Friday, November 2, 2018

5:00 p.m.-8:00 p.m.
Speaker Ready Room Open

6:00 p.m.-8:00 p.m.
Registration Open

Saturday, November 3, 2018

7:00 a.m.-7:30 p.m.
Registration and Information Desk

7:00 a.m.-6:00 p.m.
Speaker Ready Room

8:00 a.m.-5:00 p.m. (available at an additional fee)
ACVP Pre-Meeting Workshop
Primate Pathology: Important Non-Human Primate Viral Pathogens
Session Chairs:
Theresa Boulineau, DVM, MS, DACVP, Boehringer Ingelheim Pharmaceuticals, Inc. Ridgefield, CT
Karyn Colman, BVetMed, DACVP, Novartis Institutes for BioMedical Research, East Hanover, NJ

The theme of this year's workshop is Important Non-Human Primate Viral Pathogens. The first focus will be on addressing established viral pathogens in primate colonies. Invited speakers will address simian herpesviruses as well as an array of other endemic viruses that are often ignored but that can affect research/study outcomes by immunomodulatory or other means. The second focus of the workshop will be on Emerging Viral Pathogens in primates. Invited speakers will address Ebolavirus among others.

In addition to presentations by invited speakers, there will be “mystery” NHP case presentations from workshop attendees in the afternoon. Case material with a focus on viral disease is encouraged, but material can be from any interesting, unique, or classic primate disease. Oral case presentations will be 10-12 minutes with 3-5 minutes for questions/discussion. Any interested parties, including clinicians, pathologists, and research scientists, are encouraged to submit cases.

8:00 a.m.-8:10 a.m.
Welcome and introductions

8:10 a.m.-8:55 a.m.
NHP Viral Pathogens and Their Impact on Toxicology Studies
Julie Schwartz, DVM, PhD, DACVP, Charles River Laboratories, Reno NV

8:55 a.m.-9:40 a.m.
Overview and Updates on Herpes B Viral Infection in NHPs
Julia Hilliard, PhD, Georgia State University, Atlanta GA

9:40 a.m.-10:00 a.m.
Refreshment Break

10:00 a.m.-10:45 a.m.
Nonhuman Primate Models of Middle East Respiratory Syndrome (MERS)
Dana Scott, MS, DVM, DACVP, Rocky Mountain Laboratories, NIH, Hamilton MT

10:45 a.m.-11:30 a.m.
Filoviruses: Epidemiology, Pathogenesis and Persistence
Donna Perry, DVM, PhD, National Institute for Allergy and Infectious Diseases, NIH, Frederick MD

11:30 a.m.-1:00 p.m.
Lunch Break (on your own)

1:00 p.m.-5:00 p.m. (available at an additional fee)
ACVP Pre-Meeting Workshop
Digital Pathology: Future Practice Pixels and Bytes
Session Chairs:
R. Mark Simpson, DVM, PhD, DACVP, National Cancer Institute
Hibret A. Adissu, DVM, PhD, DVSc, DACVP, National Cancer Institute
Stephen M. Hewitt, MD, PhD, FCAP, National Cancer Institute

Whole-slide image (WSI) based digital pathology systems (DPS) permit much more than just an alternative way to view a histopathology slide. Some of the greatest impacts are anticipated to be due to computational image analysis and pathology informatics, now merging into pharmaceutical research, computer-assisted clinical diagnostics, and education. Workshop participation
will afford greater understanding of how application of DPS is evolving in clinical diagnosis and research. Participants will obtain greater comprehension of how this high velocity field is poised for major disruption due to the impact of artificial intelligence, and how veterinary pathologists must position themselves to remain adopters and peer leaders of this transformational change. DPS vendor scientists and technical representatives will also participate for real use scenarios of state of the art technology by workshop participants.

Digital Pathology and its Future
John E. Tomaszewski, MD, University of Buffalo

Histological and Other Image Pre-processing Variables that Affect Image Analysis
Kumar Shanmukappa, BVSc, PhD, DACVP, Novartis Institute for Biomedical Research

Validating Primary Clinical Diagnosis Employing Digital Display and Computer Assistance
R. Mark Simpson, DVM, PhD, DACVP, National Cancer Institute

Quantitative Image Analysis: Applications and Representative Tools
Hibret A. Adissu, DVM, PhD, DVSc, DACVP, National Cancer Institute

The Systems Engineer, the Pathologist, and the Machine: A Primer on Automation, Computer Vision, and Artificial Intelligence
Munish Puri, PhD, National Cancer Institute

Computational Pathology: Opportunities for Precision Medicine
Anant Madabhushi, PhD, Case Western Reserve University

Big Data Requires Big Ideas
Stephen M. Hewitt, MD, PhD, FCAP, National Cancer Institute

State of the Art Technology Facilitation
Adam Smith, Indica Labs
Catherine Conway, PhD, Leica Biosystems
Regan Baird, Visiopharm

Roundtable Discussion

8:00 a.m.-5:00 p.m. (available at an additional fee)
ASVCP Pre-Meeting Workshop
Clinical Pathology of Non-Domestic Species
Session Chair: Nicole Rosen, MT (ASCP), Purdue University, West Lafayette, IN

The focus of the ASVCP Veterinary Laboratory Professional Pre-meeting Workshop will be Clinical Pathology of Non-Domestic Species. The majority of the workshop will consist of didactic speakers on topics of Chemistry (protein electrophoresis & acute phase proteins), Hematology and Cytology, Generating Reference Intervals and Quality Assurance. The workshop will conclude with numerous case study reviews.

The goal of the workshop, which is geared to pathologists, residents, and medical technologists, is to familiarize participants with clinical pathology testing of non-domestic species samples.

8:00 a.m.-9:00 a.m.
Hematology and Quality Assurance: A Focus on Non-domestic Species
Kendal Harr, MS, DVM, DACVP, Urika, LLC, Mukilteo, WA

9:00 a.m.-10:00 a.m.
Who, What, Why of Acute Phase Proteins
Carolyn Cray, PhD, University of Miami, Miami, FL

10:00 a.m.-10:15 a.m.
Refreshment Break

10:15 a.m.-11:15 a.m.
Protein Electrophoresis of Exotic Species
Carolyn Cray, PhD

11:15 a.m.-12:15 p.m.
Lemurs, Rabbits, and Walruses: Exotics Under the Microscope and the Panic They Induce
Julie Webb, DVM, DACVP, IDEXX, Markham, Ontario, Canada

12:15 p.m.-1:45 p.m.
Lunch Break (on your own)

1:45 p.m.-2:45 p.m.
Reference Interval Generation in Non-traditional Species: A Discussion of 120 Published Studies
A Russell Moore, MS, DVM, Colorado State University, Fort Collins, CO

2:45 p.m.-3:00 p.m.
Refreshment Break

3:00 p.m.-5:00 p.m.
Case Study Reviews
In this workshop, Dr. Don Meuten will provide a review of lesions, pathogenesis and clinical pathology associated with diseases of the endocrine system. Emphasis will be on common endocrinopathies, primarily in dogs and cats, but with a comparison to similarities and differences in other species. Gross, microscopic, cytology and lab data will be presented. Topics will include parathyroid and calcium disorders, disorders of the thyroid gland, adrenal gland, pituitary gland, and endocrine pancreas. This exciting course should be of interest to veterinary pathologists, pathology residents, and diagnosticians.
In 2016, the GHPN held a mini-symposium outlining the creation of the Global Health Pathology Network and describing the nature of potential international endeavors that veterinary pathologists could pursue. Now, in 2018, the GHPN would like to expand on the earlier program and more specifically detail ways in which veterinary pathologists could interact with colleagues and programs in-country or via remote technologies such as telepathology. Part 1 of this session will focus on important transboundary animal diseases and disease reporting, and Part 2 will cover the use of telepathology to connect and partner with developing nations.

8:00 a.m.-8:10 a.m.
Introduction and Update on GHPN
Derron A. Alves, DVM, DACVP

Part 1: Reportable/Transboundary Animal Diseases

8:10 a.m.-8:50 a.m.
Pathogenesis of Selected Transboundary Animal Diseases
Corrie Brown, DVM, PhD, DACVP, University of Georgia, Athens, GA

8:50 a.m.-9:30 a.m.
Reporting Transboundary Diseases
Aaron D. Lehmkuhl, DVM, MS, DACVP, National Veterinary Services Laboratories, Ames, IA

9:30 a.m.-9:40 a.m.
Questions and Discussion

9:40 a.m.-10:10 a.m.
Refreshment Break

Part 2: Those who have created learning programs for colleagues in developing nations will share their ideas and platforms, including what works and what doesn’t in this format.

10:10 a.m.-11:00 a.m.
Challenges and Opportunities in Global Veterinary Telepathology: Real World Experiences
Dalen Agnew, DVM, PhD, DACVP, Michigan State University, Lansing, MI

11:00 a.m.-11:50 a.m.
Innovation Through Partnerships and Technology in Pathology
Danny A. Milner, Jr., MD, MSc (Epi), FASCP, FASTMH, American Society for Clinical Pathology, Chicago, IL

11:50 a.m.-12:00 noon
Questions and Discussion

8:00 a.m.-12:00 noon
Industrial and Toxicologic Pathology Focused Scientific Session I
Session Chair: Kyathanahalli Janardhan, BVSc, MVSc, PhD, DACVP, Integrated Laboratory Systems, Research Triangle Park, NC

Invited Speakers
Immunotoxicity Evaluation: Approaches and Challenges
Gopinath Palanisamy, BVSc, MS, PhD, DACVP, Theravance Biopharma, South San Francisco, CA

Histopathological Evaluation for Immunotoxicity
Cynthia Willard-Mack, VMD, PhD, Envigo, East Millstone, NJ

8:00 a.m.-12:00 noon
Natural Disease Focused Scientific Session I
Session Chair: Daniel R. Rissi, DVM, PhD, DACVP, University of Georgia, Athens, GA

Invited Speakers
Interdisciplinary Insights on the New World Origin of Canine Distemper
Elizabeth Uhl, DVM, PhD, DACVP, University of Georgia, Athens, GA

Toxic Plants of Livestock: Case Studies and Diagnostic Workup
Leslie W. Woods, DVM, PhD, DACVP, University of California, Davis, CA

9:00 a.m.-5:00 p.m.
Career Center

9:30 a.m.-4:30 p.m.
Focused Scientific Poster Session
Exhibits Open

12:00 p.m.-1:30 p.m.
Lunch Break (on your own)
12:15 p.m.-1:15 p.m.
**Emerging Disease Focus Seminar**
Session Chair: Schantel A. Bouknight, DVM, PhD, DACVP, Charles River Laboratories, Durham, NC

The Enigmatic Biology of Tick-borne Flaviviruses
Marshall Bloom, MD, Rocky Mountain Labs/NIAID/NIH, Hamilton, MT

12:15 p.m.-1:15 p.m.
**Veterinary Pathology Resident/Trainee Luncheon**

1:00 p.m.-4:00 p.m.
**ASVCP Veterinary Laboratory Professionals Session I**
Session Chair: Nicole Rosen, MT (ASCP), Purdue University, West Lafayette, IN

1:00 p.m.-2:00 p.m.
Staying Safe in the Laboratory: Avoiding Zoonotic Diseases
Lynn Guptill, DVM, PhD, DACVIM, Purdue University, West Lafayette, IN

2:00 p.m.-3:00 p.m.
Troubleshooting Basic Parasitology Diagnostic Dilemmas
Erin Burton, MS, DVM, DACVP, University of Minnesota, St. Paul, MN

3:00 p.m.-3:30 p.m.
Refreshment Break

3:30 p.m.-4:30 p.m.
Echinococcus Multilocularis: An Emerging Health Concern for Dogs and People?
Andrew S. Peregrine, BVMS, PhD, DVM, DEVPC, DACVM, Ontario Veterinary College, University of Guelph, Guelph, Ontario

1:30 p.m.-3:00 p.m.
Panel Discussion of Prominent Leaders in Our Field
Anne Barger, DVM, MS, DACVP, ACVP Past President, 2018–2019, University of Illinois at Champaign-Urbana, Champaign, IL
Diane Brown, DVM, PhD, DACVP, AKC Canine Health Foundation, Raleigh, NC
Dawn Duncan-Evans DVM, DACVP, LSU School of Veterinary Medicine, Baton Rouge, LA
Richard T. Miller, DVM, PhD, DACVP, R&D Platform Technology & Science, GSK, Collegeville, PA
Mary Anna Thrall, DVM, MS, DACVP, ACVP Past President, 2007, Ross University, Basseterre, West Indies
Michael J. Topper, DVM, PhD, DACVP, AVMA Past-President, Merck & Company, Harleysville, PA
Susan J. Tornquist, DVM, PhD, DACVP, Oregon State University, Corvallis, OR

3:00 p.m.-3:30 p.m.
Refreshment Break

3:30 p.m.-4:50 p.m.
Roundtable Discussions.
Session summary and next directions for veterinary pathologist leadership development.

1:30 p.m.-4:30 p.m.
**Clinical Pathology Focused Scientific Session I**
Session Chair: Julie Webb, DVM, DACVP, IDEXX Laboratories, Markham, Ontario

Invited Speaker
Targeting the Complement Cascade to Dampen Autoimmune Diseases in the Dog
Erica Behling-Kelly, DVM, PhD, DACVP, Cornell University, Ithaca, NY

1:30 p.m.-5:00 p.m.
**Diagnostic Pathology Focused Scientific Session I**
Session Chair: Eric R. Burrough, DVM, PhD, DACVP, Iowa State University, Ames, IA

1:30 p.m.-5:00 p.m.
**Experimental Disease Focused Scientific Session I**
Session Chair: Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory University, Atlanta, GA

Invited Speakers
Unlocking Mechanisms of Cystic Fibrosis Lung Disease
David K. Meyerholz, DVM, PhD, DACVP, University of Iowa, Iowa City, IA
Are Laboratory Animals Relevant for Studying Human Disease?
Jerry Ward, DVM, PhD, DACVP, Global VetPathology, Montgomery Village, MD
Natural Disease Focused Scientific Session II  
Session Chair: Daniel R. Rissi, DVM, PhD, DACVP, University of Georgia, Athens, GA

Invited Speakers  
Hyrax Under Glass  
Dalen Agnew, DVM, PhD, DACVP, Michigan State University, Lansing, MI

Viral Discovery and Establishing Links to Causality  
Patricia Pesavento, DVM, PhD, DACVP, University of California, Davis, CA

ASVCP Business Meeting

6:00 p.m.-7:30 p.m.
ACVP Town Hall Business Meeting

Mystery Slide Review Session: Neuropathology  
Session Chair: Andrew D. Miller, DVM, DACVP, Cornell University, Ithaca, NY

Monday, November 5, 2018

7:00 a.m.-6:00 p.m.
Speaker Ready Room

7:30 a.m.-1:00 p.m.
Registration and Information Desk

8:00 a.m.-12:00 noon  
ACVP and ASVCP Plenary Session:  
Artificial Organs to Tissue Chips- Medical Advances in Tissue Bioengineering  
Session Chairs:  
Erin Brannick, DVM, MS, DACVP, University of Delaware, Newark, DE  
John Slater, PhD, University of Delaware, Newark, DE

Recent advances in computer-modeling, bioprinting, and tissue engineering have led to the creation of synthetic tissues and organs for transplantation, as well as new diagnostic and drug development assays such as organ-on-a-chip technologies. Just how closely do synthetic tissues match their real counterparts? What potential role could veterinary pathologists play in development and evaluation of synthetic tissue models? Global leaders in the field of tissue bioengineering will share successes, challenges, and future opportunities in this burgeoning research field.

8:00 a.m.-9:00 a.m.
Micro and Nanoengineered Hydrogels for Regenerative Engineering and Precision Medicine  
Ali Khademhosseini, PhD, University of California, Los Angeles, CA

9:00 a.m.-10:00 a.m.
Body-on-a-Chip Systems for Drug and Diagnostic Test Development  
Michael L. Shuler, PhD, Cornell University, Ithaca, NY

10:00 a.m.-10:30 a.m.
Refreshment Break

10:30 a.m.-11:30 a.m.
Regenerative Medicine: Current Concepts and Changing Trends  
Anthony Atala, MD, Wake Forest University, Winston-Salem, NC

11:30 a.m.-12:00 noon
Speaker Panel for Q&A

8:30 a.m.-12:00 noon  
ASVCP Veterinary Laboratory Professionals Session II  
Session Chair: Nicole Rosen, MT (ASCP), Purdue University, West Lafayette, IN

8:30 a.m.-9:30 a.m.
Serous Body Cavity Effusions: Ins & Outs and Hows & Whys  
Craig A. Thompson, DVM, DACVP, Purdue University, West Lafayette, IN

9:00 a.m.-10:00 a.m.
Body-on-a-Chip Systems for Drug and Diagnostic Test Development  
Michael L. Shuler, PhD, Cornell University, Ithaca, NY

10:00 a.m.-10:30 a.m.
Refreshment Break

10:30 a.m.-11:30 a.m.
Regenerative Medicine: Current Concepts and Changing Trends  
Anthony Atala, MD, Wake Forest University, Winston-Salem, NC

11:30 a.m.-12:00 noon
Speaker Panel for Q&A
Exploring Pharmacological Alternatives Against Clostridium Perfringens Enterotoxin in vivo
Mauricio Navarro DVM, MSc, University of California, Davis, San Bernardino, CA

1:30 p.m.-3:30 p.m.
ASVCP Case Discussion Session
Session Chair: Amy MacNeill, DVM, PhD, DACVP (clinical), Colorado State University, Ft. Collins, CO

1:30 p.m.-4:00 p.m.
Community Service Activity: Clean the World

1:45 p.m.-3:00 p.m.
Meet the Pathologists

3:00 p.m.-5:00 p.m.
Veterinary Student and Resident Forum

3:45 p.m.-5:15 p.m.
ASVCP Education Forum for Discussion:
Research-Based Flipped Classroom: Team-Based Learning
Session Chair: Ashleigh Newman, VMD, DACVP, Cornell University, Ithaca, NY
Invited Speaker: Holly Bender, DVM, PhD, DACVP, Iowa State University, Ames, IA

5:15 p.m.-6:45 p.m.
ASVCP Reception

5:30 p.m.-7:00 p.m.
ACVP New Diplomates Reception

7:00 p.m.-9:00 p.m.
Mystery Slide Review Session: Muscle Pathology
Session Chair: G. Diane Shelton, DVM, PhD, DACVIM, University of California, San Diego, CA
Heather Tillman, DVM, PhD, DACVP, St. Jude Children's Research Hospital, Memphis, TN

Tuesday, November 6, 2018

7:00 a.m.-6:00 p.m.
Speaker Ready Room

7:30 a.m.-3:30 p.m.
Registration and Information Desk

8:00 a.m.-12:00 noon
Concurrent Session II:
Before and After: Muscle and Meat Pathology of Food Animal Species
Session Chairs: David K. Meyerholz, DVM, PhD, DACVP, University of Iowa, Iowa City, IA
John Edwards, DVM, PhD, DACVP, Texas A&M University, College Station, TX

Diagnostic pathologists are often called upon to evaluate pre-processing muscle lesions in food animal species and may also be asked to evaluate lesions in meat following carcass processing/dressing. Common gross and histologic lesions of muscle and meat will be covered across food animal species, including ruminants, game animals, swine and poultry.

8:00 a.m.-10:00 a.m.
Identification of Muscle and Meat Lesions in Ruminant and Game Animal Species
John Edwards, DVM, PhD, DACVP

10:00 a.m.-10:30 a.m.
Refreshment Break

10:30 a.m.-11:15 a.m.
Genetic, Nutritional, and Toxicologic Diseases of Porcine Muscle
Eric R. Burrough, DVM, PhD, DACVP, Iowa State University, Ames, IA

11:15 a.m.-12:00 noon
Wooden Breast, White Striping and “Worms”: Muscle and Meat Lesions of Broiler Chickens
Erin Brannick, DVM, MS, DACVP, University of Delaware, Newark, DE

8:00 a.m.-12:00 noon
Concurrent Session III:
Diseases and Disorders Associated with Natural and Manmade Disasters
Session Chairs:
Julie Engiles, VMD, DACVP, University of Pennsylvania, Kennett Square, PA
Lisa Murphy, VMD, DABT, University of Pennsylvania School of Veterinary Medicine, Kennett Square, PA

8:00 a.m.-8:50 a.m.
Overview of Diseases and Toxicologic Concerns Associated with Floodwaters and Other Natural Disasters
Sharon Gwaltney-Brant, DVM, PhD, DABVT, DABT, Veterinary Information Network, Mahomet, IL

8:50 a.m.-9:40 a.m.
Injuries and Disorders in Military Working Dogs (MWDs)
Matt S. Takara, DVM, MSpVM, DACVIM(SAIM), U.S. Army Animal Health Division, Lackland, TX

9:40 a.m.-10:10 a.m.
Refreshment Break
10:10 a.m.-11:00 a.m.  
Effects of Radiation on Animals: What Do We Really Know?  
Lisa Murphy, VMD, DABT

11:00 a.m.-11:50 a.m.  
Wildlife, Water and One Health  
Christine Densmore, DVM, PhD, U.S. Geological Survey, Kearneysville, WV

11:50 a.m.-12:00 noon  
Questions and Discussion

8:00 a.m.-12:00 noon  
Clinical Pathology Focused Scientific Session II  
Session Chair: Julie Webb, DACVP, IDEXX Laboratories, Markham, Ontario

Invited Speaker  
NETs, cfDNA and Immunothrombosis: A Tangled Web?  
Robert Goggs, BVSc, PhD, DACVECC, DECVECC, Cornell University, Ithaca, NY

8:00 a.m.-12:00 noon  
Education Focused Scientific Session  
Session Chairs: Rachel Mo Peters, DACVP, Agios Pharmaceuticals, Arlington, MA  
Mee-Ja Sula, DACVP, University of Tennessee, Knoxville, TN

8:00 a.m.-8:45 a.m.  
Biobanking Data: An Educational Journey Towards Precision Medicine  
Marta Castelhano, DVM, Cornell University College of Veterinary Medicine, Ithaca, NY

8:45 a.m.-9:45 a.m.  
How to Use Bioinformatic Approaches to Understand Viral Pathology  
Terry Fei Fan Ng, PhD, University of Georgia, Athens, GA

9:45 a.m.-10:15 a.m.  
Refreshment Break

10:15 a.m.-11:15 a.m.  
Should Veterinarians Dream of Electric Sheep: A Place for Bioinformatics in the DVM Curriculum?  
James Wasmuth, BSc, MRes, PhD, FLS, University of Calgary, Calgary, Alberta, Canada

11:15 a.m.-12:00 noon  
Platform Presentations

9:00 a.m.-5:00 p.m.  
Career Center

9:30 a.m.-3:30 p.m.  
Focused Scientific Poster Session  
Exhibits Open

12:15 p.m.-1:15 p.m.  
Presidential Pathology and Assassination Conservation  
Session Chair: Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory University, Atlanta, GA

12:15 p.m.-1:15 p.m.  
Maintenance of Certification Review Session  
Session Chair: Amy C. Durham, VMD, DACVP, University of Pennsylvania, Philadelphia, PA

1:30 p.m.-5:00 p.m.  
ASVCP Mystery Slide Case Session  
Session Chair: Amy MacNeill, DVM, PhD, DACVP (clinical), Colorado State University, Ft. Collins, CO

1:30 p.m.-5:00 p.m.  
Mini-Symposium II:  
Snap Decisions: Intraoperative Diagnosis  
Session Chair: Pamela J. Mouser, Angell Animal Medical Center, Boston, MA  
Joshua Webster, DVM, PhD, DACVP, Genentech, South San Francisco, CA

Veterinary medicine is continually evolving to provide more rapid and accurate diagnostic testing for patients. The sense of urgency intensifies with critical or anesthetized patients, where treatment decisions await the results of STAT diagnostics. Pathologists are expected to interpret intraoperative cytopathology and frozen sections to provide immediate answers, some of which may result in aggressive surgical measures or end-of-life decisions. These opportunities can be exciting and stressful for all parties involved. This session explores some of the challenges, benefits, techniques, and outcomes of providing intraoperative diagnostic services.

1:30 p.m.-3:00 p.m.  
Guiding the Surgeons Hands: The History and Current Practice of Frozen Section and On Site Assessment at Mayo Clinic  
Gary L. Keeney, MD, and John C. Cheville, MD, Mayo Clinic, Rochester, MN

3:00 p.m.-3:30 p.m.  
Refreshment Break

3:30 p.m.-4:15 p.m.  
Cryosectioning in Diagnostic Veterinary Pathology  
Andrew D. Miller, DVM, DACVP, Cornell University, Ithaca, NY

4:15 p.m.-5:00 p.m.  
A Novel Digital Cytology Service for STAT Submissions  
Julie Piccione, DVM, MS, DACVP, Texas A&M Veterinary Medical Diagnostic Laboratory, College Station, TX

1:30 p.m.-5:00 p.m.  
Diagnostic Pathology Focused Scientific Session II  
Session Chair: Eric R. Burrough, DVM, PhD, DACVP, Iowa State University, Ames, IA

1:30 p.m.-5:00 p.m.  
Experimental Disease Focused Scientific Session II  
Session Chair: Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory University, Atlanta, GA
Invited Speakers

Immune Response to Transplanted Organs, with a Focus on Therapeutics and Diagnostics
Andrews Adams, MD, PhD, Emory University, Atlanta, GA

The Promise and Challenges of Canine CART T Cell Therapy
Nicola J. Mason, PhD, BVetMed, DACVIM, University of Pennsylvania, Philadelphia, PA

1:30 p.m.-5:00 p.m.

**Industrial and Toxicologic Pathology Focused Scientific Session II**
Session Chair: Kyathanahalli Janardhan, BVSc, MVSc, PhD, DACVP, Integrated Laboratory Systems, Research Triangle Park, NC

Invited Speakers
Basics of Preclinical Toxicity Testing
Alok K. Sharma, BVSc, MVSc, PhD, DACVP, Covance Laboratories, Inc., Madison, WI

Investigational New Drug (IND) Application
LuAnn McKinney, DVM, DACVP, US Federal Drug Administration, Silver Spring, MD

5:15 p.m.-6:45 p.m.

**ACVP Awards and Recognition Event**

7:00 p.m.-9:30 p.m.

**ACVP President’s Reception**

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**Wednesday, November 7, 2018**

7:00 a.m.-11:00 a.m.

**Speaker Ready Room**

8:00 a.m.-1:00 p.m.

**Registration and Information Desk**

8:00 a.m.-12:00 noon

**Concurrent Session IV: Virology, Pathology, and the Future**
Session Chairs:
Patricia Pesavento, DVM, PhD, DACVP, University of California, Davis, Davis, CA
Michael J. Oglesbee, DVM, PhD, DACVP, The Ohio State University, Columbus, OH

The potential roles of viruses in disease causation are increasingly apparent, in large part due to advances in molecular diagnostics and viromics. However, detection alone does not address the many potential host-virus interactions that determine the outcome of infection. What makes a virus a pathogen? The ‘reality of causality’ is that pathology is vital to identify outcomes of infection and to understand basic considerations that make animal models relevant in studying specific infection outcomes. In this session we will explore the frontlines of viral discovery, viral persistence, and host-viral interactions to illustrate how virology and pathology combine to address new challenges in the field.

8:00 a.m.-8:50 a.m.

**Viral Discovery: Opportunities and Challenges**
Torsten Seuberlich, DrMedVet, Universität Bern, Bern, Switzerland

8:50 a.m.-9:40 a.m.

**Expanding Relevance of Mouse Models of Viral Virulence**
Michael J. Oglesbee, DVM, PhD, DACVP

9:40 a.m.-10:10 a.m.

**Refreshment Break**

10:10 a.m.-11:00 a.m.

**Host Fitness Promoting Traits of Natural Microbiota in Mice**
Barbara Rehermann, MD, National Institutes of Health, Bethesda, MD

11:00 a.m.-11:45 a.m.

**Persistent Viruses and Viral Oncogenesis**
Patricia Pesavento, DVM, PhD, DACVP

11:50 a.m.-12:00 noon

**Questions and Discussion**

8:00 a.m.-12:00 noon

**Concurrent Session V: Comparative Oncology**
Session Chairs:
Joshua Webster, DVM, PhD, DACVP, Genentech, South San Francisco, CA
Stephen M. Hewitt, MD, PhD, National Cancer Institute, Bethesda, MD

This session will focus on emerging opportunities and challenges of using companion animals as models of human cancer. The session will be introduced by Joshua Webster (session chair) who will discuss the unique benefits and opportunities of comparative oncology as well as some of the challenges observed from the perspective of a pharma interested in using comparative oncology approaches in drug development. Steven Dow of Colorado State University will then discuss comparative tumor immunology in dog and man and will provide perspective on how the dog can be used to evaluate immunotherapy to inform both human and veterinary medicine. Debra Knapp from Purdue will then discuss an investigator sponsored clinical trial using vemurafenib to treated BRAF-V600E mutant canine urothelial cancer. This trial highlights the use of comparative modeling based on genetic mutations rather than histomorphology. Finally, Mark Simpson and Stephen Hewitt from the NCI will discuss the comparative oncology tumor boards and how cross-functional veterinary, human, investigative, and clinical collaborations are needed for successful comparative studies.

8:00 a.m.-8:30 a.m.

**Opportunities and Challenges of Comparative Oncology from a Pharma Perspective**
Joshua Webster, DVM, PhD, DACVP

8:30 a.m.-9:30 a.m.

**Comparative Immuno-Oncology in Dogs and Man**
Steven Dow, DVM, PhD, Colorado State University, Ft. Collins, CO

9:30 a.m.-10:00 a.m.

**Refreshment Break**
10:00 a.m.-11:00 a.m.
Anti-tumor Effects, Safety, and Mechanisms of Resistance of BRAF-targeted Therapy in Dogs with Naturally-occurring Invasive Urothelial Carcinoma
Deborah W. Knapp, DVM, MS, DACVIM, Purdue University, West Lafayette, IN

11:00 a.m.-12:00 noon
Comparative Oncology Benefits From the Synergistic Intel Achievable Through Physician and Veterinary Pathologist Consensus
R. Mark Simpson, DVM, PhD, DACVP, National Cancer Institute, Bethesda, MD
Stephen M. Hewitt, MD, PhD

8:00 a.m.-12:00 noon
Mini-Symposium III:
Flow, Fibrin, and Fabulous Vessels
Session Chairs: Tracy Stokol, BVSc, PhD, DACVP, Cornell University, Ithaca, NY
Erica Behling-Kelly, DVM, PhD, DACVP, Cornell University, Ithaca, NY

This mini-symposium will cover recent discoveries in vascular biology; specifically, mechanistic studies in the pathogenesis of vascular inflammation and thrombosis and in vivo imaging and diagnostic approaches for detecting cerebrovascular events. Speakers will address the hemorrhage-inducing effects of endotheliotropic viruses in ruminants, factors that regulate fibrin clot structure and contribute to thrombosis, the use of multiphoton laser imaging tools to study cerebrovascular pathologic events in rodent models, and cerebrovascular disease in small animals.

8:00 a.m.-8:40 a.m.
Orbivirus Hemorrhagic Disease and the Bleeding Deer
Elizabeth Howarth DVM, PhD, DACVP, University of Georgia

8:40 a.m.-9:20 a.m.
Mechanisms of Viral Hemorrhagic Fevers; the Examples of Bluetongue and African Horse Sickness
N. James MacLachlan, BVSc, MS, PhD, DACVP, University of California, Davis

9:20 a.m.-10:00 a.m.
Fibrinogen, Factor XIII and Red Blood Cells in Thrombosis
Alisa Wolberg PhD, FAHA, University of North Carolina, Chapel Hill, NC

10:00 a.m.-10:30 a.m.
Refreshment Break

10:30 a.m.-11:10 a.m.
In Vivo Imaging of Brain Microvasculature: Multiphoton Microscopy of Flow and Inflammation
Nozomi Nishimura PhD, Cornell University, Ithaca, NY

11:10 a.m.-11:50 a.m.
Cerebrovascular Disease in Companion Animals: What Happens, Why, and How Do You Know?
Elizabeth Boudreau DVM, PhD, DACVIM, Texas A&M University

11:50 a.m.-12:00 noon
Questions and Discussion