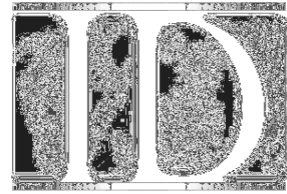


# ***The Department of Infectious Diseases Newsletter***

*(Formerly the Departments of Medical Microbiology and  
Parasitology)*

*College of Veterinary Medicine, University of Georgia  
December, 2005*



Vol. 1 Number 1

## **Comments from the Department Chair**

Hello from Athens. This is the first edition of what we hope will be a bi-annual newsletter. Our plan is to update the current graduate students, faculty, graduate alumni and emeritus faculty on current programs and projects, future plans as well as include a "whatever happened to" segment. Please let us know when something happens in your lives or careers that you would like to share with past classmates and professors. I hope you will find this educational and entertaining.

Sincerely,

Fred Quinn

## **The Mission**

**Establishing a world-class research and teaching department focusing on infectious diseases that affect both animals and humans.**

The threat to animal and human health posed by emerging infectious diseases is a matter of grave concern. These diseases are the leading cause of death worldwide, claiming at least 17 million human lives and indeterminable numbers of domesticated and wild animals each year. A majority of these infections are zoonotic, including almost all bioterror agents. These vast disease burdens place a great strain on the already

overburdened public and animal health services and create a substantial socio-economic burden for rich and poor alike. These agents also impact global security by threatening the provision of food for an increasing world population and interrupting international trade and economic growth. The potential use of pathogens as agents of bioterrorism is a familiar and greatly feared possibility that has now become a part of our daily lives.

In the past 10 years the world has had to respond to several important diseases that have appeared abruptly and without warning. A SARS-associated coronavirus that killed 774 people was identified in some domestic and wildlife species, Nipah virus leapt from bats to pigs, influenza viruses from birds threaten to cause a massive flu pandemic similar to the one experienced in 1918, and the West Nile virus entered the United States, killing birds, horses and humans. In addition, naturally occurring zoonotic diseases such as anthrax, tuberculosis and antimicrobial-resistant organisms have emerged in part due to the use of antimicrobials for disease prevention and growth promotion of several domesticated animal species. Finally, the U.S. and other countries remain vulnerable to agro-terrorism with agents such as foot and mouth disease. All of these new developments emphasize the need for a continuum of scientific interdisciplinary approaches to respond to and control these microbial threats. It is imperative that those in human, animal,

agricultural and environmental sciences work together to address threats associated with emerging infectious diseases. The Department of Infectious Diseases (ID) and College of Veterinary Medicine (CVM) plan to be at the forefront of all programs and efforts to deal with these challenges.

### **Research Vision**

This is an exciting time for our department and college. With the imminent completion of the various renovations and construction projects on or near the CVM campus, we will be poised to perform top tier research on the most threatening diseases that face us today, and will be able to attract collaborations with the most influential scientists, clinicians and policy makers in the country. Additionally, the hiring of several new world-class investigators combined with the already established research faculty will make us one of the most competitive groups of infectious disease researchers in a college of veterinary medicine in the world.

***Among the plans envisioned is an increase in graduate and veterinary student training in emerging infectious diseases. This training will include basic, applied and clinical components, and potentially include experience in BSL3 and BSL3 Ag techniques. Our department and college receive no direct TA or RA funding for students. With the exception of a few departmental stipends, we must depend exclusively on funding from individual research faculty. This method severely restricts our ability to expand and puts us at a severe disadvantage when compared to other research universities with similar capabilities. We, therefore, ask that you consider assisting us as we develop a Medical Microbiology or Parasitology Training Fund (see attached details) and make our dream a reality! Thank you!***

### **Animal Health Resource Center (AHRC)**

The AHRC is scheduled for re-commissioning in January 2006. This state-of-the-art building is designed to provide 75,000 ft<sup>2</sup> of BSL2, BSL3, and BSL3Ag animal containment space that can be easily adapted to house a variety of animal species, including small (e.g. rodents and fowl) and large (e.g. ruminants and horses) animals. In addition to the animal holding space, there are 10,000 ft<sup>2</sup> of BSL3 and BSL3Ag laboratory research space and a BSL3 flow cytometry facility. The AHRC will house interdisciplinary research in immunology, virology, parasitology, bacteriology, vector-borne diseases and other fields, bringing together investigators throughout the southeastern U.S. This facility is located on the CVM campus and most research personnel are affiliated with the department.

### **Paul C. Coverdell Biomedical Research Building and the Biomedical and Health Sciences Institute (BHSI)**

The vision of the BHSI is to support and facilitate interdisciplinary scientific activities at UGA in the biomedical and human health fields. The BHSI central offices and core research programs will be located in the new 200,000 ft<sup>2</sup> Paul D. Coverdell Center for Biomedical Research, which is slated to open early in 2006. The BHSI aims to increase the breadth and intensity of the University's biomedical and health-related research, interconnect UGA programs in these fields, and assist in securing extramural funding to support the research programs. Our department and college are charter members of the BHSI with two of the four divisions currently being chaired by CVM faculty. Additionally, the department and college plan to move research faculty members into the Coverdell Center and make a large investment in the MRI facility in order to improve hospital clinical services and research capabilities. The Coverdell Building with BHSI offices is located

directly across DW Brooks Drive from the CVM main building.

#### Center for Disease Intervention (CDI)

The CDI provides a multi-disciplinary platform to facilitate EID and select agent research and product development among UGA investigators, public health institutions, and private companies. Personnel affiliated with the CDI include veterinarians, bacteriologists, virologists, immunologists, epidemiologists, statisticians, students and laboratory technologists from UGA, as well as adjunct faculty and collaborators from other neighboring organizations. The CDI was initially formed by ID investigators and will be located in the AHRC.

#### Center for Tropical and Emerging Global Diseases (CTEGD)

The CTEGD is a university-wide, interdisciplinary center that was formed to foster research, educational programs and service related to tropical and emerging diseases. Based on a strong foundation of parasitology, immunology, cellular and molecular biology and genetics, the CTEGD currently includes investigators from several departments on campus including Infectious Diseases.

#### Veterinary Diagnostic Research Laboratory

The Diagnostic Laboratory is equipped with BSL2 and BSL3 suites that can be used for the analysis of emerging infectious diseases and biodefense pathogens, thus providing an important link to campus clinical and primary reference resources.

#### Department of Infectious Diseases Core and Research Faculty

Currently, the department has 15 core faculty (4 located in the Athens and Tifton Diagnostic Laboratories), and 11 research faculty

members. We are actively searching for three additional core assistant or associate professors in parasitic and bacterial infectious diseases. *More information about each faculty member can be accessed via the web by accessing the link provided next to each name below.*

#### Core Faculty

**Charles (Sandy) Baldwin**, DVM, PhD, ACVM.  
Director, Tifton Diagnostic Laboratory  
**Bacteriology/Mycology**

(<http://hospital.vet.uga.edu/dlab/tifton/personnel.php>)

**Harry Dickerson**, BVSc, PhD.

BVSc, University of Pretoria, South Africa;  
PhD, University of Georgia;

Postdoctoral research, University of Georgia  
**Molecular Biology & Immunology of Fish**

(<http://www.vet.uga.edu/ID/dickerson.html>)

**Don Evans**, PhD.

PhD, University of Arkansas;

Postdoctoral research, M.D. Anderson Hospital  
and Tumor Institute

**Cellular Immunology & Immunoregulation**

(<http://www.vet.uga.edu/ID/evans.html>)

**Liliana Jaso-Friedmann**, PhD.

PhD, University of Kansas;

Postdoctoral research, University of Georgia  
**Molecular Immunology**

(<http://www.vet.uga.edu/ID/friedmann.html>)

**Mary Hondalus**, DVM, PhD.

DVM, Michigan State University;

PhD, Temple University;

Postdoctoral research, Albert Einstein School  
of Medicine and Harvard University School of

Public Health.

*Microbial genetics; pathogenesis of Mycobacterium tuberculosis and Rhodococcus equi; Vaccine development*

(<http://www.vet.uga.edu/ID/hondalus.html>)

**Ray Kaplan, DVM, PhD.**

DVM, Virginia-Maryland Regional College of Veterinary Medicine;

PhD, University of Florida.

*Parasitic Diseases of Livestock*

(<http://www.vet.uga.edu/ID/kaplan.html>)

**John McCall, PhD.**

PhD, University of Georgia;

*NIH FRRR Center Experimental Chemotherapy and Diagnosis of human and animal filariasis; prevention & control of Endo-and Ectoparasites of small animals*

(<http://www.vet.uga.edu/ID/mccall.html>)

**Julie Moore, PhD.**

PhD, University of Connecticut;

Postdoctoral research, CDC, Atlanta.

*Immunology of infections during pregnancy*

(<http://www.vet.uga.edu/ID/moore.html>)

**Dave Peterson, PhD.**

PhD, University of California, Davis;

Postdoctoral research, NIH, Bethesda.

*Adhesion Proteins of Plasmodium, Molecular Parasitology*

(<http://www.vet.uga.edu/ID/peterson.html>)

**Fred Quinn, PhD.**

PhD, Indiana University;

Postdoctoral research, University of Tennessee School of Medicine, Memphis and Stanford University School of Medicine.

*Tuberculosis/Mycobacterial Pathogenesis*

(<http://www.vet.uga.edu/ID/quinn.html>)

**Sreekumari Rajeev, DVM, PhD.**

Tifton Diagnostic Laboratory

*Mycobacterial diagnostics*

(<http://hospital.vet.uga.edu/dlab/tifton/personnel.php>)

**Jeremiah Saliki, DVM, PhD.**

Athens Diagnostic Laboratory

*Viral diagnostic development*

(<http://hospital.vet.uga.edu/dlab/athens/personnel.php>)

**Susan Sanchez, BSC, MSc, PhD, Cbiol.**

Athens Diagnostic Laboratory

*Resistance of bacteria to antibiotics*

(<http://hospital.vet.uga.edu/dlab/athens/personnel.php>)

**Ralph Tripp, PhD.**

PhD, Oregon State University;

Postdoctoral research, St. Jude Children's Research Hospital, Memphis.

*Viral Immunity and Disease Pathogenesis*

(<http://www.vet.uga.edu/ID/tripp.html>)

**Mark Tompkins, PhD.**

PhD, Emory University;

Postdoctoral research, Northwestern University Medical School, Evanston, IL and FDA, Bethesda.

*The immune response to influenza virus infection; development of novel vaccines and therapeutics for pandemic influenza; anti-viral RNA interference*

(<http://www.vet.uga.edu/ID/tompkins.html>)

**Research Faculty**

**Rene Alvarez, PhD.**

PhD, University of Texas Health Science Center;

Postdoctoral research, USDA, Athens and

CDC, Atlanta.

**Immunity and disease pathogenesis associated with human metapneumovirus infection**

(<http://www.vet.uga.edu/ID/alvarez.html>)

**Yen-Hung Chow, PhD.**

PhD, National Defense Medical Center, Taipei, Taiwan, Republic of China;

Postdoctoral research, National Cancer Institute, NIH.

**The establishment of a useful model for studying Bronchioloalveolar adenocarcinoma and its mechanisms**

(<http://www.vet.uga.edu/ID/chow.html>)

**Mike Dzimianski, DVM.**

MS, The University of Georgia, 1977;

DVM, The University of Georgia, 1981.

**The maintenance and propagation of filarial parasites and their vectors**

(<http://www.vet.uga.edu/ID/dzimianski.html>)

**Craig Findley, PhD, Yale University, 1978.**

**Vaccine development against infection by *I. multifiliis***

(<http://www.vet.uga.edu/ID/findly.html>)

**Tom Hodge, PhD.**

PhD, East Tennessee State College of Medicine;

Postdoctoral research, University of Pennsylvania School of Medicine and University of Alabama, Birmingham School of Medicine

**The identification of therapeutic targets for intervention and possible inclusion in vaccines**

(<http://www.vet.uga.edu/ID/hodge.html>)

**Les Jones, MS, University of Alabama, 1993**

**Application of nanotechnologies for in-vivo detection of microorganisms; nanoparticles as delivery platforms for antimicrobial therapeutics, vaccines, and anti-tumor agents**

(<http://www.vet.uga.edu/ID/jones.html>)

**Russell Karls, PhD.**

PhD, University of Wisconsin;

Postdoctoral research, Emory University and CDC, Atlanta.

**Pathogenic mycobacteria that affect human and animal populations**

(<http://www.vet.uga.edu/ID/karls.html>)

**Candace McCombs, PhD**

PhD, University of California-Berkeley, 1974.

**The development, regulatory approval and commercialization of interventions for infectious diseases**

(<http://www.vet.uga.edu/ID/mccombs.html>)

**James Murray, PhD.**

PhD, University of Louisville;

Postdoctoral research, The Medical College of Georgia and the CDC, Atlanta

**The identification of cellular factors required for HIV-1 replication**

(<http://www.vet.uga.edu/ID/murray.html>)

**Prasit Supakorndej, Ph.D.**

MS, Mahidol University, Bangkok, 1975;

PhD, University of Georgia, 1984

**The maintenance and propagation of filarial parasites and their vectors**

(<http://www.vet.uga.edu/ID/supakorndej.html>)

**Andrea Varela, DVM, PhD.**

DVM, Tufts University;

PhD, University of Georgia;

Postdoctoral research, University of Georgia

**Experimental infections using white-tailed deer with multiple strains of *Ehrlichia chaffeensis* and vector localization in the lone star tick**

(<http://www.vet.uga.edu/ID/varela.html>)

**Recent emphasis on globalization and international education by the CVM Infectious Diseases Department.**

**By Drs. Liliana Jaso-Friedmann and Julie Moore.**

The importance of globalization for the veterinary professional has become evident as words such as "agroterrorism" continue to surface in the media. The majority of American veterinarians are never exposed to diseases endemic to other parts of the globe such as Foot and Mouth Disease (FMD). In keeping with our tradition of excellence, the CVM has implemented a "Certificate in International Medicine" available to the students in the Veterinary Medicine curriculum. The program is managed through the Office of the Associate Dean for Academic Affairs (Dr. Scott Brown, Interim) and administered by Dr. Corrie Brown (Pathology) and Dr. Julie Moore (Infectious Diseases and Center for Tropical Emerging and Global Diseases at UGA). The general description of the certificate as well as the requirements can be viewed at [www.vet.uga.edu/vpp/ia/civm](http://www.vet.uga.edu/vpp/ia/civm). The certificate program began in the spring of 2000 and requires 3 years to complete with a total of 15 credit hours consisting of course work and externships. Students are awarded the certificate concurrently with their DVM degrees. The Department of Infectious Diseases has taken a very active role in this newly created program from the planning steps to providing opportunities to professional students for externships in foreign countries.

In June of 2002, Dr. Friedmann accompanied a group of professional students to Uruguay for a week of lectures, practical training and control measures for the FMD epidemic of 2000. The students were able to interact with their counterparts at the College of

Veterinary Medicine in Montevideo, tour a slaughter house, and become immersed in the impact of the FMD outbreak that nearly paralyzed the economy of the country. In addition to becoming more aware of the impact of FMD in the cattle industry, the students were able to gain knowledge about the differences in veterinary professional activities in other countries.

In June of 2004, Lauren Atkins (class of 2006, UGA) traveled to Uruguay on a very different mission. Her interests are in population control, so she spent one month living with a Uruguayan family and working with the equivalent to the American Humane Society on sterilization programs in small animals. Lauren came back with significant expertise in spay and neuter techniques as she toured the poorest parts of the cities with local veterinarians in their population control campaign. In addition to her professional gain, Lauren had a chance to evaluate the work of foreign veterinarians and in the process she made lots of friends and practiced her Spanish skills.

In May 2001, Dr. Moore traveled to Kenya to establish opportunities for externships in that country. In one-to-two-day visits with four research institutions (the International Livestock Research Institute, the Institute of Primate Research, the Kenya Trypanosomiasis Research Institute, and the Centre for Vector Biology and Control Research, a division of the Kenya Medical Research Institute), the Kenya Wildlife Service, and the University of Nairobi in Kenya, she succeeded in laying the groundwork for the creation of numerous externship opportunities for UGA veterinary medical students. At each institution, Dr. Moore met with administrators and/or scientists and discussed potential projects suitable for short-term externships for UGA students. Mechanisms for matching students

and mentors to maximize the benefits of the program for all individuals involved were also covered. Also, in the spirit of establishing long-lasting, mutually beneficial linkages, considerable discussion was devoted to possible mechanisms by which true exchange or training opportunities at UGA for Kenyan scientists and veterinarians might be developed. Expanding the linkages between UGA and Kenyan institutions to include such exchanges will maximize the transfer of knowledge and expertise between our institutions and solidify these linkages. Demonstrating such substantial interactions will undoubtedly be critical for attracting funding to support these programs in the future.

As a result of this program, to date four veterinary students have traveled to Kenya and Ethiopia to participate in 4 to 8 week programs with the International Livestock Research Institute (Addis Ababa, Ethiopia; Nicole Giusto, class of 2005; to work on program with feral donkeys), the Institute of Primate Research (Nairobi, Kenya; Elizabeth Mitchell, class of 2004; to study reproductive success in captive monkeys), the Kenya Trypanosomiasis Research Institute (Lake Magadi, Kenya; Tracy Walker, class of 2004; to work on local prevention and treatment programs for local cattle farmers), and the Centre for Vector Biology and Control Research (Kisumu, Kenya; Lauren Reid, class of 2005; to study the impact of malaria on local populations and also to learn about local veterinary practice in Kenya). These experiences were very successful for the students and left indelible impressions on both the students and their Kenyan mentors.

We would like to encourage retired and current Faculty in the ID Department to take an active role in this valuable program that the CVM currently offers. There is clearly a need for veterinarians to be trained in international veterinary diseases, problems and policy, and

our program has been actively embraced by the students (to date, six have successfully earned the Certificate). Through contacts or monetary contributions, we have the opportunity to continue to make a significant impact in the globalization of the profession.

## **Graduate Training News**

### **Profile of Dr. William P. Van Eseltine**

Dr. Van Eseltine received his A.B. degree in biology (1944) from Oberlin College and M.S. (1947) and Ph.D. (1949) degrees from Cornell University. He was then employed as an Assistant in Bacteriology at the New York State Agricultural Experiment Station in Geneva (1944-46) and the College of Agriculture at Cornell (1946-48). During this period of time he authored three and co-authored four publications in areas of food microbiology and chemical disinfection.

In 1948 Dr. Van Eseltine had his first job out of graduate school as an associate professor of bacteriology at Clemson Agricultural College (now Clemson University) in Clemson, SC. He taught courses in general, advanced, dairy, soil and sanitary (water & sewage) bacteriology. While at Clemson, he directed bachelor's thesis research for four agronomy majors which culminated in one publication in the area of soil microbiology.

In 1952 he accepted a position as assistant professor of veterinary hygiene in the School (now College) of Veterinary Medicine at the University of Georgia. (50% teaching/50% research) He taught introductory bacteriology to first year veterinary students. In 1955, he began teaching pathogenic bacteriology for second year veterinary students. At this time, the University of Georgia had a cooperative bacteriology program involving faculty from five different departments on campus. The veterinary faculty was responsible for the medical aspects of the program. At first, the small

numbers of students in this program were accommodated by being included with the veterinary students in existing courses in pathogenic bacteriology (and immunology & virology). During his tenure at the University he also taught advance pathogenic bacteriology. Dr. Van Eseltine was graduate coordinator from 1971 until 1987. Dr. Van really enjoyed interviewing prospective students for the graduate program and had a great experience working with the Graduate School.

Dr. Van's research areas of interest included: the nutritional requirements and cell structure of *Leptospira* sp.; the taxonomy of *Moraxella*; and the pathogenic properties of human and animal Group G Streptococci. Dr. Van was major professor for 13 MS and 6 PhD students. His students upon graduation held the following positions.

**Scott Borneman** (PhD) Co-chair of advisory committee w/scientists at Russell Research Laboratory.

**John Jaugstetter** (PhD) Russell Research Laboratory.

**Bryan William** (PhD) Veterinarian employed by Mississippi State in research.

**Gaffney Blalock** (PhD) Clemson University State Veterinary Diagnostic Laboratory.

**Ann English** (MS) and earned DVM simultaneously. Practicing in Florida.

**Wafa Cheikh** (MS) works at Arts & Science in Zoology.

**Linda Tillery** (MS) Environmental Health Science. Married and worked in a diagnostic laboratory. She then went to NC State College of Veterinary Medicine and is a practicing Veterinarian.

Dr. Van retired in 1987 after an exemplary career at the University.

## Van Eseltine, Hanson and Roberson Graduate Student Fund Purpose Statement

The purpose of this fund is to provide support for graduate students in the Department of Infectious Diseases, College of Veterinary medicine. Support shall include, but not be limited to, graduate student travel, scholarships, moving expenses, office supplies, equipment, research support and efforts to sustain the growth of this fund. All expenditures from this Fund shall adhere to the Arch Foundation expenditure policy as set forth by the Arch Foundation, as the same may be modified from time to time by the Arch Foundation and applicable UGA policies.

We would appreciate your support of Graduate Education in our department. Please use the enclosed envelope and make your check payable to Arch Foundation and note the fund name or account number (A912220) in the memo line of the check. Also, you can call or email Brooke Stortz at (706) 542-6807 or [bstortz@vet.uga.edu](mailto:bstortz@vet.uga.edu) in the Office of Development to make a credit card donation over the phone. Currently, we cannot take donations to this fund over the internet, but the technology group at the Arch Foundation is working on that capability. Thank you for your support.

### Emeritus faculty news

**John Brown:** deceased

**Donald Dawe** retired in 2002 and is active in raising horses.

**Dave Dreesen** retired in 2000 and is active in world-wide aspects of food safety and epidemiology, and continues to "bleed red and black" for the UGA football team. He also directs the DVM/MPH Program at the CVM.

**Jack Gratzek** retired in 1993 and continues to

be active in aquatic medicine. He also makes deliveries for "Meals on Wheels" and calls bingo games with a stern hand to prevent the elderly from cheating.

**Sol Kadis:** deceased

**Phil Lukert** retired in 2000 and is active on the golf course.

**Katherine Prestwood:**

**Emmett Shotts:** retired in 1998 and became the Director of the Leetown Science Center, USGS, Kearneysville, WV. He then retired from federal service and is enjoying his retirement in the North Georgia Mountains near Cleveland, GA

**Richard Wooley** retired June 30, 2005.

### Alumni news

**Margie Lee** (PhD 90) is a Professor of Avian Medicine at the CVM.

**Hal King** (PhD 90) is Director of Food Safety for the Chick-Fil-A restaurant chain.

**Barry Fields** (PhD 86) is Chief of the Respiratory Diseases Laboratory Section, CDC.

**Lisa Nolan** (PhD 92) is Department Chair of the Department of Microbiology and Preventive Medicine, College of Veterinary Medicine, Iowa State University.

**Penny Gibbs** (PhD 02) is an Assistant Professor in the Department of Veterinary and Microbiological Sciences, North Dakota State University.

**Ken Nusbaum** (PhD 82) is on the faculty of the Department of Pathobiology, College of Veterinary Medicine, Auburn University.

**Jeannine Gilbert** (PhD 82) is at Merial Inc., Athens, Ga.

**Joe Esposito** (PhD 70) is at CDC in Atlanta.

**Joanne Maki** (PhD 04) is at Merial Inc., Athens, GA.

**Cliff Starliper** (PhD 92) is a microbiologist, USGS National Fish Health Research Laboratory, Kearneysville, WV.

**Richard Cooper** (PhD 91) is an associate professor of aquatic diseases, School of Veterinary Medicine, LSU.

**Janet Payeur** (PhD 82) is Head, Mycobacteria and Brucella Section, National Veterinary Services Laboratories, Ames, IA.

**Donald Simmons** (PhD 71) is Director of the Education and Research Division of the American Veterinary Medical Association, Schaumburg, IL.

**John Glisson** (PhD 85) is Director of the Poultry Disease Research Center and Head of the Department of Avian Medicine.

**Paul Drummond** (PhD 2004) is a Post-Doctoral Research Assistant in the Department of Pathobiology, University of Florida.

**Kesavannair Praveen** (PhD 2005) is a Post-Doctoral Research Professional in the Department of Pathology, Center for Tumor Immunology, Pritzker School of Medicine, University of Chicago.

**Ritesh Tandon** (PhD 2005) is a Post-Doctoral fellow at Johns-Hopkins Medical Center in the Viral Oncology Program.

**Let us know what you are doing. If you would like to have information listed in our next newsletter or have your mini-bio placed on the department web page, contact Stephanie O'Kelley at (706) 542-4442 or sokelley@vet.uga.edu for more information.**