

# 2018 Final Program



**ACVP/ASVCP CONCURRENT ANNUAL MEETING**

**WASHINGTON MARRIOTT  
WARDMAN PARK HOTEL**

**WASHINGTON, DC  
NOVEMBER 3-7, 2018**





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### Registration

Registration will be located in Exhibit Hall C Foyer in the Exhibit Lower Level.

#### Registration Hours:

Friday, November 2 . . . . . 6:00 p.m.-8:00 p.m.  
Saturday, November 3 . . . . . 7:00 a.m.-7:30 p.m.  
Sunday, November 4 . . . . . 7:00 a.m.-5:00 p.m.  
Monday, November 5 . . . . . 7:30 a.m.-1:30 p.m.  
Tuesday, November 6 . . . . . 7:30 a.m.-3:00 p.m.  
Wednesday, November 7 . . . . . 8:00 a.m.-12:30 p.m.

### Wireless Internet Access

Complimentary basic wireless Internet service is available at the Marriott Wardman Park Hotel.

Access the wireless Internet in the meeting rooms:

Network: Marriott\_Conference  
Passcode: ACVP18

However, the strength of the bandwidth cannot be guaranteed.

If you are traveling from another country, please check your cell phone plan for international rates.

### Mobile App

Download the free 2018 ACVP and ASVCP Combined Annual Meeting mobile app through the iTunes store or Google Play. Select your personal favorites, abstracts, program, proceedings, and more information about the Annual Meeting. Search for the “Attendify” app, download it, click into the app and search for 2018 ACVP, then join.

Be sure to share your photos through the social media section of the mobile app. We like to see what attendees are up to during the meeting!

### Proceedings

You can access the Proceedings through the mobile app and online during the meeting. A link to the Proceedings will be available soon.

### ACVP RACE Credits

This program 35-34403 is approved by the AAVSB RACE to offer a total of 130.00 CE Credits (42.50 max) being available to any one veterinarian, and/or 123.50 Veterinary Technician CE Credits (39.00 max). This RACE approval is for the subject matter categories of:

- Category One: Scientific using the delivery method of Seminar/Lecture.

This approval is valid in jurisdictions which recognize AAVSB RACE; however, participants are responsible for ascertaining each board's CE requirements. RACE does not “accredit” or “endorse” or “certify” any program or person, nor does RACE approval validate the content of the program.

ACVP is now an approved sponsor of continuing education in New York State. Those ACVP members in New York who need RACE credits will now be able to receive them at the upcoming Annual Meeting.

A RACE credit verification will be sent by email to each individual registering for those credits after the 2018 Annual Meeting.

### Speaker Ready Room

#### Johnson, Mezzanine Level

Speakers (oral presenters) are required to download their presentations in the Speaker Ready Room prior to their sessions.

#### Speaker Ready Room Hours:

Friday, November 2 . . . . . 5:00 p.m.-8:00 p.m.  
Saturday, November 3 . . . . . 7:00 a.m.-6:00 p.m.  
Sunday, November 4 . . . . . 7:00 a.m.-6:00 p.m.  
Monday, November 5 . . . . . 7:00 a.m.-6:00 p.m.  
Tuesday, November 6 . . . . . 7:00 a.m.-6:00 p.m.  
Wednesday, November 7 . . . . . 7:00 a.m.-10:30 a.m.

You can always download your slides earlier than the dates and times in the chart below. Leave plenty of time to visit the Speaker Ready Room before your presentation.



If Your Presentation Date/Time is	Then Your Scheduled Check-In Time is...
Sunday, November 4, 2018 Between 8:00 a.m.-12:00 noon	Report prior to 6:00 p.m. on Saturday, November 3, 2018
Sunday, November 4, 2018 Between 1:30 p.m.-5:00 p.m.	Report prior to 11:00 a.m. on Sunday, November 4, 2018
Monday, November 5, 2018 Between 8:00 a.m.-12:00 noon	Report prior to 5:00 p.m. on Sunday, November 4, 2018
Tuesday, November 6, 2018 Between 8:00 a.m.-12:00 noon	Report prior to 5:00 p.m. on Monday, November 5, 2018
Tuesday, November 6, 2018 Between 1:30 p.m.-5:00 p.m.	Report prior to 11:00 a.m. on Tuesday, November 6, 2018
Wednesday, November 7, 2018 Between 8:00 a.m.-12:00 noon	Report prior to 5:00 p.m. on Tuesday, November 6, 2018
Wednesday, November 7, 2018 Between 1:00 p.m.-5:00 p.m.	Report prior to 10:00 a.m. on Wednesday, November 7, 2018

## Poster Session Schedule

### Veterinary Student Poster Session

Saturday, November 3, 2018

Poster Setup . . . . .	5:00 p.m.-6:00 p.m.
Awards Judging . . . . .	6:00 p.m.-7:00 p.m. (no authors present)
Authors Present . . . . .	7:00 p.m.-8:30 p.m. (authors present)
Teardown . . . . .	8:30 p.m.-9:00 p.m.

### Focused Scientific Poster Session

**Poster Setup:**  
Sunday, November 4, 2018 . . . . . 7:00 a.m.-9:00 a.m.

**Poster Viewing:**  
Sunday, November 4, 2018 . . . . . 9:30 a.m.-4:30 p.m.  
Monday, November 5, 2018 . . . . . 9:30 a.m.-1:00 p.m.  
Tuesday, November 6, 2018 . . . . . 9:30 a.m.-3:30 p.m.

**Poster Teardown:**  
Tuesday, November 6, 2018 . . . . . 3:30 p.m.-4:00 p.m.

Authors present at their posters at the following times:

### Clinical Pathology Posters:

Refreshment Breaks on Sunday afternoon and Tuesday morning

### Diagnostic Pathology Posters:

Refreshment Breaks on Sunday afternoon and Tuesday afternoon

### Education Posters:

Refreshment Breaks on Tuesday morning

### Experimental Disease Posters:

Refreshment Breaks on Sunday afternoon and Tuesday afternoon

### Industrial and Toxicologic Pathology Posters:

Refreshment Breaks on Sunday morning and Tuesday afternoon

### Natural Disease Posters:

Refreshment Breaks on Sunday morning and Sunday afternoon

### ACVP Late-Breaking Poster Session

#### Poster Setup:

Sunday, November 4, 2018 . . . . . 7:00 a.m.-9:00 a.m.

#### Poster Viewing:

Sunday, November 4, 2018 . . . . . 9:30 a.m.-4:30 p.m.  
Monday, November 5, 2018 . . . . . 9:30 a.m.-1:00 p.m.  
Tuesday, November 6, 2018 . . . . . 9:30 a.m.-3:30 p.m.

#### Poster Teardown:

Tuesday, November 6, 2018 . . . . . 3:30 p.m.-4:00 p.m.

**Authors present at their posters at the following times:**  
Monday, November 5, 2018.....10:00 a.m.-10:30 a.m.

### Future Annual Meetings

2019 Annual Meeting  
70<sup>th</sup> Anniversary Meeting  
November 9-13, 2019  
San Antonio Rivercenter Hotel, San Antonio, TX

2020 Annual Meeting  
October 31-November 3, 2020  
Chicago Marriott Downtown Magnificent Mile, Chicago, IL

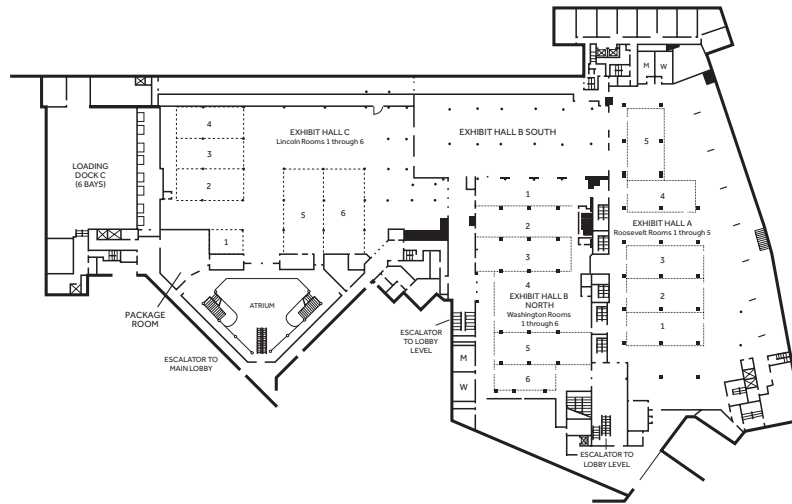
### ACVP Policies

ACVP has recently adopted new policies in regards to:

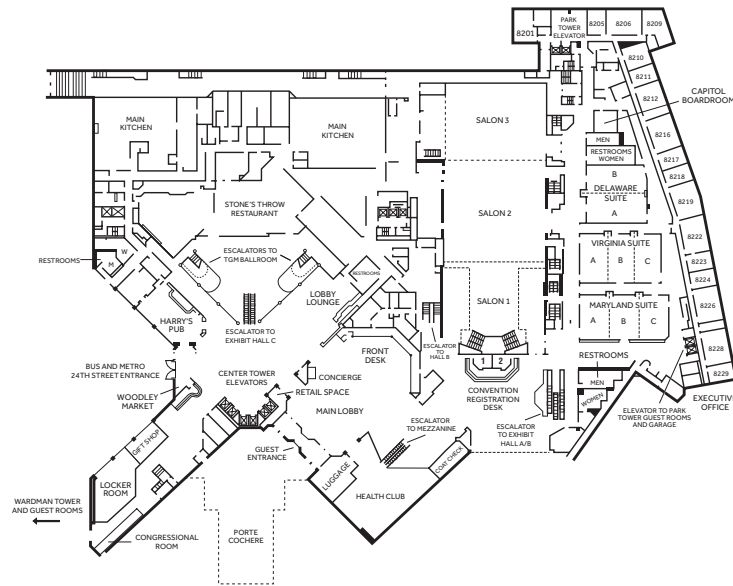
Code of Professional Ethics  
Code of Conduct Policy  
Anti-Harrassment and Discrimination Policy

You can find these three policies at [www.acvp.org](http://www.acvp.org) under the "About" category.

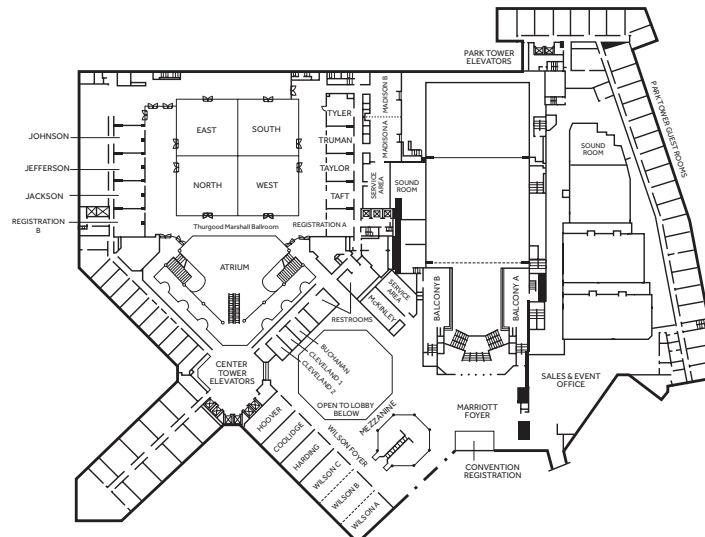
## EXHIBITION LEVEL



## LOBBY LEVEL



## MEZZANINE LEVEL



## Friday, November 2, 2018

3:00 p.m.-6:00 p.m.

Congressional Boardroom, Lobby Level  
**ACVP Council**

4:00 p.m.-7:00 p.m.

Taft, Mezzanine Level  
**ASVCP Executive Board**

5:00 p.m.-8:00 p.m.

Johnson, Mezzanine Level  
**Speaker Ready Room Open**

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

Exhibit Hall C Foyer, Exhibition Lower Level  
**Registration Open**

## Saturday, November 3, 2018

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

Exhibit Hall C Foyer, Exhibition Lower Level  
**Registration and Information Desk**

7:00 a.m.-7:00 p.m.

Johnson, Mezzanine Level  
**Speaker Ready Room**

8:00 a.m.-5:00 p.m. (available at an additional fee)

Madison A, Mezzanine Level  
**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.

**Short Case Presentations**

15 minutes per case: 10 minutes for presentation, 5 minutes for discussion

8:00 a.m.-5:00 p.m. (available at an additional fee)

Thurgood Ballroom North, Mezzanine Level

**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.

8:00 a.m.-8:10 a.m.

**Welcome and Opening Remarks**

8:10 a.m.-9:10 a.m.

**Digital Pathology and its Future**

John E. Tomaszewski, MD, University of Buffalo

9:20 a.m.-9:50 a.m.

**Histological and Other Image Pre-processing Variables that Affect Image Analysis**

Kumar Shanmukhappa, BVSc, PhD, DACVP, Novartis Institute for Biomedical Research

9:55 a.m.-10:25 a.m.

**Validating Primary Clinical Diagnosis Employing Digital Display and Computer Assistance**

R. Mark Simpson, DVM, PhD, DACVP, National Cancer Institute

10:30 a.m.-10:45 a.m.

**Refreshment Break**

10:45 a.m.-11:15 a.m.

**Quantitative Image Analysis: Applications and Representative Tools**

Hibret A. Adissu, DVM, PhD, DVSc, DACVP, National Cancer Institute

11:20 a.m.-11:50 a.m.

**The Systems Engineer, the Pathologist, and the Machine: A Primer on Automation, Computer Vision, and Artificial Intelligence**

Munish Puri, PhD, National Cancer Institute

11:55 a.m.-1:00 p.m.

**Lunch Break**

1:00 p.m.-1:50 p.m.

**Computational Pathology: Opportunities for Precision Medicine**

Anant Madabhushi, PhD, Case Western Reserve University

2:00 p.m.-2:35 p.m.

**Big Data Requires Big Ideas**

Stephen M. Hewitt, MD, PhD, FCAP, National Cancer Institute

2:40 p.m.-3:00 p.m.

**Refreshment Break**

3:00 p.m.-4:30 p.m.

**State of the Art Technology Facilitation**

Adam Smith, Indica Labs

Catherine Conway, PhD, Leica Biosystems

Regan Baird, Visiopharm

4:30 p.m.-5:00 p.m.

**Roundtable Discussion**

8:00 a.m.-5:00 p.m. (available at an additional fee)

Thurgood Ballroom East, Mezzanine Level

**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 and 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 Walrus: 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**

8:00 a.m.-5:00 p.m.

Thurgood Ballroom West, Mezzanine Level

**C.L. Davis-Thompson Foundation Pre-Meeting  
Workshop**  
**Endocrine Pathology**

**Session Chairs:**

Bruce H. Williams, DVM, DACVP, Joint Pathology Center,  
Silver Spring, MD

Jennifer L. Chapman, DVM, DACVP, Defense Health Agency,  
Falls Church, VA

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.

8:00 a.m.-6:00 p.m.

Capitol Boardroom, Lobby Level  
**ASVCP Executive Board**

12:00 noon-2:00 p.m.

Coolidge, Mezzanine Level

**Veterinary Pathology Editors Luncheon**

12:00 noon-2:00 p.m.

Coolidge, Mezzanine Level

**Veterinary Pathology Editors Luncheon**

12:00 noon-2:00 p.m.

Stone's Throw Restaurant, Lobby Level

**ACVP Council and ASVCP Executive Board Luncheon**

1:00 p.m.

Exhibit Hall C, Exhibition Lower Level

**Internet Station**

*Sponsored by VIN*

3:00 p.m.-8:00 p.m.

Taylor, Mezzanine Level

**Career Center**

3:00 p.m.-4:30 p.m.

Taft, Mezzanine Level

**ASVCP Executive Board and Committees**

4:00 p.m.-7:00 p.m.

Coolidge, Mezzanine Level

**ACVP Education Committee**

6:00 p.m.-7:00 p.m.

Wilson B, Mezzanine Level

**Student and Resident Reception**

*Sponsored by Antech*

*All students and residents are welcome to attend!*

6:00 p.m.-7:30 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Professional Photos**

*Sponsored by IDEXX*

*Stop by to have your free professional photo taken!*

7:00 p.m.-8:30 p.m.

Exhibit Hall C, Exhibition Lower Level

**Opening Reception and Veterinary Student Poster Session**

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

Hoover, Mezzanine Level

**Japanese Group of ACVP**

8:00 p.m.-9:00 p.m.

Truman, Mezzanine Level

**Exam Assembly and Administration Group Meeting**

**Sunday, November 4, 2018**

7:00 a.m.-5:00 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Registration and Information Desk**

7:00 a.m.-8:00 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Internet Station**

*Sponsored by VIN*

7:00 a.m.-6:00 p.m.

Johnson, Mezzanine Level

**Speaker Ready Room**

7:00 a.m.-8:00 a.m.

Virginia A, Lobby Level

**Veterinary Student Breakfast**

*All students are invited to attend!*

7:00 a.m.-8:00 a.m.

Taft, Mezzanine Level

**ASVCP Quality Assurance and Standards Committee**



7:00 a.m.-8:00 a.m.

Hoover, Mezzanine Level

**Academic Leadership Special Interest Group**  
(formerly Pathology Chair Breakfast)

7:00 a.m.-8:00 a.m.

Harding, Mezzanine Level

**ASVCP Education Committee**

8:00 a.m.-9:30 a.m.

Virginia C, Lobby Level

**Veterinary Pathology Editorial Board Meeting**

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

Thurgood Ballroom West, Mezzanine Level

**ASVCP Current Topics in Clinical Pathology:**

***Clinical Immunology***

*(Veterinary Laboratory Professionals are invited to attend.)*

**Session Chair:** Kristina Meichner, DVM, DECVIM-CA, DACVP,  
University of Georgia, Athens, GA

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

**Diagnostic Criteria for Immune-Mediated Hemolytic  
Anemia: Laying the Ground Rules, or Opening  
Pandora's Box?**

Oliver Angus Garden, BVetMed, PhD, DACVIM (SAIM),  
DECVIM-CA, University of Pennsylvania, Philadelphia, PA

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

**What is the Evidence for the Use of Commonly Used  
Diagnostic Tests for IMHA and How Are They Most  
Optimally Performed?**

Amy MacNeill, DVM, PhD, DACVP, Colorado State University,  
Ft. Collins, CO

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Industrial & Toxicologic Pathology and  
Natural Disease Posters—Authors Present!***

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

**Principles and Clinical Applications of Clinical Flow  
Cytometry**

Dorothee Bienzle, DVM, MSc, PhD, DACVP, University of  
Guelph, Guelph, Ontario, Canada

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

**Immune Thrombocytopenia (ITP): Pathophysiology  
Update and Diagnostic Dilemmas**

Dana LeVine, DVM, PhD, DACVIM (SAIM), Iowa State  
University, Ames, IA

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

Questions and Discussion

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

Thurgood Ballroom East, Mezzanine Level

**Career Development: *Fighting Fatigue***

**Session Chairs:**

Kris Helke, DVM, PhD, DACVP, Medical University of South  
Carolina, Charleston, SC

Tracy Gluckman, MS, DVM, DACLAM, Oregon Health and  
Sciences University, Portland, OR

8:00 a.m.-8:25 a.m.

**Ergonomic Approaches to Pathology: Mitigating or  
Eliminating Self-Inflicted Chronic Injuries**

Keith Nelson, DVM, PhD, DACVP, MPI/CRL, Mattawan, MI

8:25 a.m.-9:10 a.m.

**Mental Health in Veterinarians**

Linda Lord, DVM, PhD, Merck Animal Health,  
Worthington, OH

9:10 a.m.-9:55 a.m.

**Compassion Fatigue in the Workplace: Is the Cost of  
Caring Affecting Me?**

Tracy Gluckman MS, DVM, DACLAM

9:55 a.m.-10:25 a.m.

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Industrial & Toxicologic Pathology and  
Natural Disease Posters—Authors Present!***

10:25 a.m.-11:10 a.m.

**A Veterinary Pathologist and a Social Worker Share an  
Uber: What Happens Next?**

Sandra Brackenridge, PhD, MSSW, Center for Veterinary  
Specialty and Emergency Care, Lewisville TX

11:10 a.m.-12:00 noon

Roundtable Discussion

**Does Veterinary Medicine Have a Mental Health Crisis?**

Sandra Brackenridge, PhD, MSSW  
Tracy Gluckman MS, DVM, DACLAM  
Linda Lord, DVM, PhD  
Keith Nelson, DVM, PhD, DACVP

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

Thurgood Ballroom South, Mezzanine Level

**Concurrent Session I:**

***Pathology Beyond Borders: Global Engagement***

**Session Chairs:**

Sarah M. Corner, DVM, MS, DACVP, Michigan State  
University, East Lansing, MI

Derron A. Alves, DVM, DACVP, U.S. Army Veterinary Corps,  
Silver Spring, MD

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**

Mark A. Remick, DVM, USDA, Washington, DC

9:30 a.m.-9:40 a.m.

Questions and Discussion

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Industrial & Toxicologic Pathology and Natural Disease Posters—Authors Present!***

**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

Madison A, Mezzanine Level

**Industrial and Toxicologic Pathology Focused Scientific Session I**

***Session Chair:***

Kyathanahalli Janardhan, BVSc, MVSc, PhD, DACVP, Integrated Laboratory Systems, Research Triangle Park, NC

***Committee Members:***

K. Knostman (Co-Chair), G. Palanisamy (Past Chair), M. Bockenstedt, G. Cain, S. Choudhary, C. Colleton, K. Helke, and R. Johnson

**Platform Presentations**

8:00 a.m.-8:05 a.m.

Introduction

***Invited Speaker***

8:05 a.m.-9:00 a.m.

IMMUNOTOXICITY EVALUATION: APPROACHES AND CHALLENGES

G. Palanisamy

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

ACETALDEHYDE POTENTIATES THE TUMOROGENESIS OF N'-NITROSONORNICOTINE IN RATS

F. Tabaran, I. Cornax, S. Hecht, S. Balboa, L. Peterson, M. Sullivan

**Keyword:** Toxicologic Pathology

9:30 a.m.-9:45 a.m.

THE SINOATRIAL NODE REGION OF THE BEAGLE DOG: SECTIONING PROCEDURE, HISTOLOGY, AND BACKGROUND PATHOLOGY

R. Terry, R. Pittaway, I. Taylor, P. Clements

**Keyword:** Cardiovascular

9:45 a.m.-10:00 a.m.

INVESTIGATION OF SILVER DEPOSITION AND INFLAMMATORY LESION IN SELECTED ORGANS OF STRANDED CETACEANS

W. Li, B. Liou, W. Yang, M. Chen, V.F. Pang, C. Jeng

**Keyword:** Toxicologic Pathology

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Industrial and Toxicologic Pathology Focused Scientific Posters!***

***Invited Speaker***

10:30 a.m.-11:30 a.m.

HISTOPATHOLOGICAL EVALUATION FOR IMMUNOTOXICITY

C. Willard-Mack



11:30 a.m.-12:00 noon

AN OUTBREAK OF HYPERVITAMINOSIS D IN RABBITS DUE TO A FEED MILL MIXING ERROR

J. Kurz, T. Baldwin, E.J. Kelly, G. Hullinger, J. Hall

*Keyword:* Rabbit

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

Thurgood Ballroom North, Mezzanine Level

**Natural Disease Focused Scientific Session I**

***Session Chair:***

Daniel R. Rissi, DVM, PhD, DACVP, University of Georgia, Athens, GA

***Committee Members:***

F.A. Uzal (Past Chair), A.E. Pillatzki (Co-Chair),

P.G.F. Bolfa, J.B. Engiles, S. Priestnall

**Platform Presentations**

***Invited Speaker***

8:00 a.m.-8:45 a.m.

INTERDISCIPLINARY INSIGHTS ON THE NEW WORLD ORIGIN OF CANINE DISTEMPER

Elizabeth Uhl, DVM, PhD, DACVP, University of Georgia, Athens, GA

8:45 a.m.-9:00 a.m.

CANINE EPENDYMOMA: DIAGNOSTIC CRITERIA AND HISTOLOGIC PITFALLS

A. Miller, J. Koehler, T. Donovan, J. Stewart, B. Porter, D. Rissi, S. Priestnall, F. Schulman

*Keyword:* Nervous system

9:00 a.m.-9:15 a.m.

CHARACTERIZATION OF SYSTEMIC AMYLOID A AMYLOIDOSIS IN STEJNEGER'S BEAKED WHALES (MESOPLODON STEJNEGERI)

S. Nakagun, K. Watanabe, Y. Tajima, T. Yamada, N. Horiuchi, Y. Kobayashi

*Keyword:* Wildlife

9:15 a.m.-9:30 a.m.

AN OUTBREAK OF NECROTIZING DERMATITIS IN MOOSE CALVES DUE TO A NOVEL CERVIDPOXVIRUS

A. Armien, T. Wolf, S. Mor, T. Ng, S. Goyal, J. Rasmussen

*Keyword:* Infectious Disease

9:30 a.m.-9:45 a.m.

EMERGENCE OF RABBIT HEMORRHAGIC DISEASE VIRUS 2 IN BRITISH COLUMBIA, CANADA

H. Snyman, T. Joseph, H. Schwantje, A. Ambagala, G. McGregor, A. Britton, S. Raverty, R. Cooper, C. Embury-Hyatt, K. Hooper-McGrevy, S. Babiuk, J. Prichard

*Keyword:* Rabbit

9:45 a.m.-10:00 a.m.

BREED SPECIFIC DIFFERENCES IN MOLECULAR FEATURES AND CLINICAL OUTCOME IN CANINE B-CELL CHRONIC LYMPHOCYTIC LEUKEMIA

E. Rout, J. Labadie, R. Burnett, J. Yoshimoto, A. Avery

*Keyword:* Neoplasia

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Natural Disease Focused Scientific Posters!***

10:30 a.m.-10:45 a.m.

DETERMINATION OF TREATMENT FAILURE FOR FIP INFECTED CATS TREATED WITH ANTICORONAVIRAL THERAPY TO FACILITATE THE SUCCESS OF SECOND GENERATION THERAPY

M. Liepnieks, B. Murphy, M. Perron, M. Bannasch, E. Montgomery, E. Murakami, H. Liu, N. Pedersen

*Keyword:* Infectious Disease

10:45 a.m.-11:00 a.m.

BETA-MANNOSIDOSIS IN MIXED-BREED SIBLING DOGS

G. Johnson, G. Johnson, D. O'Brien, A. Kolichski, C. Levine

*Keyword:* Nervous System

11:00 a.m.-11:15 a.m.

PATHOLOGIC AND MOLECULAR DIAGNOSIS OF YELLOW FEVER IN NEOTROPICAL NON-HUMAN PRIMATES, BRAZIL  
N. Fernandes, J. Guerra, R. Ressio, C. Cirqueira, S. Iglezias, C. Kanamura, J. Dias-Delgado, I. Rizkallah, K. Beraldo, L. Kimura, M. Cunha, L. Araujo, J. Catao Dias

*Keyword:* Infectious Disease

***Invited Speaker***

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

TOXIC PLANTS OF LIVESTOCK: CASE STUDIES AND DIAGNOSTIC WORKUP

Leslie W. Woods, DVM, PhD, DACVP, University of California, Davis, Davis, CA

9:00 a.m.-12:00 noon

Congressional Boardroom, Lobby Level

**ACVP Council**

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

Taylor, Mezzanine Level

**Career Center**

9:30 a.m.-4:30 p.m.

Exhibit Hall C, Exhibition Lower Level

**Focused Scientific Poster Session**

**Exhibits Open**

10:00 a.m.-5:00 p.m.

McKinley, Mezzanine Level

**Guest and Student Hospitality Room**

*Feel free to use this area to meet colleagues and friends, or take a break and check your email.*

12:00 noon-1:30 p.m.

**Lunch Break** (on your own)

12:00 noon-1:30 p.m.

Maryland A, Lobby Level

**Veterinary Pathology Resident and Trainee Luncheon**

*Sponsored by IDEXX*

12:00 noon-1:30 p.m.

Truman, Mezzanine Level

**Veterinary Clinical Pathology Editorial Board Meeting**

12:15 p.m.-1:15 p.m.

Thurgood Ballroom West, Mezzanine Level

**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

1:00 p.m.-4:30 p.m.

Wilson B, Mezzanine Level

**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.

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

*Visit the Focused Scientific Poster Session—Authors Present!*

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.-5:00 p.m.

Thurgood Ballroom East, Mezzanine Level

**Mini-Symposium I:**

**Leadership Development: Involve and Evolve**

**Session Chairs:**

Barbara Davis, VMD, PhD, DACVP, Innogenics, Harvard, MA

R. Mark Simpson, DVM, PhD, DACVP, National Cancer Institute, Bethesda, MD

What is leadership?

Leadership can be hard to define and it means different things to different people, but there are some characteristics that appear common to the best leaders. Foremost, leaders help themselves and others do the right things. They set directions, build an inspiring vision, and create something new. Leadership is about mapping out where you need to go to win as a team or organization and communicating the vision and future. Leadership is dynamic, exciting, and inspiring. Effective leaders have integrity, enthusiasm, and good communication skills.

Leaders have faith in their ability to train and develop the employees under them. Because of this, they have the willingness to empower those they lead to act autonomously.

**Facilitator:**

Betsy Charles, DVM, MA, DACVR, Veterinary Leadership Institute and Western University of Health Sciences

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 Urbana-Champaign, 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

Kevin McDorman, DVM, PhD, DACVP, Charles River, Washington, DC

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.

Exhibit Hall South, Exhibition Lower Level

**Refreshment Break**

*Visit the Focused Scientific Poster Session—Authors Present!*

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.

Thurgood Ballroom West, Mezzanine Level

**Clinical Pathology Focused Scientific Session I**

**Session Chair:**

Julie Webb, DVM, DACVP, IDEXX Laboratories, Markham, Ontario

**Committee Members:**

N. Tripathi, C. Wagg, M. Fry, S. Clark, K. Wycislo, V. Wong

**Platform Presentations**

1:30 p.m.-1:45 p.m.

$\beta$ 1-TUBULIN GENE POINT MUTATION ASSOCIATED WITH CONGENITAL MACROTHROMBOCYTOPENIA IN CAIRN AND NORFOLK TERRIERS IDENTIFIED IN TWO JACK RUSSELL TERRIERS

P. Christopherson, K. King, M. Boudreaux

**Keyword:** Hematopoietic System

1:45 p.m. - 2:00 p.m.

CEREBROSPINAL FLUID ANALYSIS WITH THE PROCYTE DX HEMATOLOGY ANALYZER AND COMPARISON WITH MANUAL NUCLEATED CELL COUNTS AND DIFFERENTIALS

H. Brown, J. Wilson-Hess, F. Metzger, D. DeNicola

**Keyword:** Clinical Pathology

***Invited Speaker***

2:00 p.m.-3:00 p.m.

TARGETING THE COMPLEMENT CASCADE TO DAMPEN AUTOIMMUNE DISEASE IN THE DOG

Erica Behling-Kelly

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

*Visit the Clinical Pathology Focused Scientific Poster Session—Authors Present!*

3:30 p.m.-3:45 p.m.

EFFECT OF MICROSCOPIC AREA ON DIFFERENTIAL CELL COUNTS IN EVALUATION OF EQUINE BRONCHOALVEOLAR LAVAGE FLUID

K. Foote+, C. Gilroy, S. Burton, R. Vanderstichel

**Keyword:** Cytology

3:45 p.m.-4:00 p.m.

EFFECTS OF MARKED HYPERTRIGLYCERIDEMIA AND LIPID CLEARANCE ON CANINE BIOCHEMISTRY TESTING

C. Azevedo+, J. Lidbury, U. Jeffery

**Keyword:** Clinical Chemistry

4:00 p.m.-4:15 p.m.

HEMATOLOGIC AND BIOCHEMICAL PROFILES OF CATS NATURALLY INFECTED WITH CYTAUXZON FELIS, 29 CASES (2007-2017)

B. Kastl+, L. Pohlman, N. Springer

**Keyword:** Clinical Pathology

4:15 p.m.-4:30 p.m.

HYPERCHOLESTEROLEMIA AND HYPERTRIGLYCERIDEMIA AS BIOMARKERS OF DISEASE IN COMPANION RABBITS

D. Sharma+, A. Hill, M. Christopher

**Keyword:** Rabbit

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

Thurgood Ballroom South, Mezzanine Level

**Diagnostic Pathology Focused Scientific Session I**

**Session Chair:**

Eric R. Burrough, DVM, PhD, DACVP, Iowa State University, Ames, IA

**Committee Members:**

A. Rodrigues Hoffman (Co-Chair), L. Kennedy (Past Chair), F. Oliveria, H. Snyman, R. Derscheid, A. Van Wettene

**Platform Presentations**

1:30 p.m.-1:35 p.m.

Introduction and Announcements

1:35 p.m.-1:45 p.m.

DEVELOPMENT AND USE OF A DATABASE OF RETROSPECTIVE DIAGNOSTIC DATA OF PSITTACINE BIRDS

D. Gibson#, N. Nemeth, H. Beaufrère, C. Varga, L. Susta

**Keyword:** Avian

1:45 p.m.-1:55 p.m.

SYNOVIAL AMYLOIDOSIS IN THREE ADULT CAPTIVE TIGERS

O. Fasina#, F. Sebastian, M. Sula, L. Craig

**Keyword:** Bone and Joint

1:55 p.m.-2:05 p.m.

HISTOLOGIC CHARACTERIZATION OF EMERGENT INFECTIOUS DISEASES WITHIN THE ORNAMENTAL FISH INDUSTRY

A. Armwood#, A. Camus

**Keyword:** Infectious Disease

- 2:05 p.m.-2:15 p.m.  
GLOMERULAR ULTRASTRUCTURAL FINDINGS IN PIGS WITH PORCINE DERMATOPATHY AND NEPHROPATHY SYNDROME  
C. Siepker#, C. Schmidt, C. Brown  
*Keyword: Urinary System*
- 2:15 p.m.-2:25 p.m.  
A SERIES OF HETEROGENEOUS LYMPHOPROLIFERATIVE DISEASES CO-EXPRESSING CD3 AND MUM-1 IN DOGS AND CATS  
K. Hughes#, E. Rout, P. Avery, A. Moore, A. Avery  
*Keyword: Neoplasia*
- 2:25 p.m.-2:35 p.m.  
MICROTUBULE-ASSOCIATED PROTEIN 2 EXPRESSION IN CANINE GLIOMA  
E. Demeter#, C. Frank, D. Rissi, A. Miller  
*Keyword: Neoplasia*
- 2:35 p.m.-2:45 p.m.  
SQUAMOUS CELL CARCINOMA WITH CLEAR CELL DIFFERENTIATION IN AN EQUINE EYELID  
L. Stein#, D. Sledge, R. Smedley, M. Kiupel, T. Thaiwong  
*Keyword: Neoplasia*
- 2:45 p.m.-2:55 p.m.  
SCHWANNOSIS IN THREE FOALS AND A CALF  
I. Miranda#, K. Taylor, W. Castleman, B. Summers, A. Miller  
*Keyword: Nervous System*
- 2:55 p.m.-3:00 p.m.  
Veterinary Student Presentation  
OPTIMIZATION OF METHODS TO STUDY THE EFFECT OF CANNABINOIDS ON IMMUNE RESPONSES IN STIMULATED CANINE PBMCS  
C. Brown, E. Kummari, T. Archer, B. Kaplan
- 3:00 p.m.-3:30 p.m.  
Exhibit Hall C, Exhibition Lower Level  
**Refreshment Break**  
***Visit the Diagnostic Pathology Focused Scientific Poster Session—Authors Present!***
- 3:30 p.m.-3:35 p.m.  
STANDARDIZATION OF MITOTIC COUNT IN TUMORS  
D. Meuten, F. Moore, M. Miller, P. Stromberg, J. Webster, J. Munday, D. Whitley  
*Keyword: Neoplasia*
- 3:35 p.m.-3:40 p.m.  
Questions and Discussion
- 3:40 p.m.-3:45 p.m.  
HYDROCEPHALUS AND NEONATAL MORTALITY ASSOCIATED TO COMBINED DEFICIENCY OF VITAMIN A AND FOLIC ACID (VIT B9) IN MATERNAL RABBITS  
A. Morales, M. Moya-Acosta, C. Esteves, Y. Brito, E. Suniaga  
*Keyword: Nervous System*
- 3:45 p.m.-3:50 p.m.  
CANINE CUTANEOUS AND SUBCUTANEOUS SOFT TISSUE SARCOMAS: IDENTIFICATION OF THERAPEUTIC TARGETS THROUGH GENE EXPRESSION LARGE-SCALE STUDY  
R. Laufer-Amorim, J. Nobrega, S. Linde, L. Conceição, R. Torres-Neto, F. Loures  
*Keyword: Neoplasia*
- 3:50 p.m.-3:55 p.m.  
Veterinary Student Presentation  
PLATELET-ENDOTHELIAL ASSOCIATIONS MAY IMPACT THE PATHOGENESIS OF CYTOMEGALOVIRUS INFECTION IN MICE  
B. Daly, A. Braxton, G. Cyphers, S. Vijay, J. Brockhurst, A. Chalmin, K. Najarro, K. Johnson, C. Cryer, S. Guerrero-Martin, R. Mukhopadhyay, Y-P. Su, R. Boger, K. Metcalfe Pate
- 3:55 p.m.-4:00 p.m.  
Questions and Discussion
- 4:00 p.m.-4:05 p.m.  
INTRAOCULAR NEURAL HETEROTOPIA IN A MOROCCAN UROMASTYX  
M. Mainenti, C. Clancy, A. Van Wettere  
*Keyword: Nervous System*
- 4:05 p.m.-4:10 p.m.  
CILIAE INFECTION ASSOCIATED WITH CUTANEOUS ULCERATION IN SEA PENS (ORDER: PENNATULACEA)  
E. Corbin, M. Garner, E. LaDouceur  
*Keyword: Wildlife*
- 4:10 p.m.-4:15 p.m.  
PANCREATIC CYSTIC LESIONS IN LABORATORY MICE FROM PREDOMINANTLY NOD AND NOD-DERIVED STRAINS  
J. Vilches-Moure, R. Doty, D. Imai-Leonard  
*Keyword: Liver and Pancreas*
- 4:15 p.m.-4:20 p.m.  
NEUROLOGIC AND OCULAR LESIONS IN 8-DAY-OLD BROILER BREEDERS  
S. Williams, K. Grogan, S. Tilley  
*Keyword: Avian*
- 4:20 p.m.-4:25 p.m.  
Veterinary Student Presentation  
CLINICAL AND HISTOPATHOLOGICAL CHARACTERISTICS OF FELINE DIFFUSE IRIS MELANOMA  
M. Akella, I. Herring, A. Enders, K. Waler, T. LeRoith
- 4:25 p.m.-4:30 p.m.  
Questions and Discussion
- +Competitor for the ASVCP Young Investigator Award  
#ACVP/AAVLD Diagnostic Pathology Travel Award

4:30 p.m.-4:35 p.m.

EVALUATING THE EFFECTS OF VARIOUS DECALCIFICATION PROTOCOLS ON IMMUNOHISTOCHEMICAL STAINING IN ZEBRAFISH (DANIO RERIO)

D. Meritet, C. Löhr, S. Spagnoli, K. Fischer

*Keyword:* Immunohistochemistry

4:35 p.m.-4:40 p.m.

RENAL TUBULAR DYSGENESIS WITH CONCURRENT OSTEOGENESIS IMPERFECTA, DENTINOGENESIS IMPERFECTA, AND GROWTH ARREST IN A YOUNG DOG

W. Sills, R. Pool, K. Kelly

*Keyword:* Urinary System

4:40 p.m.-4:45 p.m.

ACUTE DISSEMINATED CHAGAS DISEASE IN A PREGNANT RHESUS MACAQUE (MACACA MULATTA)

M. Betley, G. Wilkerson, S. Gray, W. Baze

*Keyword:* Infectious Disease

4:45 p.m.-4:50 p.m.

SUDDEN UNEXPECTED NATURAL DEATH OF THREE DOGS WITH PULMONARY HEMORRHAGE

I. Mitsui, Y. Kawamura

*Keyword:* Respiratory System

4:50 p.m.-4:55 p.m.

ULCERATIVE VEGETATIVE AND CAVITATING BACTERIAL AORTIC VALVULAR ENDOCARDITIS IN TWO DOGS

T.T. Negrão Watanabe, S. Shippy, F. Del Piero

*Keyword:* Cardiovascular

4:55 p.m.-5:00 p.m.

Questions and Discussion

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

Madison A, Mezzanine Level

**Experimental Disease Focused Scientific Session I**

***Session Chair:***

Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory University, Atlanta, GA

***Committee Members:***

L. Baseler (Past Chair), O. Foreman (Co-Chair), S. Montgomery, S. Santagostino, M. Sebastian and J. Webster

**Platform Presentations**

1:30 p.m.-1:45 p.m.

IMMUNOPHENOTYPING OF MURINE PRECURSOR B-CELL LEUKEMIA: IMMUNOHISTOCHEMISTRY VERSUS FLOW CYTOMETRY

L.J. Janke and J.E. Reh

*Keyword:* Hematopoietic System

***Invited Speaker***

1:45 p.m.-2:30 p.m.

UNLOCKING MECHANISMS OF CYSTIC FIBROSIS LUNG DISEASE

D. Meyerholz

2:30 p.m.-2:45 p.m.

NON-COITAL SEXUAL TRANSMISSION OF ZIKA VIRUS FROM IMMUNOCOMPROMISED MALE MICE IN ACUTE BUT NOT CHRONIC REPRODUCTIVE INFECTION

C.S. Clancy, A.J. Van Wette, J.D. Morrey and J.G. Julander

*Keyword:* Infectious Disease

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

PATHOLOGY OF INTRATRACHEAL AEROSOL INNOCULATION WITH BRUCELLA MELITENSIS IN A GUINEA PIG MODEL

M.E. Hensel, D. Garcia, S.P. Chaki and A.M. Arenas-Gamboa

*Keyword:* Infectious Disease

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

Exhibit Hall C, Exhibition Lower Level

Refreshment Break

***Visit the Experimental Disease Focused Scientific Poster Session—Authors Present!***

***Invited Speaker***

3:30 p.m.-4:30 p.m.

ARE LABORATORY ANIMALS RELEVANT FOR STUDYING HUMAN DISEASE?

J. Ward

4:30 p.m.-4:45 p.m.

CHARACTERIZATION OF BLOOD-TUMOR BARRIER PATHOLOGY IN A MOUSE MODEL OF BRAIN METASTASES OF LUNG CANCER

A. Dieterly, G. Uzunalli, C. Kemet, A. Soepriatna, C. Goergen, M. Wendt and T.L. Lyle

*Keyword:* Nervous System

4:45 p.m.-5:00 p.m.

SNAKE FUNGAL DISEASE: A NOVEL EXPERIMENTAL MODEL

C.M. McKenzie, P.T. Oesterle, C.M. Jardine, C.M. Davy, B.N. Lillie and N.M. Nemeth

*Keyword:* Infectious Disease

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

Thurgood Ballroom North, Mezzanine Level

**Natural Disease Focused Scientific Session II**

***Session Chair:***

Daniel R. Rissi, DVM, PhD, DACVP, University of Georgia, Athens, GA

***Committee Members:***

F.A. Uzal (Past Chair), A.E. Pillatzki (Co-Chair), P.G.F. Bolfa, J.B. Engiles, S. Priestnall



**Platform Presentations****Invited Speaker**

1:30 p.m.-2:15 p.m.

HYRAX UNDER GLASS

Dalen Agnew, DVM, PhD, DACVP, Michigan State University, Lansing, MI

2:15 p.m.-2:30 p.m.

BLUETONGUE VIRUS (BTV) INFECTION IN RAMS INDUCES THE ACTIVATION OF TYPE-I INTERFERON RESPONSE RESULTING IN TESTICULAR DEGENERATION

D. Pintus, G. Puggioni, G. Meloni, R. Scivoli, E. Melzi, A. Rocchigiani, D. Manunta, A. Oggiano, M. Palmarini, C. Ligios

**Keyword:** Infectious Disease

2:30 p.m.-2:45 p.m.

CHARACTERIZATION OF THE TRANSCRIPTIONAL PROGRAM OF FELINE INJECTION-SITE SARCOMA

Q. Wei, S. Ramsey, M. Larson, C. Löhr

**Keyword:** Neoplasia

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

AN EPIDEMIOLOGIC INVESTIGATION OF OPHIDIAN NIDOVIRUSES IN CAPTIVE SNAKES

L. Hoon-Hanks, P. Bartolini, S. Fogelson, S. Perry, R. Ossiboff, E. Dubovi, J. Wellehan, M. Stenglein

**Keyword:** Infectious Disease

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break****Visit the Natural Disease Focused Scientific Poster Session—Authors Present!**

3:30 p.m.-3:45 p.m.

WHOLE GENOME SEQUENCING IN RELATING ANIMAL ILLNESS AND PET FOODBORNE INFECTIOUS AGENTS

J. Jones, O. Ceric, L. Goodman, A. Pightling, S. Nemser, R. Reimschuessel, L. Palmer, L. Carey, E. Edwards, M. Glover, J. Queen, A. Hodges, S. Lambkin, N. Reed-Jones, D. Rotstein

**Keyword:** Infectious Disease

3:45 p.m.-4:00 p.m.

ENCEPHALOMYOCARDITIS VIRUS IN CAPTIVE AUSTRALIAN MARSUPIALS

J. Mackie, A. Hill, M. Pyne, C. Lacasse

**Keyword:** Wildlife

4:00 p.m.-4:15 p.m.

IMMUNOHISTOCHEMICAL FEATURES OF CANINE INTRACRANIAL EMBRYONAL NEOPLASIA: 10 CASES

E. Demeter, J. Koehler, B. Porter, D. Rissi, A. Miller

**Keyword:** Nervous System**Invited Speaker**

4:15 p.m.-5:00 p.m.

VIRAL DISCOVERY AND ESTABLISHING LINKS TO CAUSALITY

Patricia Pesavento, DVM, PhD, DACVP, University of California, Davis, CA

2:30 p.m.-3:30 p.m.

Exhibit Hall C, Exhibition Lower Level

**Professional Photos***Sponsored by IDEXX**Stop by to have your free professional photo taken!*

4:30 p.m.-6:00 p.m.

Thurgood Ballroom West

**ASVCP Business Meeting**

5:00 p.m.-6:00 p.m.

Thurgood Ballroom Foyer

**“Happy Hour”***Join your colleagues for an informal gathering at the end of the program for the day (cash bar).*

5:00 p.m.-6:30 p.m.

Maryland A, Lobby Level

**Comparative Pathology Reception and Meeting+**

6:00 p.m.-7:30 p.m.

Thurgood Ballroom South, Mezzanine Level

**ACVP Town Hall Business Meeting**

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

Stone's Throw Restaurant

**Antech Reception+**

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

Virginia B, Lobby Level

**University of Florida Alumni Reception+**

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

Maryland B, Lobby Level

**Ohio State University College of Veterinary Medicine Alumni Reception+**

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

Thurgood Ballroom West, Exhibition Lower Level

**Mystery Slide Review Session: Neuropathology****Session Chair:**

Andrew D. Miller, DVM, DACVP, Cornell University, Ithaca, NY

*Weigh in on the mystery slides at [www.acvp.org](http://www.acvp.org) (click on Mystery Slides). If you are correct, win a free beverage!*

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

Virginia C, Lobby Level

**North Carolina State University College of Veterinary Medicine Alumni Reception+**

7:30 p.m.-9:30 p.m.  
Virginia A, Lobby Level  
**Washington State University College of Veterinary  
Medicine Alumni Reception+**

## Monday, November 5, 2018

7:00 a.m.-6:00 p.m.  
Johnson, Mezzanine Level  
**Speaker Ready Room**

7:00 a.m.-8:00 p.m.  
Exhibit Hall C Foyer, Exhibition Lower Level  
**Internet Station**  
*Sponsored by VIN*

7:00 a.m.-8:00 a.m.  
Wilson C, Mezzanine Level  
**ACVP Council and CEB Board**

7:00 a.m.-8:00 a.m.  
McKinley, Mezzanine Level  
**ASVCP Veterinary Laboratory Professionals Program  
Committee**

7:00 a.m.-8:00 a.m.  
Hoover, Mezzanine Level  
**ACVP Member Relations Committee**

7:00 a.m.-8:00 a.m.  
Truman, Mezzanine Level  
**Governance Task Force**

7:00 a.m.-8:00 a.m.  
Taft, Mezzanine Level  
**IEPC Committee**

7:00 a.m.-8:00 a.m.  
Maryland A, Lobby Level  
**Virginia-Maryland College of Veterinary Medicine  
Alumni Breakfast+**

7:00 a.m.-10:00 a.m.  
Coolidge, Mezzanine Level  
**C.L. Davis Foundation Board Meeting+**

7:30 a.m.-1:00 p.m.  
Exhibit Hall C Foyer, Exhibition Lower Level  
**Registration and Information Desk**

8:00 a.m.-12:00 noon  
Thurgood Ballroom, Mezzanine Level  
**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, 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.  
Exhibit Hall C, Exhibition Lower Level  
**Refreshment Break**  
**Visit the Late Breaking Poster Session—Authors  
Present!**

10:30 a.m.-11:30 a.m.  
**Regenerative Medicine: Current Concepts and Chang-  
ing 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  
Madison A, Mezzanine Level  
**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

9:30 a.m.-10:30 a.m.  
**Emotional Intelligence: So it Really IS All About Me!**  
John A. Christian, DVM, PhD, Purdue University, West  
Lafayette, IN



10:30 a.m.-11:00 a.m.  
Exhibit Hall C, Exhibition Lower Level  
**Refreshment Break**

11:00 a.m.-12:00 noon  
**Perspectives on Cerebrospinal Fluid Analysis in Animal Models**  
L. Tiffany Lyle, DVM, PhD, DACVIM, DACVP, Purdue University, West Lafayette, IN

9:00 a.m.-5:00 p.m.  
Taylor, Mezzanine Level  
**Career Center**

9:30 a.m.-1:00 p.m.  
Exhibit Hall C, Exhibition Lower Level  
**Focused Scientific Poster Session Exhibits Open**

10:00 a.m.-5:00 p.m.  
McKinley, Mezzanine Level  
**Guest and Student Hospitality Room**  
*Feel free to use this area to meet colleagues and friends, or take a break and check your email.*

12:00 noon-1:30 p.m.  
Tyler, Mezzanine Level  
**Maintenance of Certification Committee**

12:00 noon-1:30 p.m.  
**Lunch Break** (on your own)

12:15 p.m.-1:15 p.m.  
Madison A, Mezzanine Level  
**Veterinary Pathology Journal Editors Present: Things Are Not Always as They Seem: The Emerging Issue of Antibody Validation in Veterinary Pathology With a Special Presentation: A Visit to the Artful World of High Magnification Histopathology (open to all attendees)**

**Session Chair:**  
Jeff L. Caswell, DVM, DVSc, PhD, DACVP, Editor, Veterinary Pathology and University of Guelph, Guelph, Ontario

**Speakers:**  
Jerrold Ward, Global VetPathology  
Courtney Schott, University of California - San Francisco  
Joshua Webster, Genentech  
Jeff L. Caswell, University of Guelph

12:15 p.m.-1:45 p.m.  
Wilson B, Mezzanine Level  
**Latin Comparative Pathology Group Presents** (presented in English)

**Session Chairs:**  
Melissa Sanchez, VMD, PhD, DACVP, Antech Diagnostics

Ana Alcaraz, DVM, PhD, DACVP, Western University of Health Sciences, Pomona, CA

12:15 p.m.-1:00 p.m.  
**Lessons and Lesions from Around the World**  
Corrie Brown, DVM, PhD, DACVP, University of Georgia, Athens, GA

1:00 p.m.-1:25 p.m.  
**Reproductive Pathology in Zoo and Wild Animals**  
Dalen Agnew, DVM, PhD, DACVP, Michigan State University, Lansing, MI

1:25 p.m.-1:45 p.m.  
**Exploring Pharmacological Alternatives Against Clostridium Perfringens Enterotoxin in vivo**  
Mauricio Navarro DVM, MSc, University of California, Davis, San Bernardino, CA

12:15 p.m.-1:15 p.m.  
Wilson C, Mezzanine Level  
**ACVP Council and Education Committee**

1:00 p.m.-5:00 p.m.  
Taft, Mezzanine Level  
**Relaxation Room**  
*Sponsored by IDEXX*

Come and see what is in store for you at the Relaxation Room! You deserve a stress-free break!

1:30 p.m.-3:30 p.m.  
Thurgood Ballroom South, Mezzanine Level  
**ASVCP Case Discussion Session**

**Session Chair:**  
Amy MacNeill, DVM, PhD, DACVP, Colorado State University, Ft. Collins, CO

1:30 p.m.-4:00 p.m.  
Exhibit Hall C Foyer, Exhibition Lower Level  
**Community Service Activity: Clean the World**

1:45 p.m.-3:00 p.m.  
Thurgood Ballroom East, Mezzanine Level  
**Meet the Pathologists**

3:00 p.m.-4:00 p.m.  
Wilson C, Mezzanine Level  
**ACVP Test Writers Meeting**

3:00 p.m.-5:00 p.m.  
Exhibit Hall B South, Exhibition Lower Level  
**Veterinary Student and Resident Forum**

3:45 p.m.-5:15 p.m.

Thurgood Ballroom South, Mezzanine Level

**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

4:30 p.m.-5:30 p.m.

Tyler, Mezzanine Level

**Flow Cytometry Users Meeting+**

5:00 p.m.-6:30 p.m.

Wilson B, Mezzanine Level

**C.L. Davis-Thompson Foundation Reception+**

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

Maryland A, Lobby Level

**ASVCP Reception (open to members only)**

6:00 p.m.-7:30 p.m.

Delaware A, Lobby Level

**ACVP New Diplomates Reception**

*Sponsored by IDEXX*

6:00 p.m.-7:30 p.m.

Hoover, Mezzanine Level

**Iowa State University College of Veterinary Medicine  
Alumni Reception+**

6:30 p.m.-8:00 p.m.

Wilson C, Mezzanine Level

**University of Pennsylvania School of Veterinary  
Medicine Alumni Reception+**

6:30 p.m.-8:00 p.m.

Virginia A, Lobby Level

**University of Georgia College of Veterinary Medicine  
Alumni Reception+**

7:00 p.m.-8:00 p.m.

Maryland C, Lobby Level

**ASVCP Team Jeopardy: Residents/Established Clinical  
Pathologists**

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

Thurgood Ballroom West, Mezzanine Level

**Mystery Slide Review Session: *Muscle Pathology***

**Session Chairs:**

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

*Weigh in on the mystery slides at [www.acvp.org](http://www.acvp.org)  
(click on Mystery Slides). If you are correct, win a  
free beverage!*

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

Harding, Mezzanine Level

**Colorado State University College of Veterinary  
Medicine Alumni Reception+**

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

Virginia C, Lobby Level

**Cornell University College of Veterinary Medicine  
Alumni Reception+**

## Tuesday, November 6, 2018

7:00 a.m.-6:00 p.m.

Johnson, Mezzanine Level

**Speaker Ready Room**

7:00 a.m.-6:00 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Internet Station**

*Sponsored by VIN*

7:00 a.m.-8:00 a.m.

Taft, Mezzanine Level

**ACVP Past Presidents Breakfast**

7:00 a.m.-8:00 a.m.

Hoover, Mezzanine Level

**ACVP Finance Committee**

7:00 a.m.-8:00 a.m.

Tyler, Mezzanine Level

**ASVCP Program Committee**

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

Harding, Mezzanine Level

**Certifying Exam Board**

7:00 a.m.-8:00 a.m.

Truman, Mezzanine Level

**Government Policy Committee**

7:30 a.m.-3:30 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Registration and Information Desk**

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

Thurgood Ballroom South, Mezzanine Level

**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.

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

*Visit the Clinical Pathology and Education Focused Scientific Poster Sessions—Authors Present!*

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

Thurgood Ballroom West, Mezzanine Level

**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.

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

*Visit the Clinical Pathology and Education Focused Scientific Poster Sessions—Authors Present!*

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

Thurgood Ballroom North, Mezzanine Level

**Clinical Pathology Focused Scientific Session II**

**Session Chair:**

Julie Webb, DACVP, IDEXX Laboratories, Markham, Ontario

**Committee Members:**

N. Tripathi, C. Wagg, M. Fry, S. Clark, K. Wycislo, V. Wong

**Platform Presentations**

8:00 a.m.-8:15 a.m.

A SPECIFIC IMMUNOASSAY AND ANTIBODY FOR DETECTION OF FELINE KIDNEY INJURY MOLECULE-1 IN URINE AND KIDNEY TISSUE

S. Bland, M. Clark, O. Cote, D. Bienzle

**Keyword:** Urinary System

8:15 a.m.-8:30 a.m.

VALIDATION OF THE USE OF DENSITOMETRIC QUANTITATION FOR MEASUREMENT OF SERUM M-PROTEIN CONCENTRATION IN THE DOG

R. Harris+, A. Moore

**Keyword:** Clinical Pathology

8:30 a.m.-8:45 a.m.

OPTIMIZING THE U411 AUTOMATED URINALYSIS INSTRUMENT FOR VETERINARY USE

S. Evans+, J. Sharp, L. Vap

**Keyword:** Clinical Pathology

8:45 a.m.-9:00 a.m.

THE ROLE OF HIGH-DENSITY LIPOPROTEINS (HDL) IN MODULATING NEUTROPHIL ACTIVATION DURING THE TRANSITION PERIOD IN COWS

J. Cruz Otero+, C. Wong, E. Behling-Kelly

**Keyword:** Immune System

**Invited Speaker**

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

NETS, cfDNA, AND IMMUNOTHROMBOSIS: A TANGLED WEB?  
R. Goggs

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

**Visit the Clinical Pathology and Education Focused  
Scientific Poster Session—Authors Present!**

10:30 a.m.-10:45 a.m.

CLINICAL AND FLOW CYTOMETRIC FEATURES OF CANINE  
NODAL CD8+ and CD4-CD8- T-CELL LYMPHOMAS

L. Harris, E. Rout, J. Yoshimoto, A. Avery

**Keyword:** Hematopoietic System

10:45 a.m.-11:00 a.m.

CLINICAL DESCRIPTION AND LINEAGE ASSESSMENT OF  
CANINE CD34+ ACUTE LEUKEMIAS—IMMUNOPHENOTYPING  
AND GENE EXPRESSION PROFILING

E. Rout, J. Yoshimoto, J. Labadie, A. Avery, P. Avery

**Keyword:** Hematopoietic System

11:00 a.m.-11:15 a.m.

DIAGNOSTIC VALIDATION OF A WHOLE-SLIDE  
IMAGING SCANNER IN CYTOLOGICAL SAMPLES:  
DIAGNOSTIC ACCURACY AND COMPARISON WITH LIGHT  
MICROSCOPY

F. Bonsembiante, U. Bonfanti, F. Cian, B. Zattoni,

L. Cavicchioli, Maria Elena Gelain

**Keyword:** Cytology

11:15 a.m.-11:30 a.m.

A NOVEL AGGRESSIVE T-CELL LYMPHOMA/LEUKEMIA IN  
YOUNG ENGLISH BULLDOGS

K. Frankhouse, E. Rout, K. Hughes, J. Yoshimoto,

P. Avery, A. Avery

**Keyword:** Neoplasia

11:30 a.m.-11:45 a.m.

PREDICTION OF CANINE LYMPHOMAS' PHENOTYPE IN  
CYTOLOGICAL SAMPLES USING DEEP LEARNING

T. Banzato, M. Gelain, M. Serraglio, V. Martini,

F. Bonsembiante

**Keyword:** Neoplasia

11:45 a.m.-12:00 noon

IT IS TIME TO SIMPLIFY THE CLASSIFICATION OF CANINE  
AND FELINE BODY CAVITY EFFUSIONS

Andrea A. Bohn

**Keyword:** Cytology

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

Madison A, Mezzanine Level

**Education Focused Scientific Session**

**Session Chairs:**

Rachel Mo Peters, DVM, DACVP, Agios Pharmaceuticals,  
Arlington, MA

Mee-Ja Sula, DVM, DACVP, University of Tennessee,  
Knoxville, TN

8:00 a.m.-8:45 a.m.

**Biobanking Data: An Educational Journey Toward  
Precision Medicine**

Lara Mouttham, PhD

Cornell Veterinary Biobank, 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.

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

**Visit the Education Focused Scientific Poster Session—  
Authors Present!**

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.-11:30 a.m.

AN ACTIVE INTEGRATION EXERCISE FOR DEVELOPMENT  
OF ILLNESS SCRIPTS IN THE TEACHING OF ANATOMIC  
PATHOLOGY

G. Halderson

11:30 a.m.-11:45 a.m.

ERROR MANAGEMENT TRAINING AND METACOGNITION:  
INVESTIGATING THEIR EFFECT AND ROLE IN VETERINARY  
STUDENTS LEARNING BLOOD SMEAR ANALYSIS

D. Meritet

11:45 a.m.-12:00 noon

VIRTUAL REALITY IN THE CLINICAL PATHOLOGY  
CLASSROOM

M. Camus

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

Congressional Boardroom, Lobby Level

**ACVP Council**

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

Taylor, Mezzanine Level

**Career Center**

9:00 a.m.-11:00 a.m.

Wilson B, Mezzanine Level

**International Veterinary Pathology Coalition**

9:30 a.m.-3:30 p.m.

Exhibit Hall C, Exhibition Lower Level

**Focused Scientific Poster Session Exhibits Open**

10:00 a.m.-5:00 p.m.

McKinley, Mezzanine Level

**Guest and Student Hospitality Room**

*Feel free to use this area to meet colleagues and friends, or take a break!*

12:15 p.m.-1:15 p.m.

Thurgood Ballroom East, Mezzanine Level

**Presidential Pathology and Assassination Conservation**

**Session Chair:**

Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory University, Atlanta, GA

**Preserving Pathology and Remains of Presidents and Their Assassins**

Lowell Flanders, MS, Mütter Museum, Philadelphia, PA

12:15 p.m.-1:15 p.m.

Wilson C, Mezzanine Level

**ACVP Training Program Network Luncheon**

12:15 p.m.-1:15 p.m.

Thurgood Ballroom West, Mezzanine Level

**Maintenance of Certification Review Session**

**Session Chair:**

Amy C. Durham, VMD, DACVP, University of Pennsylvania, Philadelphia, PA

1:30 p.m.-4:00 p.m.

Wilson B, Mezzanine Level

**Congress of Committees**

1:30 p.m.-3:00 p.m.

Truman, Mezzanine Level

**ACVP/STP Coalition for Veterinary Pathology Fellows Board of Governors Meeting**

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

Thurgood Ballroom North, Mezzanine Level

**ASVCP Mystery Slide Case Session**

**Session Chair:**

Amy MacNeill, DVM, PhD, DACVP, Colorado State University, Ft. Collins, CO

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

Thurgood Ballroom West, Mezzanine Level

**Mini-Symposium II:**

**Snap Decisions: Intraoperative Diagnosis**

**Session Chairs:**

Pamela J. Mouser, DVM, 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.-2:15 p.m.

**Guiding the Surgeons' Hands: The History and Current Practice of Frozen Section and On-site Assessment at Mayo Clinic**

John C. Cheville, MD, Mayo Clinic, Rochester, MN

2:15 p.m.-3:00 p.m.

**Frozen Section Telepathology by Whole-slide Imaging**

Andrew Evans, MD, PhD, FRCPC  
Toronto General Hospital, Toronto, Ontario

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

*Visit the Focused Scientific Group Poster Session—Authors Present!*

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.

Thurgood Ballroom South, Mezzanine Level

**Diagnostic Pathology Focused Scientific Session II**

**Session Chair:**

Eric R. Burrough, DVM, PhD, DACVP, Iowa State University, Ames, IA

**Committee Members:**

A. Rodrigues Hoffman (Co-Chair), L. Kennedy (Past Chair), F. Oliveria, H. Snyman, R. Derscheid, A. Van Wettene



**Platform Presentations**

**2017 ACVP/AAVLD Travel Award Winner**

1:30 p.m.-1:40 p.m.

IDENTIFICATION OF PORCINE ASTROVIRUS TYPE 3 IN CENTRAL NERVOUS SYSTEM TISSUE FROM SWINE WITH NEUROLOGIC DISEASE AND ENCEPHALOMYELITIS: DIAGNOSTIC INVESTIGATION, VIRUS CHARACTERIZATION, AND RETROSPECTIVE ANALYSIS OF HISTORICAL CASES  
F. Matias Ferreyra, P. Arruda, E. Burrough, L. Bradner, Q. Chen, V. Cooper, R. Derscheid, P. Gauger, K. Harmon, B. Hause, M. Hensch, I. Honorato Gatto, G. Li, D. Madson, P. Piñeyro, K. Schwartz, G. Stevenson, Y. Zheng, C. Yang, B. Arruda

*Keyword: Infectious Disease*

1:40 p.m.-1:50 p.m.

HISTOPATHOLOGIC FEATURES OF A SYNDROME IN BERNESE MOUNTAIN DOGS CHARACTERIZED BY HEPATIC AND CEREBELLAR DEGENERATION  
K.P. Carmichael, M. Seguel, J. Stanton

*Keyword: Nervous System*

1:50 p.m.-2:00 p.m.

OUTBREAK OF MALIGNANT CATARRHAL FEVER IN FIVE FORMOSAN SEROWS (CAPRINCORNIS SWINHOEI) IN TAIWAN

J.H. Yin, H.Y. Chiou, J.W. Liao

*Keyword: Infectious Disease*

2:00 p.m.-2:10 p.m.

VETERINARY FORENSIC PATHOLOGY: CASES FROM AN EMERGING DISCIPLINE

B. McEwen

*Keyword: Forensic Pathology*

2:10 p.m.-2:20 p.m.

COUNTING MITOTIC FIGURES

D. Meuten, F. Moore, M. Miller, H. Tvedten, J. Webster, D. Whitley

*Keyword: Neoplasia*

2:20 p.m.-2:30 p.m.

CLINICAL, HISTOPATHOLOGIC, AND IMMUNOHISTOCHEMICAL FEATURES OF THIRTEEN CASES OF CANINE GALLBLADDER NEUROENDOCRINE CARCINOMA  
B. Bankoff, K. O'Brien, P. Rosenstein, D. Clendaniel, M. Sánchez, A. Durham

*Keyword: Neoplasia*

2:30 p.m.-2:40 p.m.

IMMUNOHISTOCHEMICAL DIAGNOSIS AND CHARACTERIZATION OF THE IMMUNE CELL POPULATION IN CANINE CHOROID PLEXUS TUMORS

M. Dalton, J. Stilwell, A. Miller, P. Krimer, D. Rissi

*Keyword: Nervous System*

2:40 p.m.-2:50 p.m.

P63/P40 IMMUNOREACTIVITY IN A CANINE PULMONARY SQUAMOUS CELL CARCINOMA

J. Crawford, T. Franks, B. Culbertson, D. Alves

*Keyword: Respiratory System*

2:50 p.m.-3:00 p.m.

PRIMARY CENTRAL NERVOUS SYSTEM LARGE GRANULAR LYMPHOCYTE (LGL) LYMPHOMA IN A YOUNG ADULT DOG  
T. Towns, E. Fish, M. Sandey, A. Yanke, J. Koehler

*Keyword: Neoplasia*

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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Diagnostic Pathology Focused Scientific Posters—Authors Present!***

3:30 p.m.-3:40 p.m.

ENDOCARDIOSIS IN TETRAS (FAMILY: CHARACIDAE)

R. Kim, A. Cartoceti, J. St. Leger, R. Yanong, K. Holder, E. LaDouceur

*Keyword: Wildlife*

3:40 p.m.-3:50 p.m.

CORRELATING HEPATIC HISTOPATHOLOGY TO GALLBLADDER DISEASE IN DOGS

E. Choi, S. McDonough

*Keyword: Liver and Pancreas*

3:50 p.m.-4:00 p.m.

GLOBOID CELL LEUKODYSTROPHY IN THREE RELATED BORDER COLLIE MIXED-BREED PUPPIES

C. Burrell, M. Vieson, D. Hague, B. Kompare

*Keyword: Nervous System*

4:00 p.m.-4:10 p.m.

AORTIC LESIONS IN TWO WILD COMMON BOTTLENOSE DOLPHINS (TURSIOPS TRUNCATUS)

D. Rotstein, D. Pabst, W. McClellan, T. Keenan-Bateman

*Keyword: Wildlife*

4:10 p.m.-4:20 p.m.

PYOGANULOMATOUS OTITIS MEDIA, MENINGOENCEPHALITIS & OSTEOMYELITIS IN A GOAT CAUSED BY RHODOCOCUS EQUI

M. Cruz Penn, A. Saied

*Keyword: Nervous System*

4:20 p.m.-4:30 p.m.

BRUCELLA OOPHORITIS IN A MARINE TOAD (RHINELLA MARINA)

R. Glabman, R. Mani, D. Agnew

*Keyword: Infectious Disease*

4:30 p.m.-4:40 p.m.  
 PROLIFERATIVE REPRODUCTIVE TRACT LESIONS IN  
 A FEMALE AFRICAN GREEN MONKEY (CHLOROCEBUS  
 AETHIOPS SABAEUS)  
 G. Balamayooran, H. Atkins, M. Jorgensen, J. Cline, N.  
 Kock  
*Keyword:* Reproductive System

4:40 p.m.-4:50 p.m.  
 CLINICAL AND HISTOPATHOLOGIC FEATURES OF  
 CANINE PERIPHERAL ODONTOGENIC FIBROSARCOMA  
 (ODONTOGENIC SARCOMA)  
 I. Kim, M. Sanchez, M. Volker  
*Keyword:* Alimentary

4:50 p.m.-5:00 p.m.  
 miRNA GLOBAL GENE EXPRESSION IN CANINE PRIMARY  
 MAMMARY CARCINOMA AND IN THE RESPECTIVE LYMPH  
 NODE METASTASIS  
 R. Laufer-Amorim, R. Salvador-Bernabé, S. Drigo, M.  
 Carvalho, F. Sueiro, E. Paes de Almeida  
*Keyword:* Mammary

1:30 p.m.-5:00 p.m.  
 Thurgood Ballroom East, Mezzanine Level  
**Experimental Disease Focused Scientific Session II**

***Session Chair:***

Sanjeev Gumber, BVSc, MVSc, PhD, DACVP, Emory  
 University, Atlanta, GA

***Committee Members:***

L. Baseler (Past Chair), O. Foreman (Co-Chair), S.  
 Montgomery, S. Santagostino, M. Sebastian and J.  
 Webster

**Platform Presentations**

1:30 p.m.-1:45 p.m.  
 MURINE MODELS OF LUPUS NEPHRITIS AND EFFICACY OF  
 SERPINB3 FOR IMMUNOMODULATORY RESPONSE  
 G. Maggioni, A. Ghirardello, R. Luisetto, A. Doria and L.  
 Cavicchioli  
*Keyword:* Immune System

***Invited Speaker***

1:45 p.m.-2:30 p.m.  
 NEXT GENERATION COSTIMULATION BLOCKADE IN  
 TRANSPLANTATION  
 A. Adams

2:30 p.m.-2:45 p.m.  
 ROLES OF ANTIBODY IN SUPPRESSION OF PANCREATIC  
 CANCER PROGRESSION AND METASTASIS  
 J.B. Foote and C.A. Klug  
*Keyword:* Neoplasia

2:45 p.m.-3:00 p.m.  
 CHARACTERIZATION OF SPONTANEOUS LYMPHOMAS/  
 LEUKEMIAS IN NSG MICE  
 H. Tillman, L. Janke, P. Vogel, and J. Reh  
*Keyword:* Neoplasia

3:00 p.m.-3:30 p.m.  
 Exhibit Hall C, Exhibition Lower Level  
**Refreshment Break**  
***Visit the Experimental Disease Focused Scientific  
 Poster Session—Authors Present!***

***Invited Speaker***

3:30 p.m.-4:30 p.m.  
 LANDMARKS ON THE CANINE CAR JOURNEY  
 N. Mason

4:30 p.m.-4:45 p.m.  
 ZIKA VIRUS AND TESTICULAR TERATOMAS IN MICE:  
 INSIGHTS INTO VIRUS TROPISM AND DISEASE  
 PRESENTATION IN HUMANS  
 I.N. Moore  
*Keyword:* Reproductive System

4:45 p.m.-5:00 p.m.  
 CONSERVED IMPACT OF BRCA2 MUTATION ON PLOIDY  
 OUTCOME IN ZEBRAFISH CANCERS  
 L. Mensah, J.L. Ferguson, and H.R. Shive  
*Keyword:* Neoplasia

1:30 p.m.-5:00 p.m.  
 Madison A, Mezzanine Level  
**Industrial and Toxicologic Pathology Focused Scientific  
 Session II**

***Session Chair:***

Kyathanahalli Janardhan, BVSc, MVSc, PhD, DACVP,  
 Integrated Laboratory Systems, Research Triangle Park, NC

***Committee Members:***

K. Knostman (Co-chair), G. Palanisamy (Past Chair),  
 M. Bockenstedt, G. Cain, S. Choudhary, C. Colleton, K.  
 Helke, and R. Johnson

**Platform Presentations**

1:30 p.m.-1:35 p.m.  
**Introduction**

***Invited Speaker***

1:35 p.m.-2:30 p.m.  
 BASICS OF PRECLINICAL TOXICITY TESTING  
 A. Sharma

2:30 p.m.-3:00 p.m.  
 THE CONTRIBUTION OF CORTICAL INTERNEURONS TO  
 CEREBRAL BLOOD FLOW  
 C. Ruff, J. Couey, A. Vazquez, S. Ross  
*Keyword:* Nervous System



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

Exhibit Hall C, Exhibition Lower Level

**Refreshment Break**

***Visit the Industrial and Toxicologic Pathology  
Focused Scientific Poster Session—Authors Present!***

***Invited Speaker***

3:30 p.m.-4:30 p.m.

INVESTIGATIONAL NEW DRUG (IND) APPLICATION

L. McKinney

4:30 p.m.-4:45 p.m.

STRAIN SUSCEPTIBILITY DIFFERENCES: EVALUATING  
MORIBUND STATUS, HISTOPATHOLOGY, AND SERUM  
BIOMARKERS OF CARDIAC INJURY IN THREE MOUSE  
STRAINS

E. Sung, S. Borghoff, A. Nyska, J. Dunnick, G. Tavlos

**Keyword:** Toxicologic Pathology

4:45 p.m.-5:00 p.m.

RETROSPECTIVE ANALYSIS OF FUNGAL RHINITIS IN  
SPRAGUE-DAWLEY RATS: SEX DIFFERENCES IN INFECTION  
FREQUENCY AND LESION LOCATION IN NASAL CAVITY

K. Carlton, J. Lamoureux, C. Dean, K. Nelson

**Keyword:** Respiratory System

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

Marriott Ballroom Salon I, Lobby Level

**ACVP Awards and Recognition Event**

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

Thurgood Ballroom, Mezzanine Level

**ACVP President's Reception**

**Wednesday, November 7, 2018**

7:00 a.m.-8:00 a.m.

Harding, Mezzanine Level

**Focused Scientific Group Breakfast**

7:00 a.m.-10:30 a.m.

Johnson, Mezzanine Level

**Speaker Ready Room**

8:00 a.m.-12:30 p.m.

Exhibit Hall C Foyer, Exhibition Lower Level

**Registration and Information Desk**

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

Thurgood Ballroom North, Mezzanine Level

**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.

Exhibit Hall C Foyer, Exhibition Lower Level

**Refreshment Break**

***Visit the Young Investigator Award Posters!***

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

**Host Fitness Promoting Traits of Natural Microbiota in Mice**

Barbara Rehmann, 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

11:45 a.m.-12:00 noon

Questions and Discussion

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

Thurgood Ballroom West, Mezzanine Level

**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.

Exhibit Hall C Foyer, Exhibition Lower Level

**Refreshment Break**

*Visit the Young Investigator Award Posters!*

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

Thurgood Ballroom South, Mezzanine Level

**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.-8:30 a.m.

**Orbivirus Hemorrhagic Disease and the Bleeding Deer**

Elizabeth Howerth DVM, PhD, DACVP, University of Georgia

8:30 a.m.-9:00 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

9:00 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.

Exhibit Hall C Foyer, Exhibition Lower Level

**Refreshment Break**

*Visit the Young Investigator Award Posters!*

10:30 a.m.-11:15 a.m.

**In Vivo Imaging of Brain Microvasculature: Multiphoton Microscopy of Flow and Inflammation**

Nozomi Nishimura, PhD, Cornell University, Ithaca, NY

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

**Cerebrovascular Disease in Companion Animals: What Happens, Why, and How Do You Know?**

Elizabeth Boudreau DVM, PhD, DACVIM, Texas A&M University, College Station, TX

8:00 a.m.-10:00 a.m.

Thurgood Ballroom East, Mezzanine Level

**Wednesday Slide Conference Live From the Archives of the Joint Pathology Center**

**Session Chair:**

Colonel Derron A. Alves, DVM, DACVP, U.S. Army Veterinary Corps, Silver Spring, MD

**Speakers:**

Bruce Williams, DVM, DACVP, Joint Pathology Center, Silver Spring, MD

Major Emily Corbin, U.S. Army Veterinary Corps, Joint Pathology Center, Silver Spring, MD

Major Sarah Cudd, U.S. Army Veterinary Corps, Joint Pathology Center, Silver Spring, MD

Major Robert Kim, U.S. Army Veterinary Corps, Joint Pathology Center, Silver Spring, MD

8:00 a.m.-12:00 noon  
Thurgood Ballroom Foyer, Mezzanine Level  
**ACVP Young Investigator Award Poster Session**

8:00 a.m.-12:00 noon  
Congressional Boardroom, Lobby Level  
**ACVP Council**

12:00 noon  
**Meeting Concludes**

1:00 p.m.-6:00 p.m. (available at an extra fee)  
Madison A, Mezzanine Level  
**Post-Meeting Workshop I:  
Forensic Pathology**

**Session Chairs:**

Sean P. McDonough, DVM, PhD, DACVP, Cornell University,  
Ithaca, NY

Beverly J. McEwen, DVM, MSc, PhD, DACVP, University of  
Florida, Gainesville, FL

Skeletal injuries and skeletonized bodies present unique challenges to veterinary pathologists. Following lectures on comparative osteology, veterinary forensic taphonomy, and diagnostic imaging of blunt force, sharp force, and projectile induced trauma, Drs. Maranda Kles, Lerah Sutton and Elizabeth Watson will lead interactive, hands-on sessions with participants. Dr. Watson will provide veterinary pathologists with the information needed to advise diagnostic imaging staff on a protocol for postmortem imaging of forensic cases and illustrate the use of postmortem imaging to recognize and evaluate traumatic skeletal injuries. A fundamental issue with skeletal remains is to determine the species of origin. Dr. Kles will describe the differences between the broad groups of mammals, reptiles, fish, and birds, and identify some of the general differences between commonly seen species such as dogs, cats, horses, deer, and pigs. Dr. Sutton will discuss how to distinguish antemortem bone pathology from postmortem changes such as weathering and scavenging.

1:00 p.m.-1:45 p.m.  
**Forensic Radiology and Imaging for Veterinary  
Pathologists**  
Elizabeth Watson, DVM, DACVR, University of Florida,  
Gainesville, FL

1:45 p.m.-2:35 p.m.  
**Comparative Distinguishing Skeletal Features of  
Common Species and Breeds: What We Know and Why  
We Need More**  
Maranda A. Kles, PhD, University of Florida, Gainesville, FL

2:35 p.m.-3:30 p.m.  
**Forensic Taphonomy for the Investigator**  
Lerah Sutton, PhD, CSI Academy of Florida, Alachua, FL

3:30 p.m.-5:00 p.m.

**Applied Sessions**

Three applied sessions of 30 minutes each will run concurrently. Participants will rotate through the stations and then move to the next session. Attendees are encouraged to take photographs of the bone specimens to create a personal archive for reference.

## ACVP Veterinary Student Poster Session

## Poster Schedule—Exhibit Hall C

Saturday, November 3, 2018

Poster Setup . . . . . 5:00 p.m.-6:00 p.m.

Awards Judging . . . . . 6:00 p.m.-7:00 p.m.  
(no authors present)Authors Present . . . . . 7:00 p.m.-8:30 p.m.  
(authors present)

Teardown . . . . . 8:30 p.m.-9:00 p.m.

**SP-1**  
PATHOLOGICAL LESIONS OF THE CAPTIVE BUDGETT'S  
FROG (LEPIDOBATRACHUS LAEVIS)  
M. Womble, G. Lewbart, H. Shive

**SP-2**  
PLEOMORPHIC LIPOSARCOMA IN A DOG  
S. Muller, T. LeRoith

**SP-4**  
CLONING CANINE CD16 FOR DIRECTED NK CELL-  
IMMUNOTHERAPY  
C. Fattori, E. Dickerson, A. Borgatti, K. Makielski,  
A. Graef, J. Van Etten, H. Park, J. Modiano

**SP-5**  
MOST FREQUENT INJURIES SUSTAINED BY FREE-RANGE  
CATS KILLED IN ROAD TRAFFIC ACCIDENTS IN ST. KITTS  
S. Zayas, J. Wulcan, M. Dennis

**SP-6**  
SALIVARY GLAND NEOPLASMS IN NON-HUMAN PRIMATES:  
A CASE SERIES AND BRIEF LITERATURE REVIEW  
E. Howard, O. Gonzalez, S. Gumber, D. Anderson,  
S. Kumar, E. Dick, Jr.

**SP-7**  
HAPTOGLOBIN AS AN INDICATOR OF ON-GOING ACUTE  
INFLAMMATION IN PRE-SLAUGHTER COWS  
K. Okeowo, F. Thomas, E. Ajibola, O. Akintunde, S.  
Rahman

**SP-8**  
OPTIMIZATION OF METHODS TO STUDY THE EFFECT OF  
CANNABINOIDS ON IMMUNE RESPONSES IN STIMULATED  
CANINE PBMCS  
C. Brown, E. Kummari, T. Archer, B. Kaplan

**SP-9**  
ANTIBODY MEDIATED PROTECTION AGAINST RSV AFTER  
IMMUNIZATION WITH A VSV-G and F RECOMBINANT  
C. Lewis, K. Brakel, O. Harder, S. Niewiesk

**SP-10**  
A SELECTIVE BCL-2 INHIBITOR IMPAIRS CANINE LYMPHOMA  
CELL LINE SURVIVAL  
G. Herbert, T. Lawhon, R. Gogal, K. Meichner

**SP-11**  
THE EFFECT OF IRRADIATED HUMAN SQUAMOUS CELL  
CARCINOMA CELLS ON MICROGLIA ACTIVATION AND  
SURVIVAL  
R. Martin, J. Lawrence, A. Khammanivong, L. Nguyen,  
G. Phung, D. Seelig

**SP-12**  
NOVEL IN SITU HYBRIDIZATION ASSAY FOR THE DIAGNOSIS  
OF CHAGAS MYOCARDITIS AND ORCHITIS IN A RHESUS  
MACAQUE  
M. DeLorenzo, E. Carias, A. Mustonen, L. Giavedoni,  
O. Gonzalez, S. Kumar, E. Dick, Jr.

**SP-13**  
TH2 CELLS AND ILC2 RESPONSES IN ALLERGIC WEST  
HIGHLAND WHITE TERRIERS  
V. Bergomi, E. Tait-Wojno, S. Frueh

**SP-14**  
IMPAIRED EXPRESSION OF AP ENDONUCLEASE-1 IMPAIRS  
FETAL DEVELOPMENT AND LEADS TO EMBRYONIC LOSS  
A. Oates, G. den Hartog, L. Butcher, A. Ablack,  
M. Matsubara, T. Izumi, S. Crowe, P. Ernst

**SP-15**  
A MORPHOLOGIC STUDY OF 17 CASES OF PERIOcular  
XANTHOGRANULOMAS IN DOGS  
A. Harvey, L. Teixeira, R. Dubielzig

**SP-16**  
EFFECTS OF LIVER CELL SURFACE GLYCOCONJUGATES ON  
INVASION BY PLASMODIUM BERGHEI  
A. Schwirian, J. King

**SP-17**  
A RETROSPECTIVE ANALYSIS OF POSTMORTEM EQUINE  
RENAL LESIONS  
C. Culligan, L. Craig, J. Janes

**SP-18**  
LATS1 AND LATS2 MAINTAIN THE FATE OF  
ADRENOCORTICAL CELLS IN THE EMBRYONIC ADRENAL  
GLAND  
A. Menard, A. Levasseur, G. St-Jean, M. Le Gad-Le Roy,  
M. Benoit-Biancamano, D. Boerboom, A. Boyer

**SP-19**

CLINICAL, HISTOPATHOLOGICAL, AND IMMUNOHISTOCHEMICAL FEATURES OF CANINE SPLENIC STROMAL SARCOMAS  
K. Murphy, E. Anglin, J. Mahoney, A. Durham, M. Church

**SP-20**

HEMOPHAGOCYTIC HISTIOCYTIC SARCOMA IN A DOG  
M. Meyerhoeffer, B. Robertson, K. Zimmerman, S. Coutermarsh-Ott, T. Cecere

**SP-21**

PHOTOGRAPHY COMPARISON BETWEEN DSLR AND SMARTPHONE CAMERAS IN ANATOMIC PATHOLOGY  
H. Blazek, B. Njaa

**SP-22**

PERIPHERAL BLOOD ABNORMALITIES IN A CAT RECEIVING CANINE XENOTRANSFUSION  
N. Taylor, E. Fish, P. Christopherson, E. Graff, L. Lowe, L. Bacek

**SP-23**

BENIGN VS MALIGNANT TRICHOEPITHELIOMAS: A RETROSPECTIVE ANALYSIS OF 73 CASES (2014-2018)  
S. Mitchell, S. Coutermarsh-Ott

**SP-24**

BLOOD-BRAIN BARRIER PATHOLOGY IN AN EXPERIMENTAL MODEL OF BLAST-INDUCED NEUROTRAUMA  
C. Cheatham, M. Hoang, G. Uzunalli, S. Herr, R. Shi, L. Lyle

**SP-25**

MOLECULAR, MORPHOLOGIC, AND ULTRASTRUCTURAL CHARACTERIZATION OF INTESTINAL NEMATODES IN PANAMANIAN GOLDEN FROGS (ATELOPUS ZETEKI) FROM THE MARYLAND ZOO IN BALTIMORE  
J. Purnell, S. Poynton, L. Mangus

**SP-26**

IN SITU ILEAL EXPRESSION OF IL-10 AND IFNGAMMA DURING EARLY INTESTINAL MYCOBACTERIUM AVIUM SUBSPECIES PARATUBERCULOSIS INFECTION OF CALVES  
L. Ludwig, R. Egan, K. Stinson, B. Plattner

**SP-27**

CLINICAL AND HISTOPATHOLOGIC FEATURES OF EXFOLIATIVE CUTANEOUS LUPUS ERYTHEMATOSUS IN FOUR GERMAN SHORTHAIK POINTERS  
P. Huang, V. Affolter

**SP-28**

CLINICAL AND HISTOPATHOLOGICAL CHARACTERISTICS OF FELINE DIFFUSE IRIS MELANOMA  
M. Akella, I. Herring, A. Enders, K. Waler, T. LeRoith

**SP-29**

INVESTIGATION OF BUBR1 EXPRESSION IN ZEBRAFISH CANCERS  
J. Riker, H. Shive

**SP-30**

PLATELET-ENDOTHELIAL ASSOCIATIONS MAY IMPACT THE PATHOGENESIS OF CYTOMEGALOVIRUS INFECTION IN MICE  
B. Daly, A. Braxton, G. Cyphers, S. Vijay, J. Brockhurst, A. Chalmin, K. Najarro, K. Johnson, C. Cryer, S. Guerrero-Martin, R. Mukhopadhyay, Y. Su, R. Boger, K. Metcalf Pate

**SP-31**

EVALUATION OF CYTOKINE PRODUCTION BY HUMAN NATURAL KILLER CELLS EXPRESSING ENGINEERED FC RECEPTORS  
A. Rogich, K. Snyder, R. Hullsiek, D. Mendez, H. Mishra, J. Wu, B. Walcheck

**SP-32**

ACUTE LEUKEMIA IN A BEARDED DRAGON (POGONA VITTICEPS)  
J. Wild, C. Azevedo, R. Gold, R. Ploeg, T. Stokol, R. Cianciolo, E. Calomeni, B. Griff, S. Hoppes, M. Nabity

**SP-33**

COMPARISON OF DETECTION METHODS FOR EQUINE HERPESVIRUS-1 PREVALENCE IN HEALTHY ONTARIO BROODMARES  
M. Botts, C. Cooper, J. Hammermueller, L. Arroyo, B. Lillie

**SP-34**

THE RAPID GROWTH OF A BIOLOGICALLY AGGRESSIVE, BUT HISTOLOGICALLY BENIGN FIBROSARCOMA IN A DOG  
J. Choi, C. Lui, S. Halland, A. Alcaraz

**SP-35**

JEJUNAL CARCINOSARCOMA IN A GOLDEN RETRIEVER  
N. Tocco, P. Moak, A. Mack, S. Martinson

**SP-36**

SUBLINGUAL MASS IN A DOG: WHAT ELSE IF NOT A STORAGE DISEASE?  
S. Zayas, N. Rajeev, M. Thrall, P. Bolfa, A. Armien

**SP-37**

SUBCONJUNCTIVAL HEMORRHAGE IN 147 DOGS  
U. Jeffery, J. Saastamoinen

**SP-38**

INVESTIGATION OF ECHINOCOCCUS MULTILOCULARIS IN CALGARY MUSKRATS  
M. Trudeau, C. Lelain, S. Stamler, A. Massolo, J. Rothenburger



**SP-39**

FIRST REPORT OF WEISSELLA CETI AN EMERGING PATHOGEN CAUSING HIGH MORTALITIES IN RAINBOW TROUT ONCORHYNCHUS MYKISS IN COLOMBIA  
G. Vásquez, J. Avila, M. Rubiano

**SP-40**

CHARACTERIZATION OF BRONCHOPNEUMONIA WITH INTERSTITIAL PNEUMONIA IN FEEDLOT CATTLE  
L. Sergejewich, L. Bassel, D. Smerek, K. Fenton, J. Caswell

**SP-41**

METASTATIC OSTEOSARCOMA IN A VEILED CHAMELEON (CHAMAELEO CALYPTRATUS)  
A. Ford, E. Sasaki, N. Wakamatsu

**SP-42**

SUBINVOLUTION OF PLACENTAL SITES IN A BITCH  
J. Magnotti, V. Oakes, P. Sponenberg

**SP-43**

ELUCIDATING THE MECHANISM AND DOSE REQUIREMENTS OF CPG ODN FOR THE PREVENTION OF OSTEOSARCOMA LUNG METASTASIS  
R. Eisemann, T. Piech, T. Fan, K. Wycislo

**SP-44**

AN UNUSUAL PATTERN OF ENDOCARDIAL MINERALIZATION IN A YOUNG CAT WITH MITRAL VALVE DYSPLASIA  
E. Hennessy, J. Koehler, J. Her, D. Newhard, D. Kepler

**SP-45**

NASOPHARYNGEAL NEPHROBLASTOMA OF A 3 MONTH OLD GOAT  
J. Athey, L. Rice, A. Harvey, K. Washburn, A. Rodrigues Hoffmann

**SP-46**

RIGHT VENTRICULAR EPITHELIOID HEMANGIOSARCOMA WITH PULMONARY METASTASIS IN A DOG  
K. McNulty, R. Taylor, W. Baumgartner

**SP-47**

MOST FREQUENT INJURIES SUSTAINED BY FREE-RANGE CATS KILLED IN ROAD TRAFFIC ACCIDENTS IN ST. KITTS  
S. Zayas, M. Thrall, A. Armien, P. Bolfa

**SP-48**

DIAGNOSIS OF CANINE PERIARTICULAR HISTIOCYTIC SARCOMA BY SYNOVIAL FLUID CYTOLOGY  
Y. Ngo, K. Boes, S. Coutermarsh-Ott, N. Dervisis, N. Muro

**SP-49**

ACROLEIN-INDUCED NASAL INFLAMMATION IN RATS  
B. Pray, A. Durkes

**SP-50**

ESTHESIONEUROBLASTOMA IN A CYNOMOLGUS MACAQUE  
M. Zalek, J. Lamoureux, J. Hampel, K. Nelson

**SP-51**

CHRONIC EOSINOPHILIC GRANULOMATOUS PNEUMONIA IN A HORSE  
K. Williams, E. Carr, E. Henderson, A. Gates

**SP-52**

TISSUE SPECIFIC EXPRESSION OF AQUAPORIN GENES IN RHIPICEPHALUS (BOOPHILUS) MICROPLUS  
C. Parell, G. Scoles, S. Davis

**SP-53**

THERE IS MORE TO CDKN2A THAN MEETS THE EYE  
S. Zalar, A. Loftin, M. Simpson, J. White, C. McKerlie, H. Adissu

**SP-54**

NECROPSY EXAMINATIONS OF LITTLE AUKS (ALLE ALLE) FROM A MASS STRANDING EVENT IN SCOTLAND  
P. Smith, A. Philbey

**SP-55**

GINGIVAL HISTOPLASMOSIS: AN ATYPICAL PRESENTATION OF AFRICAN HISTOPLASMOSIS IN THREE BABOONS (PAPIO SPP)  
T. Johannigman, O. Gonzalez, S. Kumar, E. Dick, Jr., J. Dutton

**SP-56**

ASSOCIATION OF CANINE MALIGNANCY WITH COMPLETE BLOOD COUNT AND SERUM BIOCHEMISTRY ABNORMALITIES  
D. Zakers, B. Grasperge

**SP-57**

SEPTICEMIC LISTERIOSIS IN A COLONY OF SUGAR GLIDERS  
A. Olson, A. Zimmerman, D. Sledge

**SP-58**

MALIGNANT CATARRHAL FEVER-LIKE DISEASE DUE TO NATURALLY-OCCURRING OVINE HERPESVIRUS 2 INFECTION IN A JUVENILE EWE  
J. Miller, K. Ramsay, C. Eckstrand

**SP-59**

FINDING THE SOLUTION TO CALCIUM OXALATE UROLITHIASIS: A COMPARISON OF THE DISSOLUTION ABILITIES OF CITRATES AND ORGANIC ACIDS  
S. Bourner-Drawbridge, B. Szladovits

**SP-60**

MORPHOLOGICAL CHARACTERIZATION OF THE ADHERENCE AND INVASION OF STREPTOCOCCUS AGALACTIAE TO THE INTESTINAL MUCOSA OF TILAPIA OREOCHROMIS SP. IN VITRO MODEL  
G. Vásquez, C. Iregui, P. Barato

**SP-61**

AN OUTBREAK OF METABOLIC BONE DISEASE IN HERON AND EGRET CHICKS AT A WILDLIFE REHABILITATION CENTER IN NORTHERN CALIFORNIA

M. Horgan, B. Murphy, R. Duerr

**SP-62**

A COMPARISON OF BOVINE AUTOPSIES USING DIGITAL IMAGES VERSUS STANDARD METHODS

R. Redick, J. Rothenburger, C. McGowan, S. Checkley, E. Janzen

**SP-63**

CAUSES OF MORBIDITY AND DEATH IN SPRAGUE-DAWLEY AND WISTAR RATS IN 2-YEAR CARCINOGENICITY STUDIES

N. Vetter, C. Dean, K. Nelson

**SP-64**

RENAL METASTASES OF MAMMARY CARCINOMA IN AN INTACT MALE CANINE

F. Fan, V. Oakes, T. LeRoith, S. Coutermarsh-Ott

**SP-65**

EFFECT OF CRANBERRY EXTRACT ON FELINE ORAL SQUAMOUS CELL CARCINOMA PROLIFERATION AND MIGRATION IN VITRO

E. Pugh, H. Wang, J. McCallum, C. Martin

**SP-66**

PROBIOTIC SUPPLEMENTATION OF ANTIRETROVIRAL THERAPY IMPROVES GASTROINTESTINAL IMMUNITY IN SIMIAN IMMUNODEFICIENCY AND HUMAN IMMUNODEFICIENCY VIRAL INFECTIONS

A. Loftin, C. Vinton, J. Brenchley

**SP-67**

DETECTING CANINE RETICULOCYTES AND POLYCHROMATOPHILS USING U-NET NEURAL NETWORK ARCHITECTURE

L. Smaller, C. Stamate, A. Foster, B. Szladovits

**SP-68**

INTERSEX FISH HISTOPATHOLOGY IN THE UPPER TENNESSEE RIVER SYSTEM

C. Hester

**SP-69**

NEURONAL CEROID LIPOFUSCINOSIS IN A DOMESTIC BLACK AUSTRALORP CHICKEN

H. Vogel, A. Cartoceti, K. Woolard

**SP-70**

ESTHESIONEUROBLASTOMA IN A HORSE: HISTOLOGIC, IMMUNOHISTOCHEMICAL AND ULTRASTRUCTURAL CHARACTERIZATION

J.P. Velasco Montes de Oca, B.V. Cantón, D.M. Medina, M.J. Ramírez, G.C. Alonso, M. Hernández, E. García

**SP-71**

RADIOTHERAPY RESPONSIVE FELINE PROGRESSIVE CUTANEOUS DENDRITIC HISTIOCYTOSIS

R. Tierce, T. Wormhoudt, C. Olver, S. LaRue, M. Boss

**SP-72**

THREE CASES OF CARCINOMA IN CHRYSOPELEA PARADISI

A. Saver, V. Oakes, T. LeRoith, D. Sponenberg, C. Lau

**SP-73**

CHARACTERIZATION OF BALLOONING DEGENERATION IN MOUSE MODELS OF NONALCOHOLIC STEATOHEPATITIS

I. Napier, M. Liu, J. Galarneau, K. Mansfield, C. Saravanan

**SP-74**

EVALUATION OF TIME AND TEMPERATURE ON FELINE BRONCHOALVEOLAR LAVAGE FLUID STORED IN EDTA

M. Walker, S. Fielder, L. Nafe, J. Taylor

**SP-75**

DOES SIZE MATTER? REDUCED PROSTATE SIZE ALTERS URINARY FUNCTION IN MALE MICE

H. Ruetten, H. Zhang, K. Wegner, P. Wang, Z. Wang, D. Bjorling, W. Ricke, P. Marker, C. Vezina

**SP-76**

FIRST REPORT OF CUTANEOUS EPITHELIOTROPIC LYMPHOMA IN A NON-HUMAN PRIMATE (BABOON, PAPIO SPP.)

E. Carias, M. DeLorenzo, O. Gonzalez, S. Kumar, E. Dick, Jr.

**SP-77**

THE TRANSCRIPTIONAL RESPONSE OF ENDOTHELIAL CELLS TO STATIN TREATMENT IN VIVO

K. Turnbull, A. Cleuren, D. Ginsburg

**SP-78**

BACKGROUND LESIONS IN AFRICAN GREEN MONKEYS (CHLOROCEBUS AETHIOPS SABAEUS)

V. Savinon, P. Bolfa, A. Beierschmitt

**SP-79**

DYSREGULATION OF THE MICRORNAS LET-7A AND LET-7B IN CANINE UROTHELIAL CARCINOMA

C. Ridenour, N. Elshafie, P. Deshuillers, D. Knapp, J. Ramos-Vara, A. Santos

**SP-80**

DETECTION OF HEPATOZOOM AMERICANUM IN GULF COAST TICKS FROM OKTIBBEHA COUNTY, MS

A. Frankovich, A. Varela-Stokes, J. Stokes, S. Rivera

**SP-81**

NASAL ADENOCARCINOMA IN A CAT

C. Lui, J. Choi, T. McNamara, A. Alcaraz



**SP-82**

HEMOLYTIC ANEMIA, SPHEROCYTOSIS, AND THROMBOCYTOPENIA ASSOCIATED WITH HONEY BEE ENVENOMATION IN A DOG - IMMUNE MEDIATED OR NOT?  
R. Nair, M. Thrall, E. Riddle

**SP-83**

URINARY BLADDER BOTRYOID RHABDOMYOSARCOMA WITH EXTENSIVE METASTASIS IN AN 18-MONTH-OLD ROTTWEILER  
A. Shoemaker, L. Stein, J. Couto, D. Sledge, M. Kiupel

**SP-84**

INTRAGASTRIC INFUSION OF THE VACUOLATING CYTOTOXIN OF *HELICOBACTER PYLORI*  
R. Holland, K. Bosi, S. Blanke

**SP-85**

MULTIPLE NEUROENDOCRINE NEOPLASIA IN A BULLDOG  
C. Bond, K. Boes, K. Lahmers, G. Saunders, N. Dervisis, J. Ruth

**SP-86**

UNUSUAL PRESENTATION AND URINARY TRACT OBSTRUCTION DUE TO DISSEMINATED INTRA-ABDOMINAL EUMYCETOMAS CAUSED BY *CURVULARIA* SPECIES IN A DOG  
D. Chong, J. Herbert, D. Spielman, M. Krockenberger

**SP-87**

SUBRETINAL PROTOTHECOSIS IN A DOG  
C. Dover, A. Enders, J. Villm, S. Barrett

**SP-88**

PRIONS ARE COMMONLY PRESENT IN MUSCLE OF CWD-INFECTED ANIMALS  
D. Bissinger, E. Hoover, C. Mathiason, C. Hoover, D. Henderson, A. Nalls, N. Denkers

**SP-89**

M-PROTEIN DISTRIBUTION AND SELECT POPULATION CHARACTERISTICS IN CANINE PARAPROTEINEMIA  
C. Jeffries, M. Leissinger, A. Harris, A.R. Moore

**SP-90**

NECROTIZING FASCIITIS WITH CUTANEOUS REACTIVE HISTOCYTOSIS IN A DOG  
S. Hughes, S. Yang, T. Morgan

**Focused Scientific Poster Sessions**

**Poster Schedule—Exhibit Hall C**

**Poster Setup:**

Sunday, November 4, 2018 . . . . . 7:00 a.m.-9:00 a.m.

**Poster Viewing:**

Sunday, November 4, 2018 . . . . . 9:30 a.m.-4:30 p.m.

Monday, November 5, 2018 . . . . . 9:30 a.m.-1:00 p.m.

Tuesday, November 6, 2018 . . . . . 9:30 a.m.-3:30 p.m.

**Poster Teardown:**

Tuesday, November 6, 2018 . . . . . 3:30 p.m.-4:00 p.m.

Authors present at their posters at the following times:

**Clinical Pathology Posters:**

Refreshment Breaks on Sunday afternoon and Tuesday morning

**Diagnostic Pathology Posters:**

Refreshment Breaks on Sunday afternoon and Tuesday afternoon

**Education Posters:**

Refreshment Breaks on Tuesday morning

**Experimental Disease Posters:**

Refreshment Breaks on Sunday afternoon and Tuesday afternoon

**Industrial and Toxicologic Pathology Posters:**

Refreshment Break on Sunday morning and Tuesday afternoon

**Natural Disease Posters:**

Refreshment Breaks on Sunday morning and Sunday afternoon

**Focused Scientific Poster Sessions**

**Focused Scientific Chair:** C. Lohr

**Focused Scientific Co-Chair:** I. Langohr

**Clinical Pathology Focused Scientific Poster Session**

**Planning Committee:**

Chair: J. Webb

Committee Members: N. Tripathi, C. Wagg, M. Fry, S. Clark, K. Wycislo, V. Wong

**C-2**

POLYCLONAL B-CELL LYMPHOCYTOSIS IN A SUBSET OF ENGLISH BULLDOGS

E. Rout, J. Labadie, R. Burnett, A. Moore, A. Avery

**Keyword:** Hematopoietic System

- C-3**  
A RETROSPECTIVE STUDY OF LYMPHOCYTE-RICH EFFUSIONS IN BRAZILIAN CATS  
S. Valle, N. Duda, N. Nunes, D. Wissmann, B. Almeida, T. Oliveira, A. Menin, F. Costa  
*Keyword:* Cytology
- C-4**  
BIOCHEMISTRY ANALYSIS OF POST-MORTEM VITREOUS HUMOR AND URINE SAMPLES FROM BOTTLENOSE DOLPHINS (*TURSIOPS TRUNCATUS*) FOR LOW SALINITY EXPOSURE  
R. Ewing, A. Schaefer, D. Moore, R. Carmichael, H. Whitehead, T. Stokol  
*Keyword:* Wildlife
- C-5**  
CLINICOPATHOLOGICAL FINDINGS IN A CHRONIC KIDNEY DISEASE DOG TREATED WITH MESENCHYMAL STEM CELLS  
E. Marquez, L. Bestana, R. Castilho, G. Araújo  
*Keyword:* Clinical Pathology
- C-6**  
LABORATORY EVALUATIONS IN A DOG WITH CHOLANGITIS/CHOLANGIOHEPATITIS SUBMITTED TO STEM CELLS THERAPY  
E. Marquez, L. Bestana, K. Gromboni  
*Keyword:* Clinical Pathology
- C-7**  
CONCURRENT ALIMENTARY PLASMACYTOMA AND DIFFUSE LARGE B-CELL LYMPHOMA IN A DOG  
M. Schexnayder, M. Kiupel, J. Sparago, S. Rutherford, A. Grooters, D. Paulsen, S. Dehghanpir  
*Keyword:* Alimentary
- C-8**  
CYTOLOGIC IDENTIFICATION OF BACTERIA IN SPLENIC ASPIRATES FROM TWO MACAWS WITH COXIELLOSIS  
K. Whipple, M. Leissinger, J. Rosenberg, L. Charles, L. Farina, J. Wellehan  
*Keyword:* Cytology
- C-9**  
CYTOLOGICAL FEATURES OF A CANINE PITUITARY ADENOMA REMOVED BY TRANSSPHENOIDAL HYPOPHYSECTOMY  
I. Cerchiaro, J. Chavera, T. Owen, A. Chen, L. Martin, J. Ramsay, M. Miller, J. Wardrop, C. Souza  
*Keyword:* Cytology
- C-10**  
CYTOLOGICAL FEATURES OF AN EXTRADURAL SPINAL SYNOVIAL CYST IN A DOG  
I. Cerchiaro, J. Chavera, H. Greatting, A. Massa, J. Wardrop, C. Souza  
*Keyword:* Cytology
- C-11**  
DIFFERENTIATION OF NEOPLASIA FROM REACTIVE MESOTHELIUM IN CAVITY FLUID AND TUMOR ASPIRATE PREPARATIONS USING MULTIPLEX IMMUNOCYTOCHEMISTRY FOR VIMENTIN AND CYTOKERATIN  
D. von Stade, A. Moore, K. Santangelo, S. Leavell  
*Keyword:* Cytology
- C-12**  
EFFECT OF URINE COLLECTION METHOD ON THE SENSITIVITY AND SPECIFICITY OF THE SEDIVUE DX(TM) ANALYZER FOR DETECTION OF CELLS AND CRYSTALS  
L. Pena, A. Hernandez, J. Heseltine, M. Nabity  
*Keyword:* Urinary System
- C-13**  
EPIDEMIOLOGICAL PROFILE OF DOGS WITH CAVITARY EFFUSION IN BRAZIL  
F. Alonso, P.R. Paes  
*Keyword:* Clinical Pathology
- C-14**  
GENERAL CLASSIFICATION OF CANINE CAVITARY EFFUSIONS BASED ON BIOCHEMICAL PARAMETERS  
F. Alonso, P.R. Paes  
*Keyword:* Clinical Chemistry
- C-15**  
EVALUATION OF THROMBOELASTOGRAPHY IN CATS DURING THE DEVELOPMENT OF OBESITY AND WITH PROLONGED OBESITY  
T. Towns, E. Spangler, R. Judd, E. Graff  
*Keyword:* Clinical Pathology
- C-16**  
HEMATOLOGIC PARAMETERS AND THEIR CORRELATION WITH VIRAL AND PROVIRAL LOADS IN FELV NATURALLY INFECTED CATS  
N. Duda, L. Ortiz, A.P. Murtele, N. Nunes, F. Costa, P. Roehe, F. González, S. Valle  
*Keyword:* Hematology
- C-17**  
HEMATOLOGICAL EVALUATION OF ALOUATTA BELZEBUL: MANUAL AND AUTOMATED METHODS  
R. Takahira, V. Guimaraes  
*Keyword:* Primates
- C-18**  
IMPROVING THE CYTOPATHOLOGICAL DIAGNOSIS OF CANINE VISCERAL LEISHMANIASIS IN LYMPH NODES SAMPLES  
J. Guerra, N. Fernandes, R.A. Réssio, J. Magno, L. Kimura, J.E. Barbosa, H. Taniguchi, R. Hiramoto, G. Motoie, J.E. Tolezano, B. Cogliati  
*Keyword:* Cytology
- C-19**  
MARKED PARANEOPLASTIC EOSINOPHILIA IN A CAT WITH T-CELL LYMPHOMA  
N. Strandberg, A. Santos, J. Messick, A. Leisering, Y. Jones-Hall, A. Vanderpool  
*Keyword:* Hematology
- C-20**  
METARUBRICYTES IN ASCITIC FLUID: A CYTOLOGICAL FINDING INDICATIVE OF INTRACAVITARY HEMANGIOSARCOMA?  
P.R. Paes, F. Alonso  
*Keyword:* Cytology
- C-21**  
PATHOPHYSIOLOGY OF GLYCOSURIA IN OBSTRUCTIVE FELINE LOWER URINARY TRACT DISEASE  
R. Takahira, R. Basso, B. Santos, M. Ronchetti  
*Keyword:* Clinical Pathology

**C-22**

**PHENOTYPE REFERENCE DATA OF NORMAL FELINE LYMPH NODES**

B. Rütgen, S. Hammer, B. Wolfesberger, S. Groiss, D. Baumgartner, A. Saalmüller, I. Schwendenwein  
*Keyword: Clinical Pathology*

**C-23**

**PROTEIN BIOMARKERS IN SERUM/URINE FOR EARLY DIAGNOSIS OF CANINE HIP DYSPLASIA**

C. Bozynski, C. Moser, A. Stoker, C. Cook, E. Leary, J. Cook  
*Keyword: Bone and Joint*

**C-24**

**REFERENCE INTERVALS FOR HEMATOLOGICAL AND BIOCHEMICAL VARIABLES AND CYTOLOGIC EVALUATION OF BLOOD AND BONE MARROW IN NSG MALE MICE**

C. Layssol-Lamour, J. Braun, C. Trumel, N. Bourges-Abella  
*Keyword: Clinical Pathology*

**C-25**

**SENSITIVITY AND SPECIFICITY OF CYTOLOGIC EVALUATION OF UROTHELIAL CARCINOMA**

C. McAloney, S. Evans, M. White, J. Hokamp, M. Wellman  
*Keyword: Urinary*

**C-26**

**THE PRESENCE OF LE CELLS IN SYNOVIAL FLUID AS KEY SUPPORT IN THE DIAGNOSIS OF SYSTEMIC LUPUS ERYTHEMATOSUS IN A DOG**

M. Varvil, C. Aldridge, J. Christian  
*Keyword: Cytology*

**C-27**

**THROMBOELASTOMETRIC CHANGES IN DOGS WITH IMMUNE MEDIATED HEMOLYTIC ANEMIA**

R. Takahira, T. Gorenstein, B. Santos, P. Assunção, G. Silva, G. Cunha  
*Keyword: Clinical Pathology*

**C-28**

**VIABILITY OF FNA MATERIAL FROM LYMPHOMA CELLS IN DIFFERENT STORAGE MEDIA AND TEMPERATURE**

B. Rütgen, D. Baumgartner, A. Saalmüller, I. Schwendenwein  
*Keyword: Clinical Pathology*

**C-29**

**FIBRINOGEN IN EQUINE PLATELET LYSATE AFFECTS THE CHARACTERISTICS AND FUNCTIONALITY OF MESENCHYMAL STEM CELLS**

M. Naskou, S. Sumner, I. Copland, J. Peroni  
*Keyword: Immune System*

**Diagnostic Pathology Focused Scientific Posters**

**Planning Committee:**

Chair: E. Burrough

Committee Members: A. Rodrigues Hoffman (Co-Chair), L. Kennedy (Past Chair), F. Oliveria, H. Snyman, R. Derscheid, A. Van Wettre

**D-1**

**TRAUMATIC LINGUAL ENTRAPMENT AND GRANULOMA FORMATION IN A CAPTIVE CUBAN BOA (EPICRATES ANGULIFER)**

J. Thornton, E. Ball, M. Garner, B. Marble  
*Keyword: Alimentary*

**D-2**

**MALIGNANT COLONIC GLOMANGIOMA IN AN ADULT THOROUGHBRED HORSE WITH CONCURRENT CLOSTRIDIUM DIFFICILE**

E. Brinker, T. Sierra, C. Reynier, J. Koehler  
*Keyword: Alimentary*

**D-3**

**DETERMINING THE ORIGIN OF A CARCINOMA WITH PULMONARY AND GASTROESOPHAGEAL JUNCTION INVOLVEMENT IN A CAT**

T. Wu+, E. Choi  
*Keyword: Alimentary*

**D-4**

**LIPOGRANULOMATOUS ENTERITIS IN A SPOTTED MORAY EEL (GYMNOTHORAX MORINGA)**

J. Elliott, J. Torres, D. Evans  
*Keyword: Alimentary*

**D-5**

**MYCOBACTERIAL INFECTION IN A PET ZEBRA FINCH**

K. Hill-Thimmesch, T.L. Lin, T. Hickok, P. Wakenell  
*Keyword: Infectious Disease*

**D-6**

**EXOCRINE PANCREATIC ADENOCARCINOMA IN A TURKEY (MELEAGRIS GALLOPAVO)**

A. Byas+, G. Tovar Lopez, M. Johnston, L. Kawalilak, J. Plenn, J. Muñoz Gutiérrez  
*Keyword: Avian*

**D-7**

**ROUND CELL NEOPLASIA IN PSITTACINE BIRDS: A DESCRIPTION OF MORPHOLOGICAL PRESENTATION**

D. Gibson+, N. Nemeth, H. Beaufrère, C. Varga, M. Garner, L. Susta  
*Keyword: Avian*

**D-8**

**A CASE OF INCLUSION BODY HEPATITIS IN TEN WHITE BROILERS (GALLUS GALLUS DOMESTICUS) IN TAIWAN**

J.H. Yin, Y.C. Wu, H.Y. Chiou, J.H. Shien  
*Keyword: Avian*

**D-9**

**YOUNG PIGEON DISEASE SYNDROME IN A DOMESTIC PIGEON (COLUMBA LIVIA DOMESTICA)**

Y.C. Chang+, C.H. Shih, J.W. Liao, H.Y. Chiou  
*Keyword: Avian*

- D-10**  
MYELOPROLIFERATIVE NEOPLASM AND AVIAN POXVIRUS INFECTION IN A CRESTED SERPENT EAGLE (SPILORNIS CHEELA)  
Y.H. Su+, J.H. Yin, J.W. Liao  
*Keyword: Avian*
- D-11**  
HIP IMPLANT FAILURE ASSOCIATED PIGMENTED GRANULOMATOUS REACTION IN A DOG  
E. Howerth, J. Phillips  
*Keyword: Bone and Joint*
- D-12**  
NATURAL KLEBSIELLA PNEUMONIAE INFECTION IN 9 RHESUS MACAQUES: A SUMMARY OF CLINICAL AND PATHOLOGICAL FINDINGS FROM THE CNPRC FROM 2010-2015  
R. Keesler, A. Colagross-Schouten, R. Reader  
*Keyword: Primates*
- D-13**  
CARDIAC RHABDOMYOMA IN A CHIHUAHUA PUPPY  
N. Helgert+, M.J. Sula  
*Keyword: Cardiovascular*
- D-14**  
CEREBRAL TISSUE PULMONARY EMBOLISM IN A PUPPY WITH SEVERE HEAD TRAUMA  
M. Vieson, R. Teixeira-Neto  
*Keyword: Cardiovascular*
- D-15**  
COR TRIATRIATUM SINISTER IN A YOUNG ADULT CAT  
N. Kirk+, S. Kadotani, D. LoBato  
*Keyword: Cardiovascular*
- D-16**  
ABSENCE OF RIGHT CRANIAL VENA CAVA AND PERSISTENCE OF LEFT CRANIAL VENA CAVA IN A CALF  
R. López-Crespo+, M. Bedolla-Alba, R. Contreras-Pérez, J. Ruiz-Ramírez, L. García-Márquez, C. Salas-Garrido  
*Keyword: Cardiovascular*
- D-17**  
ULCERATIVE VEGETATIVE AND CAVITATING BACTERIAL AORTIC VALVULAR ENDOCARDITIS IN TWO DOGS  
T.T. Negrão Watanabe+, S. Shippy, F. Del Piero  
*Keyword: Cardiovascular*
- D-18**  
ATHEROSCLEROSIS IN KORAT CATS  
V. Karkamo, S. Ngyen, K. Hagner, A. Knuuttila, M. Jauhiainen, H. Kairento, N. Arias, K. Öörni, I. Kareinen  
*Keyword: Cardiovascular*
- D-19**  
ANOMALOUS PULMONARY VENOUS CONNECTION IN A CALF  
R. López-Crespo+, M. Bedolla-Alba, C. Salas-Garrido, R. Wong-Saavedra, L. García-Camacho  
*Keyword: Cardiovascular*
- D-20**  
LOCARD'S EXCHANGE PRINCIPLE: FROM DOG TO MAN  
A. Stern, N. Chinnici  
*Keyword: Forensic Pathology*
- D-21**  
WIDESPREAD LARGE GRANULAR LYMPHOCYTIC LYMPHOMA IN A 19-YEAR-OLD GELDING  
T.W. O'Neill+, C. Löhr, S. Schale, E. McKenzie, J. Johns  
*Keyword: Hematopoietic System*
- D-22**  
GRANULOCYTIC SARCOMA IN A DOG WITH MYELOID LEUKEMIA  
M. Madrigal-Alvarado+, A. Reyes-Matute, M. Samperio-Gama, A. Carvajal-Rincon  
*Keyword: Hematopoietic System*
- D-23**  
EVALUATING THE EFFECTS OF VARIOUS DECALCIFICATION PROTOCOLS ON IMMUNOHISTOCHEMICAL STAINING IN ZEBRAFISH (DANIO RERIO)  
D. Meritet+, C. Löhr, S. Spagnoli, K. Fischer  
*Keyword: Immunohistochemistry*
- D-24**  
IMMUNOHISTOCHEMICAL DETECTION OF VIRAL ANTIGENS FROM DIFFERENT MORBILLIVIRUS-INFECTED SPECIES  
G. Di Guardo, D. Malatesta, S. Salucci, L. Di Renzo, G. Zaccaria, A. Lorusso, E. De Luca, A.R. D'Angelo, F. Monaco, M. Piserchia, P. Troiano, A. Petrella, G. Di Francesco  
*Keyword: Infectious Disease*
- D-25**  
HISTOPATHOLOGY AND ELECTRON MICROSCOPY OF CHLAMYDIA PNEUMONIAE ENCEPHALOMYELITIS AND GANGLIONITIS IN CAPTIVE HOUSTON TOADS (ANAXYRUS HOUSTONENSIS)  
A. Fratzke+, L. Howard, M. Tociłowski, A. Armien, F. Oliveira, B. Ritchie, E. Berlin, E. Snook  
*Keyword: Infectious Disease*
- D-26**  
SPOROTRICHOSIS IN CATS FROM SOUTHEAST BRAZIL  
T. Teodoro, F. Souza, L. Silva, M. Campos, M. Varaschin, F. Wouters, D. Raymundo, A. Wouters  
*Keyword: Infectious Disease*
- D-27**  
ALVEOLAR ECHINOCOCCOSIS IN A PET DOG IN MISSOURI  
K. Kuroki, Y. Morishima, L. Dorr  
*Keyword: Infectious Disease*
- D-28**  
CYTAUXZONOSIS IN A YOUNG DOMESTIC SHORTHAIRED CAT  
C. Lanier, I.D. Kuykendall, II, L. Lowe, L. Bacek, J. Newton  
*Keyword: Infectious Disease*
- D-29**  
SYSTEMIC ARTERITIS ASSOCIATED WITH PCV3 INFECTION IN POST-WEANING PIGS  
T. Carlson, T. Resende, F. Vannucci  
*Keyword: Infectious Disease*
- D-30**  
INTRANUCLEAR COCCIDIOSIS IN A TWO LEOPARD TORTOISES  
M. Friedemann, L. Rice, B. Griff, J. Heatley, A. Arenas, R. Rech  
*Keyword: Infectious Disease*

- D-31**  
PENTASTOMIASIS IN CAPTIVE JUVENILE AMERICAN ALLIGATORS  
E. Graham, J. Steventon, J. Wawra, C. Keller, A. Childress, J. Wellehan, H. Walden, S. Frasca Jr., R. Ossiboff  
*Keyword: Infectious Disease*
- D-32**  
AN OUTBREAK OF SARCOCYSTOSIS AND SALMONELLOSIS IN A GROUP OF PSITTACINES  
R. Taylor, A. Olivier  
*Keyword: Infectious Disease*
- D-33**  
RHODOTORULA MUCILAGINOSA ASSOCIATED WITH PULMONARY ADENOCARCINOMA IN A CAT  
M. Roy, K. Wollard  
*Keyword: Infectious Disease*
- D-34**  
CASE REPORT ASSOCIATED WITH ASPERGILLOSIS AND HEPATITIS E VIRUS COINFECTION IN HIMALAYAN GRIFFONS  
T. Liu, R. She, J. Tian, J. An, C. Zhang  
*Keyword: Infectious Disease*
- D-35**  
GENOTYPE IV HEPATITIS E VIRUS CROSS SPECIES INFECTION IN CAPTIVE SIBERIAN TIGER BY FOOD BORNE TRANSMISSION  
R. She, T. Liu, J. Tian, C. Zhang  
*Keyword: Infectious Disease*
- D-36**  
ENCEPHALITIZOON POGONAE-ASSOCIATED VASCULITIS IN AN INLAND BEARDED DRAGON (POGONA VITTICEPS)  
N. Kaiser+, S. Greenwood, S. Martinson, G. Gouchie,  
*Keyword: Infectious Disease*
- D-37**  
RENAL DISEASE IN TWO REPTILES WITH FLAGELLATED PROTOZOA CONSISTENT WITH HEXAMITA PARVA  
A. Watson+, S. Newman, A. Cushing, L. Craig  
*Keyword: Infectious Disease*
- D-38**  
NEOSPOROSIS IN A 3-MONTH-OLD CALF WITH HINDLIMB PARALYSIS  
R. Chien, M. Breshears, A. Confer  
*Keyword: Infectious Disease*
- D-39**  
PATHOLOGY OF PNEUMONIC PLAGUE IN A DOG  
L. Harris+, J. Daniels, S. Brault, C. Hershkowitz, P. Morley, K. Dowers, P. Schaffer  
*Keyword: Infectious Disease*
- D-40**  
NASAL MYCOBACTERIOSIS IN A HORSE  
K. Vail+, L. Stranahan, L. Richardson, D. Wiener, B. Porter  
*Keyword: Infectious Disease*
- D-41**  
DESCRIPTION OF AN OUTBREAK OF FRANCISELOSIS (FRANCISELLA NOATUNENSIS SUBSP. ORIENTALIS) IN NEON JEWEL FISH (HEMICHROMIS BIMACULATUS) FROM A FARM OF THE STATE OF MORELOS, MEXICO  
R. López-Crespo, A. Reyes-Matute, L. Romero-Romero, L. Martínez-Chavarría, L. García-Márquez, A. Lugo-García  
*Keyword: Infectious Disease*
- D-42**  
MULTI-SYSTEMIC SARCOCYSTIS NEURONA INFECTION IN A BLOODHOUND  
K. Mulka, L. Mangus  
*Keyword: Infectious Disease*
- D-43**  
CHRONIC IDIOPATHIC CHOLANGIOFIBROSIS IN TWO PET GUINEA PIGS  
E. Alloway+, J. Cullen  
*Keyword: Liver and Pancreas*
- D-44**  
NESIDIOBLASTOSIS IN THREE BABOONS (PAPIO SPP.)  
E. Corbin, E. Dick Jr., O. Gonzalez, S. Kumar  
*Keyword: Liver and Pancreas*
- D-45**  
IMMUNOHISTOCHEMICAL CHARACTERIZATION OF GALL BLADDER MESENCHYMAL TUMORS IN DOGS  
A. Flis+, J. Cullen  
*Keyword: Liver and Pancreas*
- D-46**  
INTRAHEPATIC BILE DUCT AND GALL BLADDER APLASIA IN MULTIPLE CANINE LITTERS WITH THE SAME PARENTAGE  
K. Carlton, M. Stalker, B. Plattner  
*Keyword: Liver and Pancreas*
- D-47**  
DECREASED EXPRESSION OF LEPTIN RECEPTOR IN CANINE HEPATOCELLULAR CARCINOMA: A PILOT STUDY  
S.H. Kim, B.J. Seung, S.H. Cho, H.Y. Lim, J.H. Sur  
*Keyword: Liver and Pancreas*
- D-48**  
SEVERE IDIOPATHIC LIVER AMYLOIDOSIS WITH SPONTANEOUS RUPTURE IN A HORSE  
A. Anderson+, K. Legendre, F. Andrews, F. Del Piero  
*Keyword: Liver and Pancreas*
- D-49**  
THE PROGNOSTIC VALUE OF HISTOLOGICAL CLASSIFICATION AND GRADING OF CANINE MAMMARY TUMORS: A COHORT STUDY IN SOUTH KOREA  
B.J. Seung, S.H. Cho, S.H. Kim, J.H. Sur  
*Keyword: Mammary*
- D-50**  
CANINE CONGENITAL MYOPATHY WITH MUSCLE SPINDLE EXCESS  
M. Lanza+, M. Casal, A. Durham  
*Keyword: Muscle*
- D-52**  
CANINE EXTRAHEPATIC BILIARY CARCINOID  
J. Crawford, M. Rivard, K. Barry, B. Williams  
*Keyword: Neoplasia*



- D-53**  
CUTANEOUS LIP AND NODAL T-CELL LYMPHOMA WITH GIANT CELLS IN TWO DOGS  
M. Harris+, C. Martinez, E. Rout, K. Hughes, K. Frankhouse, A. Avery, C. Stevenson, S. Han, A. MacNeil  
*Keyword:* Neoplasia
- D-54**  
ACUTE LYMPHOCYTIC LEUKEMIA (ALL) IN A GOLDEN RETRIEVER DOG  
S. Muller, G. Stock, J. Braun, M. Landry  
*Keyword:* Neoplasia
- D-56**  
OVARIAN TUMOUR IN CAT ARISING FROM AN OVARIAN REMNANT: DESCRIPTION OF 2 CASES  
E. Riccardi, S. Le Calvez, J. McKay  
*Keyword:* Neoplasia
- D-57**  
IMMUNOHISTOCHEMISTRY ANALYSIS OF CHROMATOPHOROMAS IN TWO SPECIES OF TELEOSTS (CYPRINUS CARPIO AND CARASSIUS AURATUS)  
W. Siniard+, M. Sheley, E. Soto  
*Keyword:* Neoplasia
- D-58**  
ENDOMETRIAL DISEASES OF SIX CATS WITH CLINICAL AND HISTOPATHOLOGICAL FEATURES RESEMBLING ATYPICAL ENDOMETRIAL HYPERPLASIA OF HUMANS  
S. Suzuki, H. Kitamura, K. Hayashi, T. Nakashima, M. Okamura, K. Shirai, T. Kariya  
*Keyword:* Neoplasia
- D-59**  
MALIGNANT MELANOMA ARISING FROM THE EYE IN A DUCK (ANAS PLATYRHYNCHOS)  
A. Reyes-Matute, J.A. Ruiz-Remolina, S. Díaz-Yucupicio  
*Keyword:* Neoplasia
- D-60**  
CHOLANGIOCELLULAR CYSTADENOCARCINOMA IN A BLACK TAILED PRAIRIE DOG: A CASE REPORT  
S.H. Cho, B.J. Seung, S.H. Kim, J.H. Sur  
*Keyword:* Neoplasia
- D-61**  
ORAL MELANOMA WITH PSEUDOVASCULAR SPACES IN THREE DOGS  
G. Martinez-Romero, R. Weiss, K. Joiner, J. Newton  
*Keyword:* Neoplasia
- D-62**  
OH DEAR HEART! A CASE OF A PRIMARY INTRA-ATRIAL PARAGANGLIOMA IN A DOG  
M. Ronderos, S. Aschenbroich, G. Shaw  
*Keyword:* Neoplasia
- D-63**  
EXPRESSION OF 2', 3'-CYCLIC NUCLEOTIDE 3'- PHOSPHODIESTERASE (CNPASE) IN CANINE OLIGODENDROGLIOMAS  
F. Tabaran, E. Pluhar, M. O'Sullivan  
*Keyword:* Neoplasia
- D-64**  
INFLUENCE OF GENDER AND AGE FLUCTUATIONS ON CANCER INCIDENCE IN A GROUP OF 7,780 SOUTHERN BRAZILIAN DOGS SUBMITTED TO NECROPSY OVER FIFTY YEARS (1964-2013)  
M. Flores, A. Cezar, D. Lorensetti, G. Kommers, R. Figuera  
*Keyword:* Neoplasia
- D-65**  
SQUAMOUS CELL CARCINOMA WITH CLEAR CELL DIFFERENTIATION IN AN EQUINE EYELID  
L. Stein+, D. Sledge, R. Smedley, M. Kiupel, T. Thaiwong  
*Keyword:* Neoplasia
- D-66**  
IMMUNOHISTOCHEMICAL PROFILES OF LINGUAL GRANULAR CELL TUMORS IN 10 DOGS  
G. Ehrensing+, M. Kiupel, D. Sledge  
*Keyword:* Neoplasia
- D-67**  
METASTATIC SARCOMA AND ACQUIRED PORTOSYSTEMIC SHUNTS IN A WATER MOCCASIN (AGKISTRODON PISCIVORUS)  
L. Charles+, R. Ossiboff, L. Farina  
*Keyword:* Neoplasia
- D-68**  
CONGENITAL MELANOMA IN THE VERTEBRAL CANAL IN A SAANEN GOAT  
D. Sinnott, K. Woolard, V. Affolter  
*Keyword:* Neoplasia
- D-69**  
RETROSPECTIVE PATHOLOGICAL REPORTS OF SPLENIC LESIONS IN DOMESTIC HAMSTER  
Y.C. Tuan, R.C. Wang, J.P. Kao, K. Takahashi, J.W. Liao  
*Keyword:* Neoplasia
- D-70**  
GANGLIONEUROMA OF THE GALLBLADDER AND BILIARY TREE IN A TWO-YEAR-OLD DOG RESULTING IN EXTRAHEPATIC BILIARY OBSTRUCTION  
S. More+, W. Craft,  
*Keyword:* Neoplasia
- D-71**  
IMMUNOHISTOCHEMISTRY AND ULTRASTRUCTURE OF EPITHELIAL MESOTHELIOMA IN A RED SINDHI HERD FROM BRAZIL  
D. Guimarães Ubiali, I. Miranda, Y. Daoualibi, S. Lopes, M. Farias Brito, A. Armien  
*Keyword:* Neoplasia
- D-72**  
HOLOPROSENCEPHALY IN AN AFRICAN GREEN MONKEY (CHLOROCEBUS AETHIOPS SABAEUS)  
C. Labriola+, R. Andrews, M. Jorgensen, N. Kock  
*Keyword:* Nervous System
- D-73**  
FIBROCARILAGINOUS EMBOLIC ENCEPHALOMYLOPATHY OF THE CERVICAL SPINAL CORD INVOLVING THE CEREBELLUM IN A CAT  
K. Okada, T. Ishizaki, Y. Kagawa  
*Keyword:* Nervous System

- D-74**  
GLOBOID CELL LEUKODYSTROPHY IN THREE RELATED BORDER COLLIE MIXED-BREED PUPPIES  
C. Burrell+, M. Vieson, D. Hague, B. Kompare  
*Keyword: Nervous System*
- D-75**  
SUBEPENDYMAL GIANT CELL ASTROCYTOMA IN A CAT: IMMUNOHISTOCHEMICAL CHARACTERISTICS  
E. Crouch+, M. Troxel, A. Miller  
*Keyword: Nervous System*
- D-76**  
SCHWANNOSIS IN THREE FOALS AND A CALF  
I. Miranda+, K. Taylor, W. Castleman, B. Summers, A. Miller  
*Keyword: Nervous System*
- D-77**  
CEREBRAL PLAQUES AND NEUROFIBRILLARY TANGLES IN A WOLVERINE (GULO GULO)  
K. Langsten+, A. Armien, T. O'Brien  
*Keyword: Nervous System*
- D-78**  
INTRAOCULAR NEURAL HETEROTOPIA IN A MOROCCAN UROMASTYX  
M. Mainenti+, C. Clancy, A. Van Wettre  
*Keyword: Nervous System*
- D-79**  
ANGIOCENTRIC ASTROCYTOMA IN A CAT  
B. McHale, A. Armien, D. Rissi  
*Keyword: Nervous System*
- D-80**  
MULTIFOCAL CEREBRAL CORTICAL DYSPLASIA IN A PET PIG WITH ASSOCIATED SEIZURE-LIKE ACTIVITY  
E. Biswell+, A. Durkes, K. Mielnicki, J. Kritchevsky  
*Keyword: Nervous System*
- D-81**  
PARASTRONGYLUS CANTONENSIS CENTRAL NERVOUS SYSTEM INFECTION IN TWO CALLITRICHIDS IN TEXAS  
E. Edwards, B. Lewis, J. Flanagan  
*Keyword: Primates*
- D-82**  
AN OUTBREAK OF LEPTOSPIRAL ABORTION AND RENAL DISEASE IN ALPACAS (VICUGNA PACOS) IN NEW ZEALAND  
F. Castillo-Alcala, S. Brown, C. Dwyer, D. Aberdein, A. Johnstone, K. Dittmer, C. Gans, S. Rajeev  
*Keyword: Reproductive System*
- D-83**  
COLOR DOPPLER, ULTRASOUND, AND PATHOLOGIC FEATURES OF SPONTANEOUS LEYDIG CELL CARCINOMA OF TESTIS IN BALB/C CMEDC MICE  
S. Sacco+, E. Belotti, J. Bertona, F. Salinas, N. Salvetti, H. Ortega  
*Keyword: Reproductive System*
- D-84**  
COXIELLA BURNETII ABORTIONS IN AN EWE HERD  
J. Hanlon+, J. Ramos-Vera, S. Yingst, K. Hammac  
*Keyword: Reproductive System*
- D-85**  
CLITORAL CARCINOMA IN DOGS: A RARE OCCURRENCE  
A. Stern, M. Robbins  
*Keyword: Reproductive System*
- D-86**  
AN OUTBREAK OF FATAL BORDETELLA BRONCHISEPTICA BRONCHOPNEUMONIA IN PUPPIES  
J. Chambers, I. Matsumoto, T. Shibahara, M. Haritani, H. Nakayama, K. Uchida  
*Keyword: Respiratory System*
- D-87**  
PULMONARY SILICOSIS IN TWO ADULT ROCK HYRAXES (PROCAVIA CAPENSIS)  
B. Pfisterer+, R. Donnell, A. Ashley, K. Newkirk  
*Keyword: Respiratory System*
- D-88**  
IDIOPATHIC PROGRESSIVE FIBROSING LUNG DISEASE IN A DOG  
T.T. Negrão Watanabe+, A. Dedeaux, F. Del Piero  
*Keyword: Respiratory System*
- D-89**  
NASAL SEROMUCINOUS HAMARTOMA IN A HORSE  
F. Rosa, J. Newton, J. Koehler  
*Keyword: Respiratory System*
- D-90**  
IMMUNOHISTOCHEMICAL CHARACTERIZATION OF SPONTANEOUS BRANCHIOBLASTOMA IN A KOI CARP (CYPRINUS CARPIO) AND BLUEGILL SUNFISH (LEPOMIS MACROCHIRUS)  
E. Alloway+, J. Riker, H. Shive, B. Troan, E. Christiansen, G. Lewbart  
*Keyword: Respiratory System*
- D-91**  
MESOTHELIAL PROLIFERATION MIMICKING NEOPLASTIC DISEASE PROCESS IN A BABOON (PAPIO SPP.)  
O. Gonzalez, E. Ball, S. Kumar, E. Dick Jr.  
*Keyword: Respiratory System*
- D-92**  
TOXIC PNEUMONITIS CAUSED BY WATERPROOFING SPRAY IN A DOG  
Y.X. Lin+, H.K. Chang, S.L. Lin, H.Y. Chiou, J.W. Liao  
*Keyword: Respiratory System*
- D-93**  
ACHYLA SPP DERMATITIS IN AN AMERICAN ALLIGATOR (ALLIGATOR MISSISSIPPIENSIS)  
C. Lau+, L. Bryan, E. Snook  
*Keyword: Skin*
- D-94**  
IMMERSION FOOT SYNDROME IN 6 EQUIDS EXPOSED TO HURRICANE FLOODWATERS  
B. Taylor+, A. Rodrigues Hoffmann, A. Arenas-Gamboa  
*Keyword: Skin*
- D-95**  
SQUAMOUS CELL CARCINOMA ARISING IN CHRONIC EXFOLIATIVE CUTANEOUS LUPUS ERYTHEMATOUS OF THE GERMAN SHORTHAIRED POINTER  
W. Manatchaiworakul+, A. Petersen, E. Noland  
*Keyword: Skin*

- D-96**  
CHARACTERIZATION OF CUTANEOUS CORYNEBACTERIUM BOVIS INFECTION IN NSG MICE BY HISTOPATHOLOGY AND LASER CAPTURE MICRODISSECTION  
L. Himmel, A. Southard-Smith, K. Shuster, K. Henderson, K. Boyd  
*Keyword: Skin*
- D-97**  
ACCESSORY TRAGUS: A HUMAN CONGENITAL ANOMALY IN A DOG  
B. Lee+, A. Massa, K. Taylor  
*Keyword: Skin*
- D-98**  
HYPOTRICHOSIS IN ANGUS CALVES CAUSED BY PRESUMPTIVE BOVINE VIRAL DIARRHEA VIRUS INFECTION IN A UTAH BEEF HERD  
M. Clayton+, P. Firth, G. Hullinger, J. Hall, A. Van Wettere  
*Keyword: Skin*
- D-99**  
IDIOPATHIC SKIN FRAGILITY SYNDROME IN A CAT  
N. Vazquez Mota, G. Fuentes Mascorro, M. Dominguez Martinez, R. Leon Zetina  
*Keyword: Skin*
- D-101**  
CORYNEFORM HYPERKERATOSIS IN NOG MICE  
Y.X. Lin, Y.C. Tuan, F.Y. Tsai, Y.C. Wu, J.H. Yin, J.W. Liao  
*Keyword: Skin*
- D-102**  
CASE REPORT: GASTRIC ADENOCARCINOMA IN CD-1 MOUSE  
M. Bockenstedt, A. Sharma  
*Keyword: Toxicologic Pathology*
- D-103**  
ALDICARB POISONING IN 2 DOGS  
G. Rimoldi, D. Smith, J. Buchweitz  
*Keyword: Toxicologic Pathology*
- D-104**  
RENAL TUBULAR DYSGENESIS WITH CONCURRENT OSTEOGENESIS IMPERFECTA, DENTINOGENESIS IMPERFECTA, AND GROWTH ARREST IN A YOUNG DOG  
W. Sills+, R. Pool, K. Kelly  
*Keyword: Urinary System*
- D-105**  
GLOMERULAR ULTRASTRUCTURAL FINDINGS IN PIGS WITH PORCINE DERMATOPATHY AND NEPHROPATHY SYNDROME  
C. Siepker+, C. Schmidt, C. Brown  
*Keyword: Urinary System*
- D-106**  
CILIAE INFECTION ASSOCIATED WITH CUTANEOUS ULCERATION IN SEA PENS (ORDER: PENNATULACEA)  
E. Corbin+, M. Garner, E. LaDouceur  
*Keyword: Wildlife*
- D-108**  
PATHOLOGIC FINDINGS IN AN AGED CAPTIVE SOUTHERN WHITE RHINOCEROS (CERATOTHERIUM SIMUM)  
L. Mangus+, L. Peiffer, E. Bronson  
*Keyword: Wildlife*
- D-109**  
RANAVIRUS: FIRST DESCRIBED CHELONIAN CASES IN ONTARIO, CANADA  
C. McKenzie+, D. Campbell, H. Snyman, T. Joseph, C. Davy, C. Jardine  
*Keyword: Wildlife*
- D-110**  
ENDOCARDIOSIS IN TETRAS (FAMILY: CHARACIDAE)  
R. Kim+, A. Cartoceti, J. St. Leger, R. Yanong, K. Holder, E. LaDouceur  
*Keyword: Wildlife*
- D-111**  
FIRST DETECTION OF EPIZOOTIC HEMORRHAGIC DISEASE IN WILD WHITE-TAILED DEER IN ONTARIO, CANADA  
S. Allen, J. Rothenburger, C. Jardine, A. Ambagala, K. Hooper-McGrevy, M. Ruder, N. Nemeth  
*Keyword: Wildlife*
- D-112**  
CHARACTERIZATION OF ARTERIAL VASCULOPATHY IN JUVENILE NORTHERN ELEPHANT SEALS, ASSOCIATED WITH OTOSTRONGYLUS CIRCUMLITUS INFECTION  
T. Yang+, T. Zabka, W. Baumgartner, P. Duignan, C. Field  
*Keyword: Wildlife*
- D-113**  
SPIRORCHIDIASIS WITH CONCURRENT PYELOSOMUM COCHLEAR INFECTION IN A GREEN SEA TURTLE (CHELONIA MYDAS)  
Y.C. Chang+, Y.C. Tuan, J.H. Yin, H.Y. Chiou  
*Keyword: Wildlife*
- D-114**  
FATAL LEPTOSPIROSIS WITH MUCOCUTANEOUS ULCERATION IN A FREE-RANGING RACCOON (PROCYON LOTOR) IN BRITISH COLUMBIA, CANADA  
H. Snyman, B. Burton, H. Schwantje, K. Sojonky, B. Glinnum, S. Raverty, T. Joseph  
*Keyword: Wildlife*

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#### LOCAL PEER OBSERVATION OF TEACHING

C. Löhr, D. Hassel, E. Gorman, W. Vernau, B. Murphy, S. Kurtz

*Keyword:* Education

### ED-2

#### TEACHING VETERINARY STUDENTS HOW TO CAPTURE DIGITAL IMAGES USING THEIR SMART PHONES IN A CYTOLOGY ELECTIVE COURSE

J. Hokamp, M. Wellman

*Keyword:* Education, Technology

### ED-3

#### IS BRINE FINE? EFFICACY OF A SATURATED SALT SOLUTION AS AN ALTERNATIVE TO FORMALIN FOR STORAGE OF ANATOMY SPECIMENS

J. Manfredi, I. Sonea, D. Agnew

*Keyword:* Education, Anatomy

### ED-4

#### CREATING 3-DIMENSIONAL MODELS FROM SERIAL HISTOLOGIC SECTIONS USING OPEN-SOURCE SOFTWARE

W. Oneill, C. Löhr

*Keyword:* Education, Technology

### ED-5

#### INVESTIGATING THE EFFECTS OF ERROR MANAGEMENT TRAINING ON VETERINARY STUDENTS LEARNING SURGICAL KNOT TYING

D. Meritet, K. Townsend, E. Gorman, P. Chappell, D. Russell

*Keyword:* Education

### ED-6

#### EDUCATIONAL INSIGHTS FROM AN INTERCULTURAL PATHOLOGY STUDY ABROAD PROGRAM FOR VETERINARY STUDENTS

LT. Lyle, N. Shimonohara

*Keyword:* Education

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### E-1

#### THE EFFECT OF PORCINE EPIDEMIC DIARRHEA VIRUS INFECTION ON TIGHT JUNCTION EXPRESSION IN THE SMALL INTESTINE OF WEANED PIGS

Y.M. Chen, N. Gabler, J.M. Hostetter, E.R. Burrough

*Keyword:* Infectious Disease

### E-2

#### HISTOLOGIC CHARACTERIZATION OF MALE REPRODUCTIVE PATHOLOGY DURING ACUTE ZIKA VIRUS INFECTION IN IMMUNOCOMPROMISED MICE

C.S. Clancy+, A. Van Wettere, V. Siddharthan,

J.D. Morrey, J.G. Julander

*Keyword:* Infectious Disease

### E-3

#### APOLIPOPROTEIN A-I DETECTION IN CSF OF RABBIT EXPERIMENTALLY INOCULATED WITH RABIES VIRUS AND ITS EXPRESSION IN THE BRAIN

Y. Sunden\*, M. Kihara, N. Tsunekawa, T. Morita

*Keyword:* Infectious Disease

### E-4

#### SNAKE FUNGAL DISEASE: A NOVEL EXPERIMENTAL MODEL

C.M. McKenzie+, P.T. Oesterle, C.M. Jardine, C.M. Davy,

B.N. Lillie, N.M. Nemeth

*Keyword:* Infectious Disease

### E-5

#### NON-COITAL SEXUAL TRANSMISSION OF ZIKA VIRUS FROM IMMUNOCOMPROMISED MALE MICE IN ACUTE BUT NOT CHRONIC REPRODUCTIVE INFECTION

C.S. Clancy, A.J. Van Wettere, J.D. Morrey, J.G. Julander

*Keyword:* Infectious Disease

### E-6

#### PATHOLOGY OF INTRATRACHEAL AEROSOL INOCULATION WITH BRUCELLA MELITENSIS IN A GUINEA PIG MODEL

M.E. Hensel+, D. Garcia, S.P. Chaki, A.M. Arenas-Gamboa

*Keyword:* Infectious Disease

### E-7

#### INTESTINAL T CELL RESPONSES DURING EARLY EXPERIMENTAL MAP INFECTION OF CALVES

R.J. Egan+, K.J. Stinson, L.A. Ludwig, B.L. Plattner

*Keyword:* Infectious Disease

### E-8

#### INFECTION OF NOD.SCID.IL2rg-/- MICE WITH NON-MOUSE-ADAPTED SWINE-ORIGIN AND HUMAN-ORIGIN H1 AND H3 INFLUENZA A VIRUSES

J.N. Lorbach+, S.W. Nelson, S.E. Lauterbach,

J.M. Nolting, A.S. Bowman

*Keyword:* Infectious Disease

- E-9**  
TROPISM OF BRUCELLA SPP. TO THE FEMALE REPRODUCTIVE TISSUES IS NOT ASSOCIATED WITH PREGNANCY  
S.A. Adetunji+, O.H. Khalaf, M. Hensel, A.A.M. Arenas-Gamboa  
*Keyword: Infectious Disease*
- E-10**  
CALIFORNIA SEA LION (ZALOPHUS CALIFORNIANUS) LYMPH NODE EXPLANT REVEALS INVOLVEMENT AND TRANSCRIPTIONAL REGULATION OF THE CELL ENTRY RECEPTORS SLAM AND NECTIN-4 DURING PHOCINE DISTEMPER VIRUS INFECTION  
O.A. Gonzales-Viera+, T. Goldstein, P. Eiamcharoen, P. Duignan, M.K. Keel  
*Keyword: Infectious Disease*
- E-11**  
CYTOKINE SIGNALING THROUGH DROSOPHILA MTHL10 TIES LIFESPAN TO ENVIRONMENTAL STRESS  
E.J. Sung+\*, Y. Hayakawa, S.B. Shears  
*Keyword: Immune System*
- E-12**  
ENHANCING THE IMMUNOGENICITY OF A RECOMBINANT LACTOBACILLUS ACIDOPHILUS ORAL VACCINE AGAINST HIV-1 THROUGH THE EXPRESSION OF THE E. COLI TYPE I PILUS PROTEIN FIMH  
A.C. Vilander+, A. Kajikawa, G.A. Dean  
*Keyword: Immune System*
- E-13**  
GRAFT VERSUS HOST DISEASE IN CD34+ HUMAN HEMATOPOIETIC STEM CELL TREATED NSG MICE  
E.L. Twitchell, S. Jackman, E. Jackman, D.L. Brown  
*Keyword: Immune System*
- E-14**  
MORPHOLOGICAL AND IMMUNOHISTOCHEMICAL ANALYSIS OF ORGANS IN LUPUS-PRONE MOUSE STRAINS TREATED WITH SERPINB3  
L. Cavicchioli, E. Pompermaier, G. Maggioni, A. Ghirardello, R. Luisetto, M. Beggio, A. Doria  
*Keyword: Immune System*
- E-15**  
EQUINE HERPESVIRUS TYPE 1 INDUCES A SEVERE NECROTIZING MENINGOENCEPHALITIS IN MICE  
L.P. Mesquita, R.C. Costa, L.L. Rodrigues, E.M.C. Villalobos, M.C.S.H. Lara, E. Mori, C.M.C. Mori, P.C. Maiorka  
*Keyword: Nervous System*
- E-16**  
SEQUENTIAL COLLECTION OF THE JUGULAR AND NODOSE VAGAL GANGLIA IN PIGS FOR STUDIES OF THE AUTONOMIC NERVOUS SYSTEM  
D.K. Meyerholz, L. Reznikov  
*Keyword: Nervous System*
- E-17**  
HISTOPATHOLOGICAL ANALYSIS ON DISTRIBUTION OF NEURONAL DAMAGE AND GLIAL CELL REACTION CAUSED BY TRANSIENT HYPOGLYCEMIA IN RAT  
N. Tomita\*, Y. Sunden  
*Keyword: Nervous System*
- E-18**  
DISTRIBUTION OF ATYPICAL PORCINE PESTIVIRUS IN THE CEREBELLUM OF PIGS FOLLOWING IN UTERO INOCULATION  
S. Falkenberg, P. Arruda, D. Magstadt, K. Schwartz, F. Matias Ferreyra, M. Palmer, J. Greenlee, J. Neill, I.R.H. Gatto, J. Ridpath and B. Arruda  
*Keyword: Nervous System*
- E-19**  
AGING-LIKE SPONTANEOUS EPIGENETIC SILENCING FACILITATES WNT ACTIVATION, STEMNESS AND BRAFV600E-INDUCED TUMORIGENESIS  
B. Kang+\*, Y. Tao, D.A. Petkovich, J. In, G. Stein-O'Brien, X. Kong, W. Xie, N. Zachos, S. Maegawa, R-W.C. Yen, E. Fertig, J-P. Issa, S.B. Baylin, H. Easwaran  
*Keyword: Nervous System*
- E-20**  
CHARACTERIZATION OF BLOOD-TUMOR BARRIER PATHOLOGY IN A MOUSE MODEL OF BRAIN METASTASES OF LUNG CANCER  
A. Dieterly+, G. Uzunalli, C. Kemet, A. Soepriatna, C. Goergen, M. Wendt, T.L. Lyle  
*Keyword: Nervous System*
- E-21**  
CONSEQUENCES OF PHYSIOLOGICAL SALINE INJECTION INTO THE MURINE SPINAL CORD ON MORPHOLOGICAL AND MOLECULAR LEVEL  
L. Zind, M. Gamber, K. Matheis, A. Kalkuhl, U. Deschl, W. Baumgärtner, F. Hansmann  
*Keyword: Nervous System*
- E-22**  
SPONTANEOUS BACKGROUND BRAIN PATHOLOGY IN C57BL/6J MICE  
J.C. Tarrant, L. Omodho, P. Savickas, M. Spinazzi, E. Radaelli  
*Keyword: Nervous System*
- E-23**  
IMPAIRED SPERMATOGENESIS IN PARL-DEFICIENT MICE  
E. Radaelli, L.A. Omodho, P. Savickas, M. Spinazzi  
*Keyword: Reproductive System*
- E-24**  
REDUCED PLACENTAL EXPRESSION OF REGULATOR OF G PROTEIN SIGNALING-2 (RGS2) IN A MOUSE MODEL IS SUFFICIENT TO INDUCE HISTOPATHOLOGIC AND TRANSCRIPTOMIC CHANGES TYPICAL OF PREECLAMPSIA  
K.N. Gibson-Corley, K.J. Perschbacher, G. Deng, E.J. Devor, G.L. Pierce, R.A. Fisher, D.A. Santillan, M.K. Santillan, J.L. Grobe  
*Keyword: Reproductive System*
- E-25**  
THERAPEUTIC EFFECT OF THE HUMAN RESPIRATORY SYNCYTIAL VIRUS (HRSV) REPLICATION INHIBITOR JNJ-64166037 IN HRSV INFECTED LAMBS  
P. Sitthicharoenchai+, M.R. Ackermann, S. Alnajjar, A. Larios-Mora, D. Lançois, P. Rigaux, D. Roymans, J.M. Gallup  
*Keyword: Respiratory System*



- E-26**  
THE ROLE OF SREBP-SCAP IN PANCREATIC DUCTAL ADENOCARCINOMA  
S. Myers, M. McGuire, W. Shao, T. Ewachiw, Z. Rasheed, P. Espenshade  
*Keyword:* Liver and Pancreas
- E-27**  
DEER MICE AS AN ANIMAL MODEL FOR INFECTION, PATHOGENESIS, AND IMMUNITY OF HEPATITIS C-LIKE VIRUSES  
O.M. Swartley+, S. Rekha Gadi, A. Kapoor, J.M. Cullen  
*Keyword:* Liver and Pancreas
- E-28**  
PREVENTIVE ANTAGONISM OF THE AR SIGNALING AXIS INHIBITS HEPATOCELLULAR CARCINOGENESIS IN A RAT MODEL  
T.H. Helms+, J.M. Thomas-Ahner, M.J. Campbell, S.K. Clinton, C.C. Coss  
*Keyword:* Liver and Pancreas
- E-29**  
EXPLORING PHARMACOLOGICAL ALTERNATIVES AGAINST CLOSTRIDIUM PERFRINGENS ENTEROTOXIN IN VIVO  
M.A. Navarro+, J.C. Freedman, E. Morrell, J. Beingesser, A. Shrestha, B.A. McClane, F.A. Uzal  
*Keyword:* Alimentary
- E-30**  
IMMUNOPHENOTYPING OF LYMPHOCYTES IN A MINIPIG MODEL OF VASCULARIZED COMPOSITE ALLOTRANSPLANTATION REJECTION  
C.E. Mason+, G. Furtmuller, G. Brandacher, S.E. Beck  
*Keyword:* Integument
- E-31**  
EQUINE HOOF LAMELLAR STRUCTURAL FAILURE IS PREVENTED BY CONTINUOUS DIGITAL HYPOTHERMIA IN A MODEL OF ENDOCRINOPATHIC LAMINITIS  
S.M. Stokes+, J.K. Belknap, A.W. van Eps, J.B. Engiles, F.R. Bertin, C.E. Medina-Torres  
*Keyword:* Integument
- E-32**  
DEVELOPMENT OF A PORCINE MODEL FOR CARBON PARTICLE MIGRATION TO REGIONAL LYMPH NODES  
R. Melidone, D.B. Spenciner, A.F. Barber, B.G. Zani, T.R. Muench  
*Keyword:* Bone and Joint
- E-33**  
DEFINING THE HOST RANGE OF AQUATIC BIRD BORNAVIRUS THROUGH GROWTH AND LESION DEVELOPMENT IN OVO  
A. Leacy, E. Nagy, N. Nemeth, C. Varga, L. Susta  
*Keyword:* Avian
- E-34**  
RECOMBINANT HEMAGGLUTININ GLYCOPROTEINS DERIVED FROM HIGHLY PATHOGENIC AND LOW PATHOGENIC H5 AVIAN INFLUENZA VIRUSES REFLECTS TISSUE TROPISM AND HOST SUSCEPTIBILITY ACROSS AVIAN SPECIES  
C.F.S. Jerry+, C.F. Leyson, D. Stallknecht, M.S. Franca  
*Keyword:* Avian
- E-35**  
DISEASE PHENOTYPE OF A SHEEP MODEL OF CYSTIC FIBROSIS GENERATED BY CRISPR/CAS9 DISRUPTION OF THE CFTR GENE  
A.J. Van Wettene, Z. Fan, L. Viotti Perisse, C. Cotton, M. Regouski, Q. Meng, Z. Wang, A. Harris, K.L. White, I.A. Polejaeva  
*Keyword:* Animal Model
- E-36**  
SYNERGISTIC ACTION OF ONCOLYTIC VIROTHERAPY WITH NEWCASTLE DISEASE VIRUS AND PACLITAXEL ON CHEMICALLY-INDUCED MAMMARY CANCER IN RATS  
S.S. Abd El-Rahman, A.H.M. Hassan, A.A. Saleh, M.H. Khodeir, A.O. Abd El-Khalek  
*Keyword:* Virotherapy
- E-37**  
INVESTIGATING TOLL-LIKE RECEPTOR AGONISTS AS AN IMMUNOTHERAPEUTIC FOR METASTATIC OSTEOSARCOMA  
K.L. Wycislo+, H.C. Pondenis, B.A. Fadl-Alla, T.M. Fan  
*Keyword:* Neoplasia
- E-38**  
EXPLORING THE POTENTIAL LINK BETWEEN REGENERATIVE CAPACITY AND CANCER INITIATION IN ZEBRAFISH  
V.A. Kouprianov, H.R. Shive  
*Keyword:* Neoplasia
- E-39**  
NOVEL DRUG COMBINATIONS AGAINST DOXORUBICIN-RESISTANT MULTIPLE MYELOMA  
T. Peat+, S. Gaikwad, B. Mock  
*Keyword:* Neoplasia
- E-40**  
ESTABLISHMENT AND CHARACTERIZATION OF A NEW CELL LINE FROM CANINE CUTANEOUS LANGERHANS CELL HISTIOCYTOSIS  
N.V. Son+, J.K. Chambers, T. Antigan, T.E. Kishimoto, K. Uchida, H. Nakayama  
*Keyword:* Neoplasia

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### T-1

BACKGROUND TESTICULAR LESIONS IN MALE NOD. CG-PRKDC-SCID-IL2RG-TM1WJL/SZJ (NSG) MICE IN PRECLINICAL TOXICOLOGIC STUDIES

J. Tran, M. Elliott, K. Szabo, J. Raymond

*Keyword:* Reproductive System

### T-2

COMPARISON BETWEEN ADJUVANT-ASSOCIATED HISTOLOGICAL BACKGROUND FINDINGS AT INTRAMUSCULAR INJECTION SITES IN RABBITS

E. Goldsmith\*, K. Nelson

*Keyword:* Muscle

### T-3

METHODS OPTIMIZATION FOR ROUTINE SCIATIC NERVE PROCESSING

J. Fortin, E. Chlipala, D. Shaw, B. Bolon

*Keyword:* Nervous System

### T-4

THE CONTRIBUTION OF CORTICAL INTERNEURONS TO CEREBRAL BLOOD FLOW

C. Ruff+\*, J. Couey, A. Vazquez, S. Ross

*Keyword:* Nervous System

### T-5

PATHOLOGICAL EFFECTS OF SORAFENIB ADMINISTRATION TO SPRAGUE-DAWLEY RATS

Y. Su, Y. Tzeng, J. Liao

*Keyword:* Toxicologic Pathology

### T-6

RETROSPECTIVE ANALYSIS OF FUNGAL RHINITIS IN SPRAGUE-DAWLEY RATS: SEX DIFFERENCES IN INFECTION FREQUENCY AND LESION LOCATION IN NASAL CAVITY

K. Carlton+\*, J. Lamoreux, C. Dean, K. Nelson

*Keyword:* Respiratory System

### T-8

OUTBREAK OF KIKUYU (PENNISETUM CLANDESTINUM) TOXICOSIS IN CATTLE IN NEW SOUTH WALES, AUSTRALIA

T. Westermann+\*, S. Gestier, Z. Spiers, M. Hazelton,

S. Gilchrist, K. Walker, J. Kerr, L. Stone, D. Rayward,

P. Pinczowski, L. Manning

*Keyword:* Toxicologic Pathology

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### N-1

PROSTAGLANDIN E RECEPTOR EP3 EXPRESSION IN FELINE ORAL SQUAMOUS CELL CARCINOMA

N.N. Kaiser+, K. Jones, S. Martinson, C. Martin

*Keyword:* Neoplasia

### N-2

IMMUNOHISTOCHEMICAL EVALUATION OF CD25 EXPRESSION IN CANINE LYMPHOMA

W. Sills+, A. Miller, K. Richards

*Keyword:* Hematopoietic System

### N-3

IMMUNOHISTOCHEMICAL CHARACTERIZATION OF INFLAMMATORY CELLS IN CANINE GLOMERULAR LIPIDOSIS

K. Watson+, P. Moore, R. Cianciolo, K. Harmon, F. Mohr

*Keyword:* Urinary System

### N-4

INTRATUMORAL EXPRESSION OF PROSTAGLANDIN EP4 RECEPTOR GENE PTGER4 IN MULTIPLE CANINE MALIGNANCIES

A. Viall, R. Philips, J. Hostetter, C. Johannes, M. Musser

*Keyword:* Neoplasia

### N-5

NORTH AMERICAN RIVER OTTER (LONTRA CANADENSIS) MORTALITY SURVEILLANCE, EAST CENTRAL FLORIDA, 2017-2018

D. Rotstein, M. Stolen, C. Silbernagel

*Keyword:* Wildlife

### N-6

USE OF GENETIC AND EPIGENETIC TOOLS TO DISCOVER MARKERS FOR HOST RESILIENCE TO OVINE PROGRESSIVE PNEUMONIA VIRUS IN SHEEP

A. Massa+, M. Mousel, B. Murdoch, D. Knowles, J. Taylor,

S. White

*Keyword:* Respiratory System

### N-7

EXPRESSION OF OLIGODENDROCYTE PRECURSOR CELL MARKERS IN CANINE OLIGODENDROGLIOMAS

T. Kishimoto+, K. Uchida, A. Thongtharb, T. Shibato, J.

Chambers, K. Nibe, Y. Kagawa, H. Nakayama

*Keyword:* Neoplasia

### N-8

PATHOLOGY OF CETACEAN MORBILLIVIRUS AND COMORBIDITIES IN GUIANA DOLPHINS DURING 2017-2018 EPIDEMICS (BRAZIL)

K. Groch, J. Diaz-Delgado, E. Santos-Neto, J. Ikeda,

R. Carvalho, R. Oliveira, E. Guari, E. Ferreira-Machado,

C. Sacristan, L. Keid, R. Soares, G. Souza, D. Oliveira,

A. Azevedo, J. Lailson-Brito, J. Catao-Dias

*Keyword:* Wildlife

- N-9**  
 SERUM CYTOKINE AND GROWTH FACTOR PROFILING OF HEALTHY DOGS AND DOGS WITH OSTEOSARCOMA VIA MULTIPLEX ANALYSIS  
 C. Allende, T. Jamison, B. Higgins, J. Johns  
*Keyword: Immune System*
- N-10**  
 ANALYSIS OF EPHA3 EXPRESSION IN CANINE BRAIN NEOPLASIA  
 H. Diebold, E. Jones, A. Whitelock, H. Ching Leung, S. Puttick, R. Allavena  
*Keyword: Nervous System*
- N-11**  
 METASTASIS OF AN EQUINE OCULAR SQUAMOUS CELL CARCINOMA TO THE GUTTURAL POUCH  
 J. Ramos, M. Miller, M. Sola, W. Townsend, K. Milenicki, G. Haanen  
*Keyword: Neoplasia*
- N-12**  
 CHARACTERIZATION OF ENTEROADHERENT BACTERIA WITH ZOONOTIC POTENTIAL IN SMALL INTESTINAL BIOPSY SPECIMENS OBTAINED FROM SENIOR CATS WITH DIARRHEA AND VOMITING  
 E. Demeter, E. Choi, K. Simpson, G. Duhamel  
*Keyword: Infectious Disease*
- N-13**  
 EXTRAINTESTINAL ESCHERICHIA COLI CAUSES NECROHEMORRHAGIC PNEUMONIA IN MULTIPLE RESEARCH DOGS  
 M. Magagna, A. George, C. Carter, C. Dean, K. Nelson  
*Keyword: Respiratory System*
- N-15**  
 COMPARATIVE HISTOPATHOLOGIC AND IMMUNOHISTOCHEMICAL INVESTIGATIONS OF CETACEAN MORBILLIVIROSI BETWEEN MEDITERRANEAN AND NORTHEAST-CENTRAL AND SOUTHWESTERN ATLANTIC CETACEANS: PRELIMINARY RESULTS  
 J. Diaz-Delgado, K. Groch, E. Serra, S. Sacchini, D. Zucca, O. Quesada-Canales, M. Arbelo, A. Fernandez, R. Resso, C. Kanamura, E. Santos Neto, J. Ikeda, R. Carvalho, A. Azevedo, J. Lailson-Brito Jr., C. Favero, C. Centelleghes, S. Mazzariol, L. Di Renzo, G. Di Francesco, G. Di Guardo, J. Catao-Dias  
*Keyword: Infectious Disease*
- N-16**  
 HISTOLOGIC CHARACTERIZATION OF THE MAJOR DUODENAL PAPILLA OF CATS AND CORRELATION TO PRESENCE OF CHOLANGITIS, PANCREATITIS, AND ENTERITIS  
 M. Schreeg+, J. Cullen, J. Gookin  
*Keyword: Liver and Pancreas*
- N-17**  
 HISTOLOGIC LESIONS IN CAPTIVE AMERICAN HORSESHOE CRABS (LIMULUS POLYPHEMUS)  
 E. LaDouceur, L. Mangus, M. Garner, A. Cartoceti  
*Keyword: Wildlife*
- N-18**  
 INVESTIGATING MOLECULAR MARKERS USING TISSUE MICROARRAYS FOR THE PROGNOSIS OF CANINE MAST CELL TUMORS  
 B. Knight+, G. Wood, R. Foster, B. Coomber  
*Keyword: Neoplasia*
- N-19**  
 UTERINE LESIONS OF DOMESTIC RABBITS (ORYCTOLAGUS CUNICULUS) IN JAPAN: A RETROSPECTIVE COHORT STUDY  
 H. Kondo, K. Settai, H. Shibuya  
*Keyword: Rabbit*
- N-20**  
 COMPARISON OF EXPRESSION OF THE APICAL SODIUM-DEPENDENT BILE ACID TRANSPORTER ALONG THE INTESTINAL TRACT BETWEEN DOGS WITH AND WITHOUT CHRONIC ENTEROPATHY  
 P. Giaretta+, R. Rech, B. Guard, A. Blake, A. Blick, J. Steiner, J. Lidbury, A. Cook, M. Hanifeh, T. Spillmann, S. Kilpinen, P. Syrja, J. Suchodolski  
*Keyword: Alimentary*
- N-21**  
 NEUROPATHOLOGICAL STUDY OF INCLUSION BODY DISEASE OF JAPANESE BROWN CATTLE  
 K. Watanabe, M. Yokoyama, K. Uchida, J. Chambers, H. Nakayama, N. Horiuchi, H. Furuoka, T. Matsui, A. Miller, Y. Kobayashi  
*Keyword: Nervous System*
- N-22**  
 CARDIAC MESOTHELIAL HYPERPLASIA IN CATTLE  
 D. Goldsmith, J. Adaska  
*Keyword: Cardiovascular*
- N-23**  
 THE USE OF HISTOPATHOLOGICAL STAINS TO DOCUMENT STRETCHED COLLAGEN IN THE TISSUE LESIONS OF EQUINE NAVICULAR DISEASE  
 E. Uhl, U. Blas-Machado, S. Kirejczyk, M. Osborn  
*Keyword: Bone and Joint*
- N-24**  
 ERYSIPELAS BACTEREMIA IN A SERIES OF ZOO BIRDS  
 J. Malatos, P. Mitchell, L. Goodman, C. Hollinger  
*Keyword: Avian*
- N-25**  
 EVALUATING A FUNGAL METALLOPROTEASE IN ASSOCIATION WITH CONIDIAL ADHERENCE TO EXTRACELLULAR MATRIX IN BAT WHITE-NOSE SYNDROME  
 P. Eiamcharoen, M. Keel  
*Keyword: Infectious Disease*
- N-26**  
 INTRAOCULAR HISTIOCYTIC SARCOMA IN DOMESTIC CATS  
 M. Climans, G. Shaw, R. Dubielzig, L. Teixeira  
*Keyword: Eye and Ear*
- N-27**  
 REVISITING THE CORRELATION OF C-KIT MUTATION STATUS AND TREATMENT DECISIONS IN CANINE MAST CELL TUMORS  
 S. Hammer, A. Paquay, A. Fuchs-Baumgartinger, N. Luckschander-Zeller, A. Saalmuler, I. Schwendenwein, B. Rutgen  
*Keyword: Clinical Pathology*

- N-28**  
A 35-YEAR RETROSPECTIVE REVIEW OF DIAGNOSTIC DATA FROM NATIVE BATS (ORDER: CHIROPTERA) IN THE SOUTHEASTERN USA  
S. Mehrpad, K. Niedringhaus, M. Ruder, C. Bahnson, M. Dalton, N. Nemeth  
*Keyword:* Wildlife
- N-29**  
CAUSES OF NEONATAL KID MORTALITY IN ONTARIO DAIRY GOATS  
E. Rätsep+, C. Bauman, J. Wichtel, J. Kim, P. Menzies, B. Plattner, R. Foster  
*Keyword:* General Topic
- N-30**  
NECROTIZING MENINGOENCEPHALITIS ASSOCIATED WITH PARVOVIRAL INFECTION IN CATS  
D. Rissi, G. Maboni, A. Kokosinska, J. Saliki, S. Sanchez  
*Keyword:* Nervous System
- N-31**  
ORAL FIBRO-PAPILLOMA IN LAMBS AND KIDS AFFECTED BY CONTAGIOUS ECTHYMA (ORF)  
M. Cancedda, D. Pintus, G. Puggioni, G. Tore, R. Scivoli, A. Rocchigiani, E. Coradduzza, S. Macciocu, A. Lavazza, C. Ligios  
*Keyword:* Infectious Disease
- N-32**  
IS FELINE TRICHURIASIS ASSOCIATED WITH LARGE INTESTINAL NODULES?  
J. Magnusson Wulcan+, M. Dennis, J. Ketzis  
*Keyword:* Alimentary
- N-33**  
REFERENCE CENTER OF PATHOLOGY FOR ARABIAN HORSES IN YAZD-IRAN  
A. Morales  
*Keyword:* General Topic
- N-35**  
INVESTIGATION OF EPHA2 BIOMARKER EXPRESSION IN CANINE BRAIN CANCER  
A. Whitelock, E. Jones, H. Diebold, H. Ching Leung, S. Puttick, R. Allavena  
*Keyword:* Nervous System
- N-36**  
PREVALENCE OF MYCOPLASMAS IN THE LOWER RESPIRATORY TRACT OF RACING THOROUGHBRED HORSES IN THE EAST ANGLIA REGION OF THE UNITED KINGDOM  
A. Suarez-Bonnet+, E. Dixon, A. Foote, A. Rycroft, S. Priestnall  
*Keyword:* Respiratory System
- N-37**  
NATURALLY OCCURRING AGE-RELATED, ALZHEIMER'S-LIKE PATHOLOGY IN AFRICAN GREEN MONKEY BRAINS  
T. Corey+, O. Illanes, M. Lawrence, S. Liddie, J. Callanan  
*Keyword:* Primates
- N-38**  
VALIDATION AND QUANTIFICATION OF BETA-2 ADRENORECEPTOR IMMUNOHISTOCHEMISTRY IN CANINE SPLENIC HEMANGIOSARCOMA  
S. Schlemmer+, J. Dawson, H. Wison-Robles, R. Rech, M. Johnson, A. Ambrus, K. Armstrong  
*Keyword:* Neoplasia
- N-39**  
DETECTION OF MYCOPLASMA SP. IN RHESUS MONKEYS (MACACA MULATTA) FROM BRAZILIAN LABORATORY COLONY: PRELIMINARY DATA  
A. Mongruel, C. Duquia, A. Somma, F. Montiani-Ferreira, A. Pinto, C. Campos, M. Calado, M. Lara, J. Valente, T. Vieira, R. Vieira  
*Keyword:* Infectious Disease
- N-40**  
IMMUNOHISTOCHEMICAL EXPRESSION OF CXCR4 IN CANINE BRAIN CANCER  
H. Ching Leung, E. Jones, A. Whitelock, H. Diebold, S. Puttick, R. Allavena  
*Keyword:* Nervous System
- N-41**  
SALSA AND EQUINE ASTHMA  
G. Lee+, L. Tessier, D. Bienzle  
*Keyword:* Respiratory System
- N-42**  
BRUCELLA CETI-CELLULAR PRION PROTEIN INTERACTION IN THE BRAIN FROM NEUROBRUCELLOSIS-AFFECTED STRIPED DOLPHINS (STENELLA COERULEOALBA): AN IN-SILICO STUDY  
G. Di Guardo, G. Di Francisco, L. Di Renzo, M. Tittarelli, C. Esmeralda Di Francesco, M. Baffoni, C. Grattarola, S. Mazzariol, C. Centelleghes, L. Leonardi, A. Petrella, M. Orsini  
*Keyword:* Nervous System
- N-43**  
ACUTE ACCIDENTAL EXPOSURE TO UNDILUTED QUATERNARY AMMONIUM IN DOGS  
S. Patial, T. Watanabe, R. Malbrue, C. Arsuaga, R. Stout, I. Langohr, N. Wakamatsu  
*Keyword:* General Topic
- N-44**  
ANAPLASTIC LARGE T-CELL LYMPHOMA IN THE INTESTINE OF DOGS  
L. Stranahan+, D. Whitley, T. Thaiwong, M. Kiupel, F. Oliveira  
*Keyword:* Neoplasia
- N-45**  
MICRORNA EXTRACTION FROM FORMALIN-FIXED PARAFFIN-EMBEDDED CANINE LYMPH NODES: QUANTITY AND QUALITY ASSESSMENT USING THREE COMMERCIAL EXTRACTION KITS  
M. Varvil+, N. Elshafie, A. Santos  
*Keyword:* Clinical Pathology
- N-46**  
THE ROLE OF NUCLEAR FACTOR-KAPPA B IN FELINE INJECTION SARCOMAGENESIS  
C. Hsueh+, C. Wu, C. Shih, L. Yeh, C. Jeng, F. Pang, H. Chiou, H. Chang  
*Keyword:* Neoplasia
- N-47**  
EXAMINING THE GENETIC BACKGROUND OF CANINE PHEOCHROMOCYTOMAS  
F. Abed, M. Dark  
*Keyword:* Neoplasia

## ACVP Late-Breaking Poster Session

## Poster Schedule - Exhibit Hall South

## Poster Setup:

Sunday, November 4, 2018 . . . . . 7:00 a.m.-9:00 a.m.

## Poster Viewing:

Sunday, November 4, 2018 . . . . . 9:30 a.m.-4:30 p.m.

Monday, November 5, 2018 . . . . . 9:30 a.m.-1:00 p.m.

Tuesday, November 6, 2018 . . . . . 9:30 a.m.-3:30 p.m.

## Poster Teardown:

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## N-48

IMMUNOHISTOCHEMICAL EVALUATION OF P53 EXPRESSION AND SEQUENCING OF GENOMIC DNA IN MALIGNANT CANINE INTESTINAL TUMORS

S. Cho+, B. Seung, S. Kin, J. Sur

*Keyword:* Neoplasia

## N-49

SALIVARY GLAND PATHOLOGY IN DOGS: A RETROSPECTIVE STUDY OF 174 CASES

D. Lieske+, D. Rissi

## N-50

HISTOLOGICAL FEATURES OF AUSTRALIAN CANINE AND FELINE BLADDER DISEASE

E. Jones+, C. Palmieri, M. Thompson, J. Al-Alawneh, K. Jackson, R. Allavena

*Keyword:* Urinary System

## N-51

HISTOPATHOLOGICAL AND CLINICAL CHARACTERIZATION OF CANINE MENINGOENCEPHALITIS OF UNKNOWN ETIOLOGY

S. O'Sullivan+, R. Foster, K. Vernau, F. James, O. Berke, V. Madsen, S. Keller

*Keyword:* Nervous System

## N-52

BREED SPECIFIC DIFFERENCES IN MOLECULAR FEATURES AND CLINICAL OUTCOME IN CANINE B-CELL CHRONIC LYMPHOCYTIC LEUKEMIA

E. Rout+, J. Labadie, R. Burnett, J. Yoshimoto, A. Avery

*Keyword:* Neoplasia

## N-53

DETERMINATION OF TREATMENT FAILURE FOR FIP INFECTED CATS TREATED WITH ANTICORONAVIRAL THERAPY TO FACILITATE THE SUCCESS OF SECOND GENERATION THERAPY

M. Liepnieks+, B. Murphy, M. Perron, M. Bannasch, E. Montgomery, E. Murakami, H. Liu, N. Pedersen

*Keyword:* Infectious Disease

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## LB-1

DISSIMILAR CARCINOMAS IN KIDNEY, BILE DUCT, AND THYROID GLAND OF A CAT

S. Piotrowski, M. Miller, B. Sommer, D. Dusold, J. Ramos-Vara

## LB-2

INVESTIGATING THE VALUE OF URINE VOLUME, CREATININE AND CYSTATIN C FOR URINARY BIOMARKERS NORMALIZATION IN NONCLINICAL STUDIES.

A. Adediji, T. Pourmohamad, Y. Chen, J. Burkey, L. Song, M. Sonee, J. McDuffie

## LB-3

IN OVO STUDY OF BLUETONGUE VIRUS: PATHOGENESIS AND THE PATHOGENICITY OF INFECTIOUS BLOOD AND CELL CULTURE PASSAGED VIRUS

F. Lean, J. Devlin, D. Williams, J. Bingham

## LB-4

APPARENT LACK OF DRUG ABSORPTION OF BUPRENORPHINE SR™ LAB FORMULATION ADMINISTERED SUBCUTANEOUSLY TO NUDE RATS (RATTUS NORVEGICUS)

C. Page, R. Estrada, R. Hoffman, T. Mays, N. Gades

## LB-5

NOVEL PRECLINICAL ORTHOTOPIC CANINE PROSTATE CANCER MODEL FOR DRUG DEVELOPMENT TARGETING THE GASTRIN-RELEASING PEPTIDE RECEPTOR

T. Rosol, S. Elshafae, L. Gong, S. Kothandaraman, M. Knopp, M. Tweedle

## LB-6

EFFECT OF ANTI-COAGULANT AND MAGNESIUM CHLORIDE ON FIBRINOGEN MEASUREMENT

N. Courtman, B. Tennent-Brown, C. Leung, E. Driscoll

## LB-7

APPLES TO APPLES: AIRWAY CALIBER VERSUS AIRWAY WALL CONSTITUENTS

D. Meyerholz, A. Beck

## LB-8

RHABDOMYOSARCOMA IN A GECKO

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