



VIRGINIA MARYLAND

Virginia-Maryland Regional College of Veterinary Medicine

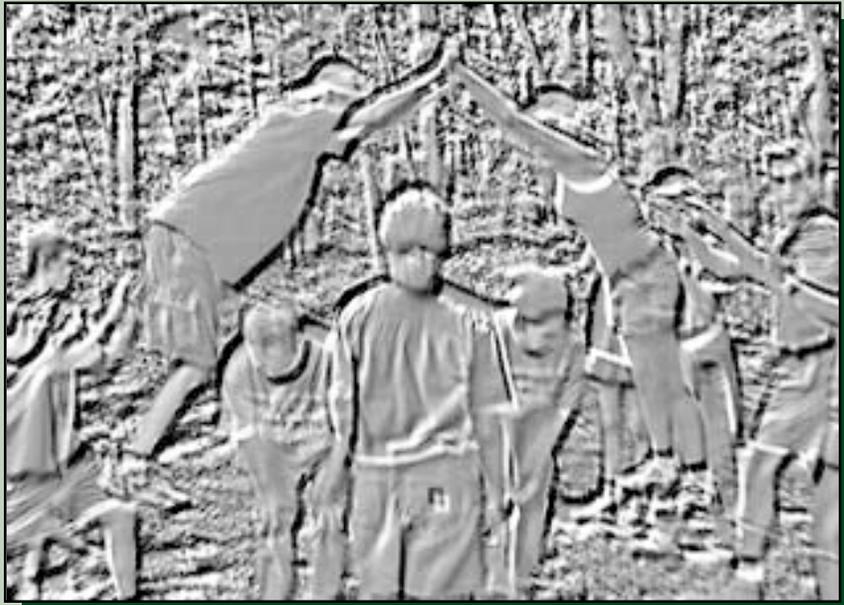
Summer-Fall 2000

Tech President Steger Sets Research Agenda During Keynote

Proclaiming ideas “the raw material of the information economy,” President Steger challenged university faculty assembled for the Virginia-Maryland Regional College of Veterinary Medicine’s annual research conference to “turn up the Bunson burners” as Virginia Tech begins to focus on “vaulting” itself into a top 30 research institution during the decade ahead.

Steger delivered his remarks as the keynote speaker of the college’s 12th Annual Research Symposium, a three-day event that featured a presentation on Iraq’s biological warfare program, a day-long symposium on comparative gerontology

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In this digitally enhanced photograph, members of the College’s Class of 2004 participate in leadership and team-building exercises at an outdoor adventure center in nearby Giles County. The entering DVM students were the first to participate in the college’s newly introduced week-long orientation process. The enhanced orientation process for new veterinary students is one of the strategic responses the college is taking to challenges identified in the KPMG MegaStudy of the veterinary profession.

Veterinary College, Medical College of Virginia, State Associations to Present Second in Three-Year Symposium Series

Year 2000 Focus is on Zoonotic Diseases

The many virtues of the “human-animal bond” are readily apparent. But close relationships between people and companion animals can present some hazards too, chiefly in the form of parasitic and infectious

diseases that can be spread by animals to people.

These diseases, termed zoonotic, and the risks they present, will be explored by a series of experts during a symposium entitled “Educating Physicians and Veterinarians on the Risks of Animal Interactions to Human Health and Well-being” hosted by the Virginia-Maryland Regional College of Veterinary Medicine on Friday, September 22. The event will be held at the Donaldson Brown Hotel and Conference Center on the campus of Virginia Tech in Blacksburg, Virginia.

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Dr. Jeff R. Wilcke

Wilcke named to First Endowed Professorship on VMRCVM’s Blacksburg Campus

The first endowed professorship ever established on the Virginia-Maryland Regional College of Veterinary Medicine’s Blacksburg campus will support a professor who is exploring and defining the new field of veterinary medical informatics.

Dr. Jeff R. Wilcke, a professor in the Department of Biomedical Sciences and

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Dean's Desk

A BOLD AGENDA

Dean Peter Eyre

Newly inaugurated University President Charles Steger has set an ambitious goal for Virginia Tech over the next ten years. Becoming one of the nation's top 30 research universities will require enormous energy and dedication from every sector of this university community.

According to National Science Foundation data, Virginia Tech is currently 48th with annual research expenditures of about \$170 million. We will need to raise that by more than \$100 million in order to achieve the president's goal by the close of the decade. Yet knowing this university and its people as I do, I consider this goal achievable.

Dr. Steger's bold vision has led me to reflect upon our own stature as one of the nation's 27 colleges of veterinary medicine. While we certainly remain one of the newest, we are in the midst of our 20th year of full-scale operations. We have recruited an excellent faculty and staff, we have trained and graduated 17 classes, and we have funded and built a three-campus system operating on about 400,000 square feet of physical plant.

We are doing many things well, and by several measures, compare favorably with our peers. National data reveal that state support for the college is about average. Whereas external sponsored support for research is not as good as it should be, we are above average in the amount of private support we have achieved and rank seventh in terms of clinical revenues when you combine our teaching hospital enterprises in Blacksburg and Leesburg. Based on the whole spectrum of national data, we are ranked at the median of our peers. Yet this is not a time to rest on our laurels.

All of you reading these words will be aware of the way technology, economics and demographics will forever change higher education as we have known it. The production of new knowledge in all of its forms, from the engineering and computer sciences through the life and social sciences, will become an even more robust facet of university life in the years ahead. Scientific inquiry is moving quickly from solving problems to creating economic opportunity. It is a bridge between academia and the private sector, where it is transformed into products and services and progress.

Like the university, our college must now turn its attention toward research and economic development more vigorously than before. In the keynote address President Steger presented during our annual research symposium, he outlined shifting priorities in federal funding for the health sciences that may spell opportunities for us.

Other important initiatives and opportunities are also emerging here in Blacksburg. Virginia Tech's partnership in the Carilion Biomedical Institute and the promising new Bioinformatics Institute present many opportunities for collaboration, and these models may soon re-emerge in the form of other similar institutes for the environment, food and nutrition, and others... all of which can benefit from the comparative animal research which can be found within a college of veterinary medicine.

As an institution, our college is maturing well. And like the university, we have excellent momentum. Perhaps, as the university has committed itself to a new plane of excellence, so should we. It seems entirely reasonable to me that we can move ourselves into the "top ten" realm of North American veterinary colleges during this pivotal first decade of the 21st century. In the near future, I expect to make further comments about this goal for our college. In the meantime, I sincerely thank all of you, internal and external, who have contributed to the success of our first 20 years.

VIRGINIA MARYLAND NEWS BRIEFS



Congressman Rick Boucher (D-9th), left, listens to veterinary radiologist Dr. Jeri Jones (right) discuss the Alphin Radiology Center's computed tomography (CT) scanner while veterinary college Dean Peter Eyre looks on. Congressman Boucher visited the VMRCVM in early August.



Dr. Larry Freeman

Freeman Leads National Veterinary Anatomists' Group

Dr. Larry Freeman, associate professor, Department of Biomedical Sciences and Pathobiology, has been elected president of the American Association of Veterinary Anatomists.

Founded in 1949, the AAVA exists to advance veterinary anatomical science and includes several hundred members from the 31 North American veterinary colleges, and from organizations around the world.

Saker Leads Veterinary Camp at Science Museum of Western Virginia

Training the next generation of veterinarians is a passion Dr. Korinn Saker does not limit to her classrooms.

For the fifth year in a row, the veterinary nutritionist has led a week-long veterinary camp in conjunction with the Science Museum of Western Virginia's annual summer camp program for school-children.

Considered one of the most popular of the museum's summer science camps, the veterinary camp offers students an opportunity to experience veterinary medicine first-hand, right down to practicing "surgery" and first aid on animal mannequins Saker has built.

The 30 students enrolled also spend a day on the college's Blacksburg campus during the week-long camp, where they tour facilities and watch veterinarians conduct the clinical business of companion and large animal veterinary medicine.

College Working with Macromolecule Biomolecule Interfaces Group

Under the leadership of Dr. Craig Thatcher, head of the Department of Large Animal Clinical Sciences, the college is cooperating in an innovative new Macromolecule Biomolecule Interfaces research and education program at Virginia Tech.

The consortium seeks to promote research, development and technology transfer to industrial partners of new scientific information on how synthetic molecules interface with biomolecules. The discipline has significant implications for everything from food and medicine to commercial packaging.

Tech facilities cooperating in the MBI include the Departments of Biochemistry, Biological Systems Engineering, Chemical Engineering, Chemistry, Environmental Engineering, Food Science and Technology, Materials Science and Engineering and the VMRCVM.

Drug Information Lab Honored by ISI

The College's Drug Information Laboratory was recently recognized by the Institute for Scientific Information (ISI) for its on-line version of the FDA "Green Book." Published by the Food & Drug Administration's Center for Veterinary Medicine, the "Green book" contains detailed product and licensing information about all government approved animal drugs.

The digital publication will now be included in the ISI's on-line awareness database called Current Web Contents. Current Contents, a database that provides information in the fields of science, social science, technology and the arts, recently created Current Web Contents, which features a daily update of the database and an option to link to selected and evaluated Web sites.

Following passage of the Generic Animal Drug and Patent Term Restoration Act in 1988, the laboratory began publishing a print version of the FDA "Green Book" in 1989 and has published it annually ever since. The lab manages the Food & Drug Administration Center for Veterinary Medicine's "Approved Animal Drug Database" which is used to produce both versions of the "Green Book."

The reference guide includes information concerning animal drugs' trade and generic names, label indications, patent information, and other related facts.

ISI editors evaluated the Green Book Web site using criteria

such as authority, accuracy, currency, navigation and design, applicability and content, scope, audience level and quality.

"We work to produce a useful high-quality publication for our subscribers. Recognition of our site by ISI suggests we have accomplished that goal," said Dr. Jeff Wilcke, the Dorothy A. and Richard G. Metcalf Professor of Veterinary Medical Informatics.

Animal Welfare Expo Held

A "Spring 2000 Animal Welfare Expo" recently hosted by the college featured a day filled with educational events and open discussion forums concerning animal welfare issues.

Co-sponsored by the Virginia Partnership for Animal Welfare and Support (VAPAWS) and the Virginia Tech Student Animal Welfare Committee, the expo focused on developing regional, long-term solutions to difficult animal problems such as irresponsible reproduction.

Presentations on the human-animal bond, state and local ordinances regarding shelter policies, dogs in literature, achieving the animal welfare medical mission, animals in community disaster planning and others were featured.

The expo also included a variety of demonstrations by assistance dogs, Canine Good Citizens and Therapy Dog International tests, canine search and rescue and others.



Eight DVM students were enrolled in the year 2000 Summer Fellowship Program. Sponsored by the Office of Research and Graduate Studies, the program offers specialized experiences in leadership, science and public policy training through an extensive summer program. Pictured, from left to right, front row, Anne Van Auken, Jody Dickey, Lindsey Savage, Margaret Bowman. Back row, Jennifer Landolfi, Rachel Johnson, Cheryl Kay Gruver, Karen Nelson Wolf.



Dr. Christiane Massicotte

Massicotte Earns Graduate Research Honors

A VMRCVM graduate student claimed top honors in the agricultural and animal sciences category of the 16th Annual Research Symposium at Virginia Tech.

Dr. Christiane Massicotte of Repentigny, Quebec, Canada, a Ph.D. student in the Department of Biomedical Sciences and Pathobiology was honored for her presentation "Adenosine triphosphate (ATP) concentration in hen sciatic nerves affected with organophosphorus ester-induced delayed neuropathy (OPIDN)."

ATP supplies energy for many biochemical cellular processes and is critical for nerve fiber functions.

Massicotte evaluated concentrations of the molecule in hen peripheral nerves following exposure to an organophosphate that causes delayed degeneration of the nervous system.

Their results suggest that variations in sciatic nerve ATP concentrations are early events in the development of OPIDN.

The college's Laboratory for Neurotoxicity Studies is one of the nation's leading research centers for organophosphate toxicity.

Organized by the university's Graduate Student Assembly and judged by faculty members, the event was themed "Bridging Research Boundaries." There were 109 entries and \$3,650 in prizes were awarded.

Livestock Arena to Honor Alphins, Stuart

A livestock teaching facility to be built on the campus of Virginia Tech will be named the Alphin-Stuart Arena in honor of university benefactors Colonel and Mrs. Horace Alphin and the late Patricia Bonsall Stuart.

Both have provided substantial philanthropic

support for the VMRCVM.

The Alphins, residents of Clifton, Virginia, have been long-time contributors to Virginia Tech. Colonel Alphin is a 1934 Virginia Tech graduate in dairy science. The Alphins have provided over \$2 million in support to Virginia Tech. The VMRCVM's radiology center is named the Horace E. and Elizabeth F. Alphin Imaging Center in honor of their philanthropy.

Stuart, who died in 1996, left nearly \$2.7 million to be divided equally between the College of Agriculture and Life Sciences and the VMRCVM. Stuart, a life-long horse enthusiast who lived in Albemarle County, earmarked the gift to support equine programs in the two colleges.

The centerpiece of the \$3.6 facility is a 31,250 square-foot arena floor with seating for 800 people. The structure will also house classrooms, an office, a kitchen-concession area, and animal holding facilities.



Dr. Spencer Johnston

Johnston Honored by St. Francis Service Dog Group

A veterinary surgeon on faculty has been honored for distinguished service by the St. Francis of Assisi Service Dog Foundation.

Dr. Spencer Johnston, associate professor, Department of Small Animal Clinical Sciences, was presented the year 2000 "Veterinarian of the Year Award" from the Roanoke-based foundation which trains service dogs to assist the disabled.

Johnston was recognized for his work in conducting orthopedic examinations on dogs being considered for the group's training programs. Many of the breeds commonly used as assistance animals, such as Labrador and Golden Retrievers suffer from hip dysplasia.

Johnston is certified to conduct "Penn Hip" radiographic examinations, a sophisticated procedure for evaluating a dog's hips and predicting the animal's chances of developing the

disorder later in life.

Using the Penn Hip examination procedure, Johnston can make recommendations about an animal's suitability as a service animal. The service is a critical part of the screening criteria used by the foundation in selecting dogs for the program, since the training is so time-consuming and expensive.

Johnston is board certified by the American College of Veterinary Surgeons.



Jeffrey S. Douglas

Douglas Leads National Veterinary College Advancement Organization

Jeffrey S. Douglas, APR, public relations director for the College, has been elected president of the Association for Veterinary Advancement Professionals (AVAP).

The organization, which consists of development, public relations and alumni relations directors of the North American veterinary schools and colleges, holds its annual meeting in conjunction with the American Veterinary Medical Association.

Douglas, who joined the College in 1983, is professionally accredited by the Public Relations Society of America and also serves as an adjunct professor of public relations at Radford University.

College Presents Annual Open House

Hundreds and hundreds of curious animal lovers turned out to visit the college during its annual Spring Open House.

Guided tours were provided throughout the day and dozens of activities showcased the profession and the college.

A "Teddy Bear Repair Clinic" delighted children, and more serious presentations liked "Parasites and Toxicants" provided useful information for guests.

The open house also featured information on alterna-

tive careers in the veterinary profession, and included presentations on preparing a competitive application for veterinary school.

The college's 2001 Open House will be held on April 7, 2001.

Abbott joins DSACS in Cardiology

Dr. Jonathan Abbott has joined the college as a veterinary cardiologist in the Department of Small Animal Clinical Sciences.

Abbott earned his DVM from the Ontario Veterinary College at the University of Guelph in Canada. He completed an internship at the University of Saskatchewan and a residency at the University of Florida. He is board certified by the American College of Veterinary Internal Medicine.

Prior to joining the college, Abbott served on the veterinary college faculties of the University of Florida and the University of Saskatchewan.



Dr. David Moore

Moore Appointed Research Compliance Head

University Veterinarian and Director of the Office of Animal Resources Dr. David Moore has been appointed Assistant Vice Provost for Research Compliance at Virginia Tech, according to Dr. Leonard Peters, vice provost for research and dean of the graduate school.

Moore, who joined the university community in 1985, has been in charge of animal care and regulatory compliance assurance for animals used in teaching and research at the university.

His broadened responsibilities now include oversight and regulatory compliance issues for all animal and human subjects used in university research programs, plus radiation safety, and laboratory safety programs.

Among other duties, he will chair the university's Institutional Review Board, Radiation Safety Committee, and serve on the

Animal Care Committee and Laboratory and Hazardous Materials Safety Committee.

Moore will also provide federally mandated training programs for faculty, staff, and students in the areas of human subjects compliance and appropriate animal care and use.



Dr. Peter Shires

Shires Heading University's Biological Sciences Initiative

Dr. Peter Shires, a professor in the Department of Small Animal Clinical Sciences, has been selected to lead Virginia Tech's Biological Sciences Initiative.

As university BSI Coordinator, Shires will head a multidisciplinary program that unites 400 professors in five colleges in an effort that seeks to enhance undergraduate teaching and learning in the life sciences.

"We're pleased and excited to have Peter coordinate the BSI, particularly because he brings a keen interest in innovative teaching and learning pedagogies for the life sciences," said Dr. Ron Daniel, associate provost for undergraduate programs. "Peter has a well developed history of collaborations with the Center for Excellence in Undergraduate Teaching and the Faculty Development Institute."

Participating colleges include Agriculture and Life Sciences, Arts and Sciences, Human Resources and Education, Forestry and Wildlife Resources, and the Virginia-Maryland Regional College of Veterinary Medicine.

Special support in learning theory, instructional design and educational technologies is being provided for faculty participating in the BSI. Enhanced student advising is another program goal.

Dr. Nino Aloro, a veterinarian who operates a practice in Virginia Beach, recently donated a series of veterinary antiquities to the College. Aloro, who earned his veterinary degree in Italy, has practiced in the Tidewater area for more than 30 years. The collection of artifacts included several antique "crossbow" style venipuncture devices which were designed and built by Aloro's grandfather. The instruments were used for blood-letting in horses and other large animals. College Art & Archives Committee Chair Dr. Carl J. Pfeiffer, who authored a paper on the history of blood-letting in the horse in 1986, described them as "special artifacts in veterinary history" that are very "unique."



Eastern Equine Encephalitis in Virginia

The National Veterinary Services Laboratory of the U.S. Department of Agriculture (USDA) has confirmed that three horses in Southeastern Virginia have died of Eastern Equine Encephalitis (EEE), according to Dr. Jim Bowen, extension equine specialist.

Horse owners, especially those living near the Eastern Shore, are strongly encouraged to vaccinate their animals against Eastern Equine Encephalitis twice yearly in order to afford the best possible protection, Bowen said.

Eastern Equine Encephalitis can also cause encephalitis in humans, with children and the elderly especially at risk.

"There is no vaccine for the human population, so it is essential that you guard against mosquito bites by using insect repellents and avoiding being outside when the mosquitoes are most active, namely dawn and dusk," said Bowen. Eastern Equine Encephalitis should not be confused with West Nile Virus, which has been reported in the Northeast over the past two years, he said.

This, too, will cause encephalitis in horses and humans, Bowen said, but has only been reported to date in New York State, New Jersey, Connecticut and Massachusetts.

Martin Assumes Presidency of AAVC

Dr. Robert A. Martin, director of the college's Veterinary Teaching Hospital, has been named president of the American Association of Veterinary Clinicians (AAVC).

That 600-member organization includes veterinarians based at colleges, institutions and veterinary practices who are engaged in teaching, service, and/or research in clinical veterinary medicine.

Martin says changing market dynamics in the veterinary profession are creating human resource challenges for academic veterinary medicine.

"Upon completion of their training, clinical specialists are now entering private specialty practices throughout the U.S. rather than remaining in academia," said Martin.

"The American Association of Veterinary Clinicians is actively involved in seeking ways to encourage the best and brightest to consider careers in academic veterinary medicine in order to meet the needs of clinical instruction in the veterinary teaching hospitals of our colleges

of veterinary medicine," he continued.

As president-elect, Martin served as program chair for the recent AAVC forum held in Seattle in conjunction with the annual meeting of the American College of Veterinary Internal Medicine.

He will also plan and preside over an upcoming conference in Arlington, Virginia entitled "Education in the 21st Century" that will focus on the value of practice-based clinical education.

The AAVC operates the Veterinary Internship/Residency Matching Program and provides programmatic leadership for veterinarian's seeking post-DVM training in internal medicine, surgery and other specialties.

Martin, who earned his DVM from Auburn University in 1976, is board certified by the American College of Veterinary Surgeons and the American Board of Veterinary Practitioners.

He joined the faculty at Virginia-Maryland in 1983, and has directed the Veterinary Teaching Hospital since 1993.

AAVC Incoming President Dr. Robert A. Martin (R) accepts the gavel from outgoing President Dr. Richard DeBowes.



New Residents and Interns Announced

Thirteen new veterinarians have been hired as residents and interns.

Internships and residencies are advanced clinical/educational programs pursued by DVM's seeking advanced training and eventual board certification by organizations like the American College of Veterinary Surgeons, the American College of Veterinary Internal Medicine, the American College of Veterinary Radiology, or the American College of Veterinary Ophthalmology.

There are three new residents and interns in the Department of Large Animal Clinical Sciences.

Dr. David M. Wong has joined as a resident in Large Animal Medicine. He attended Michigan State University and has practiced at Four Winds Equine Hospital in Bridgeport, Michigan.

Dr. Kara L. Kreitner, who earned her DVM at Colorado State University, and Dr. Jacob R. Werner, who earned his DVM at the University of Pennsylvania, are interns in large animal medicine and Production Management Medicine.

Ten new veterinarians were also hired as residents and interns in the Department of Small Animal Clinical Sciences.

Dr. Stephanie Hamilton, a VMRCVM alumnus, is a resident in anesthesiology. Dr. Hamilton recently practiced at

Henry County Animal Clinic.

Dr. Jacob Rohleder has joined as a resident in radiology. He received his DVM at Purdue University and has completed an internship at Metropolitan Veterinary Hospital. Dr. Rohleder also practiced at an Animal Emergency Clinic.

Dr. David Grant earned his DVM and completed an internship at the University of Florida. He is now a resident in small animal medicine.

Dr. Tisha Harper has joined as a resident in small animal surgery. Dr. Harper received her DVM at the University of the West Indies in St. Augustine. She has practiced at Fiddler's Dream Veterinary Clinic and has also served as a lecturer/clinician at the University of the West Indies.

Dr. Nancy Zimmerman-Pope, who earned her DVM at the University of Wisconsin, has also joined as a resident in small animal surgery. She has completed internships at the VMRCVM and Dallas Veterinary Surgical Center.

Dr. Max Banwell and Dr. Christopher Kunze, both received their DVM from Kansas State University and are new interns. Other new interns are Dr. Heidi MacLean, who received her DVM at the University of Prince Edward Island, Dr. Brett Wood, who received his from North Carolina State University, and Dr. Kelly Wang, who earned her DVM at Michigan State University.

Wilcke: continued from page 1

Pathobiology who has been working in the emerging field for the past 15 years, has been named to the Dorothy A. and Richard G. Metcalf Endowed Professorship in Veterinary Medical Informatics.

"I'm extremely honored by this appointment," said Wilcke, a veterinary pharmacologist. "Personally and professionally, this is a very gratifying opportunity," he continued. "But in a larger sense, this move goes a long way toward underscoring the legitimacy of this new discipline on a national scale."

Veterinary informatics is a scientific discipline that involves the application of modern information technology to manage vast amounts of medical data.

The professorship has been made possible as a result of a \$2 million gift from philanthropist Dorothy A. Metcalf of the Eastern Shore of Maryland through her private foundation. Half of Mrs. Metcalf's gift will be used to support the professorship, and another half will support other new initiatives under development in the college.

"We're extremely grateful for both the spirit of philanthropy and the foresight which is demonstrated by Mrs. Metcalf's gift," said VMRCVM Dean Peter Eyre. "It seems especially appropriate that our first Blacksburg based endowed professorship be placed in such an exciting and innovative area of inquiry."

Wilcke has led the college's

Drug Information Laboratory for most of the past decade. The lab manages the Food & Drug Administration Center for Veterinary Medicine's electronic Animal Drug Database and several similar initiatives. Following passage of the Generic Animal Drug and Patent Term Restoration Act in 1988, the laboratory began publishing the FDA "Greenbook" in 1989 and has published it annually ever since. The reference guide includes information concerning animal drugs' trade and generic names, label indications, patent information, and other related facts. The laboratory soon thereafter developed and began maintaining the expanded electronic version known as the FDA Approved Animal Drug Products Database System.

Wilcke serves as director of the American Veterinary Medical Association's Secretariat to SNOMED International. That international system of medical nomenclature, which was established by the American College of Pathology, serves as a unifying standard for electronic medical record systems in human and veterinary medicine.

Looking ahead, Wilcke describes the next ten years as a "building block" period for the field of veterinary informatics as medical information networks and information standards are established and adopted.

"Ultimately, veterinarians are going to have access to vastly greater amounts of information as they diagnose and treat animals in their practices, and that is going to lead to better patient care," he said.

The VMRCVM has operated nationally recognized programs in veterinary medical informatics throughout the past decade. The late founding Dean Richard Talbot established the first graduate programs in the field and key relationships with the FDA during a time when the internet and web-based communications were emerging as the defining communications technology of an era.

Wilcke, who joined the VMRCVM in 1982, was one of the first faculty members in the college to begin using computer technology to enhance student instruction in the mid-80's. He earned his DVM from Iowa State University and his M.S. in clinical pharmacology from the University of Illinois.

Three professorships have been endowed at the Marion duPont Scott Equine Medical Center in Leesburg, Virginia, which functions as the college's northern Virginia campus. However, the Metcalf Professorship is the first to be endowed on the Blacksburg campus.



Virginia-Maryland Regional College of Veterinary Medicine

Retired Faculty Luncheon, April 20, 2000

Left to Right: Joyce Morgan, Jeff Douglas, John Lee, Fred Carlisle, Gordon Carter, John Wilson, Charles Domermuth, Bob Hammond, Gerry Colmano, Bernie Gross, Gordon MacInnis, Peter Eyre, Kent Roberts, Lud Eng, Bob Martin, John Perry, Frank Pearsall, Craig Thatcher, Donna Pitt

VMRCVM'S LINDSA Y HONORED BY AMERICAN SOCIET Y OF PARASITOL OGY

A parasitologist on faculty was recently recognized with the most distinguished honor conferred by the American Society of Parasitology.

Dr. David S. Lindsay, associate professor, Department of Biomedical Science and Pathobiology, was presented the Henry Baldwin Ward Medal for 2000. Lindsay received the award during the society's annual meeting in San Juan, Puerto Rico in June.

Lindsay has been a major figure in international parasitology research for much of the past two decades. Much of his work has involved the examination of the protozoal parasites causing diseases like cryptosporidiosis, coccidiosis infection in pigs, and toxoplasmosis.

More recently, he has been recognized for his work as part of a USDA funded team that made a major break-

through in the understanding of an economically significant parasitic disease afflicting cattle.

Working in the college's Center for Molecular Medicine and Infectious Disease, Lindsay and colleagues demonstrated that the dog is a "definitive host" for *Neospora caninum*, a single-celled parasitic organism which causes pregnant cows to abort their fetuses.

He is also working on an improved diagnostic test for Equine Protozoal Myelitis (EPM), a recently identified disease which causes a range of neurological problems in horses.

In the Ward Medal acceptance speech Lindsay delivered at the society's annual meeting this summer in Puerto Rico, he attributed the honor to "a great deal of luck and association



Dr. David S. Lindsay

with extremely talented people." He then chronicled the scientists and the organizations he has been affiliated with during a career that has coincided with major advancements in the field of parasitology.

Lindsay worked at Auburn University and the American Parasitology Institute at Beltsville, Maryland prior to joining the Virginia Tech faculty in 1997.

\$1 MILLI ON RESEAR CH GRANT SUPPO RT- ING GULF WAR ILLNESS INVESTI GATIONS



Dr. Bernie Jortner and Dr. Marion Ehrich and technical support personnel in the laboratory for Neurotoxicity studies have collaborated on a number of projects designed to learn more about a health disorder which has been described by some as "Gulf War Illness."

Scientists in the college's Laboratory for Neurotoxicity Studies (LNS) and the Immunotoxicity Risk Assessment Laboratory (IRAL) are well underway on an almost \$1 million research contract from the U.S. Army designed to assess how stress and various organophosphate compounds may affect health.

Awarded in late 1999 by the United States Army Medical Research

and Materials Command, the program is helping researchers examine the individual and interactive effects of stress and two chemical compounds on neurological and immunologic well-being.

Those chemicals include chlorpyrifos, which is commonly used in insecticides, and triorthotolylphosphate, commonly used as an additive in everything from jet fuel to

plastics and lubricants.

The work is directly related to efforts undertaken by military, government and medical officials to critically examine what has been referred to in the media as "Gulf War Illness." Victims of Gulf War Illness report a number of maladies, ranging from malaise to neurological disorders and immunosuppression as a result of their experiences during the Gulf War.

The targeted chemical compounds were both in use during the Gulf War theatre of operations.

Faculty involved with the project include Drs. Bernie Jortner, professor; Marion Ehrich, professor; Steven Holladay, associate professor; and Hara Misra, professor; all in the Department of Biomedical Sciences and Pathobiology.

The three-year program is evaluating behavioral, neurochemical, neuropathological and immunological changes that may be caused by stress and the chemical agents acting individually or interactively, Jortner said.

VMRCVM scientists have conducted a number of investigations in this area for the U.S. Army. However, the \$910,000 program grant is the largest project funded to date.

ROSEANNE R OBERTSON MEMORIAL FUND EQUIPPING OPHTHALMOLOGY

Mr. Dick Robertson (center, forefront) and some of his extended family recently gathered for a day at the college. Also pictured on Mr. Robertson's right are his friends and former Virginia Tech President Dr. William Lavery and his wife Peggy.



To hear veterinary ophthalmologist Dr. J. Phillip Pickett tell the story, he was just doing his job.

But an honest day's work and a good deed he turned almost a decade ago has led to the establishment of the Roseanne Robertson Memorial Fund and helped the Ophthalmology Service acquire more than \$100,000 in new equipment.

Thanks to retired Philip Morris executive Richard "Dick" Robertson, the service is rapidly becoming one of the defining pieces of the Veterinary Teaching Hospital's highly acclaimed clinical service programs. The Roseanne Robertson Memorial Fund is a tribute to Dick Robertson's late wife, yet it's genesis can be traced to Mr. Robertson's first association with the VMRCVM.

It was March 1991 when his beloved female Lhasa Apso "Chiri" first presented with a corneal ulcer so severe it was threatening to burst.

Robertson, a former WWII fighter pilot had dropped everything, loaded the pet into his plane and flown immediately to Virginia Tech to seek emergency care for "Chiri's" critical condition.

Dr. Pickett not only cured the dog, he played host to Mr. Robertson, driving him around town to find lodging and gather the essentials he required during his impromptu visit to Blacksburg.

Six years later, Mr. Richardson and Chiri were back, but this time things were even more critical. Chiri was almost blind from complications of Kerato-conjunctivitis sicca and cataracts; in fact, Mr. Richardson had been told there was no hope for the

dog regaining his vision.

Yet the combination of Dr. Pickett's skill and Mr. Robertson's heroic, around-the-clock nursing care brought success once again. Following surgery

ogy service and its personnel, Mr. Richardson has worked with the matching charitable gift program at Philip Morris to help the college acquire about \$100,000 worth of ophthalmic diagnostic and surgical equipment.

The first piece of equipment funded was a stationary photo slit lamp biomicroscope with digital video equipment, which has developed into an excellent resource for both clinical care, teaching and outreach. Dr. Pickett says the equipment will serve well as a "platform" resource for "on-line" veterinary ophthalmology continuing education courses in the future.

The fund has also helped the hospital acquire a Zeiss surgical microscope and digital video camera which have proven extremely useful for ophthalmic surgery, as well as in other areas of the hospital where micro-surgery is required.

Most recently, Mr. Robertson has provided funding that has enabled the service to acquire a phaco-emulsification unit for cataract surgery that is as good a unit as is available anywhere in both human and veterinary ophthalmology, according to Pickett.

Pickett says the Robertson philanthropy has enabled the service to acquire the high-end equipment much more swiftly than would have been possible through conventional large-scale equipment acquisition programs such as the SCHEV Trust Fund.

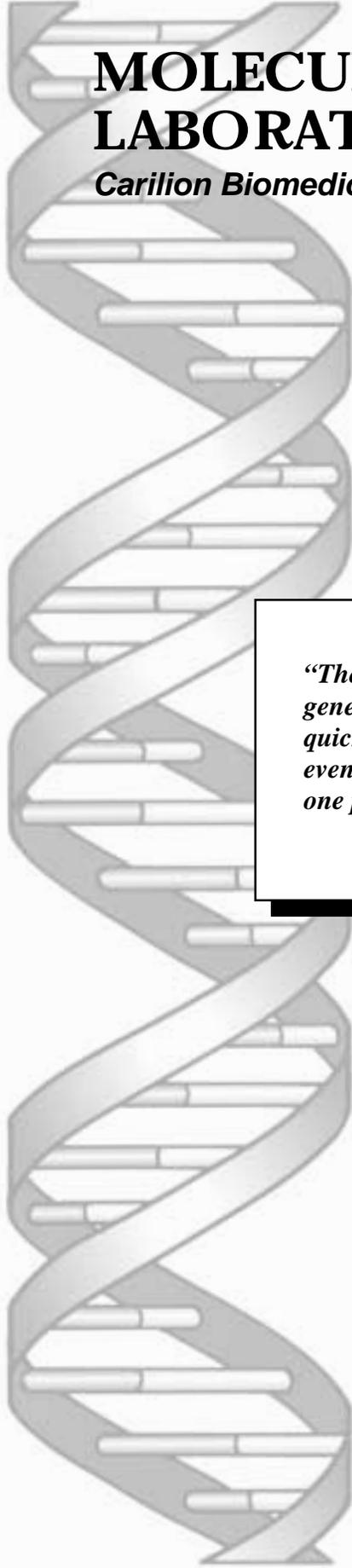
"He's a tremendous friend of the college," said Pickett, associate professor, Department of Small Animal Clinical Sciences. "He's a dynamic, energetic guy who has decided he is going to do all he can to help us do the best job possible. We're very grateful."



Mr. Robertson has taken a "hands-on" approach to his philanthropic involvement with the college. Here, he examines some of the equipment he has helped the Veterinary Teaching Hospital acquire.

and medical therapy, Chiri was seeing again. So enamored was Mr. Richardson of the high-quality service he experienced, he decided to take some action. And take action he did.

Almost "adopting" the ophthalmol-



MOLECULAR DIAGNOSTICS LABORATORY ESTABLISHED

Carilion Biomedical Institute Funds Effort

A Molecular Diagnostics Laboratory is being established in the college, thanks to \$50,000 in start-up funding from the Carilion Biomedical Institute's Optical Science Research and Engineering Center.

The laboratory will enable clinicians and scientists to investigate the genetic foundations of disease and may ultimately lead to spin-off corporations in the private sector, according to Dr. Mark Crisman, associate professor, Department of Large Animal Clinical Sciences.

“The lab will enable us to analyze gene expression accurately and quickly. We can look at hundreds or even thousands of different genes in one preparation.”

Dr. Mark Crisman

The laboratory will be equipped to conduct microarray analysis, a new technology for rapidly evaluating high volumes of genetic samples.

“The lab will enable us to analyze gene expression accurately and quickly,” said Crisman. “We can look at hundreds or even thousands of different genes in one preparation.”

Scientists are increasingly looking at the genetic and proteomic foundations of disease in an effort to better understand the causes, and ultimately the cures, for all forms of disease. Understanding which genes are expressed and which remain “quiet” during states of health and disease will eventually help scientists develop improved drug therapies, Crisman said.

Crisman, along with colleagues Dr. Steven Holladay, associate professor, Department of Biomedical Sciences and Pathobiology, and Dr. Lioudmilla

Sharova, expect to focus on four major projects in the early phases of the project.

Under Holladay's leadership, the lab will support ongoing investigations designed to learn more about the role environmental toxins and contaminants may play in teratology, or the development of health disorders prior to birth. Holladay has been examining the role these substances may play in the development of immunological disorders.

Another program will look at Chronic Obstructive Pulmonary Disease (COPD) in horses, an asthma-like disease which causes severe respiratory problems in horses. Advances in understanding the mechanisms of that disorder may lead to improved treatments for human asthma.

Dr. Rick Howard, assistant professor, Department of Large Animal Clinical Sciences, will use the laboratory to support his ongoing research into the molecular foundations of osteoarthritis in horses, another disorder that has significant comparative implications for human arthritis and degenerative joint disease.

Finally, the laboratory will provide support for investigations on how diabetes leads to pregnancy complications.

The research team is also in the process of building a library of human, mouse, and horse “probes,” genetic markers required in order to conduct microarray analysis.

They plan to seek funding from additional sources, and have already submitted a grant to a National Institutes of Health program which provides funding for life sciences research with strong potential for commercial development in the private sector.

RESEARCHERS SEEK SECRET TO BIRTH DEFECT REVERSAL

by Meg Conlon

Fetal development is a highly choreographed process. But all too often it is disrupted when a mother is exposed to a teratogen – an agent known to cause a variety of birth defects. In the United States alone, 150,000 babies are born with defects like these, making birth defects the leading cause of infant mortality.

But what if there was a way to reduce or even reverse these defects?

Call it unbelievable, call it magic, or call it as toxicologist Dr. Steven Holladay does, “immunoteratology.” The name comes from the influence the mother’s immune system can have in assuring fetal development remains on track.

Recognizing the tremendous impact this could have on the number of babies born with birth defects every year, Holladay and his team of researchers have set out to discover just how this magic really works.

Scientists have reported that injecting pregnant mice with an inert substance large enough will alert and set into action one of the body’s frontline immune cells called “macrophages.” These macrophages essentially engulf and break down what they see as foreign – a process called phagocytosis.

In the past, other researchers had hypothesized that the macrophages were acting directly on the fetus. Under this scenario, the cells would cross the placenta from the mother, then find and eliminate abnormally developing cells in the fetus that were causing birth defects such as cleft palates, digit anomalies and neural tube defects affecting the brain and spinal cord.

But that proved to be a dead end. Holladay and his co-worker on this project, Dr. Lioudmila Sharova, decided to turn down a different road. While their own tests clearly showed that immune stimulation did reduce birth defects in mice, they believed something other than maternal immune cells crossing the placenta was causing this phenomenon.

They knew that fundamental reproductive immunology suggests maternal immune cells don’t routinely traffic across the placenta. This is in part because the fetus is genetically different from the mother and will be recognized by her immune cells as foreign, resulting in what is known as a negative “graft-vs- host” rejection



Immunotoxicologist Dr. Steven Holladay and Dr. Lioudmila Sharova examine data in the Immunotoxicity Risk Assessment Laboratory.

response in the fetus.

So instead of a direct effect from maternal immune cells, they looked for an indirect effect.

Once set into action, immune cells secrete a vast array of proteins called cytokines or growth factors that regulate immune responses through cell-to-cell communication. Similar or sometimes identical growth factors are also required for the timed expression of cell-cycle genes. Cell-cycle genes control carefully orchestrated waves of cellular proliferation, differentiation, or cell death necessary for normal development. Consider the development of the hand as an example. Cells proliferate, but at some point, some of the cells must undergo programmed cell death – apoptosis – to create separate digits.

To test this hypothesis, Holladay and Sharova looked at the expression of a limited panel of genes that regulate cell cycle and apoptosis during fetal development of the palate. Using laboratory animals, they found that when the mother is injected with a known teratogen like urethane, there is decreased expression of these critical development genes, resulting in cleft palates.

Repeated studies also verified that stimulation of the maternal immune system has the opposite effect on activity of these cell cycle genes in the fetus, significantly increasing their expression level. So while a chemical like urethane might reduce the growth factor in the

fetus, immunostimulation of the mother may cause an increase in that same growth factor in the fetus. In this way, Holladay’s team was able to reduce the incidence of clubbed digits from 20 percent to zero, and cut the number of cleft palates by half.

The implications of Holladay’s research could be enormous. Traditional thinking has long held that the fetus is a preprogrammed entity that derives nutrition from the mother, but otherwise directs its own development. But the observation that maternal immune stimulation causes altered expression of critical genes in the fetus indicates it’s time for another look.

Holladay says these observations may suggest that there is routine cross-talk between fetus and mother via chemical mediators, and that mothers may play a much greater role than once believed in fetal development. Not only does this indicate that optimal maternal immune health may be important for protection against agents or events that lead to many birth defects, but it also raises the question whether individuals with a compromised immune system are at greater risk for having babies with birth defects.

Answering these questions could help unlock some of the secrets to fetal development and a mother’s early role in ensuring things go right.

Meg Conlon is a veterinary student who is currently taking a brief sabbatical from her studies to care for her infant. She is working part-time in the Office of Research and Graduate Studies.

CHI CHAPTER PHI ZETA INDUCTS MEMBERS, AWARDS SCHOLARSHIPS

Twenty-three DVM students, a faculty member and a Ph.D student were inducted into the College's most prestigious academic honor society, the National Society of Phi Zeta, during recent ceremonies in Blacksburg. The honorees were inducted by Chi Chapter President Dr. Mark Smith, and about \$5,500 in scholarship support was awarded during the event.

Dr. Leon Geyer, a professor in Virginia Tech's Department of Agricultural and Applied Economics and chair of the university's

Honors System Review Board, congratulated the inductees on their achievements and discussed the importance of academic integrity, honor and professionalism during a keynote address.

"We are extremely grateful for the scholarship support we receive from organized veterinary medicine and corporations."

Dr. Colin Carrig

Phi Zeta is the honor society of veterinary medicine that recognizes high scholarship, stands for constant advancement of the veterinary profession, and promotes research in matters pertaining to the welfare and diseases of animals. The VMRCVM's Chi Chapter was established in 1984.

The event marked the fifth time that scholarships have been provided for inductees, according to Dr. Colin Carrig, Secretary-Treasurer of Phi Zeta.

Fourth year veterinary students participate in three-week off-campus elective clerkships that sometimes involve national and international travel. The scholarship support is designed to assist students in meeting

some of the expenses incurred during these educational opportunities.

"We are extremely grateful for the scholarship support we receive from organized veterinary medicine and corporations," said Carrig, who noted that 18 organizations donated a total of \$5500 to support Phi Zeta scholarships.

Scholarship support was provided by the Roanoke Valley Veterinary Medical Association, the Central Virginia Veterinary Medical Association, the Southwest Virginia Veterinary Medical Association, the Greater Peninsula Veterinary Medical Association, the South Hampton Roads Veterinary Medical Association, the Prince William Veterinary Medical Association, the Blue Ridge Veterinary Medical Association, the Montgomery County Veterinary Medical Association, the Fredericksburg Veterinary Medical Association, and the Harford County Veterinary Medical Association. The past presidents of the Chi chapter of Phi Zeta also provided scholarship support.

Corporations providing scholarship support included Bayer Corporation Animal Health, Pfizer Inc. Animal Health Group, Schering-Plough Animal Health, Novartis Animal Health US Inc., Ralston Purina Company, VAMVESS-Hill's, and Professional Educational Enterprises. Textbook awards were provided by Harcourt Health Sciences and Lippincott, Williams & Wilkins, and the VMRCVM provided additional support for the event.

Membership in Phi Zeta is open to faculty members and graduate students who have made significant contributions to veterinary medicine and to veterinary students who rank in the top 10 percent of the third year class and the top 25 percent of the fourth year class.

Class of 2000 members inducted were Philip Edward Bailey, Patricia A. Coles, Jennifer Noelle Collins, Stephanie C. Flaherty, Michelle Lynn Gorbutt, Erin Ellen Hardam, Douglas C. Humphrey, Barbara M. Leotta, Katherine Marie Newhart, Reema T. Patel, Richard P. Streett, III, and Earl Willis.

Class of 2001 members inducted were Carrie Lynn Ellis, G. Anthony Gray, Jessica S. Mikszewski, Sara Monahan, Leela Elise Noronha, Elissa Randall, Valeria Rickard, Cassandra Lynn Thomas, and Phillip Turfle.

Dr. Otto I. Lanz, an assistant professor in the Department of Small Animal Clinical Sciences, and Dr. Christiane Massicotte, a veterinarian pursuing her Ph.D. degree, were also inducted during the event.

The Chi Chapter of Phi Zeta also recognized winners of their annual scientific manuscript contest. Dr. Massicotte was honored for her work in basic sciences, and Dr. Henry Bianucci, a former resident in the Department of Small Animal Clinical Sciences, was recognized for his work in the clinical sciences.

National Phi Zeta Research Awards Presented

A former surgical resident in the VMRCVM has won top honors in the Phi Zeta national manuscript contest.

The 2000 National Phi Zeta Award in the clinical sciences category was presented to Dr. Henri C.

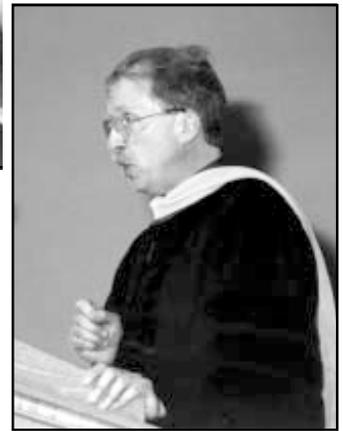
Bianucci. Dr. Bianucci's manuscript was entitled "Periodontal healing of canine experimental grade-III furcation defects treated with autologous fibrinogen and absorbable barrier membrane."

Biannuci is now a surgical specialist with Coastal Carolina Veterinary Surgery in South Carolina.

2000



Dr. John Robertson, professor, Biomedical Sciences and Pathobiology, urged the graduates to be confident in their abilities to serve animals and people during the commencement ceremony's keynote address.



VMRCVM GRADUATES 17TH CLASS

The former Maryland governor who helped create the College's regional foundations was honored during the 17th annual commencement ceremony.

The Honorable Harry R. Hughes was inducted into the college's John N. Dalton Society during the ceremonies. Hughes served two terms as governor of Maryland, from 1978 until 1986. He signed the Memorandum Of Understanding with the late Virginia Governor John N. Dalton which

began Maryland's official involvement with the regional veterinary college. Memorializing the late Virginia governor who signed its founding legislation, the Dalton Society honors those who have provided distinguished service for the college.

Eighty-eight DVM degrees, one Ph.D degree, eight M.S. degrees and five Certificates of Residency were awarded during the ceremony.

Featuring dignitaries from both Virginia



Dean Peter Eyre presents former Maryland Governor Harry R. Hughes with a commemorative following his induction into the John N. Dalton Society.



Dr. Dale L. Cupp, president of the Virginia Veterinary Medical Association, welcomed the new veterinarians into the profession on behalf of organized veterinary medicine.



Dr. Michael Erskine, (Class of '88), president of the Maryland Veterinary Medical Association, administered the "Veterinarian's Oath" to the graduates.



Dr. Anthony T. Blikslager (Class of '89), a faculty member at the North Carolina State University College of Veterinary Medicine, was honored as the College's Outstanding Young Alumna for 2000.



Veterinary ophthalmologist Dr. J. Phillip Pickett was presented the Dr. and Mrs. Dorsey Taylor Mahin Award for Clinical Excellence.

Tech and the University of Maryland, the colorful pageant included the administration of the "Veterinarian's Oath," the "Hooding Ceremony," and the presentation of numerous awards and honors.

Dr. John L. Robertson, a professor in the Department of Biomedical Sciences and Pathobiology, presented the year 2000 address. Dr. Michael Erskine, vice-president of the Maryland Veterinary Medical Association, administered the "Veterinarian's Oath," and Dr. Dale L. Cupp, president of the Virginia Veterinary Medical Association, welcomed the new veterinarians on behalf of organized veterinary medicine.

The Dr. and Mrs. Dorsey Taylor

Mahin Award for Clinical Excellence, an award that honors veterinarians who display skill and compassion in service to animals and people, was presented to veterinary ophthalmologist Dr. J. Phillip Pickett, associate professor, Department of Small Animal Clinical Sciences. Jeremy Smedley, the Class of 2000 valedictorian, was presented with the Richard B. Talbot Award, and Dr. Anthony T. Blikslager was named the College's Outstanding Young Alumna for 2000.

Earlier in the day, scores of scholarship donors and student recipients were recognized during the college's annual Awards Luncheon.

Santini Named Class of 2000 Outstanding Student



by Colleen Kuenzig,
Office of University Relations intern

Elizabeth Santini's outstanding academic performance and demonstrated leadership talents earned her the VMRCVM's Outstanding Senior Award for 2000.

While maintaining a 3.5 grade point average, the Maryland native gained experience through externships with the U. S. Department of Agriculture and Ashby Herd Health Services. She also worked as an assistant for Breton Veterinary Hospital for Companion Animals and the University of Martlan Veterans' Administration Medical Center.

"Elizabeth was selected for her academic performance, clinical skills and outstanding leadership skills," said Dr. Dru Forrester, director of student affairs. "She is admired by her peers and will serve as an excellent role model in the veterinary profession."

Santini served as the president and president-elect of the Student Chapter of the American Veterinary Medical Association, and participated in many other organizations, including the Food Animal Practitioner's Club, American Association of Bovine Practitioners, American Association of Small Ruminant Practitioners, Equine Practitioners Club, American Association of Equine Practitioners, and Alpha Psi Veterinary Fraternity.

The former valedictorian of her high school class has continued to earn honors throughout her collegiate and post-graduate education.

She has won: E.L. Tyler and C.W. Vaughan, Jr. Endowed Scholarship, W.R. Winslow Trust Scholarship, Student Chapter of the American Veterinary Medical Association Scholarship, Maryland Veterinary Foundation Scholarship, Maryland Delegate Award, St. Mary's College of Maryland Scholar Award, and the Beta Beta Beta National Biological Honor Society.

SAVMA 2000

VIRGINIA TECH HOSTS 2000 SAVMA CONFERENCE



Veterinary students from around the nation participated in a series of about 100 lectures, laboratory experiences, and intercollegiate scholastic competitions during their visit to Blacksburg for SAVMA 2000. The event also included a variety of social and athletic events.

About 1200 veterinary students and scores of representatives from corporations serving the profession of veterinary medicine converged at Virginia Tech in Blacksburg March 15-18, 2000 for SAVMA Symposium 2000.

SAVMA, which stands for Student American Veterinary Medical Association, is a national association of veterinary students affiliated with the American Veterinary Medical Association. The meeting is hosted annually by an American college of veterinary medicine. This is the first time in the history of the Virginia-Maryland Regional College of Veterinary Medicine that it has hosted the event.

SAVMA Symposium 2000, "Bridging the Millennia/Uniting Tradition and Technology in Veterinary Medicine," featured almost 100 lectures, laboratories and intercollegiate competitions. For the first time, the symposium featured a commercial

exhibit hall featuring new information and the latest in veterinary medical and surgical technology.

The SAVMA 2000 House of Delegates, which is the governing and policy body for the national association of veterinary students, also convened during the first two days of the meeting.

Topics explored throughout the meeting included small animal, equine, food animal, emergency medicine, exotics, wildlife, small ruminant medicine, and others. Some of the non-traditional programs offered included alternative medicine, animal behavior, and government and corporate opportunities and experiences.

The SAVMA symposium also included a "Look Back to New Orleans Party," a "Welcome to Blacksburg, Virginia" party, a "Betting on the Future and Blowing out the Old Century" party, and a 5K run.

Excursions to The Biltmore in Asheville, North Carolina, Baltimore-Washington to look at the College's Marion duPont Scott Equine Medical Center, the Smithsonian and the Baltimore Aquarium, and other regional sites, were also offered.

The keynote speaker for the final evening event was Dr. David G. Pugh, currently Director of Llama Research and Assistant Professor of Large Animal Surgery and Medicine at Auburn University College of Veterinary Medicine. Dr. Pugh, a former professor at the VMRCVM, discussed how the practices of the past and the technology of the future can combine successfully in veterinary medicine.

Dr. Michael Leib, professor, Department of Small Animal Clinical Sciences, recently made a series of continuing education presentations at the British Small Animal Veterinary Association Congress in Birmingham, England. Those included "Chronic vomiting: a diagnostic approach," "Upper GI endoscopy," "Therapy of gastric diseases," "Chronic vomiting: refractory cases," "Chronic vomiting: interactive cases," and "Fluid therapy for GI diseases." Leib also made presentations on "Chronic diarrhea: a case oriented diagnostic approach," "Acute pancreatitis," and "Helicobacter gastritis" at a meeting of the Louisiana Academy of Veterinary Medicine in Baton Rouge, LA. Leib also made a presentation on "Esophageal Strictures" and served as a special interest group presentation leader on "Endoscopy: What's your Diagnosis" at the American College of Veterinary Internal Medicine's 18th annual Veterinary Medical Forum in Seattle. Leib also made presentations on acute pancreatitis, chronic vomiting: the role of *Helicobacter*, therapy of gastric diseases, acute diarrhea, and inflammatory bowel disease at a meeting of the Vermont Veterinary Medical Association in Vergennes, Vermont.

Dr. David Lindsay, associate professor, Department of Biomedical Sciences and Pathobiology, recently had two articles published in professional journals. "Isolation and characterization of *Sarcocystis neurona* from a Southern sea otter (*Enhydra lutris nereis*)" was published in the International Journal of Parasitology and "Activity of decoquinatone against *Cryptosporidium parvum* in cell cultures and neonatal mice" was published in Veterinary Parasitology. Lindsay also presented "Oocyst production in dogs fed tissue cysts of a cloned bovine strain of *Neospora caninum*" and chaired a session on "Life cycles and Epidemiology" at a joint meeting of the American Society of Parasitologists (75th Annual meeting) and The Society of Protozoologists in San Juan, Puerto Rico.

Lindsay was also awarded the prestigious Henry Baldwin Ward medal from the American Society of Parasitologists in recognition of his leadership in the field of parasitology at the meeting. Dr. Lindsay has also been appointed to the Editorial Board of the Journal of Zoo and Wildlife Medicine.

Alexa C. Rosypal, graduate student in Parasitology, Department of Biomedical Sciences and Pathobiology, was elected the graduate student representative to the American Association of Veterinary Parasitologists at their recent annual meeting in Salt Lake City, Utah.

Sharonda Meade, a graduate student working toward her Ph.D. in the College's Department of Large Animal Clinical Sciences, recently received an award for "Best Research Paper" during the 72nd Northeastern Conference on Avian Diseases held at the University of Delaware. Meade's paper was entitled "The effectiveness of fenbendazole, roxarsone, and itroimidazole derivatives in the treatment of *Cochlosoma anatis* infections in turkeys."

Don Massie, supervisor of the Biomedical Media Unit, has been named recipient of the year 2000 Dean & Department Area Staff Award. Massie joined the veterinary college in 1984.

Dr. Gordon Carter, professor emeritus in the VMRCVM, has collaborated with a former Brazilian graduate student to write a book entitled "Brazilian Portuguese For Travelers" which has been

recently published in Brazil. Carter, a veterinary microbiologist, worked extensively in Brazil during his career.

Dr. Beverly Purswell, associate professor, Department of Large Animal Clinical Sciences, presented two posters and three abstracts at the 4th International Conference on Canine and Feline Reproduction in Oslo, Norway. Purswell also represented the Virginia Veterinary Medical Association as an alternate delegate during a meeting of the American Veterinary Medical Association's House of Delegates in Salt Lake City, Utah.

Dr. Spencer Johnston, associate professor, Department of Small Animal Clinical Sciences, was recently presented with a Distinguished Post-doctoral Veterinary Alumnus Award from Michigan State University's College of Veterinary Medicine. Johnston, who conducted a surgical residency at MSU from 1987-90, was honored for his performance as an exemplary faculty member in the VMRCVM, where he has earned nine teaching awards in seven years and established an excellent reputation for research and clinical activities.

Jeffrey S. Douglas, APR, director of public relations, VMRCVM, moderated a panel discussion on "Live Animals in Teaching and Research: How is it Playing in Peoria?" during a recent meeting of the Association of Veterinary Advancement Professionals in Salt Lake City, Utah.

Dr. Xiang-Jin Meng, assistant professor, Department of Biomedical Sciences and Pathobiology, has recently been awarded several research grants as principal investigator (including two NIH grants). These grants support him to study the pathogenesis, zoonotic and xenozoonotic risks of swine hepatitis E virus, to develop a vaccine against porcine circovirus-associated disease, and to study the molecular mechanisms of pathogenesis by porcine reproductive and respiratory syndrome virus and hepatitis C virus.

He recently chaired the review panel of "STEP N: Hepatitis Vaccines" for the U.S. Army's Intramural Military Infectious Diseases Research Program (FY99 Report). Meng has recently been appointed to the Editorial Board of the Infectious Disease Review and the Journal of Clinical Microbiology.

Meng has recently authored and co-authored seven articles in peer-reviewed journals on swine hepatitis E virus, porcine reproductive and respiratory syndrome virus and porcine circovirus (two published in Journal of Clinical Microbiology, and one each published in Journal of Medical Virology, Journal of Virology, Infectious Disease Review, Veterinary Microbiology, and American Journal of Tropical Medicine and Hygiene). He was invited to write an editorial for the Journal of Hepatology on the emerging issues of the hepatitis E virus.

Meng recently gave an invited lecture on xenozoonotic risk of swine hepatitis E virus at the Xenotransplantation Workshop in Minneapolis, MN, an invited talk on virus xenozoonosis at the IBC's Biological Safety and Products 2000 Conference in Washington DC, and invited seminars at PPL Therapeutics, Inc. and Fralin Biotech Center on swine hepatitis E virus. Meng was a co-author of seven presentations at recent national meetings on swine hepatitis E virus and porcine reproductive and respiratory syndrome virus (three at the 80th Conference of Research Workers in Animal Diseases, Chicago, IL, three at American Society for Virology 18th Annual Meeting, Amherst, MA, and one at the 2000 Annual Meeting of American Association of Swine Practitioner, Indianapolis, IN). One of Meng's graduate students, Martijn Fenaux, won the second place award in basic sciences at the College's 12th Annual Research Symposium.

Dr. Marion Ehrich, professor, Department of Biomedical Sciences and Pathobiology, has been accepted as a Fellow of the Academy of Toxicological Sciences. Established in 1981 to honor and certify toxicologists who have achieved peer recognition, the academy includes 130 fellows from 12 different countries.

Dr. Bernard Feldman, professor, Department of Biomedical Sciences and Pathobiology, served as senior editor of the Fifth Edition of Schalm's

Veterinary Hematology, published by Lippincott, Williams and Wilkins. This classic text has been and is the definitive veterinary hematology text for the past 40 years. It was last published 15 years ago. Published in late June 2000, the new edition has 1400 pages, over 500 illustrations, 192 chapters, 222 authors and includes over 100 clinical case descriptions.

Dr. Marie Suthers-McCabe, extension human/companion animal interaction specialist, recently presented "Safe Pets program for Domestic Violence" at the Action Ohio Domestic Violence Research Symposium in Columbus. She was also a keynote presenter at the "Horse Trailer Emergency Rescue" seminar for emergency and rescue personnel, veterinarians, veterinary technicians, horse owners and horse carriers which was sponsored by the Maryland Fire and Rescue Institute at the Maryland State Fair Grounds in Timonium. She also made a presentation entitled "Beneficial Effects of Animal Companionship in Human Health and Well-being" at a meeting of the Fredericksburg Veterinary Medical Association. Suthers-McCabe also made a presentation on "The Link Between Violence to People and Cruelty to Animals" at a meeting sponsored by the Richmond SPCA in conjunction with the Prevent Child Abuse Virginia Conference in Richmond. She also presented "A holistic Approach to Humane Education: Animals in the Community" during the "Safe Pets" program of the 2nd Annual Humane Education Seminar held at the University of Illinois. She also made several presentations on the human-animal bond and the use of birds as therapy animals in long-term care centers at the annual conference of the Mid-Atlantic States Association of Avian Veterinarians in Williamsburg. She also made a presentation entitled "Human Animal Bond: The Challenge of Evacuation Compliance and Facing Pet Loss" at the National Disaster Medical System 2000 Conference in Las Vegas. She also made two presentations on the link between cruelty to animals and interpersonal violence at a program sponsored by the Washington County Animal Defense League in Abingdon. She also made a presentation on "Pets and Primary Care" at an interdepartmental primary care conference entitled "The Impact of Companion Animals on Patient Well-being" sponsored by the MCV-VCU in Richmond.

Dr. W. Edward Monroe, professor, Department of Small Animal Clinical Sciences, presented lectures on Cushing's Disease, diabetes, feline hyperthyroidism and other topics during a meeting of the Virginia Academy of Small Animal Medicine in Portsmouth, Virginia. Monroe also made a presentation entitled "Insulin Treatment of Canine Diabetes Mellitus" at the American College of Veterinary Internal Medicine's annual Forum in Seattle.

Dr. Larry Freeman, associate professor, Department of Biomedical Sciences and Pathobiology, served as program chair for the annual meeting of the American Association of Veterinary Anatomists in San Diego, California. He also presented a paper entitled "Double cranial vena cava in a horse" at the meeting, which was held in conjunction with the annual convention of the American Association of Anatomists/Federation of American Societies of Experimental Biology.

Dr. Peter Eyre, dean, has made a series of presentations before varying groups around the nation regarding the strategic responses that academic veterinary medicine may mount in response to challenges outlined in the KPMG MegaStudy. Eyre made presentations before the annual meeting of the Association of Veterinary Advancement Professionals in Salt Lake City and during an economic symposium sponsored by the American Veterinary Medical Association during their annual meeting in Salt Lake City. Eyre also made similar presentations during the AVMA's Annual Leadership Conference in Chicago, during a meeting of the South Carolina Veterinary Medical Association in Charleston, at the North Carolina State University College of Veterinary Medicine in Raleigh, during the SAVMA 2000 Symposium in Blacksburg, and at the University of Illinois.



Development Report from the Blacksburg Campus

by E. Frank Pearsall, II – DVM '84

It has been another great year for the University and for our College. We continue to be blessed with loyal donors who give year after year and with new ones joining the college family to advance our mission with their gifts of time and resources. To say we are thankful is a tremendous understatement. As reported by the university, the Blacksburg campus experienced a 54% increase over last year with \$1,423,898 and the Equine Medical Center a four-fold increase with \$2.4 million in funds received. When we add funds pledged, it gets even better: \$3,035,466 for the Blacksburg Campus and \$2,437,353 for the EMC for a total of \$5,472,819. And this still does not include revocable gifts, such as wills. So you have been generous once again. Thank you!

As you have no doubt heard, our new President, Dr. Charles Steger, has set a goal for the university to move into the top 30 research universities in America by the year 2010. We can do that, but it will take some work. Part of that will be a major campaign beginning in 2003. Complementing that goal Dean Eyre has interpreted in his article in this issue what that means for us. We will move into the top 10 veterinary colleges in America by the same date. We can do that too. What will we have to change to make it possible? - continue doing what we do well, embrace new opportunities, and expand our circle of friends.

To address the latter, Jeff Douglas, our Public Relations Director, and I will develop ways to open communication with the animal lovers that we know about and may have communicated with at one time, but with whom we have not maintained any kind of dialogue. The two largest groups are our former Teaching Hospital clients and those who have participated in the Veterinary Memorial Fund program. But we know that these are not the only constituencies that we need to address. If you know of a group or of individuals that would be interested in knowing more about our college, please let me know. Our goal is to identify our friends and begin to develop those relationships. As we are successful at that, those who want to be supporters financially will step forward. We are fortunate that there is no shortage of animal lovers, nor any scarcity of funds. It is only a process of developing relationships, and from them every other opportunity will evolve. If you have suggestions, please let me know by calling 540-231-4259 or through email at pearsall@vt.edu. Thank you for your partnership with us in the exciting move to the next tier of excellence for the college serving our two states.

Gifts of \$10,000 or More Received or Pledged July 1, 1999 - June 30, 2000

Ms. Dorothy A. Metcalf has made an extremely generous pledge of \$2,000,000 over the next 10 years to advance two areas of critical importance in the growth of leadership for the college. Half will be used to support the Dorothy A. and Richard G. Metcalf Professorship of Informatics and half will support the like named Human-Animal Interaction Fund. These two areas will be of increasing importance to the profession over the next decade and beyond. The efforts and individuals supported now will help define these areas of the profession in the future. We thank Ms. Metcalf for the \$450,000 already received to accelerate this growth.

Dr. JoAnne S. O'Brien, one of the first female veterinarians to practice in the District of Columbia and an accomplished dog breeder and judge, has established two life-income gifts with the college to support Canine and Feline Theriogenology. Dr. O'Brien was first a client of Dr. Beverly Purswell's and was impressed with her expertise and with the college supporting the first female faculty member to be president of the Virginia Veterinary Medical Association. Dr. O'Brien is also active in assisting the college in its efforts to develop a closer relationship for admissions with the District.

Mr. Richard D. Robertson has continued to add to the Roseanne Robertson Memorial Fund towards his goal of making our Ophthalmology Section among the tops in the country with gifts of \$50,000 and matches from Philip Morris Companies, Inc. of

\$26,000. His total giving with matches for this purpose now totals \$122,477 as a result of the special care by Dr. Phil Pickett and all those in his section and the whole Teaching Hospital. We are excited to be working with Dick to raise the level of service and teaching in ophthalmology.

Mr. and Mrs. Cecil and Nancy Pruitt have created The Serendipity Animal Sanctuary, Inc. Scholarship Endowment with a gift of \$97,079 to provide scholarships to veterinary students "who are pursuing a clerkship, internship, or research in the medicine, treatment, public policy, or program approaches to the pet over-population issue." They are great animal lovers who devote significant time and resources to helping animals. We appreciate their support to help students make lasting contributions to address this problem.

Ms. Carolyn Adele Russell has made a pledge of at least \$50,000 with gifts of \$5000 a year for the next ten years or more and a bequest provision to support a neurology fellowship for post-DVM students, with a preference for neurosurgery. Ms. Russell has a background in nursing and was especially pleased with the diligence, skill, and compassion of Dr. Otto Lanz as he helped her dog Ginger return to normal activity through back surgery. Her gifts will assure talented students have assistance in developing their expertise in this area.

Mrs. Francis Farr Young has once again made an early distribution of the \$2,000,000 estate provision made by her and her late husband, Dr. Tyler Young, by giving a second \$50,000 towards their endowed scholarship fund. Both Dr. and Mrs. Young have had extensive careers in veterinary medicine as practice owners, as presidents of the Southern Veterinary Medical Association and its Auxiliary respectively, and as supporters of the veterinary colleges at Auburn and Virginia Tech. They have exemplified the best in the profession by their life-long dedication to veterinary medicine as a team. We are honored to be a part of their efforts to advance the profession.

The W. R. Winslow Residuary Trust has not only continued its support of the named scholarship endowment which supports students without discrimination from Maryland, Virginia, the District, or North Carolina enrolled at the College, but also has increased its support through diligent stewardship and management of the Trust. We are both grateful to Mr. Winslow and to those carrying out his wishes at First Union. Giving this year was \$38,931 for a cumulative total of \$696,111 to our college and the College of Agriculture and Life Sciences.

Frank A. and Helen D. Spurr, Jr. have generously continued their support of canine and feline research through assistance to students in the Summer Internship program with an additional gift of \$37,197, which includes a \$10,000 match from the Bell Atlantic Foundation. Their total support with matches for their endowment is \$125,500, not counting planned giving. We are appreciative

of their generosity and active interest in the affairs of the college, as well as Bell Atlantic Foundation's support of their commitment.

Anonymous donors in Richmond have made a charitable lead trust which benefits the college and its research efforts on behalf of dogs and cats. The donors have kindly made it possible to use the \$36,575 donated so far as seed money for an educational research program. Under the guidance of Dr. Bob Martin, our Hospital Director, the college is attempting to create a new, higher certification opportunity for veterinary technicians to recognize and support these valued members of the profession. We anticipate that this may become a national model and appreciate the opportunity to seek new answers for an increasingly complex profession.

The Ralston Purina Company has generously provided \$30,000 to the college to partially fund a nutrition technician in the Teaching Hospital for its Veterinary Nutrition Support Service, while also continuing its annual scholarship support of \$1000. Our nutrition program is now one of the tops, if not the tops, in the country due in part to support from corporations in the animal feed business. We appreciate Ralston Purina for being among those supporters.

The Virginia Kennel Club has pledged \$30,000 over the next six years to create an annual scholarship award of \$500 and an endowment to perpetuate support of veterinary students with an interest in pure bred dogs. We appreciate the partnership which this represents between owners, breeders, dog lovers, and the profession dedicated to serving them and their animals. We are honored to be a part of it.

Mr. and Mrs. W. Stuart Johnson, great supporters of the university, have made a gift of \$26,151 to establish the Freda B. and W. Stuart Johnson Animal Compassion Endowment to "provide assistance to owners coming to the VMRCVM Teaching Hospital so that pets which can be reasonably helped to recover and live out a full life are given that chance and not euthanized due solely to financial constraints." We thank them for their gift to the College and for giving us the opportunity to give the gift of life to pets and their owners.

James M. Stevens has for the 6th year in a row given \$25,000 to his named scholarship endowment to assist Virginia residents in good standing in

the DVM program with financial need. Jim is a loyal Hokie, a generous supporter of programs within our college and across the university, and he and his wife are great animal lovers and servers. They do not just admire pets from afar, but roll up their sleeves and nurture them first hand. We appreciate their dedication to the university, to the college, and to animals.

Dr. and Mrs. John G. Salsbury have again added to their endowment named for his father, Dr. Joseph E. Salsbury, a pioneer in the production and use of vaccines for animals, especially in the poultry industry, with a gift of \$20,000. Dr. Salsbury has kindly allowed us to diversify his endowment's use to not only support fourth year DVM students who "demonstrate superior scholarship, initiative, perseverance, potential for leadership, and financial need", but also a multi-year fellowship to support students in the Government and Corporate Veterinary Medicine track preparing for a career serving the poultry industry. The Salsbury's giving now totals \$233,000 and their endowment has grown to \$475,720.

The Virginia Federation of Dog Clubs and Breeders has given \$12,100 during this time period which covers two years' support of a \$1500 scholarship to a member of each class who is "financially deserving Virginia student based on academic merit, financial need, and an interest in purebred dogs." The Federation has been an important ally of the College dating back to its members' phone and letter campaign to get state government release of funds for the creation of the college. Their loyal support now totals \$156,650.

The Marion Bradley Via Memorial Foundation has again provided \$12,000 to support the Peter L. Via Scholarship which provides major support for four years for an individual student showing academic achievement and overall leadership potential as recommended by the Dean. It is an honor to be able to make such a significant award annually.

Dear Thagy...



Thagy, short for Pythagoras – his Mom is a Math Professor - lives with Steve Clark, Director of Planned Giving at Virginia Tech. In addition to completing basic obedience class, he has acquired some experience in various estate planning issues.

Dear Thagy,

I want to make a gift to help the Virginia-Maryland Regional College of Veterinary Medicine, but I am concerned that I may need my assets to pay for future health care costs. Is there a way that I still could support the College?

Willing in Williamsburg

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Dear Willing,

Absolutely! One of the easiest ways to make a big difference at the College is through your Will. By making a gift through your Will, you can provide significant support that you might not otherwise be able to provide during your lifetime. More importantly, you continue to have access to your assets. Thus, you would continue to be able to meet whatever expenses may arise. For those with estates subject to estate taxes, such a gift will have the added benefit of reducing (or even eliminating) such taxes.

Larger gifts (currently \$25,000 or more) can allow you to create an endowment in the College. An endowment is a fund that provides perpetual financial support for scholarships, professorships, research, and other needs at the College. Any gifts made through your Will should be directed to the Virginia Tech Foundation, Inc.

There are also some other ways that you can make a gift while still providing for future health care costs. They involve gifts through retirement accounts, life insurance, and “life income gifts”—gifts that can pay you money back. To learn more about how you can make such a gift, call Dr. Frank Pearsall at the College – 540-231-4259.

Well, I’ve got to go bury some bones. Talk to you next time. Arf!

Thagy.

Dear Thagy,

I’m confused. I hear a lot of people talking about how a certain amount of the assets my wife and I own will be protected from estate taxes. However, I keep hearing different amounts. How much is it? And what do I have to do to take advantage of it?

Curious in Culpeper

.....

Dear Curious,

You are referring to an amount shielded by the “unified credit” (as the tax code calls it). This credit effectively shields a certain amount of your estate from estate taxes. If your estate doesn’t exceed this amount, it will owe no estate taxes.

For a number of years, the amount shielded by the credit was \$600,000. Since the credit had not been raised in a number of years, a law was enacted several years ago to gradually raise it. In 2000 and 2001 the credit will shield \$675,000 in assets. This amount will rise to \$1,000,000 by 2006.

A person doesn’t have to do anything to take advantage of the unified credit—it automatically applies. However, married couples are often advised to do some special estate planning to take advantage of both spouses’ credits. While couples can generally pass assets to spouses free of estate taxes, this provision is not enough to get the most benefit out of both spouses’ credit. For maximum tax savings, special trusts called “credit shelter trusts” (also known as “A-B” trusts or “bypass trusts”) would need to be created and funded.

ALUMNI NEWS



Lynn Young

Dozens of guests turned out to enjoy the college's alumni reception on the College Park campus.



Dear Alumni Society Member:

My first six months in my new position have certainly flown by and I have enjoyed every moment of it! I have met many wonderful people affiliated with this excellent college and am truly impressed by both their professionalism and warm hospitality.

During my time here, I have been juggling ideas and events for the three colleges with which I am affiliated —the Colleges of Agriculture and Life Sciences, Natural Resources, and Veterinary Medicine. With such a large number of resources available to me through each program, I am confident that each college will benefit greatly. The College of Veterinary Medicine can look forward to the following ways in which Alumni Association has been actively working on their behalf:

I recently attended the 25th annual National Agriculture Alumni and Development Association (NAADA) conference at Purdue University to learn more from other institutions of programming for alumni.

Trina Murphy was recently hired to assist with events and programming for the Colleges of Veterinary Medicine and Natural Resources. Trina is a vet med student, expected to graduate in 2002.

I recently took part in the week-long orientation for first year students. Hopefully, this will enable the students to have a better understanding of how the Alumni Association can help them as students before they become alums.

The College of Veterinary Medicine recently held its first off-campus regional alumni reception at the College Park campus in Maryland on May 21. Dean Eyre, Will Hueston, Fred Fregin, Grant Turnwald, Bob Martin, and about 35 other alumni and friends attended.

The annual VMRCVM Alumni Reunion will be held on September 23. The Saturday night dinner will be catered and held at a shelter at the Caboose Park (Hand-in-Hand) playground in Blacksburg. Children will be cared for during the event at the playground and will be supervised by members of the Student Alumni Associates (SAA) from the Virginia Tech Alumni Association.

The first Alumni Society board meeting, led by President Julie Holland '89, will also take place during this weekend.

Many new events are planned for alumni beginning in October! On October 14, the annual Morven Park Steeplechase Races will include an alumni reception. Also, an alumni pre-game tailgate will be held at the University of Maryland homecoming football game on October 21! Look for registration materials in late August or early September.

I look forward to meeting you at one or all of the events scheduled.

Sincerely,

Lynn Young
Alumni Coordinator

Alumni Society Calendar of Events:

Sept. 22-23, 2000	VVMA and VMRCVM Alumni Reunion, Blacksburg
Oct. 14, 2000	Morven Park Steeplechase Races and Alumni Reception, Leesburg
Oct. 21, 2000	University of MD Homecoming Football Game and Alumni pre-game tailgate, College Park
Jan. 13-17, 2001	North American Veterinary Conference, Orlando
Feb. 1-4, 2001	VVMA, Williamsburg
Mar. 1-3, 2001	DC Academy, NOVA (place not yet determined)

NEWS FROM THE LEESBURG CAMPUS

Virginia Gold Cup 2000

Dr. G. Frederick Fregin, along with Virginia Tech President Charles W. Steger and his son David, braved the 90-degree weather at the Equine Medical Center's annual hospitality tent at the Virginia Gold Cup steeplechase in The Plains, Virginia. More than 150 supporters and friends of the EMC joined the center's faculty members and President Steger to watch the day's races. Each year, Dr. Fregin serves as the veterinary medicine coordinator for this event, which attracts a crowd of more than 50,000 spectators.



Photo by Richard Frasier

EMC's Caring Volunteers Conclude "Foal Watch 2000"

By Ann Nadjar

More than 80 people volunteered and assisted the Equine Medical Center during a busy 2000 foaling season. Between January and June, volunteers donated time and energy to aid in the care of more than 50 premature or critically ill foals brought to the EMC for treatment.

Throughout the year, volunteers perform a variety of helpful duties, depending upon their interests and skills. People assist in filing records, entering data, and supporting the staff with special events and tours. Naturally, many of the volunteers are experienced in handling horses and want to work with the animals, and so they are kept busiest during the late winter and spring with the "mat-babies" in need of constant monitor-

ing. During foal season, volunteers sit with the sick foals for four-hour shifts at all hours. During their shift they monitor I.V. and oxygen lines, and assist in hand feeding and grooming the foals as directed by the veterinarians and nurses.

The volunteer program was initiated in 1992 by Shelley Duke, a horse owner, client, and active supporter of the center who now chairs the EMC's Council. Since 1997, Maria Wakefield has served as the volunteer coordinator. Maria is a 1987 graduate of Virginia Tech who worked as a veterinary technician at the EMC for six years before taking on her new job.

Maria's background and experience have been extremely valuable in this new role because of her working

knowledge of how the volunteers can best assist the clinicians. Maria also takes the time to help educate the volunteers so they can gain even more from their experiences. "Volunteers who care about our program and our patients make the difference at the EMC," says Maria. "When a horse is sick and feels terrible, the additional grooming and attention given by the volunteers provides the extra comfort beyond what the doctors, nurses and grooms can do when they are taking care of many patients."

One busy volunteer, Sandy Danielson, works in Washington DC, trains her horse in Middleburg and makes time to volunteer at the EMC throughout the year. She works four hours a week during foal season and beyond. "Working with the foal watch program is an opportunity to contribute and learn at the same time," says Sandy. "If I can provide even a little bit of comfort and assistance to the recovery of these lovely animals, I am thankful."

The EMC's volunteer program has also served some as their first experience with Virginia Tech. In the past three years, five volunteers have gone on to college at Virginia Tech and five others have entered the VMRCVM.



EMC volunteer Sandy Danielson comforts a sick patient. Photo by Jack Strawther.

New Isolation Unit Project Getting Underway at EMC

Planning and engineering work is underway on the construction of a new isolation unit at the Equine Medical Center. Lead architects for the project are from Mosely, Harris and McClintock of Virginia Beach. Gralla Architects, specialists in equine and equestrian facilities, will act as a consultant.

A recent bequest from the estate of the late Paul Mellon for \$1 million, along with smaller private contributions and support, will cover construction costs, equipping the new building and starting an endowment for the facility. Funding from the state's pari-mutuel racing industry earmarked for Virginia Tech programs designed to support the horse industry were used to support the feasibility study.

A stable source of funding to staff the unit, which is part of the Emergency Care service, is still needed. The new Isolation Facility is important for the college's accreditation review this fall.

The finished unit will contain eight isolation stalls with access from a center aisle and outside covered walkways. The building also will contain rooms for equipment, feed, hay and bedding storage, and sterilization. To facilitate the needs of isolated patients, the stalls are designed with specialized drains and wash stations.

"Gralla has designed for us an isolation unit that will be spacious and filled with light," said Dr. G. Frederick Fregin, the Jean Ellen duPont Shehan Professor and Director of the Center. "Between the architects' and faculty members' ideas, we can look forward to a unit that will be practical, pleasant to be in, and within a budget that still leaves funds for the unit's endowment."

"Mr. Mellon was a fine gentleman and generous philanthropist who has given a great deal to the equine community," said Fregin. "We are deeply appreciative of Mr. Mellon's support of the EMC during his lifetime and now of the legacy he has left for us through his estate."

Bequest from Paul Mellon Fosters His Commitment to Equine Welfare

Since its founding, the Equine Medical Center has benefited through the munificent patronage of the late Paul Mellon, culminating recently in a discretionary bequest of \$1 million. Dr. Fred Fregin, the Director, suggested that the bequest be applied to the new Isolation Unit now in the planning stage. This will provide for not only a substantial part of the construction cost and equipment but also will enable the EMC to reserve a portion of the bequest to endow maintenance of the structure.

For most of his life Mr. Mellon had keen interests in horses and participated in fox hunting and steeplechasing. His paramount interest was in Thoroughbred racing, both in America and England, and he maintained a large stable at his beloved Rokeby near Upperville, Virginia. He is the only breeder and owner to win both the American and English Derbies as well as the Prix de L'arc de Triomphe in France.

Because of his life-long commitment to the welfare of the horse, Mr. Mellon supported several veterinary colleges and agricultural research programs, including the Middleburg Agricultural Research & Extension Center which he founded through a gift of a 420-acre farm to Virginia Tech 51 years ago. He often was receptive to projects that otherwise would not attract private funding such as the new morgue for the University of London's Royal Veterinary College. At the Equine Medical Center he participated by equipping the present building in concert with its founder, the late Marion duPont Scott. Mr. Mellon continued to make grants in his lifetime to the EMC for new equipment and research.

In reflecting on his career as a horseman, including winning the Old Dominion 100 mile endurance ride three years in a row on Christmas Goose, Mr. Mellon once wrote a poem containing these famous and heartfelt lines:

***"I'll thank the Lord the life I've led
Was always near a Thoroughbred."***

Treadmill Facility to Open Early 2001

Thanks to the generous contributions and support of many friends, the Marion duPont Scott Equine Medical Center will soon begin offering clients state of the art diagnostic services

through its new treadmill facility.

The climate-controlled treadmill facility will provide EMC veterinarians with clinical information important in diagnosing problems associated with

heart, lung, muscle, respiratory and gait functions under high speed, working conditions.

A Stratton high-speed treadmill, capable of simulating speeds of up to 55 miles per hour and elevating its platform 10 degrees in 20 seconds, has been ordered and will be installed in a specially renovated 2500 square-foot facility on the campus of the EMC.

EMC officials chose to renovate an existing building as opposed to constructing a new one in order to make the new service available as soon as possible. Work on the renovation is expected to be complete in early 2001

The building will contain two holding stalls, a wash stall and stocks, as well as an equipment room.

The new treadmill facility will provide EMC clinicians with another advanced tool for diagnosing equine health problems associated with the circulatory, respiratory, and musculoskeletal systems.



New Faculty and Residents

The EMC's faculty and staff welcomed three additional doctors in July.

Dr. David Adam-Castrillo has joined the Equine Medical Center as a resident in equine surgery. Adam-Castrillo received his BS degree from Suffolk University, Boston in 1994. He received his VMD from the University of Pennsylvania School of Veterinary Medicine in 1998. He also completed a Large Animal Medicine and Surgery Clinical Fellowship at Oregon State University, College of Veterinary Medicine from 1999-2000.

Dr. Julia Georgesen has joined the EMC as an intern in equine medicine and surgery. She received her DVM from Purdue University School of Veterinary Medicine in May 2000.

Dr. Christopher Meyer joined the EMC as an intern in equine medicine and surgery. Meyer received his DVM from North Carolina State University College of Veterinary Medicine in May 2000.

Computed Radiography Service coming To EMC

The Equine Medical Center will soon acquire a Fuji computed radiography system that will enable clinicians to electronically capture extremely detailed radiographs and then output and transport them in a variety of digital formats.

Replacing the existing xeroradiography system, the new computed system is expected to provide the detail of conventional xeroradiography with the storage and networking possibilities of the electronic age.

A single computed radiograph enables clinicians to evaluate the digital image for bone detail or soft tissue detail. The image may also be enlarged and enhanced to reveal problems that cannot be identified in standard film x-rays.

Digital images are easily archived and stored with patient records and may be sent electronically anywhere in the world. This new technology is expected to be brought on-line at the Equine Medical Center in Fall 2000, thanks to the generous support of friends of the EMC.

Tuesday Talks Series Slated for 2000-2001

Tuesday Talks, a community education series annually hosted by the Equine Medical Center, will offer four sessions this season. The informal lecture series began four years ago in response to the equine community's enthusiastic request for information on equine health and medical issues.

At each Tuesday evening session, horse owners, trainers, managers and veterinarians are invited to gather at the Leesburg campus for presentations on relevant topics in veterinary medicine. Presentations are made by faculty members from the Leesburg and Blacksburg campuses.

Topics for the 1999 series included "Corrective Shoeing and Lameness Problems," "Preparing Your Horse for Anesthesia," "Feeding the Equine Athlete," and "Laser Treatment for Upper Airway Problems." Topics are taken from the faculty and suggestions from members of the equine community who attend the lectures.

Equine Medical Center Names in the News

Dr. Michael Murray, Adelaide C. Riggs Professor of Equine Medicine, Marion duPont Scott Equine Medical Center, recently presented four lectures on equine gastric ulcer syndrome for the Michigan Veterinary Medical Association. In February he presented a seminar sponsored by Merial Ltd. on equine gastric ulcer syndrome to horse owners and veterinarians at the Wellington Horse Festival, West Palm Beach, FL. Murray also presented "Preliminary Study on the Effect of Topical Administration of I-NAME on the Gastric Mucosa of the Antrum in Ponies" and gave a specialist lecture on equine gastric physiology at the American College of Veterinary Internal Medicine's annual ACVIM Forum in Seattle, Washington. He also presented four lectures on equine gastric ulcer syndrome for the Georgia Veterinary Medical Association and conducted gastroscopy clinics at Laurel, Pimlico, and Bowie Racetracks in Maryland. Those were sponsored by Merial Ltd.

Dr. Kenneth E. Sullins, associate professor, Marion duPont Scott Equine Medical Center, and **Dr. Douglass B. Berry II**, resident, have received a grant from the Virginia Horse Industry Board on "Topical Antimicrobial Effects on Equine Wound Healing." Sullins recently presented a lecture entitled "Noninvasive Laser Lithotripsy in Geldings" at a meeting of the American Society for Lasers in Medicine and Surgery in Reno, Nevada. Sullins also conducted a lecture and instructional laboratory on "Laser Surgery in Horses" at the annual meeting of the American Veterinary Medical Association in Salt Lake City, Utah. In September, he served as program chairman and presented a laser surgery course for the American College of Veterinary Surgeons annual ACVS Symposium in Crystal City/Leesburg, VA.

Dr. Nathaniel A. White II, Theodora Ayer Randolph Professor of Surgery, has been elected to the Board of Directors of the American Association of Equine Practitioners. White has recently been awarded two research grants from equine organizations. "Effect of Diet and Fluid Administration on Colonic Ingesta" was awarded by the

Grayson Jockey Club Research Foundation and "Changes in the Plasma Levels of Atrial Natriuretic Peptide in Response to Enteral and Intravenous Fluid Therapy" was awarded by the American Quarter Horse Association. Dr. White also lectured at the Washington State University College of Veterinary Medicine's Annual Conference. Those lectures included "Intestinal Injury, Diagnosis and Decision for Surgery," "Motility Disturbances," "Shock and Endotoxemia," "Epidemiology of Colic," and "Medical Treatment of Colic." White also presented "Diagnosis and Surgery Decision," "Intestinal Injury," "Medical Treatment for Colic," and "Epidemiology of Colic" at the Oregon Veterinary Medical Association's annual conference.

NEWS FROM THE MARYLAND CAMPUS

Hammer Building Consensus, Vision



AVMA District 2 Delegate Dr. Greg Hammer of Dover, Delaware has moved decisively to create a greater sense of community among the many state veterinary medical associations within his jurisdiction.

In an effort to promote mutual understanding and unified vision, he has organized several meetings which have joined state VMA officials and other veterinary leaders in a forum that looks at common issues and shared concerns.

Almost 40 people from throughout the Mid-Atlantic States met in early March at the Gudelsky Center at College Park for the first meeting, and another was held in conjunction with the annual meeting of the Maryland Veterinary Medical Association. A third meeting is tentatively scheduled for this Fall in College Park.

Salmonella Risk Reduction at the Farm End of the Food Chain

University of Maryland extension poultry veterinarians Dr. Ed Mallinson (emeriti) and Dr. Nathaniel Tablante say recent research suggests that some of the same techniques used to minimize salmonella problems at home and in commercial kitchens may be effective in reducing the risks in production houses.

Low-level introductions of *Salmonella* cells are essentially inevitable, say Mallinson and Tablante; however, the risks of such introductions are largely neutralized

when the cells introduced are either killed or inactivated and kept from multiplying.

With funding support from the U.S. Poultry and Egg Association, data has recently been obtained which suggests that minimizing water spillage and leakage and using gently drying

uniform patterns of airflow in close proximity to litter/manure surfaces could be major features of a HACCP program for poultry production.

continued next page

Dr. Edward T. Mallinson (right), extension poultry veterinarian emeritus, accepts a commendation from Andrew Rohrer (left) senior coordinator of the National Poultry Improvement Plan (USDA sponsored). Mallinson was recognized for his outstanding efforts and research in the area of Salmonella isolation and identification from poultry and poultry environments.



Mallinson and Nablante stress the new perspective does not diminish the importance of other established control practices such as good hatchery sanitation, properly palletized feeds, fly and rodent control.

But the new perspective does suggest that just as proper food preparation and handling procedures can neutralize those occasional introductions of contamination at the kitchen end of the food safety continuum, sound litter/manure management strategies that deter the proliferation of salmonella organisms are vitally important farm management practices.

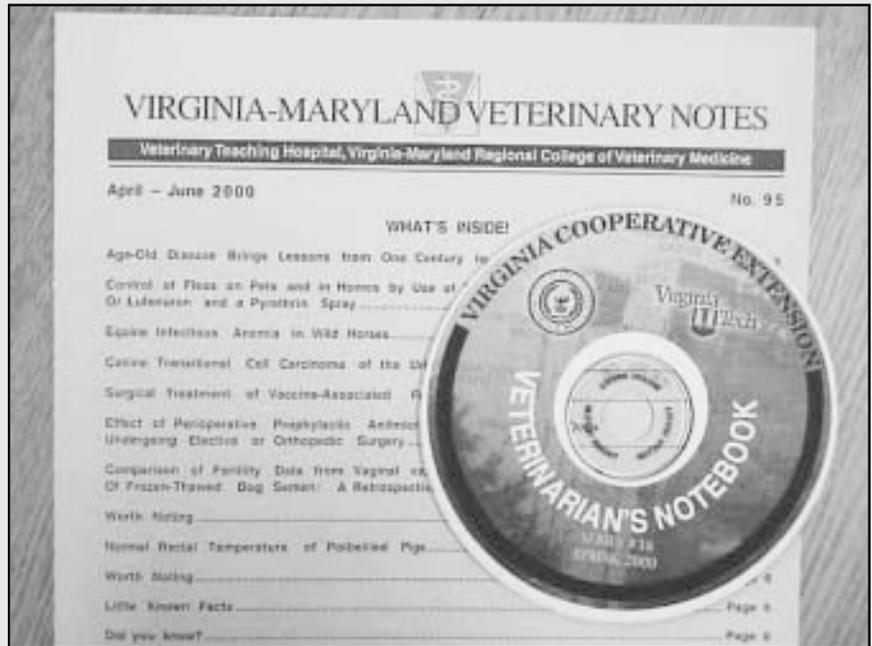
With funding support from the U.S. Poultry and Egg Association, data has recently been obtained which suggests that minimizing water spillage and leakage and using gently drying uniform patterns of airflow in close proximity to litter/manure surfaces could be major features of a HACCP program for poultry production.

For more information about the work, please contact Drs. Mallinson or Tablante on the Maryland Campus at 1-301-935-6083.

Maryland Center for Aquatic Pathology Moves to College Park

The Center for Aquatic Pathology formerly located at the University of Maryland College of Medicine in Baltimore has been relocated to the Avrum Gudelsky Veterinary Center, according to College Park Associate Dean Dr. Will Hueston.

A \$160,000 renovation at the Gudelsky Center has provided quarters for the new center, which is under the leadership of Dr. Andy Kane. Kane, his graduate students and technical support staff have relocated and are resuming work in aquaculture and environmental health supported by about \$600,000 in U.S. Army, Environmental Protection Agency, and other funding.



Programmatic advancements continue to enhance the "regional" nature of the college, which is jointly operated by the land-grant universities of Virginia Tech in Blacksburg and the University of Maryland at College Park. Two recent examples involve the renaming of an "extension" veterinary publication to better reflect the college's constituencies, and an expanded distribution network for "Veterinarian's Notebook." The syndicated radio program, which features college veterinarians discussing a variety of animal health topics, is now being shared with radio stations throughout the state of Maryland.

ACVPM Prep Course Offered for Prospective Diplomates Big Success

An innovative preparatory course offered through the College's Center for Government and Corporate Veterinary Medicine (CGCVM) for veterinary epidemiologists seeking diplomate status in the American College of Veterinary Preventive Medicine (ACVPM) appears to have paid off for those that participated.

Thirteen of the 47 candidates who sat the examination passed it, according to CGCVM Associate Director Dr. Bettye Walters, and nine of those who passed participated in the prep course.

The course was the brainchild of Walters and Maryland Campus Associate Dean Dr. Will Hueston, who recognized the need for the course in the midst of growing demand for trained and board certified veterinary epidemiologists.

Eighteen individuals enrolled in the course, which was presented

through a half-dozen four-hour sessions at the Avrum Gudelsky Veterinary Center. The course was digitally simulcast to the Centers for Disease Control in Atlanta as well as a major health sciences center in San Antonio, Texas.

About 20 board certified veterinary epidemiologists made presentations as part of the course, which was also video-taped and made available for those who could not participate live, Walters said.

Participants said the prep course was of exceptional value, and have established an e-group to stay in touch on topical issues.

The course will be offered again next year.

Epidemiology "Grand Rounds" Promoting "One Medicine"

Epidemiologists from the College's College Park Campus are meeting regularly with epidemiologists at the University of Maryland College of Medicine's Department of Preventive Medicine through a new epidemiology "Grand Rounds" program.

"We see this as a great way to stimulate exchange" that really promotes the "one-medicine" concept, said Maryland Campus Associate Dean Dr. Will Hueston.

A number of public health problems facing society today require medical and veterinary medical expertise and perspective, he said, including West Nile Virus, anti-microbial resistance, food safety, rabies and others.

About ten people from each school are meeting during the forums, Hueston said, which generally include presentations about ongoing projects and topics of concern.

The goal of the program is to help foster a unified approach to addressing public health problems, examine current trends in epidemiology and identify opportunities for collaboration, Hueston said.

The inaugural meeting was held at the Gudelsky Center in the Spring, and the next meeting is scheduled for September in Baltimore.

Executive Fellowship Program Shaping up for 2000-2001 Program

The Executive Fellowship Program in Science, Politics, and Animal Health Policy has enrolled its second class of Fellows and will meet this October at College Park.

The 24 Fellows include animal health professionals from government, industry and academia and hail from five different countries, including the United States, Canada, Mexico, Switzerland and the Netherlands.

The program was founded to help animal health professionals more effectively participate in the public policy process, according to College Park Associate Dean Dr. Will Hueston, who worked with Michigan State

University College of Veterinary Medicine Dr. Lonnie King to create the program.

The Fellows will participate in three four-day sessions, Hueston said, with meetings scheduled for the Washington D.C. area, Michigan State in East Lansing, and an international venue that may be in either Mexico or Paris.

The October meeting scheduled for early October will include an innovative program on risk communication at the "Newseum" in Arlington. The Newseum is a national museum for journalism and communications.

Communications Official Appointed on Maryland Campus

Valerie McAlpin has been appointed associate dean for communications and information technology in the University of Maryland's College of Agriculture and Natural Resources.

The University of Maryland's CANR provides the administrative home for the VMRCVM's College Park Campus.

McAlpin is responsible for public relations and outreach, as well as distance education, for the college.

Maryland State Fair Presents Scholarships

Maryland State Fair officials were so pleased with the success of a new program presented by the College that they decided to do something in kind.

That reciprocal gesture has come in the form of \$3,000 in scholarship support for Maryland students entering in the college's Class of 2004. Three students will each receive \$1,000 in support during their first year of the DVM program as a result of the gift.

"They wanted to do something in response to the overwhelming success of the birthing center," said Dr. Will Hueston, associate dean of the Maryland Campus.

Under the leadership of extension veterinary leaders Dr. W. Dee Whitter, Blacksburg Campus, and Dr. Robert Dyer, College Park Campus, faculty and students have been presenting animal birthing exhibits at the Virginia, Maryland and Delaware State Fairs.

The exhibits have proved enormously popular with fair-goers at all three states.



VMRCVM Dean Peter Eyre presents Dr. Siba K. Samal of the College Park Campus with the 2000 Pfizer Award for Research Excellence. Pfizer presents the award annually to recognize distinguished researchers whose innovative work is advancing the frontiers of science. Samal for recognized for his work in molecular virology.

Steger:

continued from page 1

produced in conjunction with the College of Human Resources and Education, and dozens of profiles of research currently underway in veterinary college laboratories.

The VMRCVM and the university are in a good position to take advantage of shifting priorities in federal research funding, Steger said. Federal research presently accounts for about 64% of Virginia Tech's research funding. However, research funding from the National Institutes of Health, which accounts for about 53% of all federal research funding, is fairly nominal at Virginia Tech.

Terming the "Research 30" goal as "formidable" yet "achievable," Dr. Steger said he was pleased with the response he has received from university faculty since articulating the Research 30 goal. "Faculty want to make a difference," said Steger, outlining the need for more interdisciplinary collaborations at the university. "They want to be part of something exciting."

The recently funded bioinformatics initiative, which Steger described as the largest "infusion of base research support in the history of the institution" is an example of the creative new programs that must be developed to move the university ahead in the early 21st century.

Partnerships with other organizations, such as the collaborations with the University of Virginia and Carilion Health Systems in the new Carilion Biomedical Institute, are another good example of how the university must proceed toward the goal, Steger said.

On Thursday, former United Nations official Dr. David Kelly outlined UN efforts to profile and contain Iraq's biological warfare program. The UN monitoring team determined that Iraq had generated some 465,000 litres of toxic weapon materials, as well as developed rocket and bomb-based biological and chemical weapons delivery systems.

Their containment project was eventually thwarted by Iraq's successful manipulation of a power struggle coursing through the foundations of the United Nations' Security Council,



Virginia Tech President Dr. Charles Steger is presented with a College sweatshirt by VMRCVM Dean Peter Eyre following Steger's delivery of the year 2000 keynote address for the college's 12th Annual Research Symposium.

Kelly said, closing his presentation with suggestions that Iraq may have preserved remnants of the program.

Some of the common ground shared by aging people and aging pets was explored on the third day of the symposium. Department of Small Animal Clinical Sciences Professor and former Veterinary Teaching Hospital Director

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Dr. Greg Troy told registrants that 13% of the United States population was now over 65 and that the figure would double between 2010-2030.

Advancements in clinical care are helping pets lead longer lives, Troy said, noting that the oldest dog on record lived to 29 and the oldest cat lived to 34. Geriatric animals and people all suffer from heart, renal and joint disease and research underway can benefit both groups, he said.

Long term relationships between elderly people and their pets can also create some special grieving problems for older people when their pets die. "Older people tend to have older pets," said Troy. "As a result they tend to have a stronger bond."

Other highlights of the program included a presentation on cognitive dysfunction in companion animals by VMRCVM alumnus Dr. Sharon L. Campbell ('93) of the Animal Health Group at Pfizer, Inc., and more than sixty individual presentations concerning biomedical and clinical research underway in college laboratories.

Students winning awards in the Basic Sciences competition for best research project included Brandy Cowing, first place; Martijn Fenaux, second place; and Timothy LaBranche, third place. Winners in the Clinical Sciences competition included Anne Cook, first place; Dagny Leininger, second place; and John Rossmeisl, third place.

The annual symposium is designed to foster increased collaboration among researchers by generating greater awareness of the college's research activities, according to Dr. John C. Lee, associate dean for research and graduate studies. It was sponsored by the VMRCVM, the College of Human Resources and Education, the Center for Gerontology, the Center for Animal Human Relationships, Pfizer, Inc., Novartis Animal Health and Hill's Pet Nutrition.

Symposium:

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The event is the second in a series of three annual symposiums hosted by the veterinary college designed to explore the linkages between human and veterinary medicine. Entitled "The Bridge Between Veterinary Medicine and Human Health," the series was created to generate increased professional and public awareness of the therapeutic aspects of human-animal interaction, human threats posed by human-animal interaction, and public health and food safety issues related to human-animal interaction.

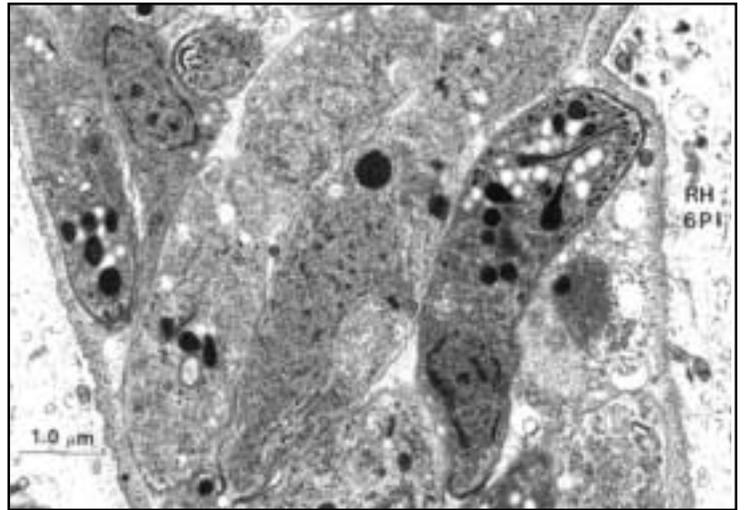
The series is sponsored by the VMRCVM, the Medical College of Virginia at Virginia Commonwealth University (MCV-VCU) and the Virginia and the Maryland Veterinary Medical Associations (VVMA and MVMA). Corporate sponsorship is being provided by Hill's Pet Products and Merial, Inc.

"Physicians and veterinarians recognize the benefits of animal companionship and both are concerned with zoonotic disease threats, food safety issues, biomedical research and the complex interdependencies between people and animals," said VMRCVM Dean Peter Eyre, "Through these symposia, we hope to create a forum in which these areas of mutual interest can be examined from a more integrated perspective."

During opening remarks, Eyre will update the group on the status of a joint academic center which is being established between the VMRCVM and MCV-VCU to examine animal-human relationships from a more systemic perspective. Dr. Marie Suthers McCabe, associate professor and extension specialist human-companion animal interaction is leading that effort.

Ten speakers from around the country will then make presentations on different aspects of the symposium topic. Jorge Guerrero, DVM, PhD, Executive Director of Veterinary Professional Services at Merial, Inc., will present "One Medicine," and Jeannie Perron, JD, DVM, an associate at the law firm of Covington and Burling in Washington, D.C., will present "Liability Issues and Problem Solving for the Veterinarian and the Physician."

This electron micrograph of a *Toxoplasma gondii* tissue cyst depicts one example of a zoonotic parasite that can cause serious harm to people. *Toxoplasma gondii* causes birth defects and mental retardation in babies when their mother becomes infected by eating these tissue cysts in under-cooked meat.



Also, Peter Schantz, VMD, PhD, Centers for Disease Control & Prevention at the National Center for Infectious Diseases in Atlanta, will present "Zoonotic Risks of Intestinal Parasites of Dogs and Cats and Strategies for Preventing Them," and Leonard Marcus, VMD, MD, Consultant in Tropical, Zoonotic and Vector-Borne Diseases for Travelers' Health and Immunization Services, will present a session on "Bite Associated Zoonosis."

During afternoon sessions, Phyllis Cassano, DVM, MA of Merial, Inc. will discuss "Zoonotic Diseases in the 21st Century and Immunocompromised Patients," Rochelle Klinger, MD, PhD, Director, Medical Psychiatry Program of MCV-VCU, will present "The Role of Companion Animals in the Psychological Health of People with HIV/AIDS," and Mark Haines, DVM, MS, Animal Program Director of the Clinical Center at National Institutes of Health, will present "Animals in the NIH Clinical Center: Service, Therapy & Risk of Zoonosis."

Also, Kevin Connelly, DO, FAAP, FACOP, Director of the Paws for Health Pet Visitation Program at MCV-VCU, will present "Children, Pets, and Pests: The Realities and Myths of Zoonotic Diseases." Finally, Marie Suthers-McCabe, DVM, associate professor of Human-Companion Animal Interaction and Director of the emerging Center for Animal Human Relationships will challenge veterinary and medical students to more fully explore this emerging discipline in the years ahead during her closing presentation.

The first in the series, which featured a presentation by Dr. Michael Blackwell, Assistant Surgeon General of the United States, was held in Fall 1999 and focused on "Beneficial Effects of Animal Companionship on Human

Health & Well-Being."

The three year series concludes in September 2001 with a seminar entitled "Educating Physicians about their Joint Responsibilities in Public Health and Food Safety." Topics scheduled for examination during that event include microbiological and chemical safety of foods of animal origin, antimicrobial drug resistance and others.

While most people think of veterinary and human medicine as distinct professions, they share a common history. The earliest known medical writings, the Kahun Papyrus, circa 1800 B.C. Egypt, described two cattle diseases, one dog disease, and an obstetrical procedure. At the time of its destruction in the fourth century A.D., the 70 volumes of the "Corpus Hippocraticum" in the Great Library of Alexandria, viewed by some as the first medical school, contained extensive information on both human and animal health.

Over the centuries, human and veterinary medicine became more specialized and evolved independently. But today, the compelling inter-relationships which bind them together are significant enough to warrant academic exploration, Eyre said. Each promotes the public health and works to contain the threats of infectious disease. Each is involved with the human health implications of an animal protein-based food supply, and each is concerned with the physical and psycho-social benefits of the human-animal bond.

A luncheon will be held in Virginia Tech's Owen's Dining Hall, and tours of the college's Veterinary Teaching Hospital will be offered after the event. Registration is \$60. For more information, contact Dr. Marie Suthers-McCabe at 540-231-7133.

THE CURIOUS LIVES OF HORSEHOE CRABS



Don't worry... the horseshoe crab hasn't gotten by for 350 million years on its looks alone.

As Roanoke Times higher education writer Michael Sluss called it, "they look like creatures from a science fiction film" and have "blood as blue as the ocean they call home."

With two sets of eyes and five sets of legs, the arachnid-like crabs look exactly like what they are: 350 million-year old creatures that have found little reason to change from their, well... ugly old selves.

"They" are horseshoe crabs, and because of some concern about the future viability of the species, they are a subject of study in the Aquatic Medicine Laboratory at the College's Price's Fork research center.

Virginia Tech Fisheries and Wildlife Professor Dr. Jim Berkson and graduate student Elizabeth Wells have

been working with Aquatic Medicine Laboratory Director Dr. Stephen Smith on a study designed to determine how current harvesting and management procedures may be affecting the population.

About three million a year are currently being harvested, and conservationists and commercial interests are beginning to square off about whether or not those numbers should be reduced.

While the crabs were caught and ground for fertilizer from the 1880's through the 1960's, there are now two primary commercial applications for the bizarre-looking crustaceans. Fisherman use about three million a year as bait for eel and conch in the fishing industry.

But it is the role they play in an operation that is almost as curious as their appearance itself that has found them the

subject of inquiry in university laboratories. Horseshoe crabs donate blood that plays an important role in the biomedical industry.

The crabs' copper-based blue blood contains a clotting agent called Limulus Amebocyte Lysate (LAL) which is used to detect bacteria that may contaminate injectable drugs and implantable medical devices such as pacemakers. A quart of horseshoe crab blood can be worth up to \$15,000.

Commercial laboratories such as Maryland-based BioWhittaker harvest the creatures, extract some blood and then return them to the sea. But scientists estimate that as many as 15% of those donors may not survive the process.

With \$125,000 in funding from BioWhittaker and other funding from the Virginia Sea Grant Program, the scientists are attempting to learn more about the creatures' blood chemistry, the effect of blood donation on their health and well-being, and other information that might shed some insight on proper population management procedures.



Aquatic Medicine Laboratory Director Dr. Stephen Smith examines a specimen.



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