

Research and Outreach Programs at the Virginia-Maryland College of Veterinary Medicine (VMCVM)



**Blacksburg Campus
(Virginia Tech)**

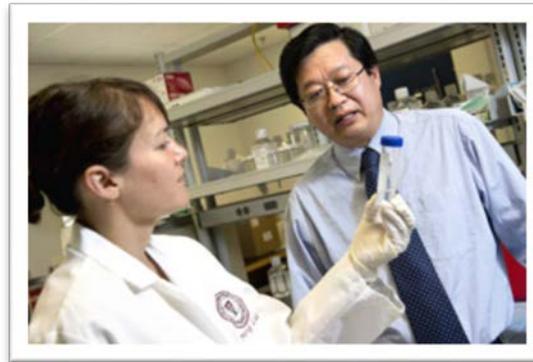


**College Park Campus
(University of Maryland)**





VMCVM Blacksburg Campus



Research

Our research program includes both basic science to understand the molecular and biological basis for disease, as well as applied science to improve the lives of animals and people.

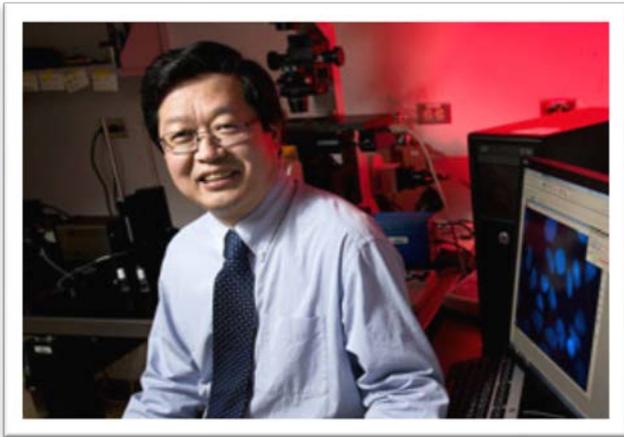
Our faculty, students, staff, and research partners are committed to discovery, service, and training future researchers and veterinarians.

Research at the Blacksburg Campus (Virginia Tech)

Dr. Xiang-Jin Meng

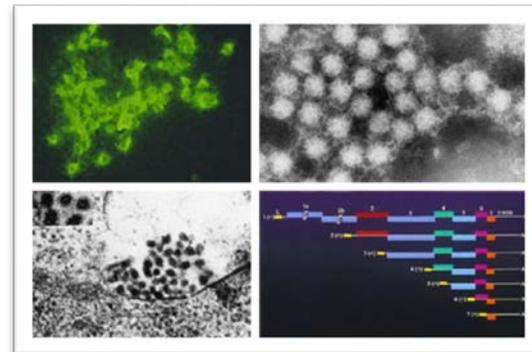
University Distinguished
Professor, Molecular
Virology

Department of Biomedical
Sciences and Pathobiology



• Current Research

- Emerging, re-emerging and zoonotic viruses that are of human and veterinary public health importance.
- Discovery of swine and avian hepatitis E viruses
- Development of the first USDA licensed, commercial vaccine against porcine circovirus type 2.



Research at the Blacksburg Campus (Virginia Tech)

Dr. F. William Pierson

Professor

Biosecurity and Infection
Control, Poultry Health

Department of Population
Health Sciences



• Current Research

- Biosecurity / Biothreats / Agroterrorism – risk reduction (ag vulnerability assessment and mitigation)
- Hemorrhagic enteritis virus of turkeys (*Siadenovirus*)
- Multifactorial production diseases of poultry – colibacilliosis, ornithobacteriosis, clostridial dermatitis of turkeys, cochlosomiasis
- Hepatitis E virus (big liver / big spleen disease of chickens)
- Food safety / poultry – early (farm-side, pre-harvest) detection of *Salmonella* (isothermal PCR), bioremediation of *Salmonella* pre- and post-harvest.

Research at the Blacksburg Campus (Virginia Tech)

Dr. Nammalwar Sriranganathan

Professor

Bacteriology

Department of Biomedical
Sciences & Pathobiology



• Current Research

- Targeted drug delivery for intracellular pathogens - design and develop novel nanoparticle based drugs by incorporating biological, engineering and chemical manufacturing principles for therapeutic application of chronic infectious diseases i.e., tuberculosis, brucellosis and salmonellosis
- Development of vaccines against bioterrorism agents - understanding the host-parasite relationships, pathogenesis, virulence and their applications in vaccine development.
- Bacteriophage based remediation of food borne Salmonella in poultry



VMCVM Blacksburg Campus (Virginia Tech)



Instruction and Outreach

Instruction and Outreach at the Blacksburg Campus (Virginia Tech)

Dr. Valerie Ragan

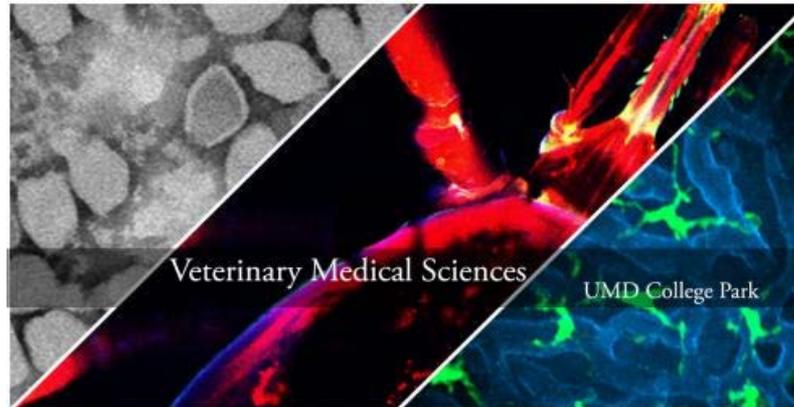
Director, Center for Public and Corporate Veterinary Medicine
Associate Professor of Practice
Department of Population Health Sciences



- The Center for Public and Corporate Veterinary Medicine (CPCVM) is headquartered at the college's Blacksburg campus and maintains a Washington, D.C. presence with faculty working at its College Park campus.
- Established more than two decades ago, the center has a long history of training veterinary students and graduate veterinarians for careers outside of traditional private clinical practice.
- The center plays a vital role in:
 - Oversight of the Public and Corporate track in the college's DVM program
 - Preparing students for public and corporate sector careers
 - Serving as a resource for veterinarians who wish to make a career redirection



VMCVM College Park Campus (University of Maryland)



Research

The research interests of our current faculty cover a broad range of topics in infectious diseases and zoonoses, including cell and molecular biology, microbiology, immunology, virology, and poultry health management and disease prevention.

Research at the College Park Campus (University of Maryland)

Dr. Siba Samal

Professor and
Associate Dean



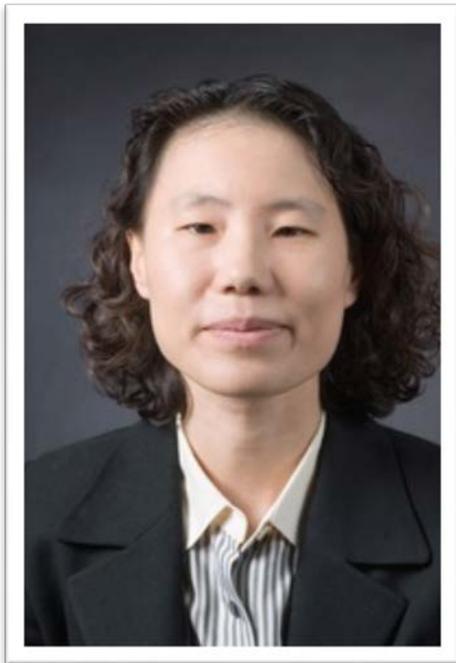
• Current Research

- Identification of molecular determinants of paramyxovirus virulence
- Identification of the mechanisms of paramyxovirus pathogenesis
- Molecular characterization of new and emerging avian paramyxoviruses
- Engineering avian paramyxoviruses as vaccine vectors against animal and human pathogens
- Development of safe and effective vaccines against avian paramyxoviruses using reverse genetics system

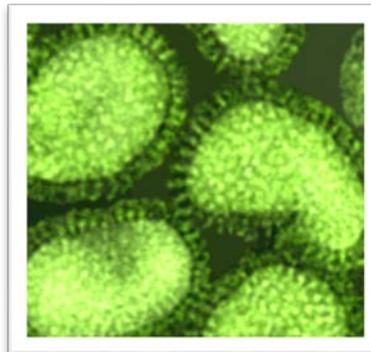
Research at the College Park Campus (University of Maryland)

Dr. Shin-Hee Kim • Current Research

Assistant Professor
Avian Influenza Specialist



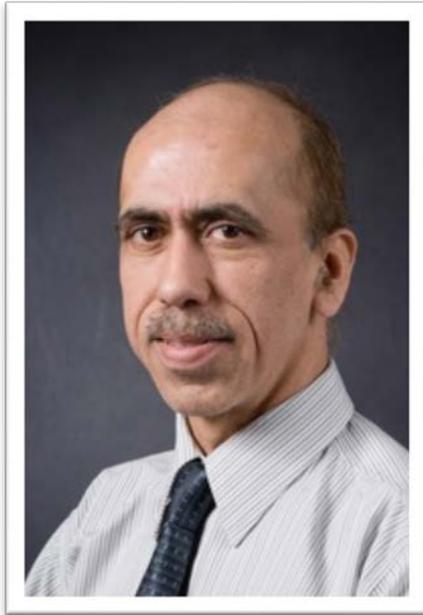
- Pathogenesis of emerging avian influenza virus in avian and mammalian hosts
- Transmissibility of avian influenza virus using an animal model system
- Development of live attenuated vectored vaccines for avian influenza infection



Research at the College Park Campus (University of Maryland)

Dr. Sunil Khattar • Current Research

Research Assistant Professor



- Sequencing different genotypes of infectious bronchitis virus and developing effective vaccine using reverse genetics.
- Use of Newcastle disease virus as a vaccine vector for viral diseases affecting birds, farm animals and humans.
- Developing a vaccine against avian paramyxoviruses using reverse genetics

Research at the College Park Campus (University of Maryland)

Dr. Chinta Lamichhane

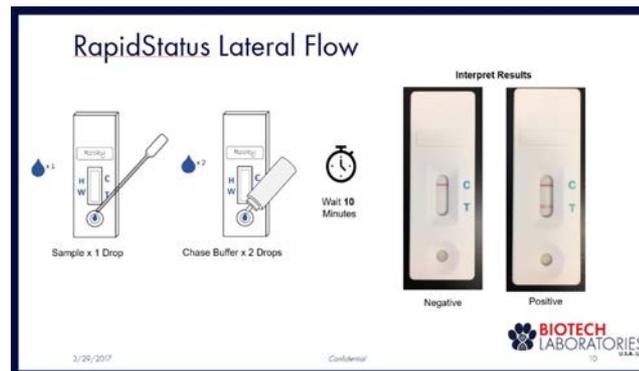
Adjunct Professor

Chief Executive Officer

Biotech Laboratories USA

• Current Research

- Development of rapid diagnostic tests for avian influenza
- Development of DIVA (differentiating infected from vaccinated animals) diagnostic tests for ILT, IBV, and IBDV



VMCVM College Park Campus (University of Maryland)



Extension and Outreach

The Extension Program of the VMCVM College Park campus supports the mission of University of Maryland Extension.

Our main goal is to build an effective extension and outreach program that focuses on biosecurity and flock health management to prevent poultry diseases such as Avian Influenza, which can be detrimental to the poultry industry and the local and national economy.

Extension and Outreach at the College Park Campus (University of Maryland)

Dr. Nathaniel Tablante

Professor

Extension Specialist –
Poultry Health



• Current Extension and Outreach Activities

- Build effective education and outreach programs on biosecurity and flock health management to prevent economically important poultry diseases
- Assist in state, regional, national, and international efforts to prevent and control Avian Influenza by preparing educational materials and conducting training workshops on AI prevention and control
- Conduct poultry health and biosecurity workshops for small poultry flock owners



Thank you!

