The Department of Veterinary Biosciences is intentional about developing collaborations and partnerships that enhance our impact through the discovery, commercialization, and application of research and scholarship. Some key partners, their mission, and our interactions include:

**Center for Clinical & Translational Science (CCTS)** is a “collaboration dedicated to turning the scientific discoveries of today into life-changing disease prevention strategies and the health diagnostics and treatments of tomorrow.” Funded by a multi-year NIH Clinical and Translational Science Award, the CCTS leverages expertise from across the University and partners with community health and education agencies, businesses, and regional institutional networks to support biomedical researchers. *VBS Leadership Roles: Cheryl London – Program Director, Translational Therapeutics. VBS Members: Brad Bolon, Krista La Perle*

**Comprehensive Cancer Center (CCC)** is one of only 41 designated comprehensive cancer centers in the nation. “The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute is dedicated to the creation of knowledge in laboratory, clinical and population-based cancer research. We apply those discoveries to develop more effective approaches to cancer prevention, diagnosis and therapies – providing tomorrow’s standard of care today.” *VBS Leadership Roles: Pat Green – Program Leadership; Krista La Perle – Director, Comparative Pathology & Mouse Phenotyping Shared Resource; Cheryl London – Director Veterinary Clinical Trials Office and Biospecimen Repository; VBS Members: Kathy Boris-Lawrie, Jim DeWille, Pat Green, Cheryl London, Larry Mathes, Stefan Niewiesk, Tracey Papenfuss, Tom Rosol, Li Wu*

**Public Health Preparedness for Infectious Disease (PHPID)** is a collection of researchers working to “improve global health and wellness by reducing the threats of infectious diseases through innovative interdisciplinary research, education and outreach.” *VBS Faculty Hires: Jianrong Li, Li Wu; VBS Members: Kathy Boris-Lawrie, Prosper Boyaka, Ian Davis, Pat Green, Jianrong Li, Stefan Niewiesk, Mike Oglesbee, Tracey Papenfuss, Yasuko Rikihiisa, Li Wu*

**Center for Microbial Interface Biology (CMIB)** is a multidisciplinary research center focused on microbe-host interactions that “facilitates synergistic interactions among investigators in the clinical and basic sciences from across the campus to promote and coordinate interdisciplinary research in the fields of infectious diseases and microbial pathogenesis.” *VBS Members: Kathy Boris-Lawrie, Prosper Boyaka, Ian Davis, Pat Green, Jianrong Li, Stefan Niewiesk, Tracey Papenfuss, Yasuko Rikihiisa, Li Wu*
Dr. Yasuko Rikihisa
2014 National Academy of Inventors Fellow

The National Academy of Inventors (NAI) awarded the rank of Fellow to Dr. Yasuko Rikihisa, Distinguished University Professor of Veterinary Biosciences. Only researchers who “have demonstrated a prolific spirit of innovation in creating or facilitating outstanding inventions and innovations that have made a tangible impact on quality of life, economic development and the welfare of society” are elected to the rank of NAI Fellow. Dr. Rikihisa is one of two OSU faculty awarded this rank this year and joins two previous OSU Fellows.

Dr. Rikihisa’s research focuses on the causative agents for tick-borne disease within the Ehrlichia, Anaplasma, Neoehrlichia, Neorickettsia, and Aegyptianella genera; spanning organisms and susceptible host species including deer, mouse, rat, dog, horse, cat, birds, and humans. Her work has supported a growing patent portfolio (11 issued US and 3 issued international patents). The commercial significance of her research and patents is demonstrated through active licenses of her patent portfolio to commercially focused companies. Diagnostic tests for tick-borne diseases in companion animals comprise current commercial products based on her patents. These tests, offered in the domestic and international marketplace, have become the highest volume diagnostic tests used throughout the world in veterinary medicine. Additionally, vaccine products from Dr. Rikihisa’s patents are in commercial development at this time.

Commercialization revenue stemming from licenses to her patents places the College of Veterinary Medicine as the leading revenue generating college at Ohio State for 6 straight years.

The mission of the National Academy of Inventors is to honor academic invention; recognize and encourage inventors; enhance the visibility of university and non-profit research institute technology and innovation; encourage the disclosure of intellectual property; educate and mentor innovative students; and translate the inventions of its members to benefit society.

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Logic will get you from A to B.
Imagination will take you everywhere.
- Albert Einstein
Dr. Mike Oglesbee has been named as one of six 2014 inductees in the American Association for the Advancement of Science (AAAS). The AAAS, the world’s largest federation of scientists, works to advance science, engineering, and innovation, throughout the world for the benefit of all people. Members of the AAAS are elevated to the rank of Fellow for their efforts in advancing science or its applications. Since 2004, eight faculty have been recognized as AAAS Fellows during their appointment in the college, all within Veterinary Biosciences.

Dr. Oglesbee’s recognition was based upon distinguished contributions to our understanding of how cellular heat shock proteins determine the outcome of virus infection. Studies showed that these cellular proteins associate with the virus’ genetic information to enhance immune responses to the virus, resulting in clearance of infection from organs such as brain. Findings suggest a protective role for fever, a potent stimulus for the induction of heat shock proteins, and the mechanism has potential relevance to a broad number of viruses.

**AAAS Fellows**
College of Veterinary Medicine

2004 Lawrence Mathes
2004 Thomas Rosol
2005 Michael Lairmore
2005 Yasuko Rikihisa
2006 Charles Capen
2006 Patrick Green
2007 Kathy Boris-Lawrie
2014 Michael Oglesbee

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*Research is creating new knowledge.*
- *Neil Armstrong*
Dr. Tom Rosol awarded fellow status in IATP
The role of the International Academy of Toxicologic Pathology (IATP) is to:
• Establish standards of excellence in education, training and experience essential for competency in toxicologic pathology.
• Support the education of scientists and other members of society with evolving, relevant knowledge important to the health of society.
• Advise governmental policy leaders on issues of toxicology and pathology.
• Develop expert opinions on issues relevant to product safety.

IATP promotes these educational standards by recognizing and accrediting toxicologic pathologists through a peer-review application process to ensure the competence and experience of professional practitioners whose work affects the public welfare throughout the world.

Dr. Ian Davis featured in Columbus Dispatch article
Flu vaccines fighting a moving target

In an interview regarding strategies to fight influenza, Dr. Davis describes the challenge of developing a universal flu vaccine due to the variation seen in the viral coat proteins as well as highlight current work in his laboratory directed to studying medical treatments for those infected with the flu virus. For the full story, visit http://www.dispatch.com/content/stories/local/2014/11/30/your-health/1-fighting-a-moving-target.html

Ongoing work in the Davis lab focuses on:
• The pathogenesis of acute viral diseases of the lung
• Modulation of lung fluid balance by viral pathogens
• Effects of viral infection on respiratory epithelial cell function and signaling
• Effects of viral infection on pulmonary mechanics
• The role of metabokines in innate immune responses to pulmonary viral infection

Theories without data are like daydreams.
- Jonathan Rottenberg
Spotlights: Discovery and Scholarship

New grants!

• Celecoxib derivative: Host cell-directed inhibitors of intracellular pathogens. PI: John Gunn, Co-I: Larry Schlesinger, Prosper Boyaka. University of North Carolina-Chapel Hill
• ATCC adaptation of PEDv and sequencing. PI: Jianrong Li. 4-Stear Animal Health
• Role of PRMT5 in HTLV-1 transformation and disease. PI: Patrick Green. National Institute of Allergy and Infectious Disease, R21

Publication spotlight: A model of Sjögren’s syndrome

Sjögren’s syndrome is common autoimmune disorder of people that affects the salivary and lacrimal glands. Dr. Brad Bolon was part of an investigative team that developed a humanized mouse model of Sjögren’s syndrome to study the T cell pathogenesis of the disease as well as test experimental therapeutics for potential use against the disease in people.

Clinical Immunology  http://www.ncbi.nlm.nih.gov/pubmed/25451161

Research Spotlight:
Mechanisms Underlying HIV-1 Restriction in Myeloid Cells

Dr. Li Wu was invited to present at the Ohio Virology Association, on the current work of his laboratory. Dr. Wu’s research focuses on the interaction between dendritic cells and HIV. His research has found that dendritic cells disseminate HIV and are critical for viral transmission but also restrict HIV and help enhance HIV’s evasion of the host immune response.

Recent studies in his lab have focused on the role of SAMHD1, a dNTPase that is highly expressed in myeloid lineage cells and CD4 T cells and restricts HIV-1 infection in non-cycling myeloid cells.

My model … is The Beatles. They were four guys who kept each other’s kind of negative tendencies in check. They balanced each other and the total was greater than the sum of the parts. Great things in business are never done by one person, they’re done by a team of people. - Steve Jobs
Sharing new knowledge


The difficulty lies not so much in developing new ideas as in escaping from old ones.  
- John Maynard Keynes
The joint annual meeting of ACVP and ASVCP provides a great venue for faculty, residents, & students to present ongoing and new scholarship as well as provide national and international representation to advance the profession. Additionally, Ohio State continues to host an Alumni Reception (this year held in the Pulse Loft with view looking up pictured) and engages in many informal discussions throughout the meeting to build connections with colleagues.

Roles in ACVP / ASVCP
- Immediate Past President, ACVP: Maxey Wellman
- ACVP Councilor: Krista La Perle
- ASVCP Young Investigator Award Judge: Judy Radin
- ACVP Young Investigator Award Judge: Brad Bolon
- ACVP Certifying Exam Board and ACVP Budget Summit Advisory Meeting: Paul Stromberg

Student presentations and awards
- ASVCP Travel Award: Nina Zitzer
- Glomerular lipidosis in dogs: a lesion on the spectrum of focal segmental glomerulosclerosis. Kohnken R, Cianciolo R
- WNT signaling in prostate cancer bone metastasis. Simmons J, Dirksen W, Rosol T

Faculty presentations
- Vasoactive eicosanoids in greyhound compared to non-greyhound dogs. Radin MJ, Tucker K, Rogers LK, Iazbik MC, Hoepf T, Couto CG, Kellogg C.
- Recent cases of idiopathic cutaneous and renal glomerular vasculopathy in dogs in the United Kingdom. Hawkins IK, Walker D, Holm L, Cianciolo R
- Specialty services for the evaluation of renal biopsies. Cianciolo, R

Programming
- Renal Pathology – Best Practices, post-meeting workshop. Chair: Cianciolo, R
- Standard setting for diagnostic flow cytometry and antigen receptor PCR, planning workshop. Co-chairs: Bienzle D, Burkhard MJ
Disease may be defined as ‘A change produced in living things in consequence of which they are no longer in harmony with their environment’.
– William Thomas Councilman