degree, and Sofia Oettinger, a veterinary student from the University of Austral who is conducting research at Virginia Tech as part of her senior thesis.

Together, they are investigating a particular receptor that is, in part, responsible for initiating the inflammatory process. They are looking for ways to modify the response of immune cells by

using albuterol, a medication that is commonly prescribed to treat human asthma. Albuterol is often administered to help relax the muscle around the airways of the lung and increase airflow.

The results of these studies may be helpful to both horses and humans, since horses are one of the few animals that naturally develop an asthma-like syndrome. In addition, "heavy" horses also respond to all the same medications that asthmatic humans do.

While albuterol has been used for many years as a treatment for asthma, according to Buechner-Maxwell, it has been recently discovered that long-term use of the drug could actually pose a threat to those who take it. Buechner-Maxwell's lab is looking at the possibility of reducing the risk of long-term exposure to the drug by adding something as simple as magnesium.

"When albuterol binds with inflammatory cells, it sets off a whole of series of events, including one that is dependent on magnesium," explains Buechner-Maxwell. "By altering the amount of magnesium in the cell's environment, you can make it respond in a completely different way."

This modification could help both four-legged and two-legged patients.

"My goal is to find a more natural and cost effective treatment for horses which will eventually translate into better and safer treatments for people with asthma," said Buechner-Maxwell.

Buechner-Maxwell earned her DVM from the VMRCVM in 1987. Prior to joining the faculty of the college in 1995, she was an instructor of equine internal medicine and a NIH postdoctoral research fellow for the division of pulmonary medicine in the Internal Medicine Department at the University of Michigan.

## Klein Working with Virginia Tech, Wake Forest Colleagues on Migrant Farm Worker Health Issues



Dr. Brad Klein



**M**igrant farm workers play a critical role in the nation's agricultural economy, particularly in the southeast.

Yet these workers face a cornucopia of hazards, ranging from chemical toxins to dangerous farm equipment, as they toil in the fields, according to Dr. Brad Klein, an associate professor in the Department of Biomedical Sciences at Virginia Tech.

Klein is one of several faculty participating in an emerging, collaborative effort mounted by a group of researchers in the social, medical, engineering, and biological sciences at Virginia Tech and Wake Forest University.

"The goal of our group is to take a multidisciplinary approach to understanding the sociological, ergonomic, and biological foundations of the physical and mental health challenges faced by these agricultural workers," said Klein, a neuroscientist who has studied how environmental toxins such as agricultural pesticides affect the brain and nervous system.

Language and cross-cultural issues experienced by many Latino migrant farm workers can include isolation from family, hesitation to seek traditional healthcare avenues, limited access to affordable healthcare, and ability to interpret health and safety protocols, according to Klein.

Chronic exposure to fertilizers and pesticides represent another major threat to health and well-being on the farm, he said. Organophosphates and pyrethroids, as well as exposure to metals such as zinc, copper and others can contribute to neurological dysfunction.

Organic threats are also present. For example, workers can develop green tobacco sickness, a disorder that causes weakness,

Dr. Bradley Klein, associate professor, DBSP, is collaborating with researchers at Virginia Tech and Wake Forest University to investigate the many hazards, ranging from chemical toxins to dangerous farm equipment, migrant workers face as they toil in the fields.

dizziness, abdominal cramping, nausea, respiration and circulatory problems from handling wet tobacco when toxic amounts of nicotine are absorbed through their skin, he said.

The group, led by Tom Arcury, Ph.D., professor and vice chair for research in the Department of Family and Community Medicine and director of the Center for Worker Health at the Wake Forest University School of Medicine, plans to present a periodic series of informational events in the future. They have applied for a grant to hold a major conference in Winston-Salem, N.C. next year, and ultimately, they would like to establish a permanent Migrant Health Worker Center for the southeastern United States that is supported by the National Institute for Occupational Safety and Health (NIOSH), according to Klein.

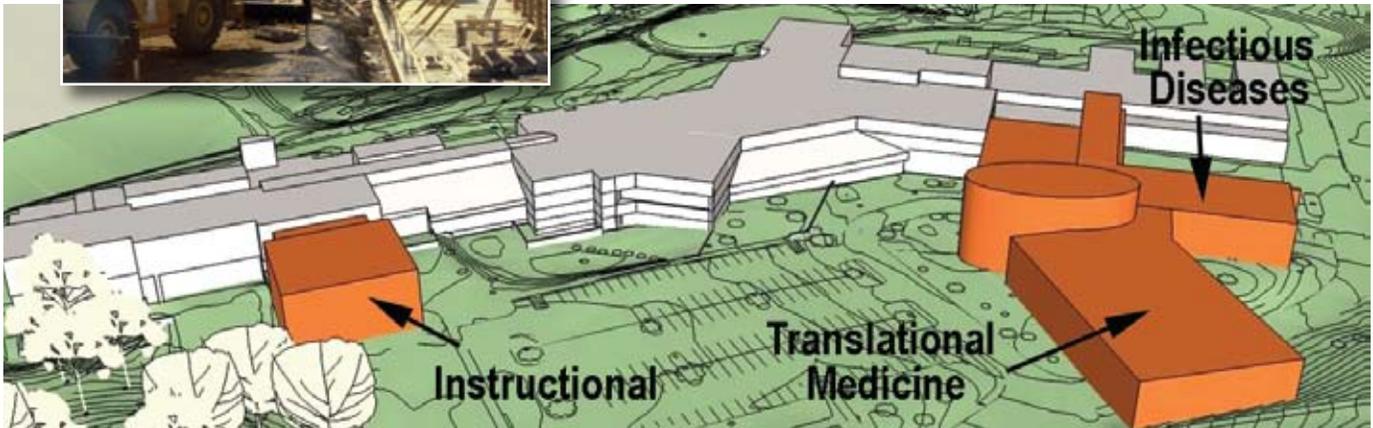
*Klein is one of several faculty participating in an emerging, collaborative effort mounted by a group of researchers in the social, medical, engineering, and biological sciences at Virginia Tech and Wake Forest University.*

Other Virginia Tech faculty members participating in the program include Maury Nussbaum, Ph.D., professor, Department of Industrial and Systems Engineering (DISE); Michael Agnew, Ph.D., assistant professor, DISE; and Jeffrey Bloomquist, Ph.D., professor, Department of Entomology. Other Wake Forest University faculty members participating in the program include Sara Quandt, Ph.D., Joe Grzywacz, Ph.D., and Tim Howard.

**For more information, contact Dr. Brad Klein  
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or 540-231-7398)  
or Dr. Thomas Arcury ([tarcury@wfubmc.edu](mailto:tarcury@wfubmc.edu)  
or 336-716-9438)**



## Major Construction on the Horizon



It has been a long time since the diesel roars and clanking treads of heavy construction equipment have been heard around the campus of the Virginia-Maryland Regional College of Veterinary Medicine's flagship campus at Virginia Tech.

But that's getting ready to change, as the college prepares to embark upon the most ambitious building program since the major build-out of the 1980's.

The VMRCVM is set to begin construction of a \$10.2 million, 16,000 square foot Infectious Disease Research Facility (IDRF) and a \$12.1 million dollar, 32,300 square foot Instructional Building in 2010. Construction of a \$76 million, 130,000 square foot Translational Research Center could begin by fall 2013.

When ground is broken for the IDRF in early 2010, it will be the first major construction project for the college since the "Phase IV" project was completed in 1994.

"Our programs in teaching, research and service have grown substantially over the past 15 years, and without question, space problems are holding us back," said VMRCVM Dean Gerhardt Schurig. "Building these projects will enhance the important work we are doing in infectious disease research, enable us to train more DVM students, expand our hospital activities and provide more appropriate housing and facilities for our faculty."

The two-story IDRF building will be architecturally compatible with the main complex and be located on the northwest portion of the main campus facility, adjacent to the main entrance of the Veterinary Teaching Hospital.

"The IDRF serves two major purposes," according to Senior Associate Dean Roger Avery. "First, it will provide new laboratory space for our growing translational animal model program focused on infectious disease and immunology. Second, it represents the

first of three new buildings which will form the cornerstone of the translational medicine precinct at the college."

Designed in a way that will foster interdisciplinary cooperation among researchers and technical staff, the IDRF will contain five major Biosafety Level-2 research laboratories as well as offices, a central conferencing area, information technology quarters, and related support space.

Once construction begins, it is expected to take about a year to complete. Funding from the facility will come from a combination of state and federal resources

**The VMRCVM is set to begin construction of a \$10.2 million, 16,000 square foot Infectious Disease Research Facility (IDRF) and a \$12.1 million dollar, 32,300 square foot Instructional Building in 2010. Construction of a \$76 million, 130,000 square foot Translational Research Center could begin by Fall 2013.**

The 32,000 square foot instructional building will include a major lecture theatre, a clinical techniques lab and other instructional facilities, seminar and conference rooms and 30-35 faculty offices.

The increased instructional space will enable the college to increase its professional student enrollment from the current 95 (effective fall 2009 the college will enroll an additional five DVM students from around the nation) to a maximum of 130.

"Experts predict a shortage of veterinarians in the future," said

Schurig. "While the definitive National Research Council study on the profession's human resource demands is not expected to be released until late this year, solid evidence documents existing shortages, particularly in public and food animal practice."

Most schools are looking at ways to increase enrollments, Schurig added, in order to accommodate the increased demand for veterinarians that are expected.

Completing the instructional building will also enable the college to provide more appropriate office accommodations for the faculty. For the past 30 years most college faculty have been housed in modular offices constructed in vast open spaces, a situation that does not provide the best environment for faculty communication and collaboration with colleagues, students and teaching hospital clients.

"Our faculty office situation has now become a serious faculty recruitment and retention issue," said Schurig. "It simply must be addressed, and this building will provide a solid move toward improvement."

The proposed \$76 million, 130,000 square foot Translational Research Center will be merged with the IDRF and involve other colleges and departments in an integrated, cross-disciplinary approach to research that is consistent with the operating philosophy of the emerging "life sciences research sector" developing on the southwest corner of the Virginia Tech campus.

Considered the signature project of the ongoing capital campaign, the building will provide a much needed 30,000 square foot expansion of the Veterinary Teaching Hospital on the ground floor, and an additional 100,000 square feet of high-performance laboratory space on several other levels to support new dimensions of achievement in scholarship and discovery.

Research laboratories, conferencing, and administrative spaces will be designed to encourage an interdisciplinary approach to creative problem-solving in a range of scientific disciplines within the medical, biological, agricultural and environmental sciences.

The translational concept facilitates research perspectives that encourage both basic science and clinical/application approaches in a highly collaborative environment that helps generate and rapidly export solutions for real world problems.

## "The Silver Lining"



*The VMRCVM has a rich heritage of private support. Virginia Tech's first organized fundraising program was the \$8 million "Campaign for the Veterinary College." Private support has played a major role throughout the college's history, and it will shape its future more profoundly than ever before. That said, these are challenging times in the fundraising business. Amanda Dymacek, assistant director of development, and Frank Pearsall ('84), director of development, recently had a conversation about the college's development program, the capital campaign, and the current economic uncertainty.*

**AD: Let's begin with the obvious. We're in the midst of a major economic downturn. What are some of the reasons our friends should remain excited during this "down" economy?**

FP: Having been in the first class to graduate, I can put the current economic situation into perspective. Down cycles are not new and through them all this college has been bold in seizing opportunities in advance of trends. We are about to do that again.



**AD: Our college does have a great tradition of innovation and resolve in the face of adversity. Let's consider some specific examples...**

FP: Historically, consider founding Dean

Dick Talbot's pioneering vision of bridging state lines in an unprecedented partnership. Some thought such an approach was doomed to failure, but it is now a model for interstate cooperation. Also, he determined early on that our college was positioned to make unique contributions in public practice.



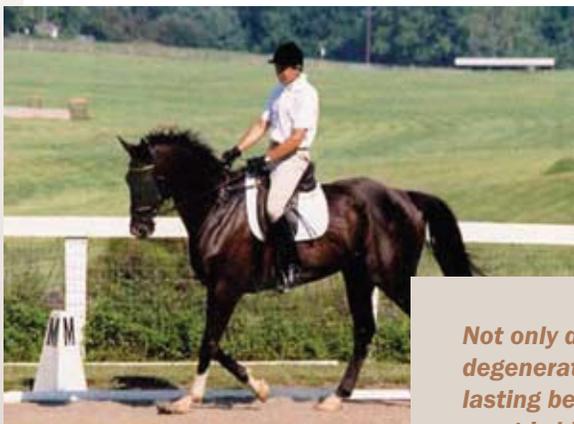
Our second dean, Peter Eyre, arrived only to face great adversity. He worked hard with the two states and the two state veterinary associations and succeeded in making this college and its innovative curriculum thrive. Before stepping down, his vision of the central role which veterinary medicine would play in the "one medicine" of the twenty-first century positioned the college to be a leader.

Now Gerhardt Schurig, our third dean, has given form and momentum to that positioning by creating a model in which the college is a central player within the university's biomedical research initiative. Besides adding research and academic space, this campaign has as its focal point a Translational Research Center that will be a major resource for colleges and departments across the university. It helps that NIH is now preferentially funding translational proposals.

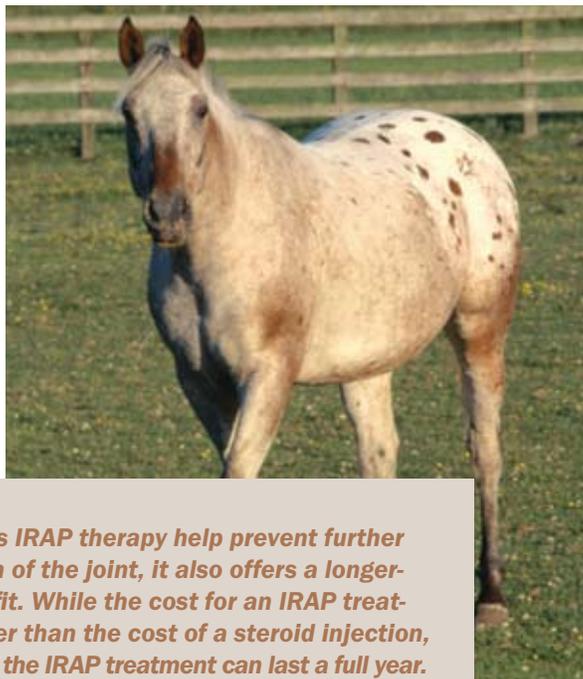
**AD: We've heard a lot about our proposed Translational Research Center,**

Please see **Silver Lining:** page 27

## Innovative Lameness Treatment in Use at the Marion duPont Scott Equine Medical Center



The Marion duPont Scott Equine Medical Center offers Interleukin-1 Receptor Antagonist Protein therapy (IRAP™) for lameness, a common malady in horses.



*Not only does IRAP therapy help prevent further degeneration of the joint, it also offers a longer-lasting benefit. While the cost for an IRAP treatment is higher than the cost of a steroid injection, the effects of the IRAP treatment can last a full year.*

**“W**hile I can show you the ‘after’ photo of my horse, ‘Captain Archer,’” said Mike Hillman, “I wish you could see the ‘before’ photo.”

Captain Archer, otherwise known as “Archie,” is a thoroughbred afflicted with lameness, a common malady in horses. Hillman brought Archie to Virginia Tech’s Marion duPont Scott Equine Medical Center to undergo an innovative treatment—and the results were remarkable.

The treatment, Interleukin-1 Receptor Antagonist Protein therapy (IRAP™) has only been available for a few years, but faculty veterinarians at the Equine Medical Center are experts in its use.

“The first step of IRAP therapy consists of using a special syringe containing glass beads to draw 50 milliliters of blood from the affected horse,” explained Dr. Nat White, Jean Ellen Shehan Professor and EMC director. “The blood mixes with the beads during a 24-hour incubation period, then it’s spun in a centrifuge to separate serum from red blood cells,” he added.

The result is an enriched serum which contains anti-inflammatory proteins that block the harmful effects of interleukin-1, an inflammatory mediator that accelerates the destruction of cartilage. When cartilage is destroyed, lameness results.

The serum is administered into the horse’s affected joint once a week for three to five treatments. Because the serum is autologous, which means it is derived from the horse’s own blood, it carries minimal risk of an adverse reaction.

Previously, Archie—along with many other equine patients diagnosed with lameness—had undergone treatments that involved injections of corticosteroid and hyaluronic acid (a combination of a steroid and an anti-inflammatory lubricant). While this therapy has merit—both from a medical and financial perspective—IRAP can offer certain benefits that steroid injections cannot.

“For instance, while steroid injections do reduce inflammation, they block a wide range of inflammatory mediators—not just the ones needed to be targeted,” White explained. “An IRAP treatment appears to be very specific in blocking the inflammation caused by interleukin activity. Therefore, this treatment helps to eliminate further damage to the joint,” he said.

Not only does IRAP therapy help prevent further degeneration of the joint, it also offers a longer-lasting benefit. While the cost for an IRAP treatment is higher than the cost of a steroid injection, the effects of the IRAP treatment can last a full year. “I compared the cost of one IRAP treatment to the total cost of the quarterly steroid injections Archie had been undergoing and the cost/benefit equation began to even out noticeably,” Hillman said. “On top of the economic value, when I took into consideration that the joint would be injected once per year rather than four times, I saw clearly that IRAP was the way to go,” he added.

As for Archie, Hillman says the improvement in his horse’s gait was nearly immediate. At Archie’s baseline lameness evaluation, Hillman said that the staff at the EMC could readily see that the horse was in obvious pain. “And, since Archie would be the first horse that received IRAP treatment at the Center, it was evident to the EMC staff that he probably represented the ‘worst case’ scenario in proving the effectiveness of this treatment,” Hillman said.

After just the first injection, Archie showed remarkable improvement and by the third injection, Hillman said that Archie was trotting more comfortably than he ever had before. “Gone was the limping horse I had known for three years,” Hillman remarked. “I couldn’t have been more thrilled with the results,” he concluded.

“Lameness from arthritis is an extremely common problem in horses and IRAP is a very promising alternative to traditional treatments,” noted White. “IRAP therapy is a cutting-edge treatment we’re offering to our clients and it clearly produces excellent results in many horses,” he said.



A recent donation in memory of 15-year old Hannah George was used to help "Gracie," a therapy horse for abused, neglected and unwanted children. Gracie is pictured above with Dr. Julie Settlege who assisted with her treatment.

## Memory of Hannah Helps "Gracie" Serve Others

**H**annah George was, by all accounts, a bright, happy, compassionate, 15-year old girl. When she was killed with her father, prominent Roanoke cardiothoracic surgeon Dr. Jeffrey George, on December 3, 2008 in a tragic car accident, there was heartache for many.

"She was just always glowing with the most radiant smile on her face. No matter what the situation was," said Sam Cox, headmaster of Faith Christian School in Roanoke where Hannah was in the ninth grade, in a Roanoke Times newspaper article. "And her greatest passion in life was horses."

It was Hannah's passion that led friends of the Georges, Bob and Susan Heath and their children, to make a donation for equine compassionate care to the Virginia-Maryland Regional College of Veterinary Medicine in Hannah's memory.

"Hannah loved horses," wrote Susan. "She was a beautiful person who is so missed."

In the mountains of West Virginia, a horse she never met is continuing to help others thanks to Hannah's kind spirit, the Heaths' generosity, and the talents of the surgeons in the veterinary college's Department of Large Animal Clinical Sciences (DLACS).

"Gracie" is a 12-year old Appendix Quarter Horse mare from the equine assisted therapy program at New River Ranch in Fayette County. The ranch has provided residential group home care and health services to abused, neglected and un-wanted children since 1988.

"Gracie, as well as other horses that belong to New River Ranch, provides a unique and valuable resource in the treatment of the children we serve," said Dr. Carl White, executive director of the ranch. "Our children have the opportunity to learn from their relationship with our horses a wide variety of lessons—such as how to give and receive love."

Gracie was first brought to the Harry T. Peters Jr. Large Animal Hospital in late 2008 for help with wound care after she received a severe laceration on her left hind leg caused by high tensile wire.

She had received the wound several months prior to her trip to the hospital and, while she had received very good care at the ranch,

several inches of hard, granulation tissue had formed on the leg, preventing it from healing properly, according to Dr. Linda Dahlgren, assistant professor, DLACS, who first treated Gracie.

In addition, x-rays showed a specula bone proliferation—an outgrowth of bone on her leg at the wound site—that was also interfering with wound closure. While not life-threatening, large wounds like this can be uncomfortable and affect a horse's quality of life, explains Dahlgren. They can interfere with a horse's ability to be ridden and are often repeatedly traumatized by the opposite leg or objects around the barn area and pasture.

The first step toward recovery was to remove the abnormalities and get the wound bed healthy. Dahlgren successfully completed this with the help of Dr. Erik Noschka, resident, DLACS, and several students. This prepared the leg for a later skin graft.

After a week or so of recovery and observation, Gracie was sent home to heal over the holidays.

Gracie returned to the VTH early in the New Year for evaluation. The wound was healing properly and was ready for the graft. Dr. Julie Settlege, clinical assistant professor, DLACS, and Noschka performed the procedure in which small plugs of skin were taken from underneath Gracie's mane and placed in recipient holes made within the wound.

Skin grafts are often necessary in wounds such as Gracie's since horses have a limited amount of loose skin on their legs that can contract to cover the wound.

*In the mountains of West Virginia, a horse she never met is continuing to help others thanks to Hannah's kind spirit, the Heaths' generosity, and the talents of the surgeons in the veterinary college's Department of Large Animal Clinical Sciences (DLACS).*

Bandage management during the first four to five days after a graft is highly critical, according to Settlege.

"During this time, grafts can adhere to the bandage instead of the wound and be inadvertently removed during change," she said. "In fact, grafts do not become firmly adhered to the wound bed until around the 10th day."

Because of this risk, it was recommended to keep Gracie in the hospital for extended observation.

"The Heaths' donation allowed Gracie to stay in the hospital during these critical 10 days and we were able to supervise the bandage changes and graft success," said Settlege. "At the time of discharge, it appeared as if we had a greater than 90 percent survival of the grafts—which is even higher than expected."

Since she has returned home, Gracie's wound has continued to heal with the help of the staff at the ranch, who have documented the process in pictures for the veterinarians who helped her. A full recovery is expected, according to Dahlgren.

"While we obviously cannot offer financial assistance in every case, we are very pleased the Heaths' donation in memory of Hannah George allowed us the unique opportunity to offset a small percentage of Gracie's care," said Dr. David Hodgson, head of the Department of Large Animal Clinical Sciences. "We are especially pleased since Gracie's good health will contribute to other children's success."

# BEHIND THE SCENES

*A closer look at some of the people and departments who help make quality care in*



Susie Ayers, senior radiologic technologist, positions a patient in the CT scanner in the Horace E. and Elizabeth F. Alphin Radiology Center.

## **Radiologic Technologists Enhance Image of Veterinary Teaching Hospital**

**I**t sometimes seems like patients flow in and out of the Virginia-Maryland Regional College of Veterinary Medicine's Horace E. and Elizabeth F. Alphin Radiology Center with the speed of a burst of ionizing radiation.

One comes in for a CT scan to check for a brain mass, another needs an MRI for a possible spinal abnormality. When a patient's health is in question, the non-invasive testing offered in this diagnostic imaging center is often crucial to an efficient and accurate diagnosis and treatment plan.

The college has five veterinary radiologists and two radiology residents who are responsible for interpreting the diagnostic images obtained by the advanced technology available in the center. The success of the doctors' interpretation and diagnosis of a condition depends upon the support of the hospital's radiologic technologists.

These individuals are specially trained and certified to perform diagnostic imaging and administer radioactive substances for diagnostic and therapeutic purposes. They must complete at least two years of education in an accredited hospital-based program or a two- to four-year program at an academic institution. Upon completion of their education, they must pass a national certification examination. The requirements are the same for human and animal medicine

Susie Ayers leads the team of four registered radiologic technologists. Ayers is the senior technologist and has been in the profession for 32 years, 21 of those at the VTH. "Registered technologists bring something unique to the table," said Ayers. "We are able to ease

Please see **Radiology**: page 31

## **Front Desk Staff Helps Keep Hospital Running Smoothly**

**I**f you spend any time in the lobby of the Veterinary Teaching Hospital (VTH), you quickly realize it's a hub of activity.

It's the place where nearly every client and patient, with the exception of those of the larger variety, spends time during their visit to the hospital. Cindy Day and her staff at the front desk are responsible for greeting and checking-in each and every client. To date, they have greeted over 100,000.

The personnel at the front desk schedule 20 to 60 appointments into the hospital's 11 different specialty services every day. In order to do this, they must be familiar with medical terminology and numerous protocols, be able to determine when a case warrants emergency or urgent care, and follow guidelines to ensure swift action is taken.

"These folks are on our front line," said Dr. Bill Pierson, director of the VTH. "Our veterinarians and clients depend on them to quickly and efficiently categorize a patient's needs and keep schedules running smoothly."

When Day began her job 22 years ago, it was only Samantha Suroski, one part-time employee and her. Since then, she has seen her staff, the work, and the technology change and grow.

"When I first started," remembers Day, "we had to do everything—including appointments—by hand. The good news was Samantha is left-handed and I am right-handed, so we could write in the book at the same time."

Today, Day and Suroski, who has been with the college 24 years, and other members of the five person staff can enter appointments directly into a computerized hospital information system called CGI—which can be viewed anywhere in the hospital. This is helpful considering making appointments and greeting clients is only part of the daily duties addressed by Day and her staff. They are

Please see **Front Desk**: page 31



Misty Hedrick-Dalton greets a patient at the front desk in the Veterinary Teaching Hospital.

## the Veterinary Teaching Hospital possible ...

### Animal Husbandry Staff Help Provide Safe Environment for Animals and Humans

A clean environment is critical in every hospital. Without it, bad things can happen—the prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) in human health-care facilities in recent years is just one example.

Biosecurity is a high priority for the Virginia-Maryland Regional College of Veterinary Medicine's Veterinary Teaching Hospital (VTH), and much of the responsibility for maintaining a clean workplace rests with the hospital's husbandry staff.

These individuals are responsible for making sure all areas are cleaned and disinfected before, during, and after patients are managed in the hospital. They receive specific training in the area of biosecurity that includes proper methods for handling and disposal of wastes, cleaning, and disinfection. These protocols are important to protect against animal-to-animal and animal-to-human transfer of infectious disease.

"We make sure the hospital is safe not only for patients and clients, but students, faculty, and staff as well," explains Vanessa Walker, who supervises the large animal husbandry staff. Husbandry personnel are trained to assist with animal restraint and food preparation. If qualified, they may also be asked to help in a variety of other areas of hospital operation.

Working closely with the animals and the medical staff provides valuable experience for those who seek to learn more about veterinary medicine. In fact, many of the husbandry staff are either students in the DVM program or individuals hoping to obtain admission to the school, according to Deanna McCrudden, a licensed veterinary technician, who supervises the husbandry staff in the Small Animal Hospital.

"The work these individuals do is an important part of maintaining the health of our patients and employees," said Dr. Bill Pierson, director of the VTH. "Their diligence and reliability benefits us all."

Trina Whitteker assists a patient in the Veterinary Teaching Hospital.



The Veterinary Teaching Hospital's pharmacy staff is responsible for filling approximately 35,000 prescriptions each year. Pictured above is Linda Turner, a pharmacy technician.

### Pharmacy Provides Hospital with Central Service

Thirty-five thousand.

That's roughly the number of prescriptions dispensed each year for the treatment of disease and pain in both hospitalized animals and outpatients by the Veterinary Teaching Hospital's (VTH) in-house pharmacy.

Each and every one of these prescriptions must be carefully calculated and checked before being administered to patients and clients in order to avoid improper dosing or harmful drug interactions. This important responsibility belongs to Maureen Perry, a registered pharmacist, and her staff of pharmacy technicians.

"By checking doses, teaching students how to correctly calculate medication and making sure that the correct medicine is properly prepared and dispensed, we positively impact outcomes in our hospital," said Perry, a diplomate in the elite International College of Veterinary Pharmacy.

The Veterinary Teaching Hospital's pharmacy contains an inventory of over 1,000 different items, including intravenous fluids, oral and injectable drugs. The staff also creates custom preparations of special products, including chemotherapy agents and constant rate infusions, which provide hospital clinicians with access to precisely developed formulations that may not be commercially available.

They also stock and maintain computerized dispensing modules that provide clinicians with after-hours and emergency access to pharmaceuticals. These machines operate much like an ATM and allow quick access to a greater variety of medications when the pharmacy is closed.

"The work of our pharmacy staff requires incredible attention to detail and diligence," said Dr. Bill Pierson, director of the VTH. "Our veterinarians, technicians, students, and patients depend on such accuracy but because much of the work takes place behind the scenes, its value is often unappreciated."

Perry and her staff face a unique challenge since they are working with patients that cannot speak for themselves. Veterinary pharmacists and technicians must rely on the expertise of

Please see **Pharmacy**: page 32

## Degenerative Joint Disease can be a Painful Affliction for Canines

**A**rthritis is a crippling, painful disorder that affects millions of Americans. Unfortunately, the disease is also a major problem for dogs.

Degenerative joint disease, also called osteoarthritis, is a non-infectious breakdown of the cartilage that covers the surfaces of the bones in the joints. It is also accompanied by thickening of the tissues surrounding the joint, an increase in the amount of joint fluid, and bone formation at the margins of the joint.

The disease can lead to significant pain and disability in canines that suffer from the condition, according to Dr. Tisha Harper, assistant professor of surgery in the Department of Small Animal Clinical Sciences (DSACS) in the Virginia-Maryland College of Veterinary Medicine.

The causes of the diseases are varied and can include abnormal wear and tear on the cartilage, traumatic injury to the joint, or it can occur as part of the normal aging process.

“Any dog is at risk of developing degenerative joint disease,” says Harper. “However, breeds that are more prone to diseases such as hip dysplasia, elbow dysplasia or developmental diseases that can affect the joint more commonly develop the disease.”

Symptoms vary by each dog. However, most animals have difficulty exercising, lameness, decreased muscle mass on the affected limb and decreased ability to bend or extend the joint. There may also be increased heat or warmth associated with the affected joint.

Treatment for degenerative joint disease may be conservative or surgical, explains Harper. Conservative management involves weight management, controlled exercise, physical therapy, and pain management. The goal is to increase muscle strength and range of motion in

the joint while promoting cartilage repair and decreasing pain. Surgical treatment options include surgical reconstruction, replacement of the joint or joint fusion. Veterinarians will weigh such factors such as age, activity level and the presence or absence of other disease conditions when deciding on the treatment plan.

*The causes of the diseases are varied and can include abnormal wear and tear on the cartilage, traumatic injury to the joint, or it can occur as part of the normal aging process.*

The prognosis for dogs with the disease varies depending on the severity of the disease, the number of joints affected, and the overall health of the animal.

“Degenerative joint disease in dogs is usually secondary to other orthopedic problems; therefore, the underlying problem should be corrected if possible,” explains Harper. “However, many pets can be functional house pets with appropriate management and some surgical procedures can return animals to near normal function.”

If an owner suspects his or her dog is suffering from the disease, he or she should first contact his or her local veterinarian who can assess the animal’s condition and then, if necessary, refer them into the Veterinary Teaching Hospital for further assessment and treatment.



## Platelet Rich Plasma Treatments Now Offered at Equine Medical Center

One of the most common causes of lameness in horses—an injury to tendon and ligaments—can now be treated at Virginia Tech's Marion duPont Scott Equine Medical Center with one of the newest treatments available: platelet rich plasma (PRP).

Platelet-rich plasma, or PRP, is derived from blood that is drawn from an equine patient and run through a centrifuge, which separates a solution's less dense components from its heavier ones. This process distills a portion of the blood to a platelet concentration level that is five times richer than regular blood. At the same time, it helps to remove both red and white blood cells from the platelet rich part of the plasma.

Plasma containing this concentrated level of platelets provides an abundance of growth factors, which are the proteins in the body that stimulate cells in the tendon or ligament to start the healing process. When PRP is injected into damaged tendon or ligament, cells in the tissue—along with new cells circulating in the blood—are stimulated to bring new cells to the injured site. These healing cells work to increase the formation of new blood vessels and connective tissue, which encourages natural repair of the injury.

**Not only can a treatment of PRP help facilitate the healing process, it may—in some cases—provide an alternative to surgery.**

Because the patient's own blood is used to make the specialized plasma—this is known as an autologous process—there is no risk of the treatment being rejected, as it might be if the blood had been provided by a donor. Autologous processes are used at the Equine Medical Center for other equine therapeutic treatments, including stem cell treatments.

"Given that tendon and ligaments in horses are often subject to injury because they become worn down with use, we're primarily utilizing PRP treatments in these areas," explained Dr. Jennifer Barrett, assistant professor of surgery at the Equine Medical Center.

"Ligaments, in particular, can degenerate over time, and in some cases, the normal healing and remodeling process does not kick in to an adequate level. We use PRP to help initiate cell response, so that the normal healing process is stimulated and can proceed," she said. "As such, a PRP treatment can be particularly helpful in cases where the healing process has stalled. This treatment helps assure that the horse's injury is completely healed and that the risk of re-injury is lessened."

Not only can a treatment of PRP help facilitate the healing process, it may—in some cases—provide an alternative to surgery. "A real advantage to the PRP treatment," Barrett said, "is that it is less invasive than surgery. PRP is a powerful tool in our arsenal of therapies; we can use it as a stand-alone treatment or in conjunction with other services we have available at the EMC, including stem cell treatments and, of course, surgery."

Barrett cautions that a PRP treatment needs to be used with careful recuperation and rehabilitation, and rest is still an important part of the therapy. "The patient still needs time off to rest," Barrett said. "But PRP offers a cutting-edge therapy that helps us restore horses back to full health. And that's always our ultimate goal," she concluded.



Welcoming a healthy foal can be a real challenge when the mare or the foal has health problems. Fortunately, the Marion duPont Scott Equine Medical Center is equipped to provide the needed care in these critical situations.

## Care for High-Risk Mares and Health-Challenged Foals Available at the Equine Medical Center

Everyone likes to see a healthy baby enter the world. But in the equine world, welcoming a healthy foal can be a real challenge when the mare or the foal has health problems. Fortunately, at Virginia Tech's Marion duPont Scott Equine Medical Center, expert faculty and staff have enormous experience in helping achieve a good birthing outcome as well as an improved start in life for the foal.

"Our faculty who specialize in internal medicine typically care for 75-85 critically ill neonatal foals per year," said Dr. Martin Furr, professor of medicine and Adelaide C. Riggs Chair in Equine Medicine at the center. "Their extensive clinical skills come not only from many years of hands-on experience in equine neonatology, but also from their years of teaching specific techniques to other veterinarians at continuing education events. I think the experience developed by the EMC faculty over the years will be invaluable for the high-risk mares and sick foals that will be treated here this season."

The pregnant mare can suffer from a number of possible health issues and complications that can affect her foal. These include uterine or blood infections, problems with the placenta or umbilical cord, and special problems associated with carrying twins.

Foals can get off to a particularly rough start if they are born premature, if they have neonatal sepsis (an infection), hypoxic ischemic encephalopathy (brain damage resulting from a lack of oxygen—also known as "dummy foal"), heart problems, or diarrhea. The first 30 days of life for a foal can be especially fraught with potential health problems because, during this time, they have a heightened susceptibility to bacteria and other dangers commonly found in their everyday surroundings.

Right now—and every year between January and June—mares and foals with health problems are brought to the Equine Medical Center where the hospital's clinical faculty provide a myriad of treatments that help return them to full health. And, whether it's the mare or the foal—or both—suffering from a health issue, they normally come to the EMC together. Mares and foals are typically

Please see **High-Risk:** page 32

## Alumni News



Lynn Young



Outgoing members of the Alumni Society Board of Directors Drs. Bill Tyrrell ('92) (above) and Steve Escobar ('90) (left) are presented appreciation plaques by Dr. Sara Salmon ('98), president of the alumni board.

The VMRCVM Alumni Society Board of Directors recently held a meeting in conjunction with the Virginia Veterinary Medical Association Conference at Hotel Roanoke.

President Sara Salmon ('98) presented outgoing board members Drs. Bill Tyrrell ('92) and Steve Escobar ('90) with an appreciation plaque (pictures above). Dr. Margaret Jordan White ('97) is also leaving the board but was not present. New board members include Dr. Scott Pleasant ('84), Dr. Matt Nicholson ('99) and Dr. Wynne DiGrassie ('96). Board members decided to hold the Morven Park Steeplechase Races in odd years and rotate the D.C. Zoo and Baltimore Aquarium alumni events in even years.

This is a special year for the VMRCVM as the first graduating Class of '84 will celebrate their 25th Anniversary Reunion! We encourage all alumni who have five, 10, 15, 20 and 25 year reunions to attend their Homecoming. Dates for College homecomings are listed in sidebar. VMRCVM alumni are invited to all featured events. Please look for an e-mail in the next month to register for events listed.

Please visit <http://www.vetmed.vt.edu/engagement/alumni/index.asp> for up-to-date VMRCVM Alumni Society events and pictures. Also, please send Lynn Young at [youngl@vt.edu](mailto:youngl@vt.edu) your e-mail address to ensure that you receive news from the college.

The VMRCVM is now on Facebook, the world's largest online social network and a great tool to find old friends and stay connected with colleagues. The VMRCVM Alumni Society invites all alumni to join us on Facebook where you will find photos, news, and event information. Please click on the Alumni Society website to access Facebook.

### Upcoming Activities

- July 13** American Veterinary Medical Association Alumni Reception - Seattle
- August 7-8** VMRCVM Class of '89 Homecoming - Blacksburg
- Sept. 11- 12** VMRCVM Classes of '84, '94, '99, '04 Homecoming - Blacksburg (On Friday, various activities are planned such as a golf outing at the Pete Dye River Course, tours of the college as well as class dinners. On Saturday, plan to attend the Virginia Tech vs. Marshall football game, hike the Cascades, tube down the New River and/or take a campus/college tour.)
- October 10** Dean's reception at the Morven Park Steeplechase Races - Leesburg
- October 16** VVMA Mentor Workshop/Fall Awards Ceremony/Parents' Weekend/Oktoberfest-Blacksburg (Please contact Mountain Lake as rooms are blocked for Friday evening.)
- November 12** VMRCVM pre-game tailgate - Virginia Tech vs. Maryland football game - College Park
- December 7** American Association of Equine Practitioners Alumni Reception - Las Vegas



## Massie ('95) Realizes Dream of Building Practice Near Boyhood Home



Dr. Tom Massie ('95), president-elect of the WVMA, has built Rose Hill Veterinary Practice – a sprawling mixed-practice located on several acres carved out of a Rappahannock County Christmas tree farm. The Texas Longhorn pictured above was at Massie's practice for reproductive work.

**D**r. Tom Massie ('95) used to ponder his future while studying at Rappahannock High School 25 years ago.

Just across the highway and situated on some of the prettiest countryside in the Virginia Piedmont is the future he created: Rose Hill Veterinary Practice.

The sprawling mixed-practice located on several acres carved out of a Rappahannock County Christmas tree farm employs seven veterinarians and contains fully equipped, independent hospital facilities for both small and large animals.

"My primary focus is on Total Quality Management for all clients," said Massie, who begins his term as president of the Virginia Veterinary Medical Association (VVMA) in early 2009. "This dedication to communication and education has created a culture of incredibly bright and conscientious clients."

Massie's commitment to quality and education is visible in every sector of the complex.

Clients visiting both the small animal and the large animal practice are greeted with wall-size colorful murals. Highly trained administrative and technical staff—including one of the few licensed veterinary technicians certified in large animal care—help provide state-of-the art care.

"I wanted to have a place in an area that had never had a veterinarian," said Massie, a place where clients who are "large, small or indifferent, wealthy, poor or indifferent, could get care for whatever they showed up with, and not just rudimentary, bare bones care, top-flight care."

Please see **Massie**: page 32

**Check out these and other "Alumni Voices" profiles by visiting <http://www.vetmed.vt.edu/engagement/alumni/index.asp>**



Suess

*Dr. Rich Suess ('89) is on the leading edge of a powerful trend in veterinary medicine. Along with his partner (Roy Barnes ('00)), he is operating Virginia Veterinary Surgical Associates in Richmond, a private veterinary referral center. Suess' pathway to board certification and specialty practice began shortly after his graduation from the VMRCVM.*



Runde

*Spend a little time with Dr. Chris Runde ('85) and that old Army marketing slogan "Be all that you can be" quickly comes to mind. From co-owning Tidewater Veterinary Hospital in historic St. Mary's County, Md. to operating his family's 50-acre Briarpatch Farm in Mechanicsville to serving as president of the Maryland State Board of Veterinary Medical Examiners, Runde is involved in a variety of areas of the profession and seems determined to never practice veterinary medicine the same way twice.*



Thompson

*Dr. Sharon Thompson ('87) has had an incredibly productive career in veterinary public practice. She is currently the director of the Center of Agriculture and Food Security and Preparedness at the University of Tennessee. The center just landed two of the 11 grants awarded by the Department of Homeland Security's Federal Emergency Management Agency through their FY 2008 Competitive Training Grants Program.*



## **Development Report from the Blacksburg Campus – Frank Pearsall ('84)**

Dr. Frank Pearsall

As you have read earlier in this issue, our campaign to build three new buildings is well underway. This will provide exciting ways for the college to reach a new level of integration into the biomedical agenda of the university. The expansion of our hospital to include focus areas in oncology and regenerative medicine will advance opportunities for breakthroughs from researchers across the campus to be made available to our clients and their animals in clinical trials. Increasing our basic research facilities will further enhance our research contributions to the university and the profession. And expanding our class size by up to 40 new students will enable us to address the shortage of veterinarians just now beginning to be felt across the profession.

**The area where we are still short is the building fund. We are focusing all attention there so that momentum can be maintained for completion of the entire complex.**

Our overall campaign numbers are very promising. With the partnership between the four Virginia Tech colleges for the Translational Research Center, reaching the needed private funding goal for it can be accomplished more quickly. The non-private portion of funding for the Translational Research Center as a whole is still a fluid picture, but it is looking very good. Our private funding goals for faculty support, student support, library support, program support, and the Dean's Fund for Excellence are almost completely met. The area where we are still short is the building fund. We are focusing all attention there so that momentum can be maintained for completion of the entire complex.

In addition to the Translational Research Center, a featured area for immediate support of the building fund is Community Practice. Our Community Practice service has an immediate pay off for our students, the veterinarians that hire them, and pet owners. For this we do not need to build space, just renovate space. This senior year rotation is operated as a hospital within a hospital to give our students a clinical experience more similar to private practice. They see routine medicine and surgery cases in a more realistic practice flow. We started this service last year using space wherever available. The response of the community has been great and the service has taken off. Now our goal is to rearrange and renovate our existing space to give the service the consolidated space it needs to be efficient. It will have its own waiting area, exam rooms, surgery and recovery suites, and rounds room. If you are interested in supporting the Community Practice service, let me know. Naming opportunities are available for this new space and would be a perfect opportunity to showcase your practice or make a lasting tribute.

**but I think a lot of people remain a little bit confused by the concept. It might be helpful if we spell that out a little bit more clearly...**

FP: This will be our signature building. The ground floor will house an expansion of our Veterinary Teaching Hospital, with a focus on oncology and regenerative medicine. The upper floors will house labs that relate to the clinical experience occurring on the first floor. This will set a new benchmark for bringing the power of research to patients - in this case animal - but with direct implications to humans. To compliment this, the Infectious Disease Research Facility, to start next spring, will increase basic research capacity, and the Instructional Building, to start in fall 2010, will allow us to increase our class size to meet the increasing demand for veterinarians across the health care fabric of the nation.



The possible development of a major clinical oncology program will provide a wonderful opportunity to harness the work of scientists in many departments and colleges. The disease we see in our animal patients is a model for the disease we see in humans. Similarly regenerative medicine, where new organs can be grown from stem cells derived from circulating blood without the need for embryonic tissue, is a therapeutic approach which holds as much potential as any being investigated today. It is truly a watershed breakthrough. As we develop expertise in animals, there will be application to humans. Our partnerships with Wake Forest Medical Center, the Virginia Tech-Carilion Medical School, and the Virginia College of Osteopathic Medicine make all of this possible and offers opportunities few universities in the world can match.

DEVELOPMENT

## “The Silver Lining”

Dean Schurig has said, “you don’t go to the Mayo Clinic because they have great doctors. There are great doctors a lot of places. You go to the Mayo Clinic because they have great doctors and the latest research to apply to treatments.” That is the model that we desire to emulate.



**AD: No doubt our plans are very exciting. But I’ve read some disturbing reports about how this recession is affecting philanthropy across the United States. We’re a special place, we’re doing wonderful things, and no question our friends believe in what we are doing. But what about this economy?**

FP: The economy is obviously not at its peak for fund raising at the moment, but this is a great motivator to find creative solutions. So it is not altogether a bad thing. Coupling that pressure for change with a new and very energetic administrative team that is eager to move forward provides an opportunity for major changes. We are already beginning to see that happen.

**AD: Many of our readers would probably be surprised to learn that most university building proposals these days are structured on a formula that includes about half of the money coming from private support. I think that’s something our friends need to know more about.**

FP: I couldn’t agree with you more. Although we have found ways to use existing income streams, anticipated state support, and borrowing to begin the Infectious Disease Research Facility and the Instructional Building, we cannot begin serious planning, much less construction, of the Translational Research Center until we have significant cash in hand. So personal gifts are needed now. Naming opportunities are

available in both the new buildings and the existing. Five-year pledges are recommended as they are obviously easier for donors. Another strategy we find people like is going in together to create joint naming opportunities.

But that is not the only way people can help. There is no shortage of money in the economy for animals. There is a shortage, however, of understanding of the needs of veterinary medicine and how those needs impact animal owners. As a still young college, there is also a shortage of animal lovers with whom we have a relationship. This is an area in which our friends can help us without costing anything; introducing us to other animal lovers. Friend-raising, as you well know, is the initial and critical part of fund raising.

**AD: Helping more and more people learn more about the important work we are doing for companion animals, for agriculture and food and fiber production, and for national security is certainly mission critical. Our college’s communication program is getting the word out, and our website has a lot of great information on it, including some of the naming opportunities. But we’ve really got to ask our friends to help us make new friends, don’t we?**



FP: Absolutely. No matter what their relationship to the college: practitioner, client, or friend, they are bound to know people who care about animals and want to make a difference. If they know anyone who would like to become a part of our success, then you and I need an opportunity to meet with them and tell them our story. Some will think it is just a nice story and decline further involvement. But some will be excited for the opportunity to help make our vision a reality.

**AD: Why don’t we summarize some of the college’s main needs...**

FP: In a word, space! Whether you look at our hospital services, our teaching facilities, or our research program, in every case the limiting factor is space. I was in the first class and the facilities we have today are still essentially those that were planned then. Here is how more space will help us excel in each area.

The nation is facing a massive shortage of veterinarians, but most are unaware of it. The colleges have to be the ones looking down the road and planning. We have done that and have an Instructional Building being designed for ground breaking next fall so that we can increase class size by up to 40 percent and the faculty to teach them.



Another pressing need is for basic research space. The Infectious Disease Research Facility will get underway in less than a year. It is important because our expertise in infectious disease is probably our biggest opportunity to contribute to the medical research agenda of the university at a time when that expertise is desperately needed.

The transformative need is the opportunity to harness clinical research for the advancement of veterinary and human medicine, helping to put Virginia Tech on the biomedical research map. Our third building, the Translational Research Center is an important part of that initiative. It has already created a paradigm shift in the way this college is seen on campus. Most importantly, it will change the standard of care for animals to the benefit of us all.

## Virginia Law Enforcement K-9 Memorial to be Dedicated



Blacksburg artist Larry Bechtel works on the Virginia Law Enforcement K-9 Memorial which will be dedicated this fall on the VMRCVM campus.

The Virginia Law Enforcement K-9 Memorial will be dedicated on the grounds of the Virginia-Maryland Regional College of Veterinary Medicine on Friday, October 16 at 1 p.m.

The memorial consists of a life-size bronze German Shepherd police dog sculpted by Blacksburg artist Larry Bechtel, creator of the noted "Officer Down" statue installed in front of the Roanoke City Police Department, the Addison Caldwell statue at Virginia Tech and several other major installations.

Located adjacent to the main entrance of the college's Veterinary Teaching Hospital, it will be installed upon a granite base that will denote the names of Virginia law enforcement dogs who lost their lives in the line of duty.

An estimated 100 K-9 officers and their dogs from departments located in cities and counties across the state, as well as hundreds of others, are expected to attend the event.

The memorial seeks to honor the lives of law enforcement dogs killed in the line of duty, according to John Hoover, a Franklin County Sheriff's Department K-9 officer, certified North American Police Work Dog Association "Master Trainer" and official with the Virginia Police Work Dog Association.

"This is something we've dreamed about for a long time," said Hoover, who has been working with a committee of college officials, members of the United States Police Canine Association (USPCA), and other officers and officials for about five years on the project. "These dogs are heroes, and what they do should be recognized by everyone they help protect."

A five-year private fund-raising campaign that sought to raise the money to build the memorial was capped off last spring when an anonymous donor stepped forward with a \$45,000 gift.

***"This is something we've dreamed about for a long time. These dogs are heroes, and what they do should be recognized by everyone they help protect."***

***- K-9 Officer John Hoover***

"Our college is honored to partner with the law enforcement community on this project," said VMRCVM Dean Gerhardt Schurig. "We're often so involved with animals as pets that we forget about the very critical role that working and service animals play in society every day. Veterinarians have an important responsibility to keep these animals healthy and vital."

Details about the ceremony are still being finalized, but speakers are expected to include Schurig, Virginia Tech President Charles W. Steger, a special guest speaker from the national law enforcement community and others.



Photos courtesy of Dr. Ken Sullins and Bob Cohenscius

## Dedication Ceremony of the Paul R. Fout Barn

**M**ore than 150 dignitaries and guests turned out for the dedication ceremony of the Paul R. Fout Barn on the campus of Virginia Tech's Marion duPont Scott Equine Medical Center.

Fout, a renowned horse breeder and trainer who passed away in 2005, left a legacy of enduring contributions to the horse industry and many special friendships.

Peggy Steinman, a longtime friend of Fout's and co-chair of the Equine Medical Center Council, was the impetus behind the construction of the barn.

"Mr. Fout was a giant in the local horse community and a strong advocate for the Marion duPont Scott Equine Medical Center," Steinman said. "His support and guidance in the equine industry was invaluable, as was the assistance he provided to the center. Naming this barn in his memory will permanently honor him and highlight his importance to the center. This is a fitting tribute."

During the ceremony Shelley Duke, chair of the EMC Council, profiled the center's achievements and heralded the contributions that Fout made to the EMC and the industry. Duke also told the guests that the Equine Medical Center was in the midst of a "Silver Anniversary" celebration.

Guests also heard from the late Mr. Fout's son Doug, founding EMC Director Dr. G. Frederick Fregin, who now resides in Texas, Dr. Betsy Flanagan, Virginia Tech's vice president of development and university relations, and Dr. Nat White, Jean Ellen Shehan Professor and director of the Equine Medical Center.

A 13-minute video profiling Fout's life and equine pursuits was presented prior to a ribbon-cutting ceremony and the unveiling of a brick pedestal and commemorative bronze plaque. A reception capped off the festivities.

During his 60-year career, Fout found much success in his equine pursuits. He served as general manager and former chairman of the Middleburg Spring Races, designed Glenwood Park's Alfred Hunt course, published equine-related magazines, and with a group of other buyers in the 1970s, purchased the Middleburg Training Center, which leases stalls to racehorse trainers.



Shelley Duke, chair of the EMC Council, addresses the audience during the dedication of the Paul R. Fout Barn at the EMC. With her are Dr. Betsy Flanagan (center), Virginia Tech's vice president of development and university relations, and Dr. Nat White, director of the EMC.

But his greatest legacy is most likely related to his achievements in training racehorses. His horses won over 200 races and more than \$4 million in prizes. One of his biggest success stories was Colstar, a thoroughbred he trained for Steinman. Colstar won 11 out of 18 races and more than \$1 million in prize money, including the Flower Bowl Invitational Handicap at Belmont Park in 2000.

*During his 60-year career, Fout found much success in his equine pursuits. He served as general manager and former chairman of the Middleburg Spring Races, designed Glenwood Park's Alfred Hunt course, published equine-related magazines, and with a group of other buyers in the 1970s, purchased the Middleburg Training Center, which leases stalls to racehorse trainers.*

Fout approved the design of the new barn before his death, acknowledging the benefit of adding space to move horses in and out of the hospital quickly, thereby freeing up space for critical care cases and other emergent needs within the main hospital.

The new barn is an open-air facility and includes 12 horse stalls, a nurses' station, and three work areas. It will primarily be utilized for elective cases as well as a place to house and care for outpatients.

## In Memorium



William Edward Lavery



Former Virginia Tech President William Lavery (left), former Virginia Governor John Dalton (center), and founding Dean Richard B. Talbot, guide the ceremonial plow during the VMRCVM's groundbreaking on April 16, 1979.

### Former President William Lavery, VMRCVM Founder, Passes Away

**T**he VMRCVM community mourns the passing of William Edward Lavery, the 12th president of Virginia Tech. Lavery died at 78 on Feb. 16.

Among many accomplishments, Lavery led the movement to create the Virginia-Maryland Regional College of Veterinary Medicine. He worked closely with founding Dean Richard B. Talbot, former Virginia Governor John Dalton, Virginia political leaders and others during the 1970's and early 1980's to create and finance the construction of the college.

Dr. Peter Eyre, the second dean of the VMRCVM, recalled Lavery as a passionate advocate for the creation of the college and said that Lavery's commitment was a major reason in his decision to accept the position.

"I recall many stories he told me about the animated interactions he had with Governor Dalton and members of the General Assembly - as well as with the university, agricultural and veterinary communities," Eyre wrote in a letter of condolence to Peggy Lavery. "He was tireless in his advocacy."

"It is no exaggeration to say that without his unwavering leadership the college would not have materialized," said Eyre.

Lavery also provided historic leadership for a major land-grant university during a period of dramatic growth and development. "Bill guided Virginia Tech as it transitioned and matured as a research university. I had the pleasure of serving as professor and dean during his time of leadership, which I recall as dynamic and exciting," said Virginia Tech President Charles W. Steger.

Lavery brought stability to the university following the years of explosive growth under President T. Marshall Hahn Jr. But, he ushered in rapid growth in other areas, complementing Hahn's successes. He emphasized research, and expenditures in support of research totaled more than \$70.2 million by fiscal year 1987, moving the university into the top 50 research institutions in the nation.

He enhanced research opportunities by initiating the Corporate Research Center (CRC) and Virginia Tech Intellectual Properties

(VTIP). During his 12-year term, the first two buildings were begun at the center and two more were planned.

Lavery hired the university's first vice president for development, Charles Forbes, who led the \$8 million Campaign for the Veterinary College in the college's founding years. Assets of the Virginia Tech Foundation grew from \$6.2 million to \$140.1 million during his term.

"Bill was a fine person ... very caring and compassionate. He was the consummate 'people person' interested in others," said Minnis Ridenour, who served as executive vice president under Lavery.

Lavery joined the faculty at Virginia Tech in 1966 as director of administration for the Extension division before being tapped as vice president for finance in 1968. In 1973, he became executive vice president, and he was appointed president in 1974, effective Jan. 1, 1975.

Born in Geneseo, N.Y., Lavery earned his bachelor's degree from Michigan State University, his master's in public administration from George Washington University, and his doctorate in extension administration from the University of Wisconsin.

He began his professional career as a teacher and coach at Clarence Central High School in Clarence, N.Y., before serving two years in the Army. He began working for the federal Extension Service's Division of Management Operations in 1956, where he remained until 1966.

Lavery married the former Peggy Johnson of Pawnee City, Neb., in 1956, and the couple had four children.

After stepping down Dec. 31, 1987, he continued to serve the university, first as honorary chancellor, then as the William B. Preston Professor of International Affairs. After his retirement on Aug. 1, 1991, he was named president emeritus.

The university recognized his contributions by presenting him with the Ruffner Medal in 1993 and by dedicating the William E. Lavery Animal Health Research Center in his honor in 1995, the same year he was named an honorary alumnus of Virginia Tech.

## **Meng:** continued from page 3

facilities and imaging equipment, and in new faculty hires in an effort to achieve this goal, according to Dr. Dennis Dean, Virginia Tech's Stroobants Professor of Biotechnology and director of the institute.

"Dr. Meng has participated in and has proven to be extremely valuable in both of these endeavors," said Dean. "He has served as a magnet that led to hiring several outstanding new faculty members and he also provided advice necessary to acquire and implement imaging and cell sorting facilities that will be housed in the new Integrated Life Science Building."

In recognition of his achievement, Meng, received a plaque and \$10,000 in funds to support research activities.

Meng's research focus is on emerging and reemerging viral diseases that impact public health. He is widely considered one of the world's leading scientists in hepatitis E virus, type 2 porcine circovirus, and porcine reproductive and respiratory syndrome virus.

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, Ames, Iowa.

Prior to joining the college, 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).

## **Kaur:** continued from page 4

student in architecture, all in the College of Architecture and Urban Studies.

Established in 1996 by Office of the Provost, the XCaliber Award (short-hand for exceptional, high caliber work) is presented annually by the Virginia Tech Center for Innovation in Learning to recognize individual faculty members or teams of faculty and staff who integrate technology in teaching and learning. The award celebrates innovative, student-centered approaches to learning activities. Awardees receive a cash award and are called upon to demonstrate their work.

The selection committee noted that authentic learning contexts are a hallmark of student-centered teaching, and this project provided an excellent example of this enacted.

During the design phase, students within the School of Architecture and Design collaboratively devised and fabricated the P.L.U.G. prototype through the use of computer-aided manufacturing based upon real-life specifications provided by faculty and students in the Virginia-Maryland Regional College of Veterinary Medicine. This design incorporates highly technical data collection and transmission equipment that is now being deployed in the field by faculty and students performing chimpanzee research in remote areas of Tanzania.

## **Vaccine:** continued from page 13

A universal backbone that could immunize many different animal species, like the one Perez has proposed, could be modified quickly to create a vaccine for a specific virus.

"A vaccine from this backbone could be deployed much faster than one specifically tailored to humans, because the vaccine would be already available for other animals. All we would have to do is modify it, grow it, and use it in humans. We would not have to remake it from scratch," he said.

Perez and his team have already shown that a vaccine consisting of a weakened form of the H9N2 virus is capable of protecting chickens, their eggs and mice against two other lethal forms of the flu virus, including the highly lethal H5N1 avian flu. This vaccine

could be administered to immunize wild and domestic birds against avian flu to minimize spread to humans.

Next they will test the vaccine in other mammals like pigs and ferrets, good models for the human immune system.

While it may be several years before scientists like Perez create an effective vaccine to protect humans against lethal H5N1 or other lethal avian bird flu strains, the universal influenza backbone will make the eventual creation of that vaccine much easier.

## **Radiology:** continued from page 20

the burden of the radiologists... once they tell us what part of the anatomy they need to see, we can strategize to achieve the image."

It's a skill that is absolutely essential to the work of the faculty they support.

"I could not do my job without our radiologic technologists," said Dr. Jeri Jones, a professor of radiology in the Department of Small Animal Clinical Sciences (DSACS). "They take care of all the technical aspects of diagnostic imaging so I can focus on image interpretation."

The college's technologists are cross-trained on the seven procedures offered by the hospital, including Magnetic Resonance Imaging (MRI), ultrasounds and nuclear medicine. The center offers its services to both large and small animals.

Having a part in patient care is what makes the job so rewarding, according to technologist Valerie Ishman.

"Knowing I am helping the patients brings me real joy," said Ishman, who also recently became nationally certified in CT scanning.

In addition to their duties performing scans and assisting the college's radiologists, the college's radiologic technologists are also responsible for teaching fourth-year veterinary students proper radiology techniques. It's a responsibility they take very seriously.

"We have three weeks to make sure they are competent in imaging," explains Ayers. "They must be able to properly position a patient if they are going to be able to properly interpret an image."

Ayers has even been known to do after-hours calls to local alumni practices to offer imaging assistance.

"Dedicated defines our diagnostic imaging staff," said Dr. Bill Pierson, director of the Veterinary Teaching Hospital. "Their skill and commitment to excellence helps us provide the quality of education and service that our students, referring veterinarians, and clients have come to value."

## **Front desk:** continued from page 20

also responsible for preparing client records for the next day and uploading information and maintaining 12 databases.

On a monthly basis, they process 250 to 300 farm visit invoices and six reports per month for the hospital's large animal ambulatory services, and transcribe 200 to 400 radiology reports.

"Our front desk staff is such an important part of ensuring our clients and patients have a good experience here at the VTH," said Pierson. "Their hard work and ability to multi-task benefits us all."

### **Pharmacy:** continued from page 21

veterinarians and students who have been taught to carefully observe an animal and document their findings to “speak” for the patient.

In addition, while human and veterinary pharmacists receive the same core training, veterinary pharmacists must learn to calibrate medications for a variety of species in addition to the human doses they are familiar with dispensing.

However, she is quick to point out the job comes with its rewards: being involved in the clinical practice of veterinary medicine, teaching students about the correct use of pharmaceuticals, and assisting researchers in planning new and exciting projects.

“Our central location in the hospital is not an accident but a necessity, since our services are essential for many parts of the organization,” said Perry.

### **High Risk:** continued from page 23

kept in the same stall; this practice is both a convenience for the owner and a benefit to the patients.

“The challenge of working with these foals is that they often have diseases that involve several organs,” said Furr. “When they arrive at the hospital, they are first examined by our internal medicine team, all of whom specialize in the physiologic interaction of the horse’s internal systems. Throughout the foal’s treatment, these board certified experts implement and oversee the care plan, along with help from residents, interns, and nurses,” he said.

Additional help for foals comes from the attention they get from a caring group of volunteers who participate in the “Foal Watch” program, which has been in place at the EMC for 14 years. This program matches volunteers with cases requiring 24-hour attention; participants in the program sit with sick patients for assigned periods of time in order to help support the foals and keep them from becoming entangled in the many intravenous lines and tubes which may be in use. Volunteers also act as “nurses’ aides” by being an extra set of eyes, ears, and helping hands to the veterinary technicians who administer the treatments.

This round-the-clock supervision from doctors, nurses, and volunteers provides the extra level of monitoring that the foals need to make sure that—given their weakened state—they avoid other complications. All of the caregivers carefully monitor the foals to see that they do not develop sores, eye infections, or imbalances in their blood chemistry.

The task of bringing a sick foal back to health can be extremely challenging and demanding, but everyone involved in the process finds much fulfillment in the endeavor. Clinicians at the Equine Medical Center say that they successfully discharge about 80 percent of neonates suffering serious illnesses from the hospital.

“When a foal is finally able to nurse, or when it takes its first steps—well, that makes it all worthwhile,” said Furr. “When we see foals recover from being so sick and vulnerable, it’s very gratifying. While not every patient recovers, we take great joy in seeing the ones who do go home happy and healthy.”

### **Massie:** continued from page 25

His own caseload specializes in bovine and equine reproduction, bovine and equine embryo transfer, ultrasound, neonatology and the management of young, developing horses. He has a special interest in angular limb and hoof deformities in young horses.

On the second floor is a classroom facility that can house fifty or sixty guests for continuing education meetings and an apartment unit for fourth-year veterinary students who are training on site.

Massie is committed to fostering the next generation of veterinarians. He and his colleagues work with local 4-H groups to build awareness of the profession, and he has been very engaged with the VMRCVM’s mentor/mentee program.

“I certainly feel a sense of privilege to get to work with them,” said Massie. “I feel like they bring me an awful lot. I also feel like our practice is a model that maybe doesn’t exist everywhere.”

Massie’s decision to bring modern veterinary medicine to his area of Rappahannock County can be traced to his childhood years growing up on the family beef cattle farm. There was no local veterinarian and he and his father provided a lot of care for their farm animals.

His interests in veterinary medicine became more defined after enrolling at Virginia Tech in the late 1980’s and discovering that “a lot of the answers I had to a lot of the questions I had for various professors were held within professors at the veterinary school.” Massie enrolled in the VMRCVM and graduated as class valedictorian in 1995.

Massie then spent the next three years gaining experience in large animal ambulatory and small animal practice while affiliated with Loudoun Veterinary Service in Purcellville, Va.

In August 1998, he purchased the home he grew up in and launched his own business, a solo ambulatory practice that he operated out of his home.

“That was a very educational year,” said Massie, who had to quickly assemble business and practice management skills. “I learned a lot of that stuff the hard way.”

But his business steadily grew. He added his first associate in spring 2000 and in 2001 he purchased the land for Rose Hill. He then began constructing “piece by piece, inch by inch, row by row” what has become a major veterinary hospital.

Massie says he feels honored at the prospects of beginning service as president of the VVMA and has enormous respect for those who have gone before him. “To be associated with folks who are that impassioned about what they do and get the privilege to work with them is a great honor,” he said.

He believes the veterinary profession needs to build public awareness about its scope and value and he understands the need to proactively manage legislative and regulatory changes that affect the profession.

He hopes to increase equine and food animal practitioner involvement with the VVMA this year.

“The bottom line is we (VVMA) represent all veterinarians in Virginia,” he said.

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## Open House 2009



The Virginia-Maryland Regional College of Veterinary Medicine's annual "Open House" was held on Saturday, April 4. The day-long student produced event attracted almost a thousand guests from throughout the community and the states of Virginia and Maryland. Visitors had the opportunity to take guided tours of the 225,000 square foot complex, glimpse the inside of a dog's stomach, witness equine acupuncture, and learn about the modern veterinary medical profession, among other things. In addition, the annual Omega Tau Sigma Service Dog of the Year Award was also presented and the St. Francis of Assisi Service Dog Foundation presented a demonstration on how dogs are trained to help those with physical challenges.