Thursday, October 28, 2021

9:00 a.m.-4:30 p.m. CDT
ACVP Pre-Meeting Workshop
Primate Pathology: Geriatric Pathology of NHP
Session Chair: Rebekah Keesler, DVM, DACVP
Charles River Laboratories, Reno, NV
The theme of this year’s Primate Pathology workshop is Geriatric Primate Pathology. In the morning, our invited guest speakers will cover diverse topics including anatomic pathology of geriatric orangutans, creating a geropathology grading platform in primates, and research into disease of aging utilizing primate models. For the afternoon program, we invite attendees to present discrete cases, encouraging consideration of the theme, but would welcome any interesting case in a primate.

- NHP Geropathology Grading Platform
  Katie Olstad, DVM, DACVP
  California National Primate Research Center, University of California, Davis, CA
  Denise Imai-Leonard, DVM, PhD, DACVP
  Comparative Pathology Laboratory, University of California, Davis, CA

- Immune Senescence in NHP Models
  Ilhem Messaoudi, PhD
  Center for Virus Research, University of California, Irvine, CA

- Macular Degeneration in NHP Models
  Martha Neuringer, PhD
  Oregon National Primate Research Center, Oregon Health and Science University, Portland, OR

- Orangutan Pathology
  Sushan Han, DVM, PhD, DACVP
  College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO

- Short Case Presentations

6:30 p.m.-8:30 p.m. CDT
Mystery Slide Session: Neuropathology
Session Chair: Andrew D. Miller, DVM, DACVP
Cornell University, Ithaca, NY
Panel:
LaFasha Crawford, University of Wisconsin, Madison, WI
Dan Rissi, University of Georgia, Athens, GA
Hannes Vogel, Stanford University, Stanford, CA

Friday, October 29, 2021

8:00 a.m.-12:30 p.m. CDT
C.L. Davis/S.W. Thompson Foundation Pre-Meeting Workshop:
Soft Tissue Tumors are “Hard”: Current Perspectives
Session Chairs:
Francisco A. Uzal, DVM, MSc, PhD, DACVP
Davis-Thompson Foundation
Jennifer L. Chapman, DVM, DACVP
Davis-Thompson Foundation
Speakers will present material from the third volume of the series, with a special guest lecture by Dr. Brian Summers.
Speakers:
- Paola Roccabianca, DVM, PhD, DECVP
  Università degli Studi di Milano DIMEVET-Dipartimento di Medicina Veterinaria, Lodi, Italy
- Giancarlo Avallone, DVM, PhD, DECVP
  Dipartimento di Scienze Mediche Veterinarie, Università di Bologna, Italy
- F. Yvonne Schulman, DVM, DACVP
  Zoetis Reference Labs, Bow, NH
- Brian A. Summers FRCS, FRCPath
  Cornell University, Melbourne, Victoria, Australia

1:30 p.m.-2:30 p.m. CDT
Sponsored Hosted Session: IDEXX
Virtual Careers: Navigating the “New Normal”
With the events of the last couple years, more people than ever before are exploring virtual work. But for many, questions still remain. Join IDEXX Pathology Managers and Talent Acquisition Specialists to discuss these questions and learn what should you consider before applying for a virtual position, what to expect during the interview, and how to set yourself up for success once you’ve landed the job.

4:00 p.m.-6:30 p.m. and 8:00 p.m.-9:30 p.m. CDT
Diversity, Equity, and Inclusion in Veterinary Pathology Training Programs: Current State and Future Directions
Keynote Speaker:
Florette Kim Gray Hazard, MD
Lucile Packard Children’s Hospital and Stanford School of Medicine, Stanford, CA
Saturday, October 30, 2021

8:00 a.m.-12:00 p.m. CDT
C.L. Davis/S.W. Thompson Foundation Pre-Meeting Workshop:
Soft Tissue Tumors are “Hard”: Current Perspectives (continued)

8:00 a.m.-12:30 p.m. CDT (times are tentative)
ISACP/ASVCP Pre-Meeting Workshop:
Understanding the Crucial Role of Acute Phase Proteins in Veterinary Clinical Pathology

8:00 a.m.-8:15 a.m. CDT
Opening Remarks
David Eckersall, PhD
University of Glasgow, UK

8:15 a.m.-8:45 a.m. CDT
Session 1: Evidence-based App Applications in Companion Animals
Session Moderator: Gabriele Rossi, DVM, PhD, DECVCP
Murdoch University, Australia

Acute Phase Proteins in Dogs
Jose Ceron, DVM, PhD, DECVCP
University of Murcia, Spain

Acute Phase Proteins in Cats
Gabriele Rossi, DVM, PhD, DECVCP
Murdoch University, Australia

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

9:00 a.m.-9:30 a.m. CDT
Session 2: Evidence-based App Applications in Large Animals
Session Moderator: Stine Jacobsen, DVM, PhD, DECVS
University of Copenhagen, Denmark

Acute Phase Proteins in Swine and Bovine
Anna Bassols, PhD
Universitat Autonoma de Barcelona, Spain

Acute Phase Proteins in Equine Medicine and Surgery
Stine Jacobsen, DVM, PhD, DECVS
University of Copenhagen, Denmark

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

9:45 a.m.-10:15 a.m. CDT
Session 3: Comparative and Translational Applications of Apps
Session Moderator: Emma Hooijberg, BVSc, PhD, DECVP
University of Pretoria, South Africa

Acute Phase Proteins in Wildlife and Zoo Animals
Emma Hooijberg, BVSc, PhD, DECVP
University of Pretoria, South Africa

Acute Phase Proteins in Laboratory Animals
Carolyn Cray, PhD
University of Miami Leonard M. Miller School of Medicine, USA

10:15 a.m.-10:30 a.m. CDT
Break

10:30 a.m.-11:00 a.m. CDT
Session 4: App R&D, Implementation in the Laboratory and Field
Session Moderator: Carolyn Cray, PhD
University of Miami Leonard M. Miller School of Medicine, USA

New Assay for Canine SAA & Results in Dogs with Sepsis
Erica Behling-Kelly, DVM, PhD, DACVP
Cornell University, USA

Validation of Haptoglobin Assay and Observations Across Multiple Species
David Eckersall, PhD
University of Glasgow, UK

Review of Methods and Reagents from Vendor Partners
Eiken Chemical, Life Diagnostics, and Others

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

11:15 a.m.-12:30 p.m. CDT
Session 5: Live Roundtable Discussion and Q&A
Session Moderators: Carolyn Cray, PhD and Stine Jacobsen, DVM, PhD, DECVS

Voices from the Field
Veterinarians and researchers from across the world who currently use APPs in their practice and studies

Live Discussion Items from Speakers
• Expert Perspectives
• Late-breaking Work
• Standardization
• Future of APP – Research and Needs

3:00 p.m.-4:30 p.m. CDT
Veterinary Student Afternoon Tea

• What does SCAVP do for you!
• What opportunities are available from the Society of Toxicologic Pathology (STP)?
• 2021 Veterinary Student Poster Awards Announced
• 2021 Mentor of the Year Award Announced
• Raffle Prizes—veterinary student attendees can register for prizes during the virtual event!

4:30 p.m.-5:00 p.m. CDT
Highlighted Posters: Diagnostic Pathology and Education
Session Chair: Hendrich Snyman, BVSc, DVSc, DACVP
University of Guelph, Guelph, Ontario, Canada

CERVICAL COMPRESSIVE MYELOPATHY SECONDARY TO GUDAIR VACCINE ASSOCIATED GRANULOMAS IN SHEEP
Leah Manning1, Katie Eager1, Brendon O’Rourke1, Eve Hall1, Keith Walker1, Erika Bunker1, Angel Ngo1, Zoe Spiers1, Mukesh Srivastava1, Pedro Pinczowski2
1Elizabeth Macarthur Agricultural Institute, Department of Primary Industries, Menangle, NSW, Australia, 2Murray Local Land Services, Holbrook, NSW, Australia

ABERRANT (ECTOPIC) CD3 EXPRESSION IN A FELINE EXTRAMEDULLARY CUTANEOUS PLASMACYTOMA
Michael Childress1, Caitlin Brown1, Tsang Lin1, Emily Hartman1, Peter Moore2, José Ramos-Vara1
1Purdue University, West Lafayette, IN, USA, 2University of California Davis, Davis, CA, USA

PERFORMANCE OF A BLOOD-BASED ‘LIQUID BIOPSY’ MULTICANCER EARLY DETECTION (MCED) TEST IN SEVEN COMMON CANINE CANCERS
Andi Flory, Jason Chibuk, Lauren Holtvoigt, Katherine Lytle, Dana Tsui, Ilya Chorny, Jilf Rafalko, Daniel Grosu, Kristina Kruglyak
PetDx, La Jolla, CA, USA
**RETROSPECTIVE ANALYSIS OF REPRODUCTIVE LESIONS IN REPTILES**
Kelsie Dougherty, Brigid Troan, Greg Lewbart
North Carolina State University College of Veterinary Medicine, Raleigh, NC, USA

**PAUCIBACILLARY MYCOBACTERIOSIS IN RELATED CAPTIVE RED SIKINS (CARDUELIS CUCULLATA)**
Brittany Beavis¹, Andrew Cartoceti², Steven Kubiski², Jason Thornton¹, Elise LaDoucer¹
¹Joint Pathology Center, Silver Spring, MD, USA, ²Smithsonian National Zoo, Washington, DC, USA, ³San Diego Zoo, San Diego, CA, USA

**ACUTE CEREBRAL TOXOPLASMOSIS IN A 2-YEAR-OLD QUARTER HORSE**
Andrew Oates, Terry Spraker
Colorado State University Veterinary Diagnostic Laboratory, Fort Collins, CO, USA

**OSTEOFLUOROSIS IN A FREE RANGING CALIFORNIA SEA LION**
Margaret Martinez¹, Michelle Rivard¹, Jaclyn Isbell¹, Chelsea Sykes², Robert Poppenga², Padraig Duignan¹
¹The Marine Mammal Center, Sausalito, CA, USA, ²California Animal Health and Food Safety Laboratory, School of Veterinary Medicine, University of California, Davis, CA, USA

**COMPARISON BETWEEN RBC VARIABLES IN CATS ACCORDING TO FIV/FELV INFECTION STATUS**
Laura Victoria Contreras, Fernanda Andreola, Vanessa Eder, Ana Paula Borenstein, Kauna Kaefe, Taynara Fogaça, Lina Bilhalva, Bruno Almeida, Stella Valle
Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

**ADVIDIA HEMATOLOGY SYSTEM-PLATELET CLUMPS FLAG DUE TO INCIDENTAL ASPIRATION OF HARDERIAN GLAND IN A FEMALE CRL:CD-1 MOUSE**
Dumisani Chuchu, Ashleigh Caffull, Mathew Hartness, and Claudio Petterino
Sequani Ltd., Ledbury, UK

**NASAL COLONIZATION BY ENTAMOEBA GINGIVALIS IN A 13-YEAR-OLD ITALIAN GREYHOUND**
Nina Kristen Randolph¹, Camille McAloney¹, Robert Ossiboff², Matthew Cook¹, Betsy Hernandez³, Jessica Hokamp¹
¹The Ohio State University, Columbus, OH, USA, ²University of Florida, Gainesville, FL, USA

**MELAMINE-CYANURIC-LIKE CRYSTALLURIA IN A DOG**
David Rotstein¹,³, Sarah Peloquin²; Renate Reimschuessel², Jake Guag², Kathleen Proia², Betsy Yakes³
²FDA Center for Veterinary Medicine, Rockville, MD, USA, ³FDA Center for Veterinary Medicine Veterinary Laboratory Investigation and Response Network, Laurel, MD, USA, ⁴FDA Center for Food Safety and Nutrition, College Park, MD, USA

**PRECURSOR-DIRECTED IMMUNE-MEDIATED ANEMIA IN A CAT WITH PHAGOCYTOSED NUCLEAR MATERIAL IN CIRCULATING NEUTROPHILS**
Nina Randolph, Camille McAloney, Sam Evans
The Ohio State University College of Veterinary Medicine
Department of Veterinary Biosciences, Columbus, OH, USA

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

**Highlighted Posters: Clinical Pathology**

Session Chair: Austin Viall, DVM, DACVP
Iowa State University, Ames, IA

**CALCIUM AND PHOSPHORUS HOMEOSTASIS IN ADVANCED STAGES OF CANINE LEISHMANIASIS**
Mario Alberto González, Rafael Barrera, María Gil-Molino, Beatriz Macías, José Ignacio Cristóbal, Paloma Nicolás-Barceló, Ángela Durán, Ana Belén García, Francisco Javier Duque
Departamento Medicina Animal, Universidad de Extremadura, Cáceres, Spain

**SYSTEM XT-2000iV AND PROCYTE DX SCATTERGRAM FINDINGS IN A DOG WITH MASTOCYTENOMA**
Jelena Palic, Annabelle Heier, Els Acke
Vet Med Labor GmbH Division of IDEXX Laboratories, Kornwestheim, Germany

**HEPATOMYOCYTE DERIVED CFA-microRNAs AS SERUM BIOMARKERS OF HEPATIC FIBROSIS OR CIRRHOSIS IN DOGS**
Ahmed El-Sebaey¹,², Pavel Abramov¹, Natalia Slesarenko¹, Seidfatima Borunova¹, Sergey Pozyabin¹
¹Moscow State Academy of Veterinary Medicine and Biotechnology, Moscow, Russian Federation, ²Faculty of Veterinary Medicine, Mansoura University, Mansoura, Egypt

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

**Focused Scientific Poster Session: Clinical Pathology, Diagnostic Pathology, and Education**

(See page 17 for the list of poster presentations.)

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

**Presidential Reception**
The Presidential Reception will be hosted on gather.town. Go to the Presidential Reception page on the virtual platform and scroll down to Saturday evening and click the link to join.

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Sunday, October 31, 2021

6:30 a.m.-7:30 a.m. CDT

**Yoga Flow & Restore with Katherine Gibson-Corley and Meditation with Jolanda Verhoef**

Please join us for yoga and meditation during the virtual 2021 ACVP Annual Meeting! Fellow Diplomates, yoga teachers, and meditation coaches will lead virtual live sessions in the morning before the meeting begins. Classes are designed for beginners but will be appropriate for all yoga and meditation practitioners. This special Halloween-themed class will feature a fun soundtrack and will begin with a slow beginner-appropriate yoga flow and end with relaxation/restoration. Mindfulness practice to follow to help integrate the work we’ve done on the mat. A light guidance will be given using non-secular language that is accessible to all. Everyone is welcome!
8:00 a.m.-11:00 a.m. CDT

**ACVP and ASVCP Joint Plenary Session: Precision Medicine**

**Session Chairs:**
Heather Sheppard, DVM, PhD, DACVP
St. Jude Children’s Research Hospital, Memphis, TN

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

The recognition that specific genomic, genetic, and epigenetic alterations can drive the pathogenesis of human and veterinary diseases has led to the development of robust research programs guiding a number of precision medicine innovations and therapies. This plenary session will foster crosstalk between MD and DVM clinicians, pathologists, and scientists to discuss promising areas of precision medicine research of human and animal diseases, successes in the application of precision medicine approaches, and to also address current limitations for the advancement of these customized therapies. Speakers will cover topics such as novel genomic insights into human and animal cancers, therapeutically promising mechanisms and targets for diseases, recent translational breakthroughs, and the incorporation of diagnostic approaches to guide the application of these customized treatments.

8:00 a.m.-8:50 a.m. CDT
Towards Realizing the Promise of Precision Veterinary Medicine
David B. Roth, MD, PhD
University of Pennsylvania Perelman School of Medicine, Philadelphia, PA

8:50 a.m.-9:40 a.m. CDT
DNA Methylation Profiling for Classification of Human Solid Tumors
Brent A. Orr, MD, PhD
St. Jude Children’s Research Hospital, Memphis, TN

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

10:10 a.m.-11:00 a.m. CDT
Delivering Genomic and Precision Medicine to Veterinary Oncology
Chand Khanna, DVM, PhD, DACVIM, DACVP
Ethos Veterinary Health/Ethos Discovery, Woburn, MA

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

**ASVCP Veterinary Laboratory Professionals Session I**

**Session Chairs:**
Kristina Meichner, DVM, DACVP
University of Georgia, Athens, GA

Trellor Fraites, MT, MPH, MBA
Ross University School of Veterinary Medicine, West Farm, St. Kitts

This session will focus on special tests for urinalysis.

8:00 a.m.-9:00 a.m. CDT
Analytical Challenges of Urine Protein to Creatinine Ratio Measurements
Gabriele Rossi, DVM, PhD, DECVP
Murdoch University, Murdoch, WA, Australia

9:00 a.m.-10:00 a.m. CDT
Urine Chemistry Testing with a Focus on Special Tests
Bridget Garner, DVM, PhD, DACVP
University of Georgia, Athens, GA

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

10:30 a.m.-12:00 p.m. CDT

Automated Urine Sediment Analysis, Part I and II
Dennis B. DeNicola, DVM, PhD, DACVP
IDEXX Laboratories, Inc., Westbrook, ME

11:00 a.m.-11:30 a.m. CDT

**Highlighted Posters: Natural Disease**

Session Chair: Pompei Bolfa, DVM, DACVP
Ross University School of Veterinary Medicine, Bassetterre, Saint Kitts and Nevis

**INVOLVEMENT OF FELIS CATUS PAPILLOMAVIRUS TYPE 2 IN THE TUMORIGENESIS OF FELINE MERKEL CELL CARCINOMA**
Soma Ito1, James Chambers2, Ayumi Sumi3, Nanako Yamashita-Kawanishi1, Tetsuo Omachi2, Takeshi Haga1, Hiroyuki Nakayama1, Kazuyuki Uchida1
1University of Tokyo, Tokyo, Japan, 2Diagnostic Laboratory Patho Labo, Shizuoka, Japan

**HISTOLOGIC FINDINGS IN EQUINE TEETH SUBMITTED FROM AN EQUINE REFERRAL HOSPITAL**
Sarah Cudd1, Brian Murphy2, James Brown3, Charles Schwarten1, Elise LaDouceur1
1Joint Pathology Center, Silver Spring, MD, USA, 2UC Davis School of Veterinary Medicine, Davis, CA, USA, 3Virginia Tech, Leesburg, VA, USA

**HISTOLOGIC LESIONS OF CESTODIASIS IN OCTOPUSES**
Daniel Finnegan1, Michael Murray2, Salvatore Frasca, Jr.3, Michael Garner4, Elise LaDouceur1,4
1Department of Pathobiology and Population Sciences, The Royal Veterinary College, Hatfield, United Kingdom, 2Bell Equine Veterinary Clinic, Maidstone, United Kingdom, 3National Specialist Ophthalmic Pathology Service (NSOPS), Royal Hallamshire Hospital, Sheffield, United Kingdom, 4School of Veterinary Medicine, UC Davis, Davis, CA, USA

**HISTOPATHOLOGICAL SUBTYPING, MOLECULAR AND VIRAL CHARACTERIZATION OF EQUINE GENITAL AND PERIOCULAR SQUAMOUS CELL CARCINOMAS**
Kevin O’Brien1, Alejandro Suárez-Bonnet1, Tim Mair2, Hardeep Mudhar3, Patricia Pesavento4, Simon Priestnall1
1Department of Pathobiology and Population Sciences, The Royal Veterinary College, Hatfield, United Kingdom, 2Bell Equine Veterinary Clinic, Maidstone, United Kingdom, 3Ministry of Agriculture, Government of Saskatchewan, Prince Albert, SK, Canada, 4National Specialist Ophthalmic Pathology Service (NSOPS), Royal Hallamshire Hospital, Sheffield, United Kingdom, 5School of Veterinary Medicine, UC Davis, Davis, CA, USA

**A NOVEL IDIOPATHIC HEPATITIS SYNDROME IN TEN HORSES FROM INDIANA**
Patrick Huang1, Margaret Miller2, Janice Kritchevsky3, Carla Olave1, Sandra Taylor1
1Purdue University, West Lafayette, IN, USA, 2NIH Comparative Biomedical Scientist Training Program, Bethesda, MD, USA

**IMPROVING METHODS OF CONTROL OF AMERICAN FOULBROOD IN HONEY BEES IN SASKATCHEWAN**
Michael Zabrodski1, Geoff Wilson2, Igor Moshynskyy3, Mohsen Sharafi4, Lara Reitsma5, Mateo Castano Ospina6, Jessica DeBruyne1, Alexandra Wentzell7, Sarah Wood1, Ivanna Kozii1, Colby Klein1, Jenna Thebeau1, Fatima Masood1, Igor Medici de Mattos1, Allyssa Cloet1, Brande Bron1, Melanie Roulin1, Dana Liebe1, LaRhonda Sobchishin1, Tasha Epp1, Antonio Ruzzini1, Elek Simko1
1Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, 2Ministry of Agriculture, Government of Saskatchewan, Prince Albert, SK, Canada
REVIEW OF NEOPLASIA IN THE ALIMENTARY TRACT OF CAPTIVE BEARDED DRAGONS (POGONA SPP.)
Elise LaDouceur1,2, Alexandria Argue1, Michael Garner2
1Joint Pathology Center, Silver Spring, MD, USA, 2Northwest ZooPath, Monroe, WA, USA

SYSTEMIC AVIAN POXVIRUS INFECTIONS ASSOCIATED WITH THE B1 SUBCLADE OF CANARYPOX VIRUS
Devinn Sinnott1,2, Jennifer Burchell1, Carmel Witte2, Rachel Burns2, Steven Kubiski2
1University of California, Davis, Davis, CA, USA, 2San Diego Zoo Wildlife Alliance, San Diego, CA, USA

AN OUTBREAK OF CHLAMYDIOsis IN CRITICALLY ENDANGERED CAPTIVE BREEDING PUERTO RICAN PARROTS (AZAMON A VITTATA)
H.L. Shivaprasad1, Karine Laroucau2, Rachid Aaziz2, Fabien Vorimore2, Chiara Palmieri2
1California Animal Health and Food Safety Laboratory System-Tulare branch, University of California, Davis, Tulare, CA, USA,
2Anses, Animal Health Laboratory, Bacterial Zoonoses Unit, Maisons-Alfort, France, 3School of Veterinary Science, The University of Queensland, Gatton, Australia

11:30 a.m.-12:00 p.m. CDT
Veterinary Student Selected Poster Highlights: Oral Presentations
Session Chair: Emily Corbin
The Joint Pathology Center, Silver Spring, MD

12:00 p.m.-1:00 p.m. CDT
Focused Scientific Poster Session: Natural Disease and Veterinary Student Posters
(See page 17 for the list of poster presentations.)

12:00 p.m.-1:30 p.m. CDT
Latin Comparative Pathology Group Presents
Session Chairs:
Angela Arenas, DVM, PhD, DACVP
Texas A&M University, College Station, TX
Ileana Miranda, DVM, MSc
Memorial Sloan Kettering Cancer Center, New York, NY
Ana Alcaraz, DVM, PhD, DACVP
Western University, Pomona, CA

12:00 p.m.-12:10 p.m. CDT
Welcome and Introduction of the LCPG Activities
Paola Barato, DVM, Esp, PhD
President LCPG and Corpavet, Bogota, Colombia

12:10 p.m.-12:25 p.m. CDT
Human-animal Interface of COVID-19: Natural and Experimental Infections
Diego G. Diel DVM, MS, PhD
Cornell University, Ithaca, NY

12:35 p.m.-1:00 p.m. CDT
Comparative Pathology and Pathogenesis of Emerging Zoonotic Respiratory Coronaviruses
Judith van den Brand, DVM, PhD, DECVP
Utrecht University, The Netherlands

1:00 p.m.-1:30 p.m. CDT
Digital Pathology and Quantitative Image Analysis in Animal Models for SARS-COV-2
Cesar Piedra-Mora, DVM
Tufts University, Boston, MA

1:40 p.m.-1:45 p.m. CDT
Questions and Discussion

1:30 p.m.-5:00 p.m. CDT
ASVCP Veterinary Laboratory Professionals Session II
Session Chairs:
Kristina Meichner, DVM, DACVP
University of Georgia, Athens, GA
Trellor Fraites, MT, MPH, MBA
Ross University School of Veterinary Medicine, West Farm, St. Kitts

This session will focus on exotic animal hematology and chemistry.

1:30 p.m.-2:30 p.m. CDT
Avian Hematology
Kendal E. Harr, DVM, MS, DACVP
URIKA, LLC, Mukilteo, WA

2:30 p.m.-3:30 p.m. CDT
Reptile Hematology
Kendal E. Harr, DVM, MS, DACVP

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

4:00 p.m.-5:00 p.m. CDT
Biochemistry Analysis in Exotic Animal Species
J. Jill Heatley, DVM, MS, DABVP, DACVM
Texas A&M University, College Station, TX

1:30 p.m.-5:00 p.m. CDT
Clinical Pathology Focused Scientific Session I
Session Chair: Austin Viall, DVM, DACVP
Iowa State University, Ames, IA

1:30 p.m.-2:30 p.m. CDT
Invited Speaker
IMMUNOTHROMBOSIS: WHEN COAGULATION AND INFLAMMATION COLLIDE
Marjory B. Brooks, DVM, DACVIM
Cornell University, Ithaca, NY

2:30 p.m.-2:45 p.m. CDT+
VALIDATION OF A POINT-OF-CARE BENCHTOP ANALYZER FOR QUANTITATIVE MEASUREMENT OF SERUM AMYLOID A IN FELINE SERUM AND PLASMA
Samantha Lee, Sara Connolly, Arnon Gal, Meghan Fick, Anne Barger University of Illinois, Urbana, IL, USA

2:45 p.m.-3:00 p.m. CDT+
IMPACT ON CANINE WHITE BLOOD CELL PRESERVATION WITH ADDITION OF BOVINE SERUM ALBUMIN TO K3-EDTA WHOLE BLOOD SAMPLES
Brodie Reinhart, Cornelia Gilroy, Noel Clancy, Shelley Burton, Jason Stull, Nicole Bishop
Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PE, Canada

3:00 p.m.-3:15 p.m. CDT+
CYTOCHEMICAL STAINING OF LEUKOCYTES AND PLATELETS IN FLORIDA MANATEES
Laura Cagle1, Tracy Stolko2, John Harvey3, Laurie Adler4, Michael Walsh1, Martine deWit1, Robert Bonde5, Nicole Stacy1
1Department of Comparative, Diagnostic, and Population Medicine; College of Veterinary Medicine, University of Florida, Gainesville, FL, USA, 2Department of Population Medicine and Diagnostic Sciences, Cornell University College of Veterinary Medicine, Ithaca, NY, USA, 3Department of Physiological Sciences, College
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>1:30 p.m.</td>
<td>HUMAN SOFT TISSUE LEIOMYOSARCOMA DETECTION IN DIGITIZED HISTOPATHOLOGY SLIDES OF A DEEP LEARNING APPROACH TO TUMOR VS. NORMAL</td>
<td>James Cronin, Asmaa Aljuhani, Monika Karera, Xiaoyan Cui, Raghu Machiraju, David Liebner</td>
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<tr>
<td>4:45 p.m.</td>
<td>LIQUID-CHROMATOGRAPHY TANDEM MASS SPECTROMETRY BIOMARKERS FOR FELINE PANCREATIC CARCINOMA BY IDENTIFICATION OF POTENTIAL Plasma PROTEIN</td>
<td>Rina Nabeta, George Katselis, Paulos Chumala, Ryan Dickinson</td>
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<tr>
<td>1:40 p.m.</td>
<td>QUANTIFICATION OF MUCOSAL LYMPHOCYTES IN FELINE SMALL INTESTINAL BIOPSIES USING ARTIFICIAL INTELLIGENCE</td>
<td>Judit Wułcan¹, Ionatan Wułcan², Peter Moore¹, Kevin Keel¹, Stefan Keller¹</td>
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<tr>
<td>1:50 p.m.</td>
<td>ATYPICAL MALIGNANT BEHAVIOR FOR CUTANEOUS HISTIOCYTOMA IN A YOUNG DOG</td>
<td>Jenny Wyrick¹, Heather Herd¹, Mark Payton², Jerry Ritchey¹</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>COMPARISON OF ANTI-MULLERIAN HORMONE AND INHIBIN IMMUNOLABELING IN CANINE AND EQUINE GRANULOSA CELL TUMORS</td>
<td>Sophie Nelissen, Andrew Miller</td>
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<tr>
<td>2:20 p.m.</td>
<td>A TALE OF TWO BEARS: HISTOLOGIC AND MORPHOLOGICAL AND IMMUNOHISTOCHEMICAL FEATURES OF TUMORS OF THE PERIPHERAL NERVOUS SYSTEM IN TWO FREE-RANGING AMERICAN BLACK BEARS (URSUS AMERICANUS)</td>
<td>Deborah Chong¹, Robert Bildfell¹, Kurt Licence¹, Julia Burco², Colin Gillin², Peregrine Wolff², Christiane Lörhr¹</td>
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<tr>
<td>2:30 p.m.</td>
<td>MIXED MAMMARY TUMORS IN FEMALE NORTHERN GREATER GALAGOS (OTOLEMUR GARNETTI)</td>
<td>Michael McKinney, Katherine Shuster, Carissa Jones, Christopher Pinelli, Katherine Gibson-Corley</td>
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<tr>
<td>2:40 p.m.</td>
<td>MORPHOLOGICAL AND IMMUNOHISTOCHEMICAL CHARACTERIZATION AND MOLECULAR CLASSIFICATION OF SPONTANEOUS MAMMARY GLAND TUMORS IN MACROPods Tu Chun (Steven) Hsu¹, Michael Garner², Matti Kuipel³</td>
<td>Michael McKinney, Katherine Shuster, Carissa Jones, Christopher Pinelli, Katherine Gibson-Corley</td>
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<tr>
<td>3:00 p.m.</td>
<td>A DEEP LEARNING APPROACH TO TUMOR VS. NORMAL DETECTION IN DIGITIZED HISTOPATHOLOGY SLIDES OF HUMAN SOFT TISSUE LEIOMYOSARCOMA</td>
<td>James Cronin, Asmaa Aljuhani, Monika Karera, Xiaoyan Cui, Raghu Machiraju, David Liebner</td>
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<tr>
<td>3:15 p.m.</td>
<td>THE MIRNOME OF CANINE UROTHELIAL CARCINOMA</td>
<td>Mara Varvil, Deepika Dhawan, Deborah Knapp, José Ramos-Vara</td>
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<td>DISCOVERY OF POTENTIAL URINE BIOMARKERS OF CANINE MEMBRANOPROLIFERATIVE IMMUNE COMPLEX MEDIATED GLOMERULONEPHRITIS BY LC-MS/MS</td>
<td>Jessica Hokamp, Miranda Gardner, Andrew Reed, Rachel Cianciolo</td>
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<td>CHARACTERIZATION OF CANINE CHRONIC MYELOID NEOPLASMS DIAGNOSED BY ANDROGEN RECEPTOR CLONALITY TESTING</td>
<td>Marika Klosowski, Janna Yoshimoto, Robert Burnett, Anne Avery, Emily Rout</td>
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<td>Rina Nabeta, George Katselis, Paulos Chumala, Ryan Dickinson, Nicole Fernandez, Melissa Meachem</td>
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*All sessions are held in the U.S. central time zone*
3:00 p.m.-3:10 p.m. CDT+
CASE REPORT: UNILATERAL PAMPINIFORM PLEXUS ARTERIOVENOUS HAMARTOMATOSIS OF THE VAGINAL TUNIC OF A DOG
Daniel Felipe Barrantes Murillo¹, Ellen Newsom², John Edwards³, Kellye Joiner¹
¹Auburn University, Auburn, AL, USA, ²Animal Medical Center, Tuscaloosa, AL, USA, ³Texas A & M University, College Station, TX, USA

3:10 p.m.-3:20 p.m. CDT+
A CASE OF INFECTIOUS NECROTIC HEPATITIS CAUSED BY CLOSTRIDIUM NOVYI TYPE B IN A CANINE PATIENT WITH NO PREDISPOSING LIVER LESIONS
Briana Trusiano, Sarah Barrett, Virginia Corrigan, Katie Krebs, Stephanie Todd, Kevin Lahmers, Vanessa Oakes, Francisco Carvallo, Michael Ciepluch, Tessa LeCuyer
Virginia-Maryland College of Veterinary Medicine, Blacksburg, VA, USA

2020 ACVP/AAVLD Diagnostic Pathology Travel Award Recipient
3:20 p.m.-3:30 p.m. CDT
INFECTIOUS BRONCHITIS VIRUS PREVALENCE, CHARACTERIZATION, AND STRAIN IDENTIFICATION IN CALIFORNIA BACKYARD CHICKENS
Omar Gonzales Viera¹, Beate Crossley¹, Francisco Carvallo-Chaigueña², Emily Blair³, Daniel Rejmanek³, Özge Erdoğan-Bamac⁴, Karen Sverlov¹, Alejandra Figueroa¹, Rodrigo Gallardo², Ash Mete⁴
¹California Animal Health and Food Safety (CAHFS), Davis Laboratory, UC Davis, Davis, CA, USA, ²Department of Biomedical Sciences & Pathobiology, Virginia–Maryland College of Veterinary Medicine, Virginia, VA, USA, ³College of Agriculture and Environmental Sciences, University of California, Davis, Davis, CA, USA, ⁴Istanbul University-Cerrahpasa, School of Veterinary Medicine, Istanbul, Turkey

3:30 p.m.-3:40 p.m. CDT+
FOCAL INOCULATION OF HISTOPLASMA CAPSULATUM IN A BUDDING RESIDENT PATHOLOGIST—A CASE FOR ZOONOTIC RISK AWARENESS
Ariel Carlson, Kim Newkirk
University of Tennessee College of Veterinary Medicine, Knoxville, TN, USA

3:40 p.m.-3:50 p.m. CDT+
FIRST REPORTED CASE OF COVID-19 INFECTION IN A CANINE IN CONNECTICUT WITH A 3-MONTH-OLD GERMAN SHEPHERD PUPPY
Natalie Tocco, Kirklyn Kerr, Neha Mishra, Alizza Barbieri, Zeinab Helal, Dong-Hun Lee, Guillermo Risatti
Connecticut Veterinary Medical Diagnostic Laboratory, Department of Pathobiology and Veterinary Sciences, College of Agriculture, Health, and Natural Resources, University of Connecticut, Storrs, CT, USA

3:50 p.m.-4:00 p.m. CDT+
SARS-COV-2 INFECTION IN TWO FARMED MINKS (NEOVISON VISON)
Ryan Yanez, Dodd Sledge, Matti Kiupel
Michigan State University Veterinary Diagnostic Laboratory and Department of Pathobiology and Diagnostic Investigation, East Lansing, MI, USA

4:00 p.m.-4:10 p.m. CDT^ SEVERE ENDOMETRITIS AND SEPTICEMIA IN A CAPTIVE STINGRAY
Clare Brown¹, Debra Moore¹,², Christa Barrett¹,², Tim Morgan²
¹Mississippi State University College of Veterinary Medicine, Starkville, MS, USA, ²Institute for Marine Mammal Studies, Gulfport, MS, USA

4:10 p.m.-4:20 p.m. CDT DISSEMINATED COCCIDIOIDOMYCOSIS IN A WHITE-FACED SAKI (PITHECIA PITHECIA)
Jason Struthers¹, Alyssa Palmer², Gary West², Kristen Phair²
¹Animal Health Institute, Midwestern University, Glendale, AZ, USA, ²Pfizer, Inc., Pearline, NY

4:20 p.m.-4:30 p.m. CDT+ ANGIOSTRONGYLUS CANTONENSI S IN A RED-RUFFED LEMUR
Jessica Rizor¹, Ryan Yanez¹, Shannon Gonsoulin², Matti Kiupel¹
¹Michigan State University Veterinary Diagnostic Laboratory and Department of Pathobiology and Diagnostic Investigation, East Lansing, MI, USA, ²All Creatures Veterinary Hospital, New Iberia, LA, USA

4:30 p.m.-4:40 p.m. CDT^ CHAGAS DISEASE IN A VIRGINIA OPOSSUM FROM NORTH CAROLINA
Andeliene Croce¹, Lisa Auckland¹, Sarah Hamer², Grace Mathis³, Bonnie Brenseke¹,⁴
¹North Carolina State University, Raleigh, NC, USA, ²Texas A&M University, College Station, TX, USA, ³Lincoln Memorial University, Harrogate, TN, USA, ⁴Campbell University, Buies Creek, NC, USA

4:40 p.m.-4:50 p.m. CDT^ T RYPANOSOMA CRUZI INFECTION IN A JUVENILE ASIAN-SMALL-CLAWED OTTER (AONYX CINEREUS) AND A JUVENILE TWO-TOED SLOTH (CHOLOEPUS SPP)
Samantha Hughes, Brittany Baughman
Mississippi State University College of Veterinary Medicine, Mississippi State, MS, USA

4:50 p.m.-5:00 p.m. CDT Questions and Discussion
+Competitor for the ACVP/AAVLD Diagnostic Pathology Travel Award
+Competitor for the Pathology of Wildlife and Zoo Animals Award

1:30 p.m.-5:00 p.m. CDT Industrial and Toxicologic Pathology Focused Scientific Session
Session Chair: Shambhunath Choudhary, BVSc, PhD, DACVP, DABT
Pfizer, Inc., Pearl River, NY

Invited Speaker
ANIMAL MODELS OF COVID-19 FROM THE PATHOLOGIST’S POINT OF VIEW
Shambhunath Choudhary, BVSc, PhD, DACVP, DABT
Pfizer, Inc., Pearl River, NY

2:30 p.m.-2:40 p.m. CDT ASSESSMENT OF GENOTOXIC DNA DAMAGE IN DOGS FROM A HIGH POLLUTED AREA IN ITALY
Davide De Biase, Valeria Baldassarre, Giuseppe Piegarì, Ilaria d’Aquino, Francesco Prisco, Serenaella Papparella, Orlando Paciello
Department of Veterinary Medicine and Animal Production, University of Naples “Federico II”, Naples, Italy
2:40 p.m.-2:50 p.m. CDT
DEVELOPMENT OF A NOVEL DECISION SUPPORT TOOL FOR DETECTION OF CARDIAC ABNORMALITIES IN THE RAT USING PATHOLOGY AI
T. William O’Neill1, Jogile Kuklyte2, Daniel Sammon2, Christiane Löhr1, Daniel Rudmann1
1Charles River Laboratories, Ashland, OH, USA, 2Deciphex, Dublin, Ireland, 3Oregon State University, Corvallis, OR, USA

2:50 p.m.-3:00 p.m. CDT
DEVELOPMENT OF A NOVEL AI-BASED ALGORITHM FOR LESION DETECTION IN THE LUNG OF RATS
Esther Crouch1, Jogile Kuklyte2, Daniel Sammon2, Daniel Rudmann1
1Charles River Laboratories, Ashland, MA, USA, 2Deciphex, Dublin, Ireland

3:00 p.m.-3:10 p.m. CDT
DEVELOPMENT OF A DEEP LEARNING MODEL FOR THE QUANTIFICATION OF LEUCINE-RICH REPEAT KINASE 2 INHIBITOR-INDUCED PNEUMOCYTE FINDINGS IN A RAT MODEL
Christiane Lörhr1, Esther Crouch2, James Baily3
1Oregon State University, Corvallis, OR, USA, 2Charles River Laboratories Inc., Ashland, OH, USA, 3Charles River Laboratories, Edinburgh, United Kingdom

4:00 p.m.-4:10 p.m. CDT
CHARACTERIZATION OF RESISTANCE TO PRMT5 INHIBITOR THERAPY IN MANTLE CELL LYMPHOMA
Mackenzie Long1,2, Shirsha Koirala3, Shelby Sloan2, Fiona Brown2, Kara Corps4, JoBeth Helming-Mason2, Stacey Beck2, Ji-Hyun Chung2, Peggy Scherle3, Kris Vaddi2, Bradley Blaser2, Lapo Alinari1, Robert Baicuici2
1The Ohio State University Department of Veterinary Biosciences, Columbus, OH, USA, 2The Ohio State University Wexner Medical Center, Columbus, OH, USA, 3Prelude Therapeutics, Wilmington, DE, USA

4:20 p.m.-4:30 p.m. CDT
CANCER TREATMENT INDUCED COGNITIVE IMPAIRMENT AND NEUROINFLAMMATION IN MICE
Kimberly Demos-Davies, Allison Rogich, Jessica Lawrence, Davis Seelig
University of Minnesota, Saint Paul, MN, USA

4:30 p.m.-4:40 p.m. CDT
MODELING HUMAN PROSTATE CANCER METASTASIS IN MICE VIA RESECTION OF SUBCUTANEOUS ALLOGRAFTS
Lauren Peiffer, Angelo De Marzo, Karen Sfanos, Janielle Maynard
Johns Hopkins University School of Medicine, Baltimore, MD, USA

4:40 p.m.-5:00 p.m. CDT
Questions and Discussion

5:00 p.m.-6:30 p.m. CDT
ACVP Town Hall Business Meeting

6:30 p.m.-8:00 p.m. CDT
Davis-Thompson Foundation Award Ceremony

Monday, November 1, 2021

6:30 a.m.-7:30 a.m. CDT
Yoga Flow with Julie Engiles and Meditation with Jolanda Verhoef
Please join us for yoga and meditation during the virtual 2021 ACVP Annual Meeting! Fellow Diplomates, yoga teachers, and meditation coaches will lead virtual live sessions in the morning before the meeting begins. Classes are designed for beginners but will be appropriate for all yoga and meditation practitioners. Mindfulness practice to follow to help integrate the work we’ve done on the mat. A light guidance will be given using non-secular language that is accessible to all. Everyone is welcome!
8:00 a.m.-10:00 a.m. CDT
**Career Development Session I**
**Consulting: Who Are You Going to Call? How Are You Going to Get Called?**

**Session Chairs:**
Tanya LeRoith, DVM, PhD, DACVP
Virginia Tech, Blacksburg, VA
Nicola Parry, BSc (Hons), MSc, BVSc (Hons), DACVP, FRCVS
University of Surrey School of Veterinary Medicine, Guildford, Surrey, UK

This session is for everyone, clinical and anatomic pathologists, from those starting out and curious about consulting, to those that are transitioning careers. Speakers have a wide range of experience in academia and industry, from laboratory animals to exotics.

8:00 a.m.-8:30 a.m. CDT
**Five Tips to Help Kickstart Your Consulting Business**
Nicola Parry, BSc (Hons), MSc, BVSc (Hons), DACVP, FRCVS
University of Surrey School of Veterinary Medicine, Guildford, Surrey, UK

8:30 a.m.-9:00 a.m. CDT
**Consultation During Retirement: Is This the Life for You?**
Rose E. Raskin, DVM, PhD, DACVP, MRCVS
Purdue University, West Lafayette, IN

9:00 a.m.-9:30 a.m. CDT
**Transitioning into Pathology Consulting: Challenges with Opportunities**
Elizabeth Neyens, DVM, DABT
ElizabethToxPath Consulting Inc., Vancouver, BC, Canada

9:30 a.m.-10:00 a.m. CDT
**Anatomic Pathology Consulting: Story of a Fish Out of Water**
Susan Fogelson, MS, DVM, PhD, DACVP
Fishhead Labs, LLC, Stuart, FL

8:00 a.m.-12:00 p.m. CDT
**ASVCP Current Topics Session: Molecular Diagnostics**

**Session Chairs:**
Kristina Meichner, DVM, DACVP
University of Georgia, Athens, GA
Julie Allen BVMS, MS, DACVIM (SAIM), DACVP
Veterinary Information Network, Davis, CA

This session focuses on the evolving field of molecular diagnostics and how molecular tests can be integrated into routine diagnostics in clinical pathology.

8:00 a.m.-8:50 a.m. CDT
**Molecular Tests for the Diagnosis of Neoplastic Diseases**
William Hendricks, PhD
Vidium Animal Health, Phoenix, AZ

8:50 a.m.-9:40 a.m. CDT
**How Molecular Diagnostics has Advanced the Diagnosis of Veterinary Infectious Diseases**
Rebecca P. Wilkes, DVM, PhD
Purdue University, West Lafayette, IN

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

10:10 a.m.-11:00 a.m. CDT
**Molecular Tests in Routine Human Cytopathology**
Jeffrey Mito, MD, PhD
Brigham and Women's Hospital, Harvard Medical School, Boston, MA

11:00 a.m.-11:50 a.m. CDT
**Molecular Assays in the Diagnosis of Hemostastic Disorders**
Pete W. Christopherson, DVM, PhD, DACVP
Auburn University, Auburn, AL

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

8:00 a.m.-12:00 p.m. CDT
**Concurrent Session: Pathology of Unconventional Animal Models**

**Session Chairs:**
Laura Janke, DVM, PhD, DACVP
St. Jude Children's Research Hospital, Memphis, TN
Elise LaDouceur, DVM, DACVP
Joint Pathology Center, Silver Spring, MD

Although a wide variety of animal species are used in research, most of the tissues veterinary pathologists evaluate from research studies are from mice, rats, dogs, and non-human primates. Other less commonly used models provide important information for specific areas of research. When presented with these unfamiliar species, veterinary pathologists may feel unprepared to evaluate these tissues. This session intends to present a primer on the uses of and common pathology encountered in four groups of unconventional research models, presented by expert veterinary pathologists in these fields.

Dr. Elemir Simko from the University of Saskatchewan will open with a discussion on honeybees, including basic honeybee biology, a review of models, and research he has performed on few important diseases encountered in honeybees. The next speaker is Dr. Jeff Wolf of Experimental Pathology Laboratories, Inc., who is an expert on the toxicologic pathology of aquatic animals and alternative animal models. In his talk, he will be focusing on the use and pathology of zebrafish in research. Covering the topic of amphibian pathology will be Dr. Allan Pessier of Washington State University, who is quite well-known in this field. In 2017, he was honored at the Library of Congress in Washington, D.C. as a recipient of the Golden Goose Award for his groundbreaking research on preventing the extinction of frogs. He will discuss the more common amphibians in research, presenting some practical normal histology and a practical overview of amphibian pathology with an emphasis on conditions in common lab species. The last talk of the session will be on perhaps the most infrequently encountered species for research pathologists—decapods, bivalves, and crustaceans. This will be presented by Dr. Roxanna Smolowitz of the Aquatic Diagnostic Laboratory at Roger Williams University. She is well known for her research on the pathogenesis and epidemiology of diseases of commercially important bivalves and various species of fish and decapods used in the laboratory. Some major areas of research have been the identification and description of Epizootic Shell Disease (ESD) that occurs in lobsters, the pathophysiology of infection of hard clams by the protistan QPX, and of other species related to QPX that cause disease in squid and octopus.

Attendees can look forward to hearing about novel animal models and seeing unique examples of pathology lesions in this session.

8:00 a.m.-9:00 a.m. CDT
**Honeybees and Veterinary Pathologists**
Elemir Simko, DVM, DVSc, DACVP
University of Saskatchewan, Saskatchewan, Saskatoon, Canada

9:00 a.m.-9:45 a.m. CDT
**Honeybees and Veterinary Pathologists**
Elemir Simko, DVM, DVSc, DACVP
University of Saskatchewan, Saskatchewan, Saskatoon, Canada

9:45 a.m.-10:15 a.m. CDT
Break
The practice of pathology is heavily reliant on diagnostic reasoning skills-how an expert gathers information and reasons through a case to come up with a diagnosis. Unlike much of decision making in veterinary medicine, pathology is unusual in that diagnostic reasoning relies on data that is almost completely visual. All reasoning processes and decision making is subject to cognitive bias-biases that can occur at any level of the process that are influenced by our cognitive processes. Pattern recognition, heavily used in visualization, is particularly fraught with bias. In this session, we will discuss what is known about the cognition of diagnostic reasoning in pathology-how our brains use the information we see during interpretation to come up with a diagnosis. We will use our understanding of diagnostic reasoning cognition as a basis to explore cognitive biases in diagnostic reasoning and explore techniques used to counteract biases in our thinking and practice.
3:00 p.m.-5:00 p.m. CDT
**Meet the Pathologists**
Session Chair: R. Mark Simpson, DVM, PhD, DACVP
National Cancer Institute, Bethesda, MD

3:00 p.m.-5:00 p.m. CDT
**Professional Self-care and Wellbeing**
Session Chair: Katherine Gibson-Corley, DVM, PhD, DACVP
Vanderbilt University Medical Center, Nashville, TN
- 3:00 p.m.-3:30 p.m. CDT
  Authentically Professional: Negotiation as Self Care
  Beth Bellman, MA, PhD
  University of Iowa, Iowa City, IA

- 3:40 p.m.-4:10 p.m. CDT
  Healthy Eating: Tips from a Registered Dietitian
  Ramona Shih, MSPH, RD
  AltaMed Health Services, Los Angeles, CA

- 4:20 p.m.-4:50 p.m. CDT
  Live Your Dash: Financial Planning for Pathologists and Trainees
  Nick Palmer, MA, CRPC, EA
  Palmer Wealth Planning, Nashville, TN

4:00 p.m.-5:30 p.m. CDT
**ASVCP Education Forum: Teaching Clinical Pathology in the Age of Systems-based and Competency-based Veterinary Education**
Session Chair: Shannon Dehghanpir, DVM, DACVP
Louisiana State University, Baton Rouge, LA
Panel:
- Bill Vernau BSc, BVMS, DVSc, PhD, DACVP
  University of California, Davis, CA
- Sharon Dial, DVM, PhD, DACVP
  University of Arizona, Phoenix, AZ
- Maxey L. Wellman, DVM, PhD, DACVP
  The Ohio State University, Columbus, OH
- Erin Burton, DVM, MS, DACVP
  University of Minnesota, Minneapolis, MN

5:00 p.m.-7:00 p.m. CDT
**Mystery Slide Review Session: Dermatopathology**
Session Chair: Martha A. Delaney, DVM, PhD, DACVP
University of Illinois, Brookfield, IL
Panel:
- Verena Affolter, DVM, DrMedVet, PhD, DECVP
  University of California, Davis, Davis, CA
- Charles Bradley, VMD, DACVP
  University of Pennsylvania, Philadelphia, PA
- Barbara McMahl, DVM, PhD, DACVP
  IDEXX Laboratories, Inc., Lander, WY
- Dominique Wiener, DrMedVet, PhD, DECVP
  Texas A&M University, College Station, TX

5:30 p.m.-7:00 p.m.
**ASVCP Resident Meet-and-Greet**

7:00 p.m.-9:00 p.m. CDT
**Veterinary Student and Resident Forum**

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**Tuesday, November 2, 2021**

6:30 a.m.-7:30 a.m. CDT
**Chair Yoga with Katherine Gibson-Corley and Meditation with Sue Knoblaugh**
Please join us for yoga and meditation during the virtual 2021 ACVP Annual Meeting! Fellow Diplomates, yoga teachers, and meditation experts will lead virtual live sessions in the morning before the meeting begins. Classes are designed for beginners but will be appropriate for all yoga and meditation practitioners. This chair-based Yoga Class will offer the benefits of yoga but use a chair so these poses can easily be utilized in daily life. Mindfulness practice to follow to help integrate the work we’ve done on the mat. A light guidance will be given using non-secular language that is accessible to all. Everyone is welcome!

8:00 a.m.-12:00 p.m. CDT
**Concurrent Session: Molecular Pathology in Veterinary Medicine**
*Sponsored by the Pathology Informatics Committee*
Session Chairs:
- Chandra Saravanan, DVM, PhD, DACVP
  Novartis Institutes for BioMedical Research, Cambridge, MA
- Elisa Salas, DVM, DACVP
  IDEXX Laboratories, Inc., Westbrook, ME

Molecular pathology is focused on the study and diagnosis of disease through the examination of molecules within organs, tissues or bodily fluids. Molecular pathology is multidisciplinary in nature and integrates molecular biology, biochemistry, proteomics, genetics, and data science. In addition to conventional technologies (e.g., qPCR), recent advances in technologies include: multiplex analysis, RNAseq, single cell analysis, and data science. These approaches and availability of reference genome sequences for many species have revolutionized disease nomenclature, are informing disease pathogenesis, guide treatments, and more accurately determine prognosis. Moreover, molecular pathology techniques are the basis of precision medicine. In this workshop, the audience will learn these emerging principles and their applications in research and diagnosis.

8:00 a.m.-8:05 a.m. CDT
**Introduction**

8:05 a.m.-8:40 a.m. CDT
**Molecular Pathology in Drug Discovery and Development**
Keith Mansfield, DVM, DACVP
Novartis Institutes for BioMedical Sciences, Cambridge, MA

8:40 a.m.-9:15 a.m. CDT
**Mitotic Count: Standardization Through Artificial Intelligence**
Christof A. Bertram, DrMedVet
Institute of Veterinary Pathology, Freie Universität Berlin, Berlin, Germany

9:15 a.m.-9:50 a.m. CDT
**CLARIFIDE Plus: Development and Validation of Genomic Predictions for Wellness Traits in Dairy Cattle**
Natascha Vukasinovic, PhD
Zoetis, Kalamazoo, MI

9:50 a.m.-10:25 a.m. CDT
**Integration of Molecular Techniques in Routine Surgical Pathology**
Tuddow Thaiwong, DVM, PhD, DACVP
Michigan State University, Lansing, MI

10:25 a.m.-10:40 a.m. CDT
**Break**

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*All sessions are held in the U.S. central time zone*
10:40 a.m.-11:15 a.m. CDT
The Utility of Clonality Testing and Immune Repertoire Sequencing for Research and Diagnostics
Stefan Keller, DVM, DrMedVet, PhD, DECVP
University of California, Davis, CA

11:15 a.m.-11:50 a.m. CDT
MicroRNA and Next Generation Sequencing in Veterinary Medicine
Eric Fish, DVM, PhD, DACVP
IDEXX, Tampa, FL

10:45 a.m.-11:00 a.m. CDT+
PLATELET FUNCTION IN HEARTWORM-INFECTED DOGS: EVALUATION OF RESPONSES FROM PLATELET-RICH PLASMA AND WHOLE BLOOD SAMPLES
Carisa Fraser, Benjamin Brainard, Bridget Garner, Andrew Moorhead, Jaime Tarigo, Mandy Wallace
University of Georgia, Athens, GA, USA

11:00 a.m.-11:15 a.m. CDT
CLINICAL FEATURES OF A RARE CD21-CD22+ B-CELL LYMPHOPROLIFERATIVE DISEASE BY FLOW CYTOMETRY IN CANINE PERIPHERAL BLOOD
Kari Frankhouse, Emily Rout, Adam Harris, Janna Yoshimoto, Anne Avery

8:00 a.m.-12:00 p.m. CDT
Clinical Pathology Focused Scientific Session II
Session Chair: Austin Viall, DVM, DACVP
Iowa State University, Ames, IA

8:00 a.m.-9:00 a.m. CDT
Invited Speaker
UPDATE ON CANINE AND FELINE BLOOD TYPING AND ITS CLINICAL IMPACT
Marie-Claude Blais, DMV, DACVIM
Université de Montréal, St-Hyacinthe, QC, Canada

9:00 a.m.-9:15 a.m. CDT+
PSEUDORETICULOCYTOSIS BY THE ADVIA 2120 HEMATOLOGY ANALYZER AND OTHER HEMATOLOGIC CHANGES IN A CYNOMOLGUS MONKEY (MACACA FASCICULARIS) WITH MALARIA
Diya Sharma, Heather Priest, Angela Wilcox

10:00 a.m.-10:30 a.m. CDT
REPEAT PATIENT TESTING AS AN ALTERNATIVE TO COMMERCIAL QUALITY CONTROL MATERIAL FOR VETERINARY HEMATOLOGY ANALYZERS
Susan Daly1,2, Kathleen Freeman3, Peter Graham2
1Synlab VPG Cork, Cork, Ireland, 2University of Nottingham, Nottingham, United Kingdom, 3Synlab VPG Exeter, Exeter, United Kingdom

10:45 a.m.-11:00 a.m. CDT+
PLATELET FUNCTION IN HEARTWORM-INFECTED DOGS: EVALUATION OF RESPONSES FROM PLATELET-RICH PLASMA AND WHOLE BLOOD SAMPLES
Carisa Fraser, Benjamin Brainard, Bridget Garner, Andrew Moorhead, Jaime Tarigo, Mandy Wallace
University of Georgia, Athens, GA, USA

11:00 a.m.-11:15 a.m. CDT
CLINICAL FEATURES OF A RARE CD21-CD22+ B-CELL LYMPHOPROLIFERATIVE DISEASE BY FLOW CYTOMETRY IN CANINE PERIPHERAL BLOOD
Kari Frankhouse, Emily Rout, Adam Harris, Janna Yoshimoto, Anne Avery

11:15 a.m.-12:00 p.m. CDT
SUSPECT CANINE DYSAUTONOMIA IN AN ENGLISH SPRINGER SPANIEL DOG FROM ALABAMA
Alana Kramer1, Rachel Neto1, Jennifer Malmberg2
1Auburn University, Auburn, AL, USA, 2University of Wyoming, Laramie, WY, USA

+Competitor for the Clinical Pathology Young Investigator Award
8:30 a.m.-8:40 a.m. CDT
GERMAN SHORTHAIRED POINTER DOGS WITH EXFOILIATIVE CUTANEOUS LUPUS ERYTHEMATOSUS DEVELOP IMMUNE-COMPLEX MEMBRANOUS GLOMERULONEPHROPATHY
Hayley Amerman1, Rachel Cianciolo2, Margret Casal1, Elizabeth Mauldin1
1University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA, USA, 2The Ohio State University College of Veterinary Medicine, Columbus, OH, USA

8:40 a.m.-8:50 a.m. CDT
A CASE OF SENNA PLANT (CASSIA OCCIDENTALIS, CASSIA OBTUSIFOLIA) POISONING IN A 4-MONTH-OLD HEIFER
Ji-Hang Yin1, Leanne Dillard2, David Martinez Rodriguez3, Manuel Chamorro Ortega3, Russell Cattley1
1Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, USA, 2Department of Animal Sciences, Crop, Soil, and Environmental Sciences, Auburn University, Auburn, AL, USA, 3Department of Clinical Sciences, College of Veterinary Medicine, Auburn University, Auburn, AL, USA

8:50 a.m.-9:00 a.m. CDT
AFLATOXIN INDUCED HEPATOTOXICITY FROM COMMERCIAL DRY DOG FOOD
David Rotstein1, Kathleen Proia2, Sarah Peloquin2, Mark Glover1, Lee Anne Palmer1, Lauren Carey1, Angelica Jones2, Amanda Willey1, Justin Henson3
1FDA Center for Veterinary Medicine, Rockville, MD, USA, 2FDA Center for Veterinary Medicine, Veterinary Laboratory Investigation and Response Network, Laurel, MD, USA

9:00 a.m.-9:10 a.m. CDT
SIMPLIFIED CARDIOPATHOLOGY PROTOCOL FOR EVALUATION OF THE CANINE HEART
Kathleen Kelly
Penn State University, University Park, PA, USA

9:10 a.m.-9:20 a.m. CDT
VETERINARY FORENSIC POSTMORTEM STANDARDS
Beverly McEwen1, Adam Stern2, Sean McDonough2, Tabitha Viner1, Rebecca Kagan1, Jason Brooks3, Ali Brower4
1College of Medicine, University of Florida, Gainesville, FL, USA, 2College of Veterinary Medicine, University of Florida, Gainesville, FL, USA, 3Auburn University, Auburn, AL, USA, 4US Fish and Wildlife Service, National Forensics Laboratory, Ashland, OR, USA

9:20 a.m.-9:30 a.m. CDT
PATTERNS OF INJURY IN DOGS CAUSED BY VEHICULAR AND NON-ACCIDENTAL BLUNT FORCE TRAUMA
Teresa Southard, Ayla Musciano, Sean McDonough
Cornell University, Ithaca, NY, USA

9:30 a.m.-9:40 a.m. CDT
FOREIGN BODY, GASTRIC CHORISTOMA, AND ATYPICAL CYSTIC JEJUNAL MASS IN A DOG
Rachel Neto, Kaleigh Bush, Jessica Ball, Brad Matz
College of Veterinary Medicine, Auburn University, Auburn, AL, USA

9:40 a.m.-9:50 a.m. CDT
PROGNOSTIC CLINICAL AND HISTOPATHOLOGICAL FEATURES OF CANINE CUTANEOUS T-CELL LYMPHOMA
Martina Dettwiler1, Elizabeth Mauldin2, Sara Jastrobski2, Deborah Gillette2, Darko Stefanovski2, Amy Durham2
1Institute of Animal Pathology, Department of Infectious Diseases and Pathobiology, Vetsuisse Faculty, University of Bern, Bern, Switzerland, 2Department of Pathobiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, USA, 3Department of Clinical Studies, New Bolton Center, School of Veterinary Medicine, University of Pennsylvania, Kennett Square, PA, USA

9:50 a.m.-10:00 a.m. CDT
IMMUNOHISTOCHEMICAL EXPRESSION OF CD30 AND MULTIPLE MYELOMA ONCOGENE/INTERFERON REGULATORY FACTOR 4 (MUM1/IRF-4) IN CANINE CUTANEOUS NON-EPITHELIOTROPIC NULL CELL LYMPHOMA AND A SUBSET OF CANINE NON-EPITHELIOTROPIC CUTANEOUS B AND T CELL LYMPHOMA
Nicholas Vetter, Jeanine Peters-Kennedy
Cornell University College of Veterinary Medicine, Ithaca, NY, USA

10:00 a.m.-10:10 a.m. CDT
AN INTRANEURAL PERINEUROMA IN A DOG
Ji-Hang Yin1, Brittni Sexton2, Maninder Sandey1
1Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, USA, 2Department of Clinical Sciences, Neurology and Neurosurgery Service, College of Veterinary Medicine, Auburn, AL, USA

10:10 a.m.-10:20 a.m. CDT
SALIVARY GLAND CARCINOMA IN A BUCKING BULL
Kayla Alexander, Timothy Morgan, Brittany Baughman
Mississippi State University College of Veterinary Medicine, MS State, MS, USA

10:20 a.m.-10:30 a.m. CDT
AMELOBLASTIC FIBRO-ODONTOMA IN A BULL
Kaylin McNulty, Brittany Baughman
Mississippi State University, Starkville, MS, USA

10:30 a.m.-10:40 a.m. CDT
BOVINE PAPULAR STOMATITIS IN AN ANGUS COW WITH METASTATIC JEJUNAL ADENOCARCINOMA
Silvia Carnaccini1, Marcia Ilha1, Yung-Yi Mosley1, Heman Naikare1, Ross Weaver1, Janemarie Hennebelle2
1University of Georgia, Tifton, GA, USA, 2Georgia Department of Agriculture, Atlanta, GA, USA

10:40 a.m.-10:50 a.m. CDT
NOVEL PAPILLOMAVIRUS ASSOCIATED WITH CUTANEOUS AND MUCOSAL PAPILLOMAS IN A POLAR BEAR (URSUS MARITIMUS)
Anna-Maria Travis1, Jennifer Luff2, Mandy Womble2, Riley Wilson3, Elise LaDoucer1
1Joint Pathology Center, Silver Spring, MD, USA, 2NC State College of Veterinary Medicine, Raleigh, NC, USA, 3The Pet Shop, Anchorage, AK, USA

10:50 a.m.-11:00 a.m. CDT
DIFFUSE LARGE B CELL LYMPHOMA AND A NOVEL GAMMABERGEPVIRUS IN NORTHERN ELEPHANT SEALS
Margaret Martinez1, Emily Trumbull2, Emily Whitmer1, Michelle Rivard1, Nicole Stacy2, Cara Field1, Linda Archer1, James Welleshan Jr3, Salvatore Frasca Jr3, Padraig Duignan1
1The Marine Mammal Center, Sausalito, CA, USA, 2SeaWorld, San Antonio, TX, USA, 3Department of Comparative, Diagnostic, and Population Medicine, University of Florida, Gainesville, FL, USA, 3Connecticut Veterinary Medical Diagnostic Laboratory, Department of Pathobiology and Veterinary Science, University of Connecticut, Storrs, CT, USA
11:00 a.m.-11:10 a.m. CDT
MYCOTIC PNEUMONIA AND ENCEPHALITIS IN AN ADULT ALPACA WITH THIRD COMPARTMENT ULCERATION AND CHEILITIS
Marvin Firth, Laura Setyo, Nicola Parry
University of Surrey, Guildford, United Kingdom

11:10 a.m.-11:20 a.m. CDT
ADENOVIRUS INFECTION IN RED-TAILED HAWKS (BUTEO JAMAICENSIS) AND A BROAD-WINGED HAWK (BUTEO PLATYPTERUS)
Emma Torii1, Arno Wuenenschmann1, Anibal Armien1, Sunil Mor1, Rahul Kumar1, Emma Chapulsky2, Michelle Willette3
1University of Minnesota, Veterinary Diagnostic Laboratory, St. Paul, MN, USA, 2University of California Davis, California Animal Health and Safety Laboratory, Davis, CA, USA, 3University of Minnesota, The Raptor Center, St. Paul, MN, USA

11:20 a.m.-11:30 a.m. CDT
AN OUTBREAK OF YERSINIA PSEUDOTUBERCULOSIS IN AFRICAN LIONS (PANTHERA LEO) WITH ABERRANT BACTERIAL MORPHOLOGY
Mandy Womble, Megan Cabot, Tara Harrison, Tatiane Terumi Negrão Watanabe
North Carolina State University College of Veterinary Medicine, Raleigh, NC, USA

11:30 a.m.-11:40 a.m. CDT
RENAL COCCIDIOSIS CAUSED BY NEPHROISOPORA EPTESI IN A CAPTIVE BIG BROWN BAT (EPTESSICUS FUSCUS)
Nathan Crilly, Sarah Poynton, Kathleen Gabrielson
Johns Hopkins School of Medicine, Baltimore, MD, USA

11:40 a.m.-11:50 a.m. CDT
GROSS AND HISTOLOGIC LESIONS ASSOCIATED WITH NATURAL RABIES VIRUS INFECTION IN FREE-RANGING WHITE-TAILED DEER (ODOCOILEUS VIRGINIANUS) IN THE EASTERN UNITED STATES (2005-2021)
Alisia Weyna1, Mark Ruder1, Martha Frances Dalton2, Charlie Bahnsen2, M. Kevin Keel3, Heather Fenton2, Jennifer Ballard2, Nicole Nemeth1
1Southeastern Cooperative Wildlife Disease Study, University of Georgia, Athens, GA, USA, 2Mississippi Veterinary Research and Diagnostic Laboratory, Pearl, MS, USA, 3North Dakota Game and Fish Department, Bismarck, ND, USA, 4University of California, Davis, Davis, CA, USA, 5Ross University, Bassetterre, Saint Kitts and Nevis, 6Arkansas Game and Fish Commission, Little Rock, AR, USA

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

12:00 p.m.-12:30 p.m. CDT
Highlighted Posters: Experimental Disease, Industrial and Toxicologic Pathology and Late-breaking
Session Chair: Joshua Webster, DVM, PhD, DACVP
Genentech, South San Francisco CA

DOES BLUEBERRY POLLEN PREDISPOSE HONEY BEES TO EUROPEAN FOULBROOD DISEASE?
Ivanna Kozii1, Igor de Mattos1, Melanie Roulin1, Sarah Wood1, Colby Klein1, Michael Zabrodski1, Mohsen Sharafi1, Jenna Thebeau1, Dana Liebe1, Jessica Debruyne2, Brandele Brown2, Fatima Masood1, Larhonda Sobchishin1, Igor Moshynsky2, Meghan Millbraith3, Robyn McCallum1, Marta Guarna4, Patricia Wolf Veiga4, Eric Gerbrandt4, Elemir Simko5
1University of Saskatchewan, Saskatoon, SK, Canada, 2Michigan State University, East Lansing, MI, USA, 3Atlantic Tech Transfer Team for Apiculture, Perennia, NS, Canada, 4Agriculture and Agri-Food Canada, Beaverlodge, AB, Canada, 5National Bee Diagnostic Centre, Beaverlodge, AB, Canada, 6British Columbia Blueberry Council, Abbotsford, BC, Canada

INFECTION AMBLYOMMA AMERICANUM TICKS WITH CYTAUXZOOON FELIS VIA DIRECT INJECTION
Tzushan Yang1, Mason Reichard2, Henry Marr1, Leah Cohn2, Laura Nafe2,3, Nathan Whitehurst1, Adam Birkenheuer2
1North Carolina State University, Raleigh, NC, USA, 2Oklahoma State University, Stillwater, OK, USA, 3University of Missouri, Columbia, MO, USA

SYSTEMIC AND RESPIRATORY INFLAMMATORY RESPONSES FROM PREDISPOSING FACTORS OF BOVINE RESPIRATORY DISEASE IN BEEF CALVES
Seyed Saeid Tabatabaei1, DeLenn Burrows1, Monika Baquero1, Ksenia Vulikh1, Derek Haley2, Jeff Caswell1
1Department of Pathobiology, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada, 2Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada

EQUINE ALVEOLAR MACROPHAGES AND BLOOD MONOCYTE-DERIVED MACROPHAGES RESPOND DIFFERENTLY TO BARN DUST-ANALOGUE CHALLENGE
Heng Kang, Gary Lee, Dorothee Bienzle, Janet Beeler-Marfssi
University of Guelph, Department of Pathobiology, Ontario Veterinary College, Guelph, ON, Canada

UPREGULATED INFLAMMATORY PATHWAYS IN THE SPINAL CORD OF SIV-INFECTED MACAQUES
Kathleen Mulka1, Suzanne Queen1, Audrey Knight1, Lisa Mangus1, Sarah Beck1, Megan McCarron1, Clarisse Solis1, Carlo Colantuoni1, Joseph Mankowski1
1Johns Hopkins University, Baltimore, MD, USA, 2University of North Carolina, Chapel Hill, NC, USA

PATHOLOGY OF LYMPHOPROLIFERATIVE DISEASE VIRUS INFECTION IN NATURALLY AND EXPERIMENTALLY INFECTED TURKEYS
Chloe Goodwin1, Kayla Adcock2, Mark Ruder2, Rebecca Poulson2, Kevin Niedringhaus2, Daniel Mead2, Heather Fenton1, Kevin Keel3, Nicole Nemeth1
1Department of Pathology, University of Georgia, Athens, GA, USA, 2Southeastern Cooperative Wildlife Disease Study, Athens, GA, USA, 3Veterinary Medical Teaching Hospital, School of Veterinary Medicine, University of California, Davis, Davis, CA, USA, 4School of Veterinary Medicine, Ross University, Bassetterre, Saint Kitts and Nevis

CLINICAL AND MORPHOLOGIC CHARACTERIZATION OF THE CENTRAL NERVOUS SYSTEM OF MICE INFECTED WITH VARIOUS STRAINS OF CHIKUNGUNYA VIRUS
Jonathan Nagel1, Audrey Knight1, Elizabeth Anderson1, Hannah Atkins1, Stephanie Montgomery1, Victoria Baxter1
1Division of Comparative Medicine, University of North Carolina, Chapel Hill, NC, USA, 2Department of Population Health and Pathobiology, North Carolina State University, Raleigh, NC, USA, 3Department of Pathology and Laboratory Medicine, University of North Carolina, Chapel Hill, NC, USA

12:30 p.m.-1:30 p.m. CDT
Focused Scientific Poster Session: Experimental Disease, Industrial and Toxicologic Pathology, and Late-breaking
(See page 17 for the list of poster presentations.)


1:30 p.m.-5:00 p.m. CDT
**ASVCP Mystery Slide Session**
Session Chair: Laura C. Cregar, DVM, DACVP
Charles River Laboratories, Mattawan, MI

1:30 p.m.-5:00 p.m. CDT
**Experimental Disease Focused Scientific Session**
Session Chair: Joshua Webster, DVM, PhD, DACVP
Genentech, South San Francisco CA

1:30 p.m.-1:45 p.m. CDT
PULMONARY IONOCYTES ARE SPATIALLY LOCALIZED TO CARTILAGINOUS AIRWAYS IN LUNGS USING BARTTIN IMMUNOHISTOCHEMISTRY
David Meyerholz, Lei Lei, Ian Thornell, Guillermo Romano Ibarra, David Stoltz, Paul McCray Jr.
University of Iowa, Iowa City, IA, USA

1:45 p.m.-2:00 p.m. CDT
ALPHA-HEMOLYSIN-MEDIATED VASCULAR INJURY AND CUTANEOUS HYPOXIA CONTRIBUTE TO THE DEVELOPMENT OF STAPHYLOCOCCUS AUREUS-INDUCED DERMONECROSIS
Ching Yang1,2, Frank Robledo-Avila1, Santiago Partida-Sanchez1,2, Christopher Montgomery1,2
1Center for Microbial Pathogenesis, Abigail Wexner Research Institute, Nationwide Children's Hospital, Columbus, OH, USA, 2Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University, Columbus, OH, USA

2:00 p.m.-2:15 p.m. CDT
TARGETING THE STEROL REGULATORY ELEMENT-BINDING PROTEIN PATHWAY IN PANCREATIC DUCTAL ADENOCARCINOMA
Stephanie Myers, Meredith McGuire, Wei Shao, Chune Liu, Theodore Ewachiw, Zeshaan Rasheed, William Matsui, Toni Sepalla, Richard Burkhart, Peter Espenshade
Johns Hopkins University, School of Medicine, Baltimore, MD, USA

2:15 p.m.-3:00 p.m. CDT
Invited Speaker
BLOOD-TUMOR BARRIER PATHOLOGY: INSIGHTS FROM PRECLINICAL MODELS
Tiffany Lyle, DVM, PhD, DACVP
Purdue University, West Lafayette, IN

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

3:30 p.m.-4:00 p.m. CDT
DEVELOPING A DEEP LEARNING CONVOLUTIONAL NEURAL NETWORK METHOD TO DETECT SMALL INTESTINE PATHOLOGY IN RAT ILEUM
Lauren Prince1, Jogile Kuklyte2, Daniel Sammon2, Christiane Lohr1, Daniel Rudmann1
1Charles River Laboratories Inc., Ashland, OH, USA, 2Deciphex, Dublin, Ireland, 3Oregon State University, Corvallis, OR, USA

4:00 p.m.-4:15 p.m. CDT
FETOSCOPIC IN UTERO TRACHEAL OCCLUSION AS A METHOD TO REDUCE FETAL LUNG HYPOPLASIA IN A SHEEP MODEL OF CONGENITAL DIAPHRAGMATIC HERNIA
Renata Mammonè1, Dae Young Kim1, Pamela Adkins1, John Dodam1, Emanuel Vlastos2, John Middleton1
1University of Missouri Veterinary Medical Diagnostic Laboratory, Columbia, MO, USA, 2University of Missouri, Kansas City, MO, USA

4:15 p.m.-4:30 p.m. CDT
INFLUENZA NEURAMINIDASE VIRUS-LIKE PARTICLE VACCINE REDUCES DISEASE, VIRUS REPLICATION AND LUNG PATHOLOGY IN SWINE
Vasilis Pliasas1, Zach Menne2, Virginia Aida1, Ji-Hang Yin1, Maria Naskou1, Peter Neasham1, James North1, Dylan Wilson1, Sheniqua Glover1, Katharine Horzmann1, Ioanna Skountzou1, Constantinos Kyriakis1,2
1Auburn University, Auburn, AL, USA, 2Emory University, Atlanta, GA, USA, 3University of Georgia, Athens, GA, USA

4:30 p.m.-4:45 p.m. CDT
A SEMI-QUANTITATIVE APPROACH TO THE ANALYSIS OF SARS-COV-2 INDUCED PNEUMONIA IN THE RHESUS MACAQUE.
Rachel Reader, Katherine Olstad, Koen Van Rompuy, Amir Aradesh UC Davis, Davis, CA, USA

4:45 p.m.-5:00 p.m. CDT
CLINICAL AND PATHOLOGIC FEATURES OF A FELINE SARS-COV-2 INFECTION MODEL ARE ANALOGOUS TO ACUTE COVID-19 IN HUMANS
Jennifer Rudd1, Miruthula Tamil Selvan1, Shannon Cowan1, Eva Kao1, Cecily Midkiff2, Jerry Ritchey1, Craig Miller1
1Department of Veterinary Pathobiology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK, USA, 2Division of Comparative Pathology, National Primate Research Center, Tulane University, Covington, LA, USA

1:30 p.m.-5:00 p.m. CDT
**Natural Disease Focused Scientific Session II**
Session Chair: Pompei Bolfa, DVM, DACVP
Ross University School of Veterinary Medicine, Bassetterre, Saint Kitts and Nevis

1:30 p.m.-1:45 p.m. CDT
PULMONARY LESIONS ASSOCIATED WITH A NOVEL EMMONSIELLOPSIS SPECIES INFECTION IN WOMBATS
Marina Gimeno1, Alexandra Berry1, Karrie Rose2, David Phalen1
1Sydney School of Veterinary Science, The University of Sydney, Camden, Australia, 2Australian Registry of Wildlife Health, Taronga Conservation Society Australia, Sydney, Australia

1:45 p.m.-2:00 p.m. CDT
CAPRINE GRANULOMATOUS MURAL FOLLICULITIS IS INFREQUENTLY ASSOCIATED WITH MALIGNANT CATARRHAL FEVER SUBGROUP MACAVIRUSES
Thomas Westermann, Elena Demeter, Jeanine Peters-Kennedy
Cornell University College of Veterinary Medicine, Ithaca, NY, USA

2:00 p.m.-2:15 p.m. CDT
PREVALENCE AND MICROSCOPIC FINDINGS OF PARELAPHOSTRONGYLUS TENUIS IN FREE-RANGING CERVIDS IN NORTH DAKOTA AND TENNESSEE
Michelle Liu, Richard Gerhold, Nickolus Stahlman, Denae LoBato University of Tennessee, Knoxville, TN, USA

*All sessions are held in the U.S. central time zone*
2:15 p.m.-2:30 p.m. CDT
MICROSCOPIC EVALUATION OF NECROSIS IN CANINE SOFT TISSUE TUMORS: ASSESSMENT OF INTER-PATHOLOGIST VARIATION USING WSI ANNOTATION
Taryn Donovan1, Alexander Bartel2, Frauke Wilm3, Jean Rogers4, Frances Moore3, Donald Meuten4, Bruce Williams7, Rachel St.Vincent1, Robert Klopfleisch8, Christof Bertram9
1Department of Anatomic Pathology, Animal Medical Center, New York, NY, USA, 2Institute for Veterinary Epidemiology and Biostatistics, Freie Universitat Berlin, Berlin, Germany, 3Pattern Recognition Lab, Computer Sciences, Friedrich-Alexander-Universitat Erlangen-Nurnberg, Erlangen, Germany, 4Department of Radiation Oncology, Animal Medical Center, New York, NY, USA, 5Heska Corporation, Loveland, CO, USA, 6College of Veterinary Medicine, North Carolina State University, Raleigh, NC, USA, 7Joint Pathology Center, Silver Spring, MD, USA, 8Freie Universitat Berlin, Berlin, Germany, 9Institute of Pathology, University of Veterinary Medicine, Vienna, Austria

2:30 p.m.-2:45 p.m. CDT
PATHOLOGY OF EPTEISIPOX VIRUS IN NATURALLY INFECTED BIG BROWN BATS
Ursula Perdrizet1,2, Janet Hill1, Champika Fernando1, Trent Bollinger1,2, Vikram Misra1
1Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, 2Canadian Wildlife Health Cooperative Western/Northern Region, Saskatoon, SK, Canada

2:45 p.m.-3:00 p.m. CDT
IMMUNOHISTOCHEMICAL CHARACTERIZATION OF THE IMMUNE RESPONSE IN CANINE CHRONIC HEPATITIS: IS THERE A CANINE IMMUNE-MEDIATED HEPATITIS?
Brittany Rasche, John Cullen
North Carolina State University, Raleigh, NC, USA

3:00 p.m.-3:15 p.m. CDT
HISTOPATHOLOGIC AND MOLECULAR CHARACTERIZATION OF ERETHIZON DORSATUM PAPILLOMAVIRUS 1 AND ERETHIZON DORSATUM PAPILLOMAVIRUS 2 IN NORTH AMERICAN PORCUPINES
Zoe Mack, Leonardo Caserta, Randall Renshaw, Rhea Gerdes, Diego Diel, Sara Childs-Sanford, Jeanne Peters-Kennedy
Cornell University College of Veterinary Medicine, Ithaca, NY, USA

3:15 p.m.-3:30 p.m. CDT
A RETROSPECTIVE STUDY ON SURVIVAL OF DOGS DIAGNOSED WITH SPLENIC FIBROHISTIOCYTIC NODULES
Claide Sprohle-Barrera, Chiara Palmieri, Rachel Allavena, Jayne McGhie, Tamsin Barnes

3:30 p.m.-3:45 p.m. CDT
IMMUNE RESPONSE TO CHLAMYDIA SPP. INFECTION IN THE MALE AND FEMALE REPRODUCTIVE SYSTEM IN KOALAS (PHASCOLARCTOS CINEREUS)
Sara Pagliarani1,2, Stephen Johnston2, Kenneth Beagley2, Chiara Palmieri1
1School of Veterinary Science, The University of Queensland, Gatton, Australia, 2School of Agriculture and Food Science, The University of Queensland, Gatton, Australia

3:45 p.m.-4:00 p.m. CDT
ANALYSIS OF SINGLE NUCLEOTIDE POLYMORPHISMS AND COPY NUMBER VARIATIONS IN METASTATIC FELINE MAMMARY TUMORS
Alessandro Sammarco1,2, Serena Ferraresson1, Alessandro Calore3, Selina Iussich4, Giuseppe Sarli5, Valentina Zappulli5
1University of Padua, Padua, Italy, 2Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA, 3University of Turin, Turin, Italy, 4University of Bologna, Bologna, Italy

4:00 p.m.-4:15 p.m. CDT
BOVINE ASTROVIRUS AND ITS POTENTIAL ROLE IN BOVINE LYMPHOCYTIC ENCEPHALITIS
Dominique Comeau1, Maria Spinato2, Robert Foster1, Davor Ojkic1, Jan Sargeant1, Jeff Caswell1
1Ontario Veterinary College, Guelph, ON, Canada, 2Animal Health Laboratory, Guelph, ON, Canada

4:15 p.m.-4:30 p.m. CDT
DESCRIPTIVE COMPARISON OF INDIVIDUAL HIVE AND YARD-LEVEL SAMPLING TECHNIQUES FOR SPORES OF PAENIBACILLUS LARVAE IN SASKATCHEWAN HONEY BEE OPERATIONS WITH RECENT OUTBREAKS OF AMERICAN FOULBROOD
Michael Zabrodski1, Jessica DeBruyne2, Geoff Wilson2, Igor Moshynskyy1, Mohsen Sharafi1, Sarah Wood1, Ivanna Kozii1, Jenna Thebeau1, Colby Klein1, Igor Medici de Mattos1, LaRhonda Sobchishin1, Tasha Epp1, Antonio Ruzzini2, Elemir Simko2
1Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, 2Ministry of Agriculture, Government of Saskatchewan, Prince Albert, SK, Canada

4:30 p.m.-4:45 p.m. CDT
PATHOLOGICAL FEATURES OF ARYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY IN FOUR UNRELATED CHIMPANZEES
Karen Terio1, Linda Lowenstein2, Trevor Gerlach3, Rita McManamon4, Sushan Han5, Marietta Danforth6, Hayley Murphy5, Gisela Martinez-Romero7
1University of Illinois at Urbana-Champaign, Brookfield, IL, USA, 2University of California, Davis, CA, USA, 3Veterinary Specialty Center, Buffalo Grove, IL, USA, 4University of Georgia, Athens, GA, USA, 5Colorado State University, Fort Collins, CO, USA, 6Zoo Atlanta, Atlanta, GA, USA

4:45 p.m.-5:00 p.m. CDT
RETROSPECTIVE ANALYSIS OF MYCOBACTERIOSIS IN AQUARIUM HOUSED ELASMOBRANCHS
Mari Inohana1, Kaoru Nagaya2, Tsunehisa Komatsu3, Shinpei Wada1, Sushan Han5, Marietta Danforth6, Hayley Murphy5, Gisela Martinez-Romero7
1University of Illinois at Urbana-Champaign, Brookfield, IL, USA, 2Shinagawa Aquarium, Tokyo, Japan, 3Shimane Aquarium, Shimane, Japan, 4Marine World Uminonakamichi, Fukuoka, Japan

4:55 p.m.-5:10 p.m. CDT
*COMPETITOR FOR THE PATHOLOGY OF WILDLIFE AND ZOO ANIMALS AWARD

5:00 p.m.-6:15 p.m. CDT
ASVCP Business Meeting

6:30 p.m.-8:00 p.m. CDT
ACVP Awards and Recognition Event
Poster Sessions
(refer to the program above for specific dates and times)

Clinical Pathology Focused Poster Session

C-01
PRECURSOR-DIRECTED IMMUNE-MEDIATED ANEMIA IN A CAT WITH PHAGOCYTOSED NUCLEAR MATERIAL IN CIRCULATING NEUTROPHILS
Nina Randolph, Camille McAloney, Sam Evans
The Ohio State University College of Veterinary Medicine
Department of Veterinary Biosciences, Columbus, OH, USA

C-02
ADVIA HEMATOLOGY SYSTEM-PLATELET CLUMPS FLAG DUE TO INCIDENTAL ASPIRATION OF HARDERIAN GLAND IN A FEMALE CRL:CD-1 MOUSE
Dumisani Chuchu, Ashleigh Caffull, Matthew Edward Hartness
Hartness, Claudio Petterino
Sequani Ltd., Ledbury, United Kingdom

C-03
MELAMINE-CYANURIC-LIKE CRYSTALLURIA IN A DOG
David Rotstein1,2, Sarah Pelouquin2, Renate Reimschuessel2, Jake Guag2, Kathleen Proia2, Betsy Yakes3
1FDA Center for Veterinary Medicine, Rockville, MD, USA, 2FDA Center for Veterinary Medicine Veterinary Laboratory Investigation and Response Network, Laurel, MD, USA, 3FDA Center for Food Safety and Nutrition, College Park, MD, USA

C-04
ANAPHYLAXIS-ASSOCIATED HEMOPERITONEUM AFTER VACCINATION IN A DOG
Bridge Garner1, Alyssa Brooker2, Amie Koenig1
1University of Georgia, Athens, GA, USA, 2IDEXX Laboratories, Maple Shade, NJ, USA

C-05
A CASE REPORT OF AN EOSINIPHILIC LEUKEMIA IN A HEDGEHOG
Hamideh Esmaeilzadeh, Priscilla Serpa, Courtney Sweeney, Margaret Miller
John christian, Andrea Santos
Purdue University, West Lafayette, IN, USA

C-06
SEBACEOUS ADENOCARCINOMA IN AN 11 YEAR OLDocker SPANIEL WITH PULMONARY METASTASIS
Karena Tang, Andrea Santos, Craig Thompson
Purdue University, West Lafayette, IN, USA

C-07
HEPATOCYTE DERIVED CFA-microRNAs AS SERUM BIOMARKERS OF HEPATIC FIBROSIS OR CIRRHOSIS IN DOGS
Ahmed El-Sebaey1,2, Pavel Abramov1, Natalia Slesarenko1, Seidfatima Borunova1, Sergey Pozyabin1
1Moscow State Academy of Veterinary Medicine and Biotechnology – MVA, Moscow, Russian Federation, 2Faculty of Veterinary Medicine, Mansoura University, Mansoura, Egypt

C-08
SYSMEX XT-2000IV AND PROCYTE DX SCATTERGRAM FINDINGS IN A DOG WITH MASTOCYTEMIA
Jelena Palic, Annabelle Heier, Els Acke
Vet Med Labor GmbH Division, IDEXX Laboratories, Kornwestheim, Germany

C-09
METASTATIC RHABDOMYOSARCOMA IN A GOLDEN DOODLE
Stacey Woods1, Jim Meinkoth2, Alexa Hunter3, Timothy Snider1, Jana Gordon2
1Oklahoma State University, Stillwater, OK, USA, 2Oregon State University, Corvallis, OR, USA

C-10
DUODENAL PERFORATION AND HYPOGLYCEMIA AS PARANEOPLASTIC SYNDROMES ASSOCIATED WITH CHRONIC BASOPHILIC LEUKEMIA IN A DOG
Sergio Vázquez1,2, Mónica Bragado-Cuesta2, José Espinosa1,3, Valentín Pérez1,2
1Department of Animal Health, University of León, León, Spain, 2Small Animal Medicine, Veterinary Teaching Hospital-University of León, León, Spain, 3Pathology, Veterinary Teaching Hospital-University of León, León, Spain

C-11
NASAL COLONIZATION BY ENTAMOEBA GINGIVALIS IN A 13-YEAR-OLD ITALIAN GREYHOUND
Nina Kristen Randolph1, Camille McAloney1, Robert Ossiboff2, Matthew Cook1, Betsy Hernandez1, Jessica Hokamp1
1The Ohio State University, Columbus, OH, USA, 2University of Florida, Gainesville, FL, USA

C-12
A CASE OF PRIMARY CNS B-CELL LYMPHOMA IN A DOMESTIC SHORTHAIRED CAT
Mara Varvil, Jaya Mehra, Rothman Reyes, Margaret Miller, Stephanie Thomovsky, R. Bentley, John Christian
Purdue University, West Lafayette, IN, USA

C-13
CALCIUM AND PHOSPHORUS HOMEOSTASIS IN ADVANCED STAGES OF CANINE LEISHMANIASIS
Mario Alberto González, Rafael Barrera, María Gil-Molino, Beatriz Macías, José Ignacio Cristóbal, Paloma Nicolás-Barceló, Ángela Durán, Ana Belén García, Francisco Javier Duque
Departamento Medicina Animal, Universidad de Extremadura, Cáceres, Spain

C-14
DEEP LEARNING-BASED ALGORITHMS CAN BE USED TO PREDICT CYTOLOGIC TOTAL HEMOSIDERIN SCORES
Christof A Bertram1,2, Christian Marzhal2,3, Alexander Bartel4, Jason Stayt,5, Federico Bonsembiante2,3, Janet Beeler-Marfisi, Ann Kristin Barton10, Ginevra Brocca7, Maria Elena Gelain8, Agnes Gläsel11, Kelly du Preez12, Kristina Weiller13, Katharina Breininger1,13, Marc Aubreville1-14, Andreas Maier2, Robert Klopfliech2, Jenny Hill16
1Institute of Pathology, University of Veterinary Medicine Vienna, Vienna, Austria, 2Institute of Veterinary Pathology, Freie Universität Berlin, Berlin, Germany, 3Pattern Recognition Lab, Computer Science, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany, 4Research and Development, EUROMMUN Medizinische Labordiagnostika AG, Lübeck, Germany, 5Institute for Veterinary Epidemiology and Biostatistics, Freie Universität Berlin, Berlin, Germany, 6Vetpath Laboratory Services, Jandakot, Australia, 7Department of Comparative Biomedicine and Food Science (BCA), University of Padova, Legnaro, Italy, 8Department of Animal Medicine, Production and Health (MAPS), University of Padova, Legnaro, Italy, 9Department of Clinical Studies, Ontario Veterinary College, Guelph, ON, Canada, 10Equine Clinic, Freie Universität Berlin, Berlin, Germany, 11Department of Veterinary Clinical Sciences, Clinical Pathology and Clinical Pathophysiology, Justus-Liebig-Universität Gießen, Gießen, Germany, 12Companion Animal Clinical Studies, Faculty of Veterinary
Diagnostic Pathology Focused Poster Session

D-01 CERVICAL COMPRESSIVE MYELOPATHY SECONDARY TO GUDAIR VACCINE ASSOCIATED GRANULOMAS IN SHEEP
Leah Manning1, Katie Eager1, Brenda O’Rourke1, Eve Hall2, Keith Walker2, Erika Bunker1, Angel Ngo1, Zoe Spiers1, Mukesh Srivastava1, Pedro Pinczewski1
1Elizabeth Macarthur Agricultural Institute, Department of Primary Industries, Menangle, NSW, Australia, 2Murray Local Land Services, Holbrook, NSW, Australia

D-02 ABERRANT (ECTOPIC) CD3 EXPRESSION IN A FELINE EXTRAMEDULLARY CUTANEOUS PLASMACYTOMA
Michael Childress1, Caitlin Brown1, Tsang Lin1, Emily Hartman1, Peter Moore2, José Ramos-Vara1
1Purdue University, West Lafayette, IN, USA, 2Synlab VPG Exeter, Exeter, United Kingdom

D-03 PERFORMANCE OF A BLOOD-BASED ‘LIQUID BIOPSY’ MULTICANCER EARLY DETECTION (MCED) TEST IN SEVEN COMMON CANINE CANCERS
Andi Flory, Jason Chibuk, Lauren Holtvoigt, Katherine Lytle, Dana Tsui, Illya Chorny, Jill Rafalko, Robert Poppenga2, Padraig Duignan1
1University of California, Davis, CA, USA, 2Colorado State University Veterinary Diagnostic Laboratory, Fort Collins, CO, USA

D-04 RETROSPECTIVE ANALYSIS OF REPRODUCTIVE LESIONS IN REPTILES
Kelsie Dougherty, Brigid Troan, Greg Lewbart
North Carolina State University College of Veterinary Medicine, Raleigh, NC, USA

D-05 PAUCIBACILLARY MYCOBACTERIOSIS IN RELATED CAPTIVE RED SIKINS (CARDUELIUS CUCULLATA)
Brittany Beavis1, Andrew Cartoceti2, Steven Kubiski3, Jason Thornton1, Elise La Douceur1
1Joint Pathology Center, Silver Spring, MD, USA, 2Smithsonian National Zoo, Washington, DC, USA, 3San Diego Zoo, San Diego, CA, USA

D-06 ACUTE CEREBRAL TOXOPLASMOSIS IN A 2-YEAR-OLD QUARTER HORSE
Andrew Oates, Terry Spraker
Colorado State University Veterinary Diagnostic Laboratory, Fort Collins, CO, USA

D-07 RESPIRATORY CRYPTOCOCCOSIS IN AN UMBRELLA COCKATOO (CACATUA ALBA)
Camille Cordero-Apone, Denae LoBato
University of Tennessee College of Veterinary Medicine, Knoxville, TN, USA

D-08 OSTEOFLUOROSIS IN A FREE RANGING CALIFORNIA SEA LION
Margaret Martinez1, Michelle Rivard1, Jaclyn Isbell1, Chelsea Sykes1, Robert Poppenga2, Padraig Duignan1
1The Marine Mammal Center, Sausalito, CA, USA, 2California Animal Health and Food Safety Laboratory, School of Veterinary Medicine, University of California, Davis, CA, USA

D-09 EQUINE PLACENTAL MIXED GERM CELL TUMOR WITH METASTASIS TO THE FETAL LIVER
Abigail Finley, JungKeun Lee, Mary White, Danielle Gordon, Sarah Matyjaszek
Midwestern University, Glendale, AZ, USA

D-10 CAPRINE PEMPHIGUS FOLIACEUS: A CASE REPORT
Adam Powers1, Emma Stapley1, Daniela Bedenice1, Amanda Prisk1, Elizabeth Larsen1, David Gardiner2, Ramón Almela1
1Tufts University Cummings School of Veterinary Medicine, North Grafton, MA, USA, 2zoetis Reference Laboratories, Parsippany-Troy, NJ, USA

D-11 HEMANGIOBLASTOMA IN THE BRAINSTEM OF A DOG
Kirsten Landsgaard1, Samantha St. Jean1, Jonathan Levine1, Stephanie Lovell1, Brian Summers2, Raquel Rech1
1Texas A&M University, College Station, TX, USA, 2Cornell University, Ithaca, NY, USA

D-12 LYMPHOCYTIC PLEOCYTOSIS CAUSED BY LISTERIA MONOCYTOGENES IN A HORSE
Shannon Phelps, Deborah Chong, Sean Spagnoli, Elena Gorman
Oregon State University, Corvallis, OR, USA

D-13 HISTIOCYTIC DISORDER IN A CAPTIVE NORTH AMERICAN RIVER OTTER
Panchan Sitthicharoenchai1, Claire Andreassen1, Andrew Gall2
1Iowa State University, Ames, IA, USA, 2Blank Park Zoo, Des Moines, IA, USA
D-14
CUTANEOUS REACTIVE ANGIOENDOThELOMATOSIS IN A GUINEA PIG (Cavia Porcellus)
Gayathri Balamayooran1, Matthew Kuhar2, Nicole McCrea3, Cinthya Cirqueira4, Josue Diaz-Delgado5
1Texas Veterinary Medical Diagnostic Laboratory, College Station, TX, USA, 2New Jersey Animal Health Diagnostic Laboratory, Erwing Township, NJ, USA, 3Madison Animal Hospital, Madison, NJ, USA, 4Instituto Adolfo Lutz (IAL), Centro de Patologia, São Paulo, Brazil

D-15
CONGENITAL TUBULAR DEFECTS CONSISTENT WITH FANCONI-LIKE SYNDROME IN A SPHINX CAT WITH ACIDURIA AND PARADOXICAL GLUCOSURIA
Michaela Botts1, Petra Cerna1, Tawfik Aboellail1, Sarah Shropshire1, Rachel Cianciolo1, Jessica Hokamp2, Petra Werner3, Margret Casal4
1Colorado State University Veterinary Diagnostic Laboratory, Fort Collins, CO, USA, 2The Ohio State University, Columbus, OH, USA, 3University of Pennsylvania, Philadelphia, PA, USA

D-16*
ITRACONAZOLE-ASSOCIATED VASCULITIS IN A DOG WITH CUTANEOUS PARALAGENIDIOSIS
Emily Brinker, Karly Hicks, Amelia White, Robert Kennis, Rachel Neto
Auburn University College of Veterinary Medicine, Auburn University, AL, USA

D-17
CHONDRO-OSSEOUS RESPIRATORY EPITHELIAL ADENOMATOID HAMARTOMA IN AN EIGHT-YEAR-OLD MIXED-BREED DOG
Cynthia de Vries1, Jerzy Gawor2
1LABOKLIN GmbH & Co.KG, Bad Kissingen, Germany, 2Klinika Weterynaryjna Arka, Kraków, Poland

D-18
PRIMARY INTESTINAL LYMPHOMA IN RABBITS
Daniel Bland1, Michael Garner2, Jessica Magnotti3, Alana Frum3, Jennifer Phinney4, Brandon Plattner5, Elise LaDouceur1,2
1Joint Pathology Center, Silver Spring, MD, USA, 2Northwest ZooPath, Monroe, WA, USA, 3Stahl Exotic Animal Veterinary Services, Fairfax, VA, USA, 4Kansas State Veterinary Diagnostic Laboratory, Manhattan, KS, USA

D-19*
DETECTING FUSION GENE TRANSCRIPTS IN CANINE PERIPHERAL T CELL LYMPHOMA
Eileen Larsen, Lauren Harris, Robert Burnett, Anne Avery Colorado State University, Fort Collins, CO, USA

D-20
MYCOBACTERIAL ENCEPHALITIS, PNEUMONIA AND SPLENITIS WITH SPLENIC INTRAHISTIOCYTIC CRYSTAL DEPOSITION IN A DOMESTIC RABBIT (ORYCTOLAGUS CUNICULUS)
Nicolas Decelles, Maegan Hester, Sara Cusack, Shannon Martinson Atlantic Veterinary College, Charlottetown, PE, Canada

D-21
METASTATIC TESTICULAR TERATOMA IN A FLORIDA MANATEE (TRICHECHUS MANATUS LATIROSTRIS)
David Rotstein1, Martine deWit2, Nicole McCrea3
1Marine Mammal Pathology Services, Olney, MD, USA, 2Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, St. Petersburg, FL, USA, 3University of Florida College of Veterinary Medicine, Gainesville, FL, USA

D-22
EVALUATION OF GENOMIC HETEROGENEITY IN CANINE CANCER BY NGs-BASED ANALYSIS OF TISSUE AND BLOOD SAMPLES
Dana Tsui, Andi Flory, Daniel Grosu, Jason Chibuk, Lauren Holtvoigt, Katherine Lytle, Jill Rafalko, Kristina Kruglyak, Ilya Chorny
PetDx, La Jolla, CA, USA

D-23
CASE REPORT: PRIMARY NEUROLymphOMATOSIS IN A DOG
Elizabeth Green, Renata Mammone, Elizabeth Curtis, Fred Williams III, Gayle Johnson
University of Missouri Veterinary Medical Diagnostic Laboratory, Columbia, MO, USA

D-24
DISORDERS OF SEXUAL DEVELOPMENT IN FREE RANGING CALIFORNIA SEA LIONS
Margaret Martinez1, Michelle Rivard1, Emily Trumbull1,2, Barbie Halaska3, Robert Foster3, Padraig Duigan3
1The Marine Mammal Center, Sausalito, CA, USA, 2SeaWorld, San Antonio, TX, USA, 3Department of Pathobiology, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada

D-25
POLYORCHIDISM IN A CAT WITH FOUR INTRAABDOMINAL TESTICLES
Bryan Lohr1, Danielle Lieske2, Nicola Parry3
1Middle Road Animal Clinic, LLC, Glenshaw, PA, USA, 2IDEXX Laboratories, Westbrook, ME, USA, 3University of Surrey, Guildford, United Kingdom

D-26
AMELOBLASTIC FIBRO-ODONTOMA IN AN OX
Sophia Rosales-Martinez1, Jesus Zavaleta-Hernandez2, Lucia Garcia-Camacho1, Ignacio Rangel-Rodriguez1
1Facultad de Estudios Superiores Cuautitlan. Universidad Nacional Autonoma de Mexico, Cuautitlan, Mexico, 2Laboratorios Tornel, Aguascalientes, Mexico

D-27#
LEPTOMENINGEAL GLIOMATOSIS IN DOGS AND CATS
Vicente Avila Reyes1, Chloe Goodwin1, Sarah Schneider1, Elizabeth Howerton1, Kaori Sakamoto1, Taryn Donovan2, Andrew Miller3, Daniel Rissi1
1University of Georgia, Athens, GA, USA, 2Animal Medical Center, New York, NY, USA, 3Cornell University, Ithaca, NY, USA

D-28*
PARACONIOTHYRIUM CYCLOTHYRIOIDES DERMATITIS IN A DOG AND A CAT
Mayane Facchin, Courteney Meason-Smith, Aline Rodrigues-Hoffmann
Texas A&M University, College Station, TX, USA

D-29*
MUTATIONS IN EXONS 8 AND 11 OF C-KIT IN CANINE SUBCUTANEOUS MAST CELL TUMORS AND THEIR ASSOCIATION WITH OTHER PROGNOSTIC MARKERS
Yue Xiang (Polly) Chen1, Laura Marconato2,3, Silvia Sabattini2, Matti Kielpel1
1Michigan State University Veterinary Diagnostic Laboratory and Department of Pathobiology and Diagnostic Investigation, College of Veterinary Medicine, Lansing, MI, USA, 2Department of Veterinary Medical Sciences, University of Bologna, Bologna, Italy
D-30
ORAL HISTIOCYTIC SARCOMA IN A CAT WITH MANDIBULAR INVASION AND REGIONAL LYMPH NODE METASTASIS
Stephani Ruppert, Sylvia Ferguson, Jason Struthers, Teela Jones
Midwestern University, Glendale, AZ, USA

D-31
ALOBAR HOLOPROSENCEPHALY IN AN ABORTED AMERICAN QUARTER HORSE FETUS
Luan Henker1, Marina Lorenzett1, Manoela Marchezan Piva1, Júlia Wronski1, Danilo Giorgi Abranches de Andrade2, Alexandre Secorun Borges2, David Driemeier1, José Paes de Oliveira-Filho2, Saulo Petinatti Pavarini2
1Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil, 2Universidade Estadual Paulista "Júlio de Mesquita Filho", Botucatu, Brazil

D-32
CLINICAL AND PATHOLOGIC CHARACTERIZATION OF FELINE OCULAR POST-TRAUMATIC LYMPHOMA
Alexandra Harvey1, Vanessa Holly1, Leandro Teixeira2, Richard Dubielzig2, Amy Durham1
1University of Pennsylvania, Philadelphia, PA, USA, 2University of Wisconsin, Madison, Madison, WI, USA

D-33
DIFFUSE COLONIC DILATATION IN A CYNOMOLGUS MACAQUE (MACACA FASCICULARIS)
Michael McKinney, Katherine Shuster, Katherine Gibson-Corley, Christopher Pinelli
Vanderbilt University Medical Center, Nashville, TN, USA

D-34*
IMMUNOHISTOCHEMICAL CHARACTERIZATION OF DUODENAL ADENOCARCINOMA WITH PULMONARY, HEPATIC, AND PARAPATELLAR METASTASES IN A COMMON MARMOSET (CALLITHRIX JACCHUS)
Cornelia Peterson, Jessica Plunkard, Andrew Johanson, Jessica Iuzzi, Joseph Mankowski, Kathy Gabrielson
Johns Hopkins University, School of Medicine, Baltimore, MD, USA

D-35
LIPID KERATOPATHY IN A BOSTON TERRIER
Sarah Milliron, Erin Scott, Lucien Vallone, Laura Bryan
College of Veterinary Medicine & Biomedical Science, Texas A&M University, College Station, TX, USA

D-36*
TYPE-1 DIABETES MELLITUS IN A YOUNG CAT
César Arroyo-Perea, Aline Luna-Sánchez, Rubén Méndez-Medina, Karla Mollinedo-Beltrán
Facultad de Medicina Veterinaria y Zootecnia - Universidad Nacional Autónoma de México, Ciudad de México, Mexico

D-37
BORDETELLA BRONCHISEPTICA PRESENTING AS A FIBRINOUS AND NECROTIZING PLEUROPNEUMONIA IN A RABBIT KIT
Ashleigh Shoemaker, Jessica Herrod, Jessica Iuzzi, Kathleen Gabrielson
Johns Hopkins University, Baltimore, MD, USA

D-38*
A DEEP LEARNING APPROACH TO TUMOR VS. NORMAL DETECTION IN DIGITIZED HISTOPATHOLOGY SLIDES OF HUMAN SOFT TISSUE LEIOMYOSARCOMA
James Cronin, Asmaa Aljuhani, Monika Karera, Xiaoyan Cui, Raghu Machiraju, David Liebner
The Ohio State University College of Medicine, Columbus, OH, USA

D-39*
QUANTIFICATION OF MUCOSAL LYMPHOCYTES IN FELINE SMALL INTESTINAL BIOPSIES USING ARTIFICIAL INTELLIGENCE
Judit Wulcan1, Jonatan Wulcan2, Peter Moore1, Kevin Keel1, Stefan Keller1
1University of California, Davis, Davis, CA, USA, 2Technogarden, Malmö, Sweden

D-40*
COMPARISON OF ANTI-MULLERIAN HORMONE AND INHIBIN IMMUNOLABELING IN CANINE AND EQUINE GRANULOSA CELL TUMORS
Sophie Nelissen, Andrew Miller
Department of Biomedical Sciences, Section of Anatomic Pathology, Cornell University College of Veterinary Medicine, Ithaca, NY, USA

D-41*
A TALE OF TWO BEARS: HISTOLOGIC AND IMMUNOHISTOCHEMICAL FEATURES OF TUMORS OF THE PERIPHERAL NERVOUS SYSTEM IN TWO FREE-RANGING AMERICAN BLACK BEARS (URSUS AMERICANUS)
Deborah Chong1, Robert Bildfell2, Kurt Licence1, Julia Burco2, Colin Gillin3, Peregrine Wolff2, Christiane Lühr1
1Oregon State University, Corvallis, OR, USA, 2Oregon Department of Fish and Wildlife, Corvallis, OR, USA, 3Wildlife Disease Association, Moorpark, CA, USA

D-42*
A PRESumptIVE CASE OF MUCOLIPIDOSIS IN A PIT BULL TERRIER
Rebecca Bacon1, Brian Porter1, Margret Casal2, Petra Werner2, Carmen Lau1
1Texas A&M University College of Veterinary Medicine, College Station, TX, USA, 2University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA, USA

D-43*
SARS-COV-2 INFECTION IN TWO FARMED MINKS (NEOVISON VISON)
Ryan Yaney, Dodd Sledge, Matti Kiupel
Michigan State University Veterinary Diagnostic Laboratory and Department of Pathobiology and Diagnostic Investigation, East Lansing, MI, USA

D-44*
ANGIOSTRONGYLUS CANTONENSIS IN A RED-RUFFED LEMUR
Jessica Rizon1, Ryan Yaney1, Shannon Gonsoulin2, Matti Kiupel1
1Michigan State University Veterinary Diagnostic Laboratory and Department of Pathobiology and Diagnostic Investigation, East Lansing, MI, USA, 2All Creatures Veterinary Hospital, New Iberia, LA, USA

D-45*
TRYPANOSOMA CRUZI INFECTION IN A JUVENILE ASIAN-SMALL-CLAWED OTTER (AONYX CINEREUS) AND A JUVENILE TWO-TOED SLOTH (CHOLEOEPS SPP.)
Samantha Hughes, Brittany Baughman
Mississippi State University College of Veterinary Medicine, Mississippi State, MS, USA

D-46*
GERMAN SHORTHAIRED POINTER DOGS WITH EXFOLIATIVE CUTANEOUS LUPUS ERYTHEMATOSUS DEVELOP IMMUNE-COMPLEX MEMBRANOUS GLOMERULONEPHROPATHY
Hayley Amerman1, Rachel Cianciolo2, Margret Casal1, Elizabeth Mauldin1
1Mississippi State University, College of Veterinary Medicine, Mississippi State, MS, USA, 2University of Tennessee, College of Veterinary Medicine, Knoxville, TN, USA

*All sessions are held in the U.S. central time zone
D-50*
A CASE OF SENNA PLANT (CASSIA OCCIDENTALIS, CASSIA OBTSUSIFOLIA) POISONING IN A 4-MONTH-OLD HEIFER
Ji-Hang Yin1, Leanne Dillard2, David Martinez Rodriguez2, Manuel Chamorro Ortega2, Russell Cattley1
1Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, USA, 2Department of Animal Sciences, Crop, Soil, and Environmental Sciences, Auburn University, Auburn, AL, USA.

D-51*
AN INTRANEURAL PERINEURIOMA IN A DOG
Ji-Hang Yin1, Britanni Sexton2, Maninder Sandey1
1Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, USA, 2Department of Clinical Sciences, Neurology and Neurosurgery Service, College of Veterinary Medicine, Auburn University, Auburn, AL, USA.

D-52*
SALIVARY GLAND CARCINOMA IN A BUCKING BULL
Kayla Alexander, Timothy Morgan, Brittany Baughman
Mississippi State University College of Veterinary Medicine, MS State, MS, USA

D-53*
AMELOBLASTIC FIBRO-ODONTOMA IN A BULL
Kaylin McNulty, Brittany Baughman
Mississippi State University, Starkville, MS, USA

D-54*
MYCOTIC PNEUMONIA AND ENCEPHALITIS IN AN ADULT ALPACA WITH THIRD COMPARTMENT ULCERATION AND CHEILITIS
Marvin Firth, Laura Setyo, Nicola Parry
University of Surrey, Guildford, United Kingdom

D-55*
ADENOVIRUS INFECTION IN RED-TAILED HAWKS (BUTEO JAMAICENSIS) AND A BROAD-WINGED HAWK (BUTEO PLATYPTERUS)
Emma Torii1, Arno Wuenschmann1, Anibal Armien2, Sunil Mor1, Rahul Kumar1, Emma Chalupsky1, Michelle Willette2
1University of Minnesota, Veterinary Diagnostic Laboratory, St. Paul, MN, USA, 2University of California Davis, CA Animal Health and Safety Laboratory (CAHFS), Davis, CA, USA.

D-56**
AN OUTBREAK OF YERSINIA PSEUDOTUBERCULOSIS IN AFRICAN LIONS (PANTHERA LEO) WITH ABERRANT BACTERIAL MORPHOLOGY
Mandy Womble, Megan Cabot, Tara Harrison, Tatiane Terumi Negrão Watanabe
North Carolina State University College of Veterinary Medicine, Raleigh, NC, USA

D-57*
RENAL COCCIDIOSIS CAUSED BY NEPHROISOSPORA EPTESICI IN A CAPTIVE BIG BROWN BAT (EPTESICUS FUSCUS)
Nathan Crilly, Sarah Poynton, Kathleen Gabrielson
Johns Hopkins School of Medicine, Baltimore, MD, USA

D-58*
MIXED MAMMARY TUMORS IN FEMALE NORTHERN GREATER GALAGOS (OTOLEMUR GARNETTI)
Michael McKinney, Katherine Shuster, Carissa Jones, Christopher Pinelli, Katherine Gibson-Corley
Vanderbilt University Medical Center, Nashville, TN, USA

^Competitor for the Pathology of Wildlife and Zoo Animals Award
*Competitor for the Diagnostic Pathology Young Investigator Award

Education Focused Poster Session

ED-1
PILOTING A CLINICAL ENTRUSTMENT SCALE AND FEEDBACK FORM IN AN ACADEMIC MEDICAL CENTER
Erin Burton, Laura Molgaard, Aaron Rendahl
University of Minnesota, St. Paul, MN, USA

ED-2
A SEMI-COLLABORATIVE APPROACH TO MIDTERM AND FINAL EXAMINATIONS IN A CLINICAL PATHOLOGY CORE CURRICULUM COURSE
Maxey Wellman, Jessica Hokamp, Samantha Evans, Mary Jo Burkhard, Jennifer Gonya, Cheryl Ray
College of Veterinary Medicine The Ohio State University, Columbus, OH, USA

ED-3
WOMEN REPRESENTATION AND GENDER EQUALITY IN DIFFERENT ACADEMIC LEVELS IN VETERINARY SCIENCE
Xinyue Liu, Rebecca Dunlop, Rachel Allavena, Chiara Palmieri
School of Veterinary Science, The University of Queensland, Gatton, Australia

ED-4
ONLINE MENDELIAN INHERITANCE IN ANIMALS (OMIA): A REVIEW OF SUSPECTED OR KNOWN INHERITED NEUROLOGIC CONDITIONS IN SHEEP
Leah Manning1,2, Brendon O'Rourke1, Frank Nicholas3, Mark Krockenberger2, Imke Tammen2
1Elizabeth Macarthur Agricultural Institute, Department of Primary Industries, Menangle, NSW, Australia, 2Sydney School of Veterinary Science, The University of Sydney, Camden, NSW, Australia, 3Sydney School of Veterinary Science, The University of Sydney, Camperdown, NSW, Australia

Experimental Disease Focused Poster Session

E-01#
A NOVEL MODEL OF ESTROGEN RECEPTOR-POSITIVE BREAST CANCER BONE METASTASIS WITH ANTIESTROGEN RESPONSIVENESS
Kendall Langsten1, Lihong Shi1, Adam Wilson2, Brian Westwood2, Maria Xie1, Victoria Surratt1, JoLyn Turner1, Ravi Singh1,3, Katherine Cook1,2,3, Bethany Kerr1,3
1Department of Cancer Biology, Wake Forest School of Medicine, Winston-Salem, NC, USA, 2Department of Surgery, Wake Forest School of Medicine, Winston-Salem, NC, USA, 3Wake Forest Baptist Comprehensive Cancer Center, Winston-Salem, NC, USA

*All sessions are held in the U.S. central time zone
E-02#
TARGETING THE STEROL REGULATORY ELEMENT-BINDING PROTEIN PATHWAY IN PANCREATIC DUCTAL ADENOCARCINOMA
Stephanie Myers, Meredith McGuire, Wei Shao, Chune Liu, Theodore Ewachiw, Zeshan Rasheed, William Matsui, Toni Sepalla, Richard Burkhart, Peter Espenshade
Johns Hopkins University, School of Medicine, Baltimore, MD, USA

E-04#
BI-TRANSGENIC CTLA4+/+ - PDC1-/- MOUSE AS A MODEL FOR LONG TERM OUTCOMES IN IMMUNE CHECKPOINT THERAPY
Rachael Wolters, Matthew Fleming, Dev Patel,avid Moslehi, Christopher Pinelli
Vanderbilt University Medical Center, Nashville, TN, USA

E-05*
SYSTEMIC AND RESPIRATORY INFLAMMATORY RESPONSES FROM PREDISPOSING FACTORS OF BOVINE RESPIRATORY DISEASE IN BEEF CALVES
Seyed Saeid Tabatabaei1, DeLen Burrows1, Monica Baquero1, Ksenia Vulikh1, Derek Haley2, Jeff Caswell1
1Department of Pathobiology, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada, 2Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada

E-06
CLINICOPATHOLOGICAL CHANGES IN A MURINE MODEL OF HEPATIC ENCEPHALOPATHY
Milene Rachid
Departamento De Patologia Geral, Instituto De Ciências Biológicas, Universidade Federal De Minas Gerais, Belo Horizonte, Brazil

E-07
TRANSCRIPTOME ANALYSIS OF DUCK AND CHICKEN BRAINS INFECTED WITH AQUATIC BIRD BORNAVIRUS-1 (ABBV-1) DEMONSTRATES DIFFERENTIAL TIMING AND TYPE OF IMMUNE RESPONSE BETWEEN HOSTS
Phuc (John) Pham, Teodora Tockovska, Alexander Leacy, Melanie Iverson, Nicole Ricker, Leonardo Susta
University of Guelph, Guelph, ON, Canada

E-08*
EXPERIMENTAL INFECTION OF AQUATIC BIRD BORNAVIRUS-1 IN CHICKENS
Melanie Iverson1, Alexander Leacy1, Phuc Pham1, Eva Nagy1, Emily Brouwer2, Brandon Lillie1, Leonardo Susta1
1Department of Pathobiology, Ontario Veterinary College, University of Guelph, Guelph, ON, Canada, 2Animal Health Laboratory, University of Guelph, Guelph, ON, Canada

E-09*
KIDNEY INTERCALATED CELLS ACTIVATE INNATE IMMUNE DEFENSES IN RESPONSE TO UROPATHOGENIC ESCHERICHIA COLI
Sarah Linn1,2, Laura Schwartz2, John David Spencer2,3
1The Ohio State University College of Veterinary Medicine, Columbus, OH, USA, 2The Abigail Wexner Research Institute at Nationwide Children’s Hospital, Columbus, OH, USA, 3The Ohio State University College of Medicine, Columbus, OH, USA

E-10*
NEONATAL Rhesus Macaque Model of Tuberculosis AND THE PRESENCE OF INDOLEAMINE 2, 3-DIOXYGENASE
Katherine Turnbull, Eunice Vincent, Peter Didier, Robert Blair, Chad Roy, Lara Doyle-Meyers, Widade Ziani, Huanbin Xu, Ronald Veazey, Xiao Lei Wang
Tulane National Primate Research Center, Covington, LA, USA

E-11*
INFECTING AMBLYOMMA AMERICANUM TICKS WITH CYTAUXZOON FELIS VIA DIRECT INJECTION
Tzushan Yang1, Mason Reichard2, Henry Marr1, Leah Cohn3, Laura Nafe3,4, Nathan Whitehurst1, Adam Birkenheuer1
1North Carolina State University, Raleigh, NC, USA, 2Oklahoma State University, Stillwater, OK, USA, 3University of Missouri, Columbia, MO, USA

E-12^*
PATHOLOGY OF LYMPHOPROLIFERATIVE DISEASE VIRUS INFECTION IN NATURALLY AND EXPERIMENTALLY INFECTED TURKEYS
Chloe Goodwin1,2, Kayla Adcock2, Mark Ruder2, Rebecca Poulson2, Kevin Niedringhaus3, Daniel Mead2, Heather Fenton1, Kevin Keel3, Nicole Nemeth1,2
1Department of Pathology, University of Georgia, Athens, GA, USA, 2Southeastern Cooperative Wildlife Disease Study, Athens, GA, USA, 3Veterinary Medical Teaching Hospital, School of Veterinary Medicine, University of California-Davis, Davis, CA, USA, 4School of Veterinary Medicine, Ross University, Bassetterre, Saint Kitts and Nevis

E-13*
CLINICAL AND MORPHOLOGIC CHARACTERIZATION OF THE CENTRAL NERVOUS SYSTEM OF MICE INFECTED WITH VARIOUS STRAINS OF CHIKUNGUNYA VIRUS
Jonathan Nagel1,2, Audrey Knight3, Elizabeth Anderson1, Hannah Atkins1,3, Stephanie Montgomery1,3, Victoria Baxter1,3
1Division of Comparative Medicine, University of North Carolina, Chapel Hill, NC, USA, 2Department of Population Health and Pathobiology, North Carolina State University, Raleigh, NC, USA, 3Department of Pathology and Laboratory Medicine, University of North Carolina, Chapel Hill, NC, USA

E-14*
DEVELOPMENT OF OCULAR PATHOLOGY IN A CANINE MODEL OF MUCOPOLYSACCHARIDOSIS IIIB
Ariel Nenninger1, Tyler Harm1, Bethann Valentine1, N. Ellinwood2, Jodi Smith1
1Iowa State University, Ames, IA, USA, 2National MPS Society, Durham, NC, USA

E-15*
DOES BLUEBERRY POLLEN PREDISPOSE HONEY BEES TO EUROPEAN FOULBROOD DISEASE?
Ivanna Kozii1, Igor de Mattos1, Melanie Roulin1, Sarah Wood2, Colby Klein1, Michael Zabrodski1, Mohsen Sharafi1, Jenna Thebeau1, Dana Liebe1, Jessica Debruyne1, Brandele Brown1, Fatima Masood1, Laura Cohn2, Laura Sobchisin1, Igor Moshynskyi1, Meghan Millbrath2, Robyn McCallum2, Marta Guarna2, Patricia Wolf Veiga3, Eric Gerbrandt4, Elemir Simko1
1University of Saskatchewan, Saskatoon, SK, Canada, 2Michigan State University, East Lansing, MI, USA, 3Atlantic Tech Transfer Team for Apiculture, Perennia, NS, Canada, 4Agriculture and Agri-Food Canada, Beaverlodge, AB, Canada, 5National Bee Diagnostic Centre, Beaverlodge, AB, Canada, 6British Columbia Blueberry Council, Abbotsford, BC, Canada
E-16
DISCOVERY PROTEOMICS FOR THE DETECTION OF MARKERS FOR ERADICATION OF INFECTION IN AN EXPERIMENTAL MODEL OF EQUINE SEPTIC ARTHRITIS USING LC-MS/MS
Roman Koziy, Joe Bracamont, Seiji Yoshimura, Paulos Chumala, George Katselis, Elemir Simko
University of Saskatchewan, Saskatoon, SK, Canada

E-17*
CONTINUOUS ANTIBIOTIC ADMINISTRATION AMELIORATES COLITIS IN AN IL10 KNOCKOUT IBD MOUSE MODEL
Viju Vijayan Pillai, Shiyu Li, Lavanya Reddivari, Abigail Cox
Purdue University, West Lafayette, IN, USA

E-18*
ALTERATION OF COLONIC MUCIN GLYCOSYLATION AND CYTOKINE EXPRESSION IN SWINE DySENTRY
Susanne Je-Han Lin, Emme Helm, Nicholas Gabler, Eric Burrough Iowa State University, Ames, IA, USA

E-19*
EQUINE ALVEOLAR MACROPHAGES AND BLOOD MONOCYTE-DERIVED MACROPHAGES RESPOND DIFFERENTLY TO BARN DUST-ANALOGUE CHALLENGE
Heng Kang, Gary Lee, Dorethie Bienenz, Janet Beeler-Marfisi University of Guelph, Department of Pathobiology, Ontario Veterinary College, Guelph, ON, Canada

E-20*
UPREGULATED INFLAMMATORY PATHWAYS IN THE SPINAL CORD OF SIV-INFECTED MACAQUES
Kathleen Mulka, Suzanne Queen, Audrey Knight, Lisa Mangus, Sarah Beck, Megan McCarron, Clarisse Solis, Carlo Colantuoni, Joseph Mankowski
1Johns Hopkins University, Baltimore, MD, USA, 2University of North Carolina, Chapel Hill, NC, USA

E-21*
THE ROLE OF THE CLOSTRIDIUM PERFRINGENS AGR-LIKE QUORUM SENSING (QS) SYSTEM IN A MOUSE MODEL OF GAS GANGRENE
Mauricio Navarro, Jihoong Li, Juliann Beengisser, Bruce McClane, Francisco Uzal
1University of California, Davis, San Bernardino, CA, USA, 2Texas A&M University, College Station, TX, USA

E-22*
PATHOGENESIS OF AQUATIC BIRD BORNAVIRUS-1 (ABBV-1) IN PEKIN DUCKS
Fernanda Ampuero, Alexander Leacy, Phuc Pham, Eva Nagy, Brandon Lillie, Pauline Delnatte, Leonardo Susta
1University of Guelph, Guelph, ON, Canada, 2Toronto Zoo, Toronto, ON, Canada

E-23
A DEEP LEARNING MODEL FOR QUANTIFICATION OF RETINAL ATROPHY IN A RAT MODEL OF BLUE LIGHT-INDUCED RETINAL DAMAGE
Christian Löhrl, Typhaine Lejeune, Virginie Piccicuto, Lindsey Smith, Aleksandra Zuraw
1Oregon State University, Corvallis, OR, USA, 2Charles River Montreal ULC, Montreal, QC, Canada, 3Aiforia Technologies Oy, Helsinki, Finland, 4Charles River Laboratories Inc., Frederick, MD, USA

E-24
ARE DETOXIFICATION ENZYMES INDUCED SIMILARLY ACROSS HONEY BEE CASTES IN RESPONSE TO NEONICOTINOID EXPOSURE?
Ivanna Kozi, Sarah Wood, Colby Klein, Michael Zabrodski, Jenna Thebeau, Melanie Roulin, Dana Liebe, Igor de Mattos, Mohsen Sharafi, Larhonda Sobchishin, Igor Moshynsky, Maud Ferrari, Elemir Simko
University of Saskatchewan, Saskatoon, SK, Canada

E-25*
ALPHA-HEMOLYSIN-MEDIATED VASCULAR INJURY AND CUTANEOUS HYPOXIA CONTRIBUTE TO THE DEVELOPMENT OF STAPHYLOCOCCUS AUREUS-INDUCED DERMONECROSIS
Ching Yang, Frank Robledo-Avila, Santiago Partida-Sanchez, Christopher Montgomery
1Center for Microbial Pathogenesis, Abigail Wexner Research Institute at Nationwide Children's Hospital, Columbus, OH, USA, 2Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University, Columbus, OH, USA, 3Department of Pediatrics, College of Medicine, The Ohio State University, Columbus, OH, USA

*All sessions are held in the U.S. central time zone

Industrial and Toxicologic Pathology Focused Poster Session

T-01*
CHARACTERIZATION OF RESISTANCE TO PRMT5 INHIBITOR THERAPY IN MANTLE CELL LYMPHOMA
1The Ohio State University Department of Veterinary Biosciences, Columbus, OH, USA, 2The Ohio State University Wexner Medical Center, Columbus, OH, USA, 3Prelude Therapeutics, Wilmington, DE, USA

T-02*
MECHANISMS OF THE COXIELLA BURNETII WHOLE CELL VACCINE REACTOGENIC RESPONSE
Alycia Fratzke, Erin Van Schaik, James Samuel
1Texas A&M University, College Station, TX, USA, 2Texas A&M Health Science Center, Bryan, TX, USA

T-03*
DO FUNGICIDES INCREASE THE INCIDENCE OF EUROPEAN FOLIOOD DISEASE IN HONEY BEES DURING BLUEBERRY POLLINATION?
Jenna Thebeau, Dana Liebe, Sarah Wood, Alyssa Cloet, Igor Moshynsky, Larhonda Sobchishin, Ivanna Kozi, Colby Klein, Igor Medici de Mattos, Michael Zabrodski, Melanie Roulin, Fatima Masood, Brandele Brown, Mateo Castano Ospina, Lara Reitsma, Jessica Debruyne, Mohsen Sharafi, Meghan Milbrath, Geoff Wilson, Marta Guarna, Patricia Wolf Veiga, Eric Gerbrandt, Antonio Ruzzini, Elemir Simko
1Western College of Veterinary Medicine, Saskatoon, SK, Canada, 2Michigan State University, East Lansing, MI, USA, 3Government of Saskatchewan, Prince Albert, SK, Canada, 4Agriculture and Agri-Food Canada, Beaverlodge, AB, Canada, 5Grand Prairie Regional College, Beaverlodge, AB, Canada, 6British Columbia Blueberry Council, Delta, BC, Canada

T-04*
BIO-CHROMATOGRAPHY FOR THE MAPPING OF HIV NEURAL TISSUE AND BRAIN SLICES
Ivanna Kozi, Sarah Wood, Colby Klein, Michael Zabrodski, Jenna Thebeau, Melanie Roulin, Dana Liebe, Igor de Mattos, Mohsen Sharafi, Larhonda Sobchishin, Igor Mosby, Maud Ferrari, Elemir Simko
University of Saskatchewan, Saskatoon, SK, Canada
T-05#*
THIAMETHOXAM TOXICITY IS DEPENDENT ON THE AGE AND CASTE OF HONEY BEES (APIS MELLIFERA)
Ivanna Kozii, Sarah Barnsley, Marina Bezerra, Sarah Wood, Colby Klein, Igor de Mattos, Michael Zabrodski, Jenna Thebeau, Roney Silva, Claudia Fabela, Ihor Dvilyuk, Maud Ferrari, Elemir Simko
University of Saskatchewan, Saskatoon, SK, Canada

T-06*
ASSESSMENT OF GENOTOXIC DNA DAMAGE IN DOGS FROM A HIGH POLLUTED AREA IN ITALY
Davide De Biase, Valeria Baldassarre, Giuseppe Piegari, Ilaria d’Aquino, Francesco Prisco, Serenella Papparella, Orlando Paciello
Department of Veterinary Medicine and Animal Production, University of Naples “Federico II”, Naples, Italy

T-07*
CANCER TREATMENT INDUCED COGNITIVE IMPAIRMENT AND NEUROINFLAMMATION IN MICE
Kimberly Demos-Davies, Allison Rogich, Jessica Lawrence, Davis Seelig
University of Minnesota, Saint Paul, MN, USA

T-08#*
MODELING HUMAN PROSTATE CANCER METASTASIS IN MICE VIA RESECTION OF SUBCUTANEOUS ALLOGRAFTS
Lauren Peiffer, Angelo De Marzo, Karen Sfanos, Janielle Maynard
Johns Hopkins University School of Medicine, Baltimore, MD, USA

N-01*
EX VIVO IDENTIFICATION OF NATURALLY OCCURRING PRECLINICAL LESIONS OF OSTEOCHONDRITIS DISSECSANS BY MORPHOLOGICAL AND QUANTITATIVE 10.5T MRI IN PIGS
Alexandra Armstrong1, Stefan Zbyni2, Gregory Metzger1, Jutta Ellermann1,2, Cathy Carlson1, Ferenc Toth1
1Department of Veterinary Clinical Sciences, University of Minnesota, St. Paul, MN, USA, 2Center for Magnetic Resonance Research, University of Minnesota, St. Paul, MN, USA, 3Department of Radiology, University of Minnesota, St. Paul, MN, USA

N-02
SEVERE PNEUMONIA AND MYOCARDITIS CAUSED BY SARS-COV-2 INFECTION IN A CAT WITH HYPERTROPHIC CARDIOMYOPATHY
Francisco Carvalho1, Mathias Martins2, Lok Joshi2, Leonardo Caserta2, Patrick Mitchell2, Thomas Cecere1, Sandy Hancock1, Erin Goodrich2, Julia Murphy1, Diego DieI2
1Virginia Tech, Blacksburg, VA, USA, 2Cornell University, Ithaca, NY, USA, 3Virginia Department of Health, Richmond, VA, USA

N-04
REVIEW OF NEOPLASIA IN THE ALIMENTARY TRACT OF CAPTIVE BEARDED DRAGONS (POGONA SPP)
Elise LaDouceur1,2, Alexandria Argue1, Michael Garner2
1Joint Pathology Center, Silver Spring, MD, USA, 2Northwest ZooPath, Monroe, WA, USA

N-05*
HISTOPATHOLOGICAL SUBTYPING, MOLECULAR AND VIRAL CHARACTERIZATION OF EQUINE GENITAL AND PERIOCULAR SQUAMOUS CELL CARCINOMAS
Kevin O’Brien1, Alejandro Suárez-Bonnet1, Tim Makr2, Hardeep Mudhari1, Patricia Pesavento1, Simon Priestnall1
1Department of Pathobiology and Population Sciences, The Royal Veterinary College, Hatfield, United Kingdom, 2Bell Equine Veterinary Clinic, Maidstone, United Kingdom, 3National Specialist Ophthalmic Pathology Service (NSOPS), Royal Hallamshire Hospital, Sheffield, United Kingdom, 4School of Veterinary Medicine, UC Davis, Davis, CA, USA

N-06*
INvolvement of Felis Catus Papillomavirus Type 2 in the Tumorigenesis of Feline Merkel Cell Carcinoma
Soma Ito1, James Chambers1, Ayumi Sumi1, Nanako Yamashita-Kawanishi1, Tetsuo Omachi2, Takeshi Haga1, Hiroyuki Nakayama1, Kazuyuki Uchida1
1University of Tokyo, Tokyo, Japan, 2Diagnostic Laboratory Patho Labo, Shizuoka, Japan

N-07*
STEPHANOFLARIAL DERMATITIS IN CATTLE FROM TEXAS
Clinson Lui1, Matthew Kulp1, Guilherme Verocai2, Erin Edwards2, Dominique Wiener1, Raquel Rech1
1Texas A&M University, College Station, TX, USA, 2Texas A&M Veterinary Medical Diagnostic Laboratory, College Station, TX, USA

N-08**
SYSTEMIC AVIAN Poxvirus Infections Associated with the B1 Subclade of Canarypox Virus
Devinn Sinnott1,2, Jennifer Burchell2, Carmel Witte1, Rachel Burns3, Steven Kubiski2
1University of California, Davis, Davis, CA, USA, 2San Diego Zoo Wildlife Alliance, San Diego, CA, USA

N-09
HISTOLOGIC FINDINGS IN EQUINE TEETH SUBMITTED FROM AN EQUINE REFERRAL HOSPITAL
Sarah Cudd1, Brian Murphy3, James Brown3, Charles Schwarten1, Elise LaDouceur3
1Joint Pathology Center, Silver Spring, MD, USA, 2UC Davis School of Veterinary Medicine, Davis, CA, USA, 3Virginia Tech, Marion DuPont Scott Equine Medical Center, Leesburg, VA, USA

N-10
Lack of the Reported Gene Mutations of Congenital Immunodeficiency in Two Juvenile Dogs with Fatal Bacterial Infections and Systemic Lymphoid Depletion
Ikki Mitsui1, Chika Inoue1, Akiko Uemura3, Md Islam4, Osamu Yamato2
1Okayama University of Science, Imabari, Japan, 2Japan Small Animal Medical Center, Tokorozawa, Japan, 3Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan, 4Kagoshima University, Kagoshima, Japan

N-11**
HISTOLOGIC LESIONS OF CESTOPHIASIS IN OCTOPUSES
Daniel Finnegan1, Michael Murray2, Salvatore Frasca, Jr1, Michael Garner1, Elise LaDouceur1,4
1Joint Pathology Center, Silver Spring, MD, USA, 2Monterey Bay Aquarium, Monterey, CA, USA, 3Connecticut Veterinary Medical Diagnostic Laboratory, University of Connecticut, Storrs, CT, USA, 4Northwest ZooPath, Monroe, WA, USA
N-12*  A NOVEL IDIOPATHIC HEPATITIS SYNDROME IN TEN HORSES
FROM INDIANA
Patrick Huang1,2, Margaret Miller1, Janice Kritchevsky1, Carla
Olave1, Sandra Taylor1
1 Purdue University, West Lafayette, IN, USA, 2 NIH Comparative
Biomedical Scientist Training Program, Bethesda, MD, USA

N-13  GROSS AND MICROSCOPIC PATHOLOGY OF WHITE SPOTTED
LIVER IN WILD EUROPEAN RABBITS IN THE UNITED KINGDOM
Diana Bochyńska, Sheelagh Lloyd, Olivier Restif, Katherine Hughes
University of Cambridge, Cambridge, United Kingdom

N-14*  HEMATOPOIETIC ROUND CELL NEOPLASIA IN AXOLOTLS
(AMBYSTOMA MEXICANUM); A MAJOR CAUSE OF MORTALITY
IN A CAPTIVE POPULATION
Ming Lo1, Peter DiGeronimo2, Megan Caudill1, Marley Iredale1,
Bryce Miller1, Nicolette Aquilino2, Robert Ossiboff1
1 University of Florida, Gainesville, FL, USA, 2 Adventure Aquarium,
Camden, NJ, USA

N-15  AN OUTBREAK OF CHLAMYDIOSIS IN CRITICALLY
ENDANGERED CAPTIVE BREEDING PUERTO RICAN PARROTS
(AMAZONA VITTATA)
H.L. Shivaprasad1, Karine Laroucau2, Rachid Aaziz2, Fabien
Vorimore2, Chiara Palmieri3
1 California Animal Health and Food Safety Laboratory System -
Tulare Branch, University of California, Davis, Tulare, CA, USA,
2 Anses, Animal Health Laboratory, Bacterial Zoonoses Unit,
Maisons-Alfort, France, 3 School of Veterinary Science, The
University of Queensland, Gatton, Australia

N-16  PATHOLOGICAL FINDINGS ASSOCIATED TO MICROFILARIAE IN
HOWLER MONKEYS (ALOUATTA SP.)
Juliana Guerra1, Ticiana Eervedosa1, Eduardo Ferreira-Machado1,2,
Pedro Enrique Suarez1,2, Alessandra dos Santos1,2, Isis de Jesus1,
Ana Carolina de Carvalho1, Ketlyn Figueiredo1, José Díaz-
Delgado1, Natália Fernandes1,2
1 Instituto Adolfo Lutz, São Paulo, Brazil, 2Universidade de São
Paulo, São Paulo, Brazil, 3 Texas A&M Veterinary Medical Diagnostic
Laboratory, College Station, TX, USA

N-17^  PREVALENCE AND DISEASE ASSOCIATION OF
AMBDOPARVOVIRUS INFECTION IN RED PANDAS (AILURUS
FULGENS)
Charles Alex1, Steven Kubiski2, Kenneth Jackson1, Raymund Wack1,
Michael Garner1, Patricia Pesavento2
1 School of Veterinary Medicine, University of California, Davis,
Davis, CA, USA, 2 San Diego Zoo Wildlife Alliance, San Diego, CA,
USA, 3 Northwest ZooPath, Monroe, WA, USA

N-18  MANNHEIMIA HAEMOLYTICA RESPIRATORY DISEASE IN
MATURE DAIRY COWS
DeLenn Burrows1, Cynthia Miltenburg2, Andrew Brooks2, Jeff
Caswell1
1 Department of Pathobiology, Guelph, ON, Canada, 2 Ontario
Ministry of Agriculture, Food and Rural Affairs, Guelph, ON,
Canada, 3 Animal Health Lab, Guelph, ON, Canada

N-19^  SPONTANEOUS DISEASES IN CAPTIVE CAPYBARAS
(HYDROCHEROUS HYDROCHAERIS)
Dallas Clontz, Alexander Aceino, Sharman Hoppes, Laura Bryan,
Brian Porter, Raquel Rech
Texas A&M University, College Station, TX, USA

N-20  PYTHIOSIS: AN EMERGING DISEASE OF DOGS IN TRINIDAD
AND TOBAGO
Karelma Frontera-Acevedo1, Lana Gyan2, Stacy Rajh1, Rod Suepaul1,
Devina Supersad1, Alissa Bally1, Indira Pargass1
1 University of the West Indies, St. Augustine, Trinidad and Tobago,
2 Caribbean Veterinary Diagnostics, St. Augustine, Trinidad and
Tobago

N-21  RNA-SEQ REVEALS THE CELL OF ORIGIN OF T-ZONE
LYMPHOMA TO BE AN ACTIVATED T-CELL
Evan Conaway, Kelly Hughes, Emily Garrison, Lauren Harris, Anne
Avery
Colorado State University, Fort Collins, CO, USA

N-22^*  MORTALITY EVENTS IN PASSERINES ASSOCIATED WITH
SALMONELLA ENTERICA TYPE B SEROVAR TYPHIMURIUM IN
THE SOUTHEASTERN UNITED STATES
Rebecca Radisic1,2, Caitlin Burrell1, Melanie Kunkel1, Alisia
Weyna1,2, Susan Sanchez2, Mark Rudier1, Sonia Hernandez1,2,
Nicole Nemeth1,2
1 Southeastern Cooperative Wildlife Disease Study, Athens, GA,
USA, 2 University of Georgia, Athens, GA, USA

N-23^*  KLEBSIELLA PNEUMONIAE-ASSOCIATED NECROSUPPURATIVE
LYMPHADENITIS AND PERITONITIS IN JUVENILE RACCOONS
Zoe Mack, Elizabeth Buckles, Elena Demeter
Cornell University College of Veterinary Medicine, Ithaca, NY, USA

N-24^*  HEPATIC HEMOSIDEROSIS IN CAPTIVE ENDANGERED PYGMY
RABBITS (BRACHYLAGUS IDAHOENSIS): A PILOT STUDY AND
PROPOSED HEPATIC IRON GRADING SCHEME
Jessica Wong, Gay Lynn Clyde, Lisa Shipley, Patricia Talcott, Laura
White
Washington State University, Pullman, WA, USA

N-25*  COMPLEX FETLOCK BREAKDOWNS IN CALIFORNIA
RACEHORSES
Monika Samol1, Susan Stover2, Rick Arthur3, Francisco Uzal3
1 California Animal Health and Food Safety Laboratory, University
of California, Davis, San Bernardino, CA, USA, 2 J.D. Wheat
Veterinary Orthopedic Research Laboratory, Veterinary Medicine
Teaching Hospital, University of California, Davis, CA, USA,
3 Veterinary Medicine Teaching Hospital, University of California,
Davis, Davis, CA, USA

N-26^*  A SURVEY OF PATHOLOGY IN 26 CAPTIVE MEXICAN GRAY
WOLVES (CANIS LUPUS BAILEYI) FROM ARIZONA, 2016-2021
Jennifer Buczek, Jason Struthers
Animal Health Institute, Department of Pathology and Population
Medicine, Midwestern University, Glendale, AZ, USA
N-27
A RETROSPECTIVE STUDY OF MYOCARDITIS IN 19 PUPPIES
Chaunte Lewis, Victoria Watson
Michigan State University, East Lansing, MI, USA

N-28*
TRAUTOMATIC FINDINGS IN POSTMORTEM INVESTIGATIONS OF ROADKILL WILD MAMMALS OF BRAZIL
Pedro Navas-Suárez, José Díaz-Delgado, Débora Yogui, Mario Alves, Mayara Grego Caiapá, Julia Ferraz Cereda, Marina Pellegrino da Silva, Maurício Candido da Silva, Marta Cremer, Patrícia Medici, Arnaud Desbiez, José Catão-Dias
1Laboratório de Patologia Comparada de Animais Selvagens, Departamento de Patologia, Faculdade de Medicina Veterinária e Zootecnia, Universidade de São Paulo, São Paulo, Brazil, 2Texas A&M Veterinary Medical Diagnostic Laboratory, College Station, TX, USA, 3Instituto de Conservação de Animais Silvestres, Campo Grande, Brazil, 4Museu de Anatomia Veterinária, Faculdade de Medicina Veterinária e Zootecnia, Universidade de São Paulo, São Paulo, Brazil, 5Laboratório de Ecologia e Conservação de Tetrápodes Marinhos e Costeiros, Universidade da Região de Joinville, São Francisco do Sul, Brazil, 6Instituto de Pesquisas Ecológicas (IPE), Nazaré Paulista, Brazil

N-29*
IMPROVING METHODS OF CONTROL OF AMERICAN FOULBROOD IN HONEY BEES IN SASKATCHEWAN
Michael Zabrodski, Geoff Wilson, Igor Moshynsky, Mohsen Sharafi, Lara Reitsma, Mateo Castano Ospina, Jessica DeBruyne, Alexandra Wentzell, Sarah Wood, Ivanna Kozii, Colby Klein, Jenna Thebeau, Fatima Masood, Igor Medici de Mattos, Alyssa Cloet, Brande Brown, Melanie Roulin, Dana Liebe, LaRhonda Sobchishin, Tasha Epp, Antonio Ruzzini, Elemir Simko
1Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, 2Ministry of Agriculture, Government of Saskatchewan, Prince Albert, SK, Canada

N-30*
HISTIOCYTIC AND NEUTROPHILIC HEPATITIS: A NOVEL FORM OF CHRONIC CANINE HEPATITIS
Andeliene Croce, John Cullen
North Carolina State University, Raleigh, NC, USA

N-31*
‘FELINE TRIADITIS’: A RETROSPECTIVE HISTOPATHOLOGICAL ANALYSIS
Belen Hernandez, Hailey Devries, Lauren McKeen, Shankumar Mooyottu
Iowa State University, Ames, IA, USA

N-32*
HISTOCHEMICAL, IMMUNOHISTOCHEMICAL AND ULTRASTRUCTURAL COMPARISON OF BOVINE, FELINE AND OPOSSUM GLOBULE LEUKOCYTES
Alisha Muscatwala, Elizabeth Howerth
University of Georgia, Athens, GA, USA

N-33*
DIAGNOSTIC IMMUNOHISTOCHEMISTRY OF CANINE GLIOMA
Gregory Krane, Carly O’Dea, David Malarkey, Andrew Miller, C. Miller, Debra Tokarz, Heather Jensen, Kyathanahalli Janardhan, Keith Shockley, Christopher Mariani
1North Carolina State University, College of Veterinary Medicine, Raleigh, NC, USA, 2National Institute of Environmental Health Sciences, National Toxicology Program, Research Triangle Park, NC, USA, 3Charles River Laboratories, Shrewsbury, MA, USA, 4Charles River Laboratories, PAI, Durham, NC, USA, 5Cornell University, College of Veterinary Medicine, Ithaca, NY, USA, 6University of Alabama, Birmingham, School of Medicine, Birmingham, AL, USA, 7Experimental Pathology Laboratories, Research Triangle Park, NC, USA, 8Integrated Laboratory Systems, Research Triangle Park, NC, USA, 9Abbvie, North Chicago, IL, USA

N-35*
RETROSPECTIVE ANALYSIS OF MYCOBACTERIOSIS IN AQUARIUM HOUSED ELSMOBRANCHS
Mari Inohana, Kaoru Nagaya, Tsuneihisa Komatsu, Sakiko Kubo, Yoshiaki Tanaka, Keisuke Kondo, Takeshi Komine, Kentarou Tomaru, Kentarou Ono, Shinpei Wada
1Nippon Veterinary and Life Science University, Tokyo, Japan, 2Shinagawa Aquarium, Tokyo, Japan, 3Shimane Aquarium, Shimane, Japan, 4Marine World Uminonakamichi, Fukuoka, Japan

N-36*
PREVALENCE AND MICROSCOPE FINDINGS OF PARELAPHOSTRONGYLUS TENUIUS IN FREE-RANGING CERVIDS IN NORTH DAKOTA AND TENNESSEE
Michelle Liu, Richard Gerhold, Nickolus Stahlman, Denae LoBato
University of Tennessee, Knoxville, TN, USA

N-37*
IMMUNE RESPONSE TO CHLAMYDIA SPP. INFECTION IN THE MALE AND FEMALE REPRODUCTIVE SYSTEM IN KOALAS (PHASCOLARCTOS CINEREUS)
Sara Pagliarani, Stephen Johnston, Kenneth Beagley, Chiara Palmieri
1School of Veterinary Science, The University of Queensland, Gatton, Australia, 2School of Agriculture and Food Science, The University of Queensland, Gatton, Australia, 3School of Biomedical Sciences, Faculty of Health, Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Australia

N-38*
PATHOLOGY OF EPTESIPOX VIRUS IN NATURALLY INFECTED BIG BROWN BATS
Ursula Perdrizet, Janet Hill, Champika Fernando, Trent Bollinger, Vikram Misra
1Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, 2Canadian Wildlife Health Cooperative Western/Northern Region, Saskatoon, SK, Canada

N-39*
MOLECULAR AND MORPHOLOGIC CHARACTERIZATION OF FUNGAL ENCEPHALITIS IN DOGS SUBMITTED TO NEW YORK STATE DIAGNOSTIC LABORATORY FROM 1996-2020
Cristy Rocío González Barrientos, Andrew David Miller, Courtney Meason-Smith, Aline Rodrigues Hoffmann, Eric Glass, James Hammond, Elena Alina Demeter
1Cornell University College of Veterinary Medicine, Ithaca, NY, USA, 2College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX, USA, 3Red Bank Veterinary Hospital, Tinton Falls, NJ, USA, 4Pieper Memorial Veterinary Center, Middletown, CT, USA

*All sessions are held in the U.S. central time zone
N-40*
BOVINE ASTROVIRUS AND ITS POTENTIAL ROLE IN BOVINE LYMPHOCYTIC ENCEPHALITIS
Dominique Comeau¹, Maria Spinato², Robert Foster¹, Davor Ojkic², Jan Sargeant¹, Jeff Caswell¹
¹Ontario Veterinary College, Guelph, ON, Canada, ²Animal Health Laboratory, Guelph, ON, Canada

N-41*
DESCRIPTIVE COMPARISON OF INDIVIDUAL HIVE AND YARD-LEVEL SAMPLING TECHNIQUES FOR SPORES OF PAENIBACILLUS LARVAE IN SASKATCHEWAN HONEY BEE OPERATIONS WITH RECENT OUTBREAKS OF AMERICAN FOULBROOD
Michael Zabrodski¹, Jessica DeBruyne¹, Geoff Wilson², Igor Moshynskyyy¹, Mohsen Sharafi¹, Sarah Wood¹, Ivanna Kozii¹, Jenna Thebeau¹, Colby Klein¹, Igor Medici de Mattos¹, LaRhonda Sobchishin¹, Tasha Epp¹, Antonio Ruzzini¹, Elemir Simko¹
¹Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada, ²Ministry of Agriculture, Government of Saskatchewan, Prince Albert, SK, Canada

N-42*
IMMUNOHISTOCHEMICAL CHARACTERIZATION OF THE IMMUNE RESPONSE IN CANINE CHRONIC HEPATITIS: IS THERE A CANINE IMMUNE-MEDIATED HEPATITIS?
Brittany Rasche, John Cullen
North Carolina State University, Raleigh, NC, USA
^Competitor for the Pathology of Wildlife and Zoo Animals Award
*Competitor for the Natural Disease Young Investigator Award