



**Combined Annual Meeting | October 17-21, 2015**  
**Minneapolis Convention Center and Hyatt Regency Minneapolis Hotel**

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**ACVP thanks the following for supporting Student Chapter Travel Awards:**

- **Mike and Kimberly Topper**
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**William J. Reagan, Armando R. Irizarry Rovira, Dennis B. DeNicola,  
Authors of *Veterinary Hematology: Atlas of Common Domestic and  
Non-Domestic Species 2nd Edition.***



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To reduce paper usage, speaker and poster abstracts, session evaluations, and links to meeting-related surveys are all online at [www.toxpath.org/am2015/materials.asp](http://www.toxpath.org/am2015/materials.asp) and [www.acvp.org](http://www.acvp.org).

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# Combined Annual Meeting Overview

## Saturday, October 17

8:00 AM–12:00 Noon	STP Pre-Meeting CE Course 1: All Eyes Focused on Ocular Toxicology and Pathology
8:00 AM–5:00 PM	ACVP Primate Pathology Pre-Meeting Workshop: Non-human Primate Genetics and Geography: Impact on Study Design, Interpretation, and Results
8:00 AM–5:00 PM	ASVCP and STP CFIG Combined Pre-Meeting Workshop: Application of New Renal and Hemostatic Biomarkers in Veterinary Medicine and Preclinical Safety: What Can We Learn from Each Other?
8:00 AM–5:00 PM	C.L. Davis Foundation Pre-Meeting Workshop: The Life (and Death) Aquatic
9:00 AM–4:30 PM	NTP Satellite Symposium: Pathology Potpourri
1:30 PM–5:30 PM	STP Pre-Meeting CE Course 2: The Use of Pigs in Biomedical Research
5:15 PM–6:15 PM	ACVP Career Session: Job Searching 2.0: Using Social Media and Connections to Find Your Right Job
5:30 PM–7:30 PM	Trainee Mixer
6:00 PM–8:00 PM	ASVCP Education Forum for Discussion: Clinical Pathology in the DVM Curriculum
7:00 PM–8:30 PM	Opening Reception, Exhibits, Silent Auction

## Sunday, October 18

8:00 AM–12:00 Noon	ACVP, ASVCP, and STP Combined Career Development Session: Visualizing Pathology Data
8:00 AM–12:00 Noon	ASVCP Education Symposium: Biomarkers in Veterinary Clinical Pathology
8:00 AM–12:00 Noon	Concurrent Session I: Diagnostic Veterinary Dermatopathology
8:00 AM–12:00 Noon	Natural Disease Focused Scientific Session I
8:00 AM–12:00 Noon	STP and Industrial and Toxicologic Pathology Focused Scientific Session
9:30 AM–4:30 PM	Exhibits and Silent Auction
9:30 AM–4:30 PM	Focused Scientific Poster Session and ACVP Veterinary Student Posters
12:00 Noon–1:30 PM	Veterinary Pathology Resident/Trainee Luncheon
12:00 Noon–4:00 PM	ASVCP Veterinary Laboratory Professionals Session I
12:15 PM–1:15 PM	Emerging Disease Focused Seminar: Corona Virus
1:30 PM–4:30 PM	Clinical Pathology Focused Scientific Session I
1:30 PM–5:00 PM	Diagnostic Pathology Focused Scientific Session I
1:30 PM–5:00 PM	Experimental Disease Focused Scientific Session I
1:30 PM–5:00 PM	Natural Disease Focused Scientific Session II
1:30 PM–5:00 PM	STP Focused Topic Scientific Session 1: Functional Anatomy and Physiology of Skin
4:30 PM–6:00 PM	ASVCP Business Meeting
5:15 PM–6:00 PM	ACVP Business Meeting
6:15 PM–7:30 PM	Combined ACVP and STP Town Hall Meeting: Core and Specialized Skill Sets for Veterinary Pathologists: An Interactive Town Hall Meeting on Future Needs
7:30 PM–9:30 PM	ACVP-STP Mystery Slide Review Session: Skin

## Monday, October 19

8:00 AM–12:00 Noon	ACVP/ASVCP/STP Combined Plenary Session: Biomarkers
8:00 AM–12:00 Noon	ASVCP Veterinary Laboratory Professionals Session II
9:30 AM–1:00 PM	Exhibits and Silent Auction
9:30 AM–1:00 PM	Focused Scientific Poster Session and ACVP Veterinary Student Posters
12:15 PM–3:00 PM	Latin Comparative Pathology Group Presents
1:30 PM–3:30 PM	ASVCP-STP Case Discussion Session
1:30 PM–4:30 PM	Community Outreach Activity (CO-Act)
1:45 PM–3:00 PM	Meet the Pathologists: A Discussion of Careers in Pathology
3:00 PM–5:00 PM	Veterinary Student and Resident Forum
5:00 PM–6:30 PM	C.L. Davis Foundation Reception
5:15 PM–7:45 PM	ASVCP Reception
5:30 PM–7:00 PM	IDEXX Reception
7:00 PM–9:30 PM	Mystery Slide Review and Neuropathology Case Presentations

## Tuesday, October 20

7:00 AM–8:00 AM	ACVP Past Presidents Breakfast
8:00 AM–12:00 Noon	Clinical Pathology Focused Scientific Session II
8:00 AM–12:00 Noon	Concurrent Session II: Genetically Engineered Large Animals
8:00 AM–12:00 Noon	Education Focused Scientific Session: Resident Training
8:00 AM–12:00 Noon	Mini-Symposium: Forensic Pathology
8:00 AM–12:00 Noon	STP Focused Topic Scientific Session 2: Pathology and Mechanisms of Skin Injury
8:15 AM–12:00 Noon	ASVCP Veterinary Laboratory Professionals Session III
9:30 AM–3:30 PM	Exhibits and Silent Auction
9:30 AM–3:30 PM	Focused Scientific Poster Session and ACVP Veterinary Student Posters
12:00 Noon–12:30 PM	Forensic Pathology Poster Session
12:00 Noon–2:00 PM	Helpful Advice or Disparaging Critic? Your Role as a Peer Reviewer for Manuscripts in Toxicologic Pathology and Veterinary Pathology
1:30 PM–5:00 PM	ASVCP and STP Mystery Slide Case Session
1:30 PM–4:50 PM	Diagnostic Pathology Focused Scientific Session II
1:30 PM–5:00 PM	Experimental Disease Focused Scientific Session II
1:30 PM–5:00 PM	STP Focused Topic Scientific Session 3: Models of Skin Disease
5:15 PM–6:00 PM	STP Business Meeting
6:00 PM–7:00 PM	IATP Business Meeting
6:15 PM–7:30 PM	ACVP and STP Combined Awards and Recognition Event
7:45 PM–10:00 PM	Presidents' Reception

## Wednesday, October 21

7:00 AM–8:00 AM	STP Past Presidents Breakfast
8:00 AM–12:00 Noon	Concurrent Session III: Pathology of Avian/Exotics
8:00 AM–12:00 Noon	Concurrent Session IV: Flow Cytometry and Clonality Assays in Diagnostic Hematopathology
8:00 AM–12:00 Noon	Mini-Symposium II: Medical Device Pathology
8:00 AM–12:00 Noon	STP Focused Topic Scientific Session 4: Case Studies of Cutaneous Toxicity, Direct and Systemic
1:00 PM–5:00 PM	ACVP/ASVCP/STP Post-Meeting Workshop I: Case-Based Molecular Pathology: State-of-the-Art
1:00 PM–5:00 PM	Post-Meeting Workshop II: Mouse Central Nervous System Neuropathology





# Welcome...

to the first ever ACVP/ASVCP/STP Combined Annual Meeting. Highlighted below, the meeting is packed with scientific content sure to provide something for everyone while also offering abundant intersocietal opportunities for networking and collaboration.

## Saturday

The meeting kicks off Saturday with three Pre-Meeting Workshops, two STP Pre-Meeting CE Courses, and the ever popular NTP Satellite Symposium.

**STP Pre-Meeting CE Course 1:** All Eyes Focused on Ocular Toxicology and Pathology

**ACVP Pre-Meeting Workshop:** Non-human Primate Genetics and Geography: Impact on Study Design, Interpretation, and Results

**ASVCP and STP CFIG Combined Pre-Meeting Workshop:** Application of New Renal and Hemostatic Biomarkers in Veterinary Medicine and Preclinical Safety: What Can We Learn from Each Other?

**C.L. Davis Foundation Pre-Meeting Workshop:** The Life (and Death) Aquatic

**NTP Session:** Pathology Potpourri

**STP Pre-Meeting CE Course 2:** The Use of Pigs in Biomedical Research

## Sunday

Sunday morning, ACVP, ASVCP, and STP team up to present the Career Development Session, "Visualizing Pathology Data." ACVP and STP team up to bring the Industrial and Toxicologic Pathology Focused Scientific Session (FSS). The ASVCP Education Symposium begins with, "Biomarkers in Veterinary Clinical Pathology." The ACVP program on Sunday includes FSS's in Natural Disease, Diagnostic Pathology, Clinical Pathology, Experimental Disease, the first Concurrent Session, "Diagnostic Veterinary Dermatopathology," and the Emerging Disease Session. The STP Focused Topic Sessions on skin begin with an afternoon session, "Functional Anatomy and Physiology of Skin." Sunday concludes with an ACVP/STP Mystery Slide Conference on skin.

## Monday

The ACVP/ASVCP/STP Combined Plenary Session, "Biomarkers," co-chaired by Bob Dunstan, Elizabeth Howerth, and Anne Provencher will discuss what biomarkers are, the types of biomarkers that are currently being developed, and what it takes to validate them for regulatory approval. The much anticipated ACVP/STP Neuropathology Mystery slide session will be held Monday evening.

## Tuesday

STP education programming continues with the second and third sessions on Skin, "Pathology and Mechanisms of Skin Injury" and "Models of Skin Disease." ACVP presents the second Concurrent Session, "Genetically Engineered Large Animals" and the first Mini-symposium, "Forensic Pathology." ACVP will also have Focused Scientific Sessions in Natural Disease, Experimental Disease, and Education. The Education FSS will have a special focus this year on Residency Training. The final ACVP/ASVCP Clinical Pathology FSS will be held Tuesday afternoon.

## Wednesday

Wednesday morning, the STP scientific sessions will conclude with, "Case Studies of Cutaneous Toxicity, Direct and Systemic." ACVP and ASVCP will have a Concurrent Session, "Flow Cytometry and Clonal Assays in Diagnostic Hematopathology." There will also be an ACVP Concurrent Session, "Pathology of Avian and Exotic Animals" and a Mini-Symposium, "Medical Device Pathology." The meeting will conclude Wednesday afternoon with two post meeting workshops:

**ACVP/ASVCP/STP:** Case-Based Molecular Pathology: State-of-the-Art

**ACVP Focused Group:** Mouse Central Nervous System Neuropathology

It's been great fun to organize the educational content for this ACVP/ASVCP/STP Combined Annual Meeting. We hope that you enjoy this unique meeting and the opportunities for learning and synergizing with our colleagues.

**Kelli Boyd**

2015 ACVP Meeting Chair

**Dimitry Danilenko**

2015 STP Meeting Chair

**Laura Snyder**

2015 ASVCP Meeting Chair

# 2015 ACVP and ASVCP Committees

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### Program Chair

*Kelli L. Boyd, DVM, PhD\**

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## Focused Scientific Groups

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### Focused Scientific Group Co-Chair and Awards Chair

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*Niraj K. Tripathi, DVM\**

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*Melissa D. Sanchez, VMD, PhD\**

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*Oded Foreman, DVM\**

*Mihai Gagea, DVM, DVSc\**

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*Daniel R. Rissi, DVM, PhD\**

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*Tracy Stokol, BVSc, PhD\**  
*Linda Vap, DVM\**

## ACVP Council Recognition

The following Council Members will soon be ending their terms. The Council extends its gratitude to these dedicated volunteers.

**Anne M. Barger, DVM\***  
**Cory Brayton, DVM, DACLAM\***

## ACVP Council

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### President-Elect

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## Board Members

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## Secretary

*Mark Johnson, DVM*

## Treasurer

*Jennifer Johns, DVM, PhD\**

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\* ACVP Diplomate



# 2015 STP Committees

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**Secretary-Treasurer: Rani Sellers, DVM, PhD, DACVP**  
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Eli Lilly & Company

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(ASC Co-Chair) University of Michigan Medical School

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National Institute of Environmental Health Sciences

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(2015 Scientific Co-Chair) Drug Development Preclinical  
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## 2015 Scientific Program Committee

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# ACVP | ASVCP | STP

Combined Annual Meeting | October 17–21, 2015

[www.acvp.org](http://www.acvp.org) | [www.asvcp.org](http://www.asvcp.org) | [www.toxpath.org](http://www.toxpath.org)

## ACVP and ASVCP Committee Meetings

The following ACVP and ASVCP committee meetings are scheduled at the Combined Annual Meeting.

### Friday, October 16

8:00 AM–5:00 PM	<b>ACVP Council</b> Room 202A, Minneapolis Convention Center
3:00 PM–9:00 PM	<b>ASVCP Executive Board</b> Lake Harriet, Hyatt Regency Hotel (4 <sup>th</sup> floor)

### Saturday, October 17

8:00 AM–5:00 PM	<b>ACVP Council</b> Room 202A, Minneapolis Convention Center
8:00 AM–4:00 PM	<b>ASVCP Executive Board</b> Lake Harriet, Hyatt Regency Hotel (4 <sup>th</sup> floor)
12:00 Noon–1:30 PM	<b>ACVP Council and ASVCP Executive Board Meeting</b> Skyway A, Hyatt Regency Hotel (2 <sup>nd</sup> floor)
12:00 Noon–2:00 PM	<b>Veterinary Pathology Editors Luncheon</b> Greenway A, Hyatt Regency Hotel (2 <sup>nd</sup> floor)
4:00 PM–6:00 PM	<b>ASVCP Executive Board and Committees</b> Lakeshore A, Hyatt Regency Hotel (Lobby Level)
5:00 PM–8:00 PM	<b>ACVP Education Committee</b> Lakeshore B, Hyatt Regency Hotel (Lobby Level)
6:00 PM–9:00 PM	<b>ACVP Exam Committee</b> Lake Harriet, Hyatt Regency Hotel (4 <sup>th</sup> floor)
8:00 PM–9:00 PM	<b>ASVCP Education Committee</b> Greenway A, Hyatt Regency Hotel (2 <sup>nd</sup> floor)

### Sunday, October 18

6:30 AM–8:00 AM	<b>ASVCP Regulatory Affairs Committee</b> Lakeshore C, Hyatt Regency Hotel (Lobby Level)
7:00 AM–8:00 AM	<b>ASVCP Web and Social Outreach Committee</b> Greenway D, Hyatt Regency Hotel (2 <sup>nd</sup> floor)
8:00 AM–9:30 AM	<b>Veterinary Pathology Editorial Board Meeting</b> Skyway A, Hyatt Regency Hotel (2 <sup>nd</sup> floor)
8:00 AM–5:00 PM	<b>ACVP Council</b> Room 202A, Minneapolis Convention Center
12:00 Noon–1:30 PM	<b>Veterinary Clinical Pathology Editorial Board Meeting</b> Lakeshore B, Hyatt Regency Hotel (Lobby Level)
2:30 PM–3:30 PM	<b>Council and Education Committee Meeting</b> Lakeshore A, Hyatt Regency Hotel (Lobby Level)
7:30 PM–9:00 PM	<b>ACVP Council and STP Executive Committee Dinner</b> Lakeshore B, Hyatt Regency Hotel (Lobby Level)

### Monday, October 19

7:00 AM–8:00 AM	<b>ASVCP Program Committee</b> Skyway A, Hyatt Regency Hotel (2 <sup>nd</sup> floor)
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7:00 AM–8:00 AM

#### **ASVCP Quality Assurance and Standards Committee**

Lakeshore B, Hyatt Regency Hotel (Lobby Level)

7:00 AM–8:00 AM

#### **ACVP Certifying Examination Board**

Greenway A, Hyatt Regency Hotel (2<sup>nd</sup> floor)

7:00 AM–8:00 AM

#### **ACVP Council and Exam Committee Meeting**

Regency Room, Hyatt Regency Hotel (2<sup>nd</sup> floor)

7:00 AM–8:00 AM

#### **ACVP Training Program Committee**

Mirage, Hyatt Regency Hotel (2<sup>nd</sup> floor)

7:00 AM–9:00 AM

#### **ACVP Member Relations Committee**

Greenway F, Hyatt Regency Hotel (2<sup>nd</sup> floor)

12:15 PM–1:15 PM

#### **ACVP Development Committee**

Skyway A, Hyatt Regency Hotel (2<sup>nd</sup> floor)

12:15 PM–1:15 PM

#### **ACVP Lifelong Learning Committee**

Greenway A, Hyatt Regency Hotel (2<sup>nd</sup> floor)

12:15 PM–1:15 PM

#### **ACVP Online Publication Task Force**

Lakeshore A, Hyatt Regency Hotel (Lobby Level)

### Tuesday, October 20

7:00 AM–8:00 AM

#### **ASVCP Veterinary Laboratory Professionals Program Committee**

Lakeshore B, Hyatt Regency Hotel (Lobby Level)

7:00 AM–8:00 AM

#### **Awards Committee**

Greenway A, Hyatt Regency Hotel (2<sup>nd</sup> floor)

7:30 AM–12:00 Noon

#### **ACVP Strategy Workshop**

Lake Harriet, Hyatt Regency Hotel (4<sup>th</sup> floor)

8:00 AM–12:00 Noon

#### **ACVP Council**

Room 202A, Minneapolis Convention Center

12:00 Noon–1:30 PM

#### **ACVP Strategy Workshop Debriefing Luncheon**

Lakeshore A, Hyatt Regency Hotel (Lobby Level)

12:00 Noon–1:30 PM

#### **ACVP/STP Coalition for Veterinary Pathology Business Luncheon**

Lakeshore B, Hyatt Regency Hotel (Lobby Level)

1:30 PM–3:30 PM

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

Skyway A, Hyatt Regency Hotel (2<sup>nd</sup> floor)

2:00 PM–5:00 PM

#### **ACVP Council**

Executive Boardroom, Hyatt Regency Hotel (4<sup>th</sup> floor)

3:00 PM–4:00 PM

#### **Certification Examination Board**

Lakeshore B, Hyatt Regency Hotel (Lobby Level)

### Wednesday, October 21

7:00 AM–8:00 AM

#### **Focused Scientific Groups Meeting**

Regency Room, Hyatt Regency Hotel (2<sup>nd</sup> floor)

8:00 AM–12:00 Noon

#### **ACVP Council**

Room 202A, Minneapolis Convention Center



## STP Committee Meetings

The following STP committee meetings are scheduled at the Combined Annual Meeting.

### Saturday, October 17

*All Saturday meetings will be held at the Hyatt Regency Hotel*

1:00 PM–6:00 PM **Executive Committee Meeting**  
Lakeshore C (Lobby Level)

### Sunday, October 18

*All Sunday meetings will be held at the Hyatt Regency Hotel*

12:00 Noon–1:30 PM **INHAND Minipig Working Group**  
Greenway A (2<sup>nd</sup> floor)

7:30 PM–9:00 PM **ACVP Council and STP Executive Committee Dinner**  
Lakeshore B (Lobby Level)

### Monday, October 19

*All Monday meetings will be held at the Hyatt Regency Hotel*

6:10 AM–8:00 AM **Clinical Pathology Interest Group**  
Greenway E (2<sup>nd</sup> floor)

6:30 AM–7:45 AM **Environmental Toxicologic Pathology Interest Group**  
Greenway D (2<sup>nd</sup> floor)

7:00 AM–7:30 AM **INHAND Global Editorial and Steering Committee (GESC)**  
Greenway C (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **Fundraising Committee**  
Greenway G (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **Newsletter Committee**  
Greenway H (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **Education Committee**  
Greenway I (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **Internet Committee**  
Greenway J (2<sup>nd</sup> floor)

7:30 AM–9:00 AM **INHAND GESC/OWG Chairs Joint Meeting**  
Greenway C (2<sup>nd</sup> floor)

12:00 Noon–1:00 PM **Joint Education-Based Committee**  
Greenway G (2<sup>nd</sup> floor)

12:00 Noon–1:30 PM **Scientific and Regulatory Policy Committee**  
Greenway H (2<sup>nd</sup> floor)

1:30 PM–2:30 PM **Committee Chairs/Executive Committee**  
Greenway D (2<sup>nd</sup> floor)

2:30 PM–6:00 PM **Executive Committee Meeting**  
Greenway D (2<sup>nd</sup> floor)

### Tuesday, October 20

*All Tuesday meetings will be held at the Hyatt Regency Hotel*

6:30 AM–8:00 AM **Neuropathology Interest Group**  
Greenway DE (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **CDOC Career Development Subcommittee**  
Greenway I (2<sup>nd</sup> floor)

7:00 AM–8:00 AM **Membership Committee**  
Greenway J (2<sup>nd</sup> floor)

7:00 AM–9:00 AM **Cardiovascular Toxicologic Pathology Interest Group**  
Greenway H (2<sup>nd</sup> floor)

8:00 AM–9:00 AM **CDOC Student Interactions Subcommittee**  
Greenway I (2<sup>nd</sup> floor)

12:00 Noon–1:00 PM **INHAND Non-Rodent Working Group Chairs**  
Greenway I (2<sup>nd</sup> floor)

12:00 Noon–1:30 PM **ACVP/STP Coalition for Veterinary Pathology Business Luncheon**  
Lakeshore B (Lobby Level)

12:00 Noon–2:00 PM **2016 Annual Symposium Committee**  
Greenway J (2<sup>nd</sup> floor)

12:00 Noon–2:00 PM **Career Development and Outreach Committee**  
Greenway H (2<sup>nd</sup> floor)

1:30 PM–3:30 PM **ACVP/STP Coalition for Veterinary Pathology Fellows Board of Governors Meeting**  
Skyway A (2<sup>nd</sup> floor)

### Wednesday, October 21

*All Wednesday meetings will be held at the Hyatt Regency Hotel*

7:00 AM–8:00 AM **INHAND Rabbit Working Group**  
Lake Calhoun (4<sup>th</sup> floor)

7:00 AM–8:00 AM **Reproductive Pathology Interest Group**  
Lake Harriet (4<sup>th</sup> floor)

8:00 AM–9:00 AM **CDOC Advocacy Subcommittee**  
Lake Minnetonka (4<sup>th</sup> floor)

8:00 AM–10:00 AM **INHAND NHP Working Group**  
Executive Boardroom (4<sup>th</sup> floor)

12:15 PM–1:15 PM **Executive Committee Leadership Meeting**  
Executive Boardroom (4<sup>th</sup> floor)





## ACVP/ASVCP Awards

### ACVP/AAVLD Diagnostic Pathology Travel Award

The American College of Veterinary Pathologists (ACVP) and the American Association of Veterinary Laboratory Diagnosticians (AAVLD) encourage trainees in veterinary pathology to participate in the Annual Meetings of both organizations. The Seventh Annual ACVP/AAVLD Diagnostic Pathology Travel Award is available to graduate students and/or residents in veterinary pathology for travel to and participation in the Annual Meeting of the AAVLD. The recipient will be awarded a \$1,000 grant from the ACVP to help defray travel and lodging costs associated with attending the AAVLD Annual Meeting. The recipient will be granted a waiver for the AAVLD meeting registration fee. The recipient will be announced at the ACVP and STP Combined Awards and Recognition Event on Tuesday, October 20, from 6:15 pm–7:30 pm in Room 101A.

#### ACVP/AAVLD Diagnostic Pathology Travel Award Judges

Giselle Cino-Ozuna, DVM\*; Rob Foster, BVSc, PhD\*; Nancy Stedman, DVM, PhD\*

### ACVP Young Investigator Awards

The Young Investigator Award Poster Competition encompasses four categories: diagnostic pathology, experimental disease, industrial and toxicologic pathology, and natural disease. Each of these categories will have monetary awards of \$500 for first place, \$300 for second place, and \$200 for third place. Judging will take place at the Annual Meeting.

The Young Investigator Award winners' names will be announced at the ACVP and STP Combined Awards and Recognition Event on Tuesday, October 20, from 6:15 pm–7:30 pm in Room 101A. Winners are asked to come to the front of the room for a photo after the event.

Recipients of the 2015 Young Investigator Awards are asked to display their posters in the Exhibit Hall B Foyer on Wednesday, October 21, from 8:00 am–12:00 noon. Poster boards will be provided for the display.

### Young Investigator Award Judges

#### Diagnostic Pathology

Tom Cecere, DVM, PhD\*; Ingeborg Langohr, DVM, PhD\*; John Ragsdale, DVM, PhD\*; Duncan Russell, BVMS(Hons)\*

#### Experimental Disease

Matti Kiupel, DrVetMed, PhD\*; Richard Luong, BVSc\*; Melissa Schutten, DVM, PhD\*; Josh Webster, DVM, PhD\*

#### Industrial and Toxicologic Pathology

Basel T. Assaf, BVSc, PhD\*; Lisa Berman-Booty, VMD, PhD; Danielle L. Brown, DVM\*; Tracy Carlson, BS, DVM, PhD\*; Vinicius S. Carreira, DVM, PhD\*; Mary E. Carsillo, DVM, PhD\*; Beth Chaffee, DVM, PhD\*; L. Wayne Dochterman, DVM\*; Rodney K. Frank, DVM, PhD\*; Lisa Lanigan, BS, DVM, PhD\*; Keith G. Nelson, DVM, PhD\*; Aaron M. Sargeant, DVM, PhD\*; Leah Schutt, DVM, DVSc\*; Sarah H. Tannehill-Gregg, DVM, PhD\*; Lyn Miller Wancket, DVM, PhD\*; Bevin Zimmerman, DVM, PhD\*

#### Natural Disease

Dale Agnew, DVM\*; Dharani K. Ajithdoss, BVSc, MVSc, PhD\*; Patrick Caplazi, DVM, PhD\*; James Stanton, DVM, PhD\*

#### Alternate Judges

Patty Pesavento, DVM, PhD\*; Nicholas Robinson, BVSc, PhD\*

\*ACVP Diplomate

# Awards

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Combined Annual Meeting | October 17-21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

## ASVCP Lifetime Achievement Award

The ASVCP Lifetime Achievement Award, established in 2004, recognizes members of the Society who have contributed to the advancement of the field of veterinary clinical pathology. The award is presented at our Annual Meeting. A call for nominations for the award is put out to ASVCP members. This year, in order to mark the occasion of the ASVCP's 50th anniversary, awards are being presented to two Society members who have significantly contributed, in different fields, to the advancement of veterinary clinical pathology.

### Dr. Alan H. Rebar

Nominated by: Marlyn Whitney



Dr. Alan H. Rebar received his DVM degree and his PhD from Purdue University and is a diplomate from the American College of Veterinary Pathologists. He is the Senior Associate Vice President for Research and Executive Director of

Discovery Park at Purdue University. His *curriculum vitae* and letters of support provide ample evidence of a stellar career, including his tremendous teaching accomplishments, his fostering of ties between academic and non-academic institutions, and his advancement into administrative duties. His many and varied achievements in the practice and promotion of veterinary clinical pathology make him uniquely deserving of the award. His *curriculum vitae* is strong evidence of his many far-reaching contributions. The positive effects he has had on many members of our Society, the impact of his tremendous professional achievements, and the high regard in which he is held by his colleagues are unanimously recognized. Early in his career he envisioned where clinical pathology could go as a specialty, and he has worked and continues to work tirelessly to bring his vision to fruition. Al Rebar is unquestionably a hard worker, and he successfully challenges others to follow his example and thus to achieve their potential, whatever it may be. Our Society and our specialty could ask for no better practitioner, promoter, supporter, and friend than Alan Rebar.

### Dr. Robert L. Hall

Nominated by: Anne Provencher



Dr. Robert L. Hall received his DVM degree from The Ohio State University and his PhD from Colorado State University, and he is a diplomate from the American College of Veterinary Pathologists. He is a senior Clinical Pathologist at Covance Laboratories. Dr. Hall

spent most of his professional career with Covance Laboratories and remained, at the same time, adjunct assistant professor in the Department of Pathobiology at the School of Veterinary Medicine, University of Wisconsin-Madison. Dr. Hall has been a true pioneer in the field of toxicologic/laboratory animal clinical pathology. Throughout his career and many achievements, he made the pharmaceutical industry aware of the unique added-value that veterinary clinical pathology can provide to preclinical sciences and drug development. Bob's talent, charisma, and endless dedication to toxicologic clinical pathology enabled this specialty to be recognized as a most valuable expertise by a large scientific community.

Having spent all his career advancing toxicologic and laboratory animal clinical pathology, and by doing so creating a specialty now recognized as one of the most valuable scientific assets in drug development, as a true educator, as a pioneer, and as a wonderful mentor, it is a true honor for the ASVCP to award Dr. Robert L. Hall the Lifetime Achievement Award.

## ASVCP Young Investigator Award

The ASVCP presents a \$500 Young Investigator Award to the resident or graduate student whose oral platform presentation is judged best among the competing presentations. Eligibility requirements include a degree in veterinary medicine and enrollment in a residency or graduate program in pathology/clinical pathology or a related discipline. The oral presentation must describe original work of the competitor involving clinical or experimental research that relates to clinical pathology. Award selection is determined by an independent panel of judges and is based on the scientific content, abstract composition, clarity of presentation, and



the contestant's ability to answer questions. The recipient of the ASVCP Young Investigator Award will be announced at the start of the ASVCP and STP Mystery Slide Case Session on Tuesday, October 20 at 1:30 pm in Room 101F.

### Judges

Melinda Camus, DVM\*; Carolyn Grimes, DVM\*;  
Florence Poitout, DVM\*; Lila Ramaiah, DVM, PhD\*

### Society of Toxicologic Pathology Student Poster Award

The Society of Toxicologic Pathology (STP) is pleased to announce the Tenth Annual STP Student Poster Award to encourage students to pursue careers in the field of Toxicologic Pathology. The 2015 recipient will receive free registration plus \$1,000 to be used for lodging and travel to the 2016 STP Annual Meeting, which will take place June 26–30 in San Diego, California, and may be asked to present the poster at that meeting.

To be eligible to compete for this award, students must have obtained a degree in veterinary medicine and be enrolled in a residency or graduate program in toxicologic pathology/general pathology/clinical pathology or a related discipline. The abstract must describe original work of the competitor involving clinical or experimental research that relates to industrial and/or toxicologic pathology. The content may include *in vitro* or *in vivo* studies. The award selection will be determined by an independent panel of judges and will be based on the scientific content, composition of the poster, clarity, and the presenter's ability to answer questions. Trainees in clinical and/or morphologic pathology are encouraged to apply for the award.

The award will be given to the veterinary resident or graduate student whose poster is judged best among up to five finalists at the 2015 ACVP/ASVCP/STP Combined Annual Meeting. The 2015 applicant should follow the guidelines for application for the ACVP Young Investigator Award in Industrial and Toxicologic Pathology to be eligible for this award.

The recipient will be announced at the ACVP and STP Combined Awards and Recognition Event on Tuesday, October 20, from 6:15 pm–7:30 pm in Room 101A.

### STP Student Poster Award Judges

Basel T. Assaf, BVSc, PhD\*; Lisa Berman-Booty, VMD, PhD; Danielle L. Brown, DVM\*; Tracy Carlson, BS, DVM, PhD\*; Vinicius S. Carreira, DVM, PhD\*; Mary E. Carsillo, DVM, PhD\*; Beth Chaffee, DVM, PhD\*; L. Wayne Dochterman, DVM\*; Rodney K. Frank, DVM, PhD\*; Lisa Lanigan, BS, DVM, PhD\*; Keith G. Nelson, DVM, PhD\*; Aaron M. Sargeant, DVM, PhD\*; Leah Schutt, DVM, DVSc\*; Sarah H. Tannehill-Gregg, DVM, PhD\*; Lyn Miller Wancket, DVM, PhD\*; Bevin Zimmerman, DVM, PhD\*

### Veterinary Student Poster Awards

For the 11th year in a row, ACVP is offering an award for veterinary students, which requires submission of an abstract followed by a quality poster presentation of pathology-related research work or clinical case material. The posters will be judged by the Student Chapter Committee representatives during the Annual Meeting. There will be two awards this year, one for an experimental disease poster and one for a clinical case report/series. A monetary prize of \$250 will go to the recipients (for group entries, the award is split among members) with another award of \$250 to the recipients' ACVP-recognized Student Chapter. Awards will be announced at the ACVP and STP Combined Awards and Recognition Event on Tuesday, October 20 from 6:15 pm–7:30 pm in Room 101A. Candidates are encouraged to attend!

Veterinary Student poster abstracts are available on the ACVP website at [www.acvp.org](http://www.acvp.org) and on the mobile app.

### Veterinary Student Poster Award Judges

#### Experimental Disease

Aline Rodrigues Hoffmann, DVM, PhD\*; Kathleen Kelly, DVM, PhD\*; Bruce LeRoy, DVM, PhD\*; Keith G. Nelson, DVM, PhD\*; Kim Newkirk, DVM, PhD\*; Nicholas Robinson, BVSc, PhD\*

#### Clinical Series/Case Report

Aline Rodrigues Hoffmann, DVM, PhD\*; Kathleen Kelly, DVM, PhD\*; Bruce LeRoy, DVM, PhD\*; Keith G. Nelson, DVM, PhD\*; Kim Newkirk, DVM, PhD\*; Nicholas Robinson, BVSc, PhD\*

\*ACVP Diplomate



# Awards

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Awards

## Toxicologic Pathology Best Paper Awards

### Best Paper Award for Original Manuscript

***Formation, Clearance, Deposition, Pathogenicity, and Identification of Biopharmaceutical-Related Immune Complexes: Review and Case Studies***

Jennifer L. Rojko, Mark G. Evans, Shari A. Price, Bora Han, Gary Waine, Mark DeWitte, Jill Haynes, Bruce Freimark, Pauline Martin, James T. Raymond, Winston Evering, Marlon C. Rebelatto, Emanuel Schenck, and Christopher Horvath

### Best Paper Award for Invited Review/Review

***HIV Treatment and Associated Mitochondrial Pathology: Review of 25 Years of In Vitro, Animal, and Human Studies***

Kristian Gardner, Peter A. Hall, Patrick F. Chinnery, and Brendan A.I. Payne

## Society of Toxicologic Pathology Student Travel Awards

**Elijah Edmondson**  
Colorado State University

**Said Elshafae**  
The Ohio State University

**Jessica Fortin**  
Université de Montréal

**Evan Frank**  
University of Cincinnati

**Sally Henderson**  
The Ohio State University

**Lauren Himmel**  
The Ohio State University

**Charlotte Hollinger**  
Michigan State University

**Raj Maganti**  
Tufts University

**Erin Quist**  
North Carolina State University

**Douglas Snider**  
Michigan State University

**Wachiraphan Supsavhad**  
The Ohio State University

## Society of Toxicologic Pathology Student Poster Award

**Ashley Klein, BS**

University of Pennsylvania School of Veterinary Medicine

***The Effect of PI3K Gamma KD and PI3K Delta KD on Intestinal Lesions in Mice with DSS-Induced Colitis***

The Ninth Annual STP Student Poster Award competition occurred at the concurrent meetings of the ACVP and ASVCP held in Atlanta, Georgia on November 8-12, 2014. The poster presentations were evaluated by a panel of judges comprised of members of the Society of Toxicologic Pathology and the American College of Veterinary Pathologists.

## IATP Charles Capen Trainee Award

**Elijah Edmondson**  
Colorado State University

***Tumor Induction in Mice After Localized Single- or Fractionated-Dose Irradiation: Differences in Tumor Histotype and Genetic Susceptibility Based on Dose Scheduling***

## STP/TEPSS Student Award

**Monica Langley**  
Iowa State University

***Preclinical Efficacy Testing of the Mitochondria-Targeted Antioxidant Mitoapocynin in the Transgenic Mitopark Mouse Model of Chronic Dopaminergic Neurodegeneration***

## Society of Toxicologic Pathology Young Investigator Awards

The 2015 STP Young Investigator Award winners will be announced at the ACVP and STP Combined Awards and Recognition Event in Room 101A at 6:15 pm on Tuesday, October 20.



## STP 2015 Lifetime Achievement Award

The Society of Toxicologic Pathology (STP) Lifetime Achievement Award is given to a member in good standing who has played critical and influential roles in the area of toxicologic pathology and has made significant contributions for 20 years or more. Achievement may be demonstrated by a body of work in any or all of the following areas: scientific discovery, education, regulatory standards, or service to the Society of Toxicologic Pathology.



The STP is proud to honor **Samuel M. Cohen, MD, PhD** as the recipient of the 2015 STP Lifetime Achievement Award. Dr. Cohen received his BS, MD, and PhD degrees from the University of Wisconsin. He is a board certified pathologist and has served as staff pathologist at

St. Vincent Hospital and up to an Associate Professor at the University of Massachusetts Medical School. He was visiting professor with Dr. Nobuyuki Ito in Nagoya, Japan. He was recruited to the University of Nebraska Medical Center, where he has served as Professor, Vice Chairman and Chairman of the Department of Pathology and Microbiology, as well as Havlik-Wall Professor of Oncology.

In addition to his academic and service roles, Dr. Cohen has made seminal discoveries in toxicologic pathology. He was one of the first scientists to fully grasp the critical role of cell proliferation in mutagenesis and carcinogenesis. His research on saccharin led to its down classification by IARC and removal from the NTP List of Carcinogens. Dr. Cohen is one of the most highly sought experts in chemical safety, including drug safety, with extensive knowledge regarding PPAR  $\alpha$  and  $\gamma$  agonists amongst several other drug classes. Likewise, he has international expertise in urinary bladder pathology and carcinogenesis. He has served on Editorial Boards as a reviewer and Associate Editor for multiple journals and has received several honors and awards from professional societies. He has and continues to serve on multiple Advisory Panels, including: International Life Science Institute (ILSI) - Health and Environmental Sciences Institute Board of Trustees (HESI), 2001–present; Chairman, 2006–2008;

ILSI Board of Trustees, 2007–present; Chairman, 2012–2015; National Institute of Environmental Health Sciences (NIEHS) (2008–2013) and National Toxicology Programs (2002–2004) Boards of Scientific Counselors; WHO-IPCS, Expert Panel on Carcinogens, 1999–2006; Expert Panel of the Flavors and Extracts Manufacturers Association, 2002–present; as well as numerous committees and panels with NIH, EPA, FDA, WHO, IARC, IPCS, and various other national and international scientific organizations. His career has clearly impacted regulatory decision making, bringing more science into the risk assessment and human relevance of various toxicologic findings.

Dr. Cohen has been a member of STP since 1990 and he served on the Organizing Committee for the 2009 STP Annual Symposium. He has also served on STP Committees for Membership, Awards, and Nominations; and is currently an Associate Editor of the Society's journal, *Toxicologic Pathology*, since 2005. Based on a lifetime of significant achievement and contributions to the field of toxicologic pathology, the STP is pleased to recognize Samuel M. Cohen as the 2015 Lifetime Achievement Awardee.

## STP 2015 Outstanding Mentor Award

The Society of Toxicologic Pathology (STP) Outstanding Mentor Award is given to a member in good standing who has played a significant role in the training of toxicologic pathologists. The award is intended for individuals who have mentored pathologists as part of formal training programs as well as individuals who have consistently provided informal coaching or instruction.



The STP is proud to honor **Thomas J. Rosol, DVM, PhD, DACVP** as recipient of the 2015 STP Outstanding Mentor Award. Dr. Rosol has been instrumental in the training of numerous toxicologic pathologists, as well as contributing to many other educational activities for the STP. He is currently Professor in the Department of Veterinary Biosciences at the Ohio State University and Senior Advisor for Life Sciences to the Office of Technology Commercialization

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and Knowledge Transfer. During his tenure at the Ohio State University, Dr. Rosol has a longstanding research program funded by the NIH. He has served in multiple academic and administrative roles, including dean of the College of Veterinary Medicine and Vice President for Research. He has always maintained a strong dedication to his students and their graduate education.

Dr. Rosol provides invaluable expertise in toxicologic pathology of the endocrine, bone, and reproductive systems, supporting numerous educational venues for both students and seasoned professionals alike; however, it is his support of graduate education of pathology trainees, resulting in the generation of investigatory (toxicologic) pathologists, that is his most significant contribution.

Graduate education leading to a PhD is a demanding responsibility, which is important to the continued excellence of our profession, creates a vibrant intellectual environment in which testable hypotheses can be pursued, and is challenging from a funding standpoint reflecting both the cost of state-of-the-art biomedical research and the highly competitive funding arena. We measure student success based upon publications emanating from their dissertation research, extramural fellowships awarded to support these endeavors, national awards made in recognition of the quality of student accomplishments, and the subsequent career progression. These successes are unquestionably the achievement of the student – performed within an environment created by a skilled mentor. Required is the ability to recruit talent and resist the temptation to micromanage. The successful mentor must allow the student to experience both the success and failure that are keys to developing a sense of project ownership. Tom Rosol is such a mentor. All in all, he has served as the mentor of nearly two dozen PhD candidates (19 completed and four current) and more than 20 postdoctoral fellows – many of whom play important roles in toxicologic pathology and are members of the STP and/or ESTP. His trainees have become effective and important contributors within pharmaceutical companies, contract research organizations, and academia. The diversity of professional roles his trainees have indicates that he trains pathologists with the type of broad-based skills that enable them to adapt as needed. In addition, several

of his trainees have had significant leadership roles either within their company or within the STP. Dr. Rosol's guidance and mentorship were imperative in developing their leadership capabilities and their commitment to professional organizations such as the STP.

While possessing the qualities essential to a mentor, Dr. Rosol also embraces the vision and goals of the Society of Toxicologic Pathology. In doing so, he inspires his students and colleagues to build upon their talents and grow personally and professionally, stimulating their careers and promoting the field of toxicologic pathology. As such, the STP is pleased to recognize Dr. Thomas Rosol as the 2015 Outstanding Mentor Awardee.

## STP 2015 Distinguished Early Career Award

The Society of Toxicologic Pathology (STP) Distinguished Early Career Award is given to a member in good standing who has made significant, early career advances in toxicologic pathology. The award is intended for young investigators (within 10 years of residency/postdoctoral study completion) who have distinguished themselves in industry, government, education, and/or public service.



The STP is proud to honor **Torrie A. Crabbs, DVM, DACVP** as the 2015 STP Distinguished Early Career Awardee. Dr. Crabbs received her BS in biology and a minor in chemistry from the University of Pittsburgh at Johnstown, Pennsylvania, in 1999,

and her DVM from North Carolina State University, Raleigh, North Carolina, in 2006. While still in veterinary school she participated in a summer internship with GlaxoSmithKline. She helped develop techniques for scoring and evaluating lesions in heart valves of rats treated with amphetamine. This timely work helped contribute to the understanding of a significant public health issue: the spontaneous death of athletes using amphetamine to enhance performance. For this work and her overall contribution to pathology while a student at NCSU, Dr. Crabbs was





awarded the R.C. Dillman Award for Excellence in Anatomic and Clinical Pathology. She was the first trainee to receive a fellowship through the ACVP/STP Coalition for Veterinary Pathology Fellows, generously funded by GlaxoSmithKline, as a Veterinary Anatomic Pathology Resident at the University of California-Davis School of Veterinary Medicine, Davis, California, (2006–2009), and at GlaxoSmithKline, King of Prussia, Pennsylvania, in 2009.

Following her residency training, Dr. Crabbs was selected as an Intramural Postdoctoral Fellow (IRTA) at the National Institute of Environmental Health Sciences (NIEHS), Research Triangle Park, North Carolina, in the Cellular and Molecular Pathology Branch (2009–2010). In this position, she ensured pathology data generated during Toxicology/Carcinogenesis studies were accurate, consistent, and appropriately reported. She participated in various Pathology Working Groups. In 2010, Dr. Crabbs joined Experimental Pathology Laboratories, Inc. (EPL) located in Research Triangle Park, North Carolina, where she continued to support the NIEHS mission. She made significant contributions in the advancement of toxicologic pathology by collaborating with various intramural and extramural investigators. She worked closely with Dr. Samuel Cohen, the STP 2015 Lifetime Achievement Awardee, to characterize the cell of origin in spontaneous and chemically induced hemangiosarcomas and hemangiomas in mice. In addition, her expert analysis of the lesions characterized by intestinal lymphangiectasis and lipodosis in rats was invaluable in reporting on the toxicity of indole-3-carbinol (I3C).

Additionally, Dr. Crabbs has been a prolific contributor to research and publication in her areas of interest: carcinogenesis, urinary system, and respiratory system pathology. She has published at least 12 papers or book chapters and presented more than 22 platform seminars and posters at local, national, and international meetings. She authored the soft tissue section for the Non-neoplastic Lesion Atlas for the NTP as well as the Rodent Respiratory Tissue Collection Protocol CD. This CD is a joint production between EPL and NTP and provides industry and academia with best-practice guidance on the collection of the respiratory tract in rodents.

Dr. Crabbs has served as a session Chair/Co-Chair for various organizations, including the ACT, ACVP – Industrial and Toxicologic Pathology Focused Scientific Session, and the RTP Rodent Pathology Course. She was appointed by the STP Executive Committee in 2014 to serve on the ACVP/STP Coalition for Veterinary Pathology as a member of the Board of Governors. Finally, she has peer reviewed several submitted papers for *Toxicologic Pathology* and other scientific journals. For her significant, early career advances in toxicologic pathology, the STP is pleased to recognize Dr. Torrie Crabbs as the recipient of the 2015 Distinguished Early Career Award.

# General Information

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## Meeting Events

### Opening Reception

Saturday, October 17, 7:00 PM–8:30 PM

*Exhibit Hall B*

The Opening Reception will kick off the week in the Exhibit Hall for all registered meeting attendees. Be sure to wear your badge for access to the Reception. Tickets for guests 18 years of age or older\* accompanying a registered attendee may be purchased for \$30 at the registration desk.

*\*To ensure their safety, children under the age of 18 are not permitted in the Exhibit Hall.*

### ACVP Silent Auction

Sunday–Tuesday Morning

*Exhibit Hall B*

ACVP is proud to present its 12th Annual Silent Auction at the 2015 Combined Annual Meeting! The Silent Auction will support externship scholarships for veterinary students exploring veterinary pathology as a career.

Visit the Silent Auction to place your bid on a treasure trove of items contributed by ACVP members and exhibitors. Silent Auction bids will be closed at 10:30 am on Tuesday, October 20. The highest bids/bidders will be announced on Tuesday afternoon at the Silent Auction area. Silent Auction winnings may be picked up at the ACVP Registration Desk located in Hall B Foyer prior to 1:00 pm on Wednesday, October 21.

### ASVCP Business Meeting

Sunday, October 18, 4:30 PM–6:00 PM

*Room 101 E*

The ASVCP Annual Business Meeting will be held immediately before the Combined ACVP and STP Town Hall Meeting.

### ACVP Business Meeting

Sunday, October 18, 5:15 PM–6:00 PM

*Auditorium Lecture Hall 2*

The ACVP Annual Business Meeting will be held immediately before the Combined ACVP and STP Town Hall Meeting.

### Combined ACVP and STP Town Hall Meeting

#### Core and Specialized Skill Sets for Veterinary Pathologists: An Interactive Town Hall Meeting on Future Needs

Sunday, October 18, 6:15 PM–7:30 PM

*Auditorium Lecture Hall 1*

### Community Outreach Activity (CO-Act): Clean the World

Monday, October 19, 1:30 PM–4:30 PM

*Room 208A*

Join your fellow meeting attendees for the ACVP Community Outreach Activity (CO-Act). This year, attendees will have the

opportunity to assemble hygiene kits for some of Minneapolis's homeless shelters and food pantries. To participate, please contact Linda Potchoiba at [registrar@acvp.org](mailto:registrar@acvp.org). To learn more about the organization with whom ACVP is partnering, visit <https://cleantheworld.org>.

Thank you for volunteering!

### 50th Anniversary ASVCP Reception

Monday, October 19, 5:15 PM–7:45 PM

*Lakeshore B, Hyatt Regency Hotel*

All ASVCP members are invited to this Anniversary Reception. Please be sure to join your friends and colleagues!

### STP Annual Business Meeting

Tuesday, October 20, 5:15 PM–6:00 PM

*Room 101E*

The STP Annual Business Meeting will be held immediately before the ACVP and STP Combined Awards and Recognition Event.

### ACVP and STP Combined Awards and Recognition Event

Tuesday, October 20, 6:15 PM–7:30 PM

*Room 101A*

Award recipients will be recognized at this event.

### Presidents' Reception

Tuesday, October 20, 7:45 PM–10:00 PM

*Ballroom A*

All attendees and registered guests are invited to the Presidents' Reception. Be sure to wear your badge for entry to this Reception. Additional tickets can be purchased on-site for \$65 (Children of attendees 11–17 yrs, \$35). Children under 11 years of age are permitted to attend the Presidents' Reception at no charge as long as the child is under the supervision of the parent at all times.

Thanks to Pfizer for sponsorship of this event!

### ACVP/ASVCP Proceedings Online

The ACVP/ASVCP Proceedings (note this does not include the STP scientific sessions or CE courses) will be available online after the meeting at the International Veterinary Informational Service website ([www.ivis.org](http://www.ivis.org)). The IVIS library also includes veterinary textbooks and proceedings of major national and international veterinary organizations. Access to the IVIS Website is free; however, it is reserved for members of the veterinary community (practicing veterinarians, veterinary students, and technicians and scientists active in animal health). First-time visitors are required to complete a short registration form. Plan to visit the site in February to access the 2015 Proceedings!

### STP CE Courses Online

STP Pre-Meeting CE Course 2: The Use of Pigs in Biomedical Research will be recorded and will be available for online credit after the meeting on the STP website ([www.toxpath.org](http://www.toxpath.org)).



## Registration

*Hall B Foyer*

### Registration Hours:

Friday, October 16.....	6:00 PM–8:00 PM
Saturday, October 17.....	7:00 AM–7:30 PM
Sunday, October 18.....	7:00 AM–5:00 PM
Monday, October 19.....	7:30 AM–1:30 PM
Tuesday, October 20.....	7:30 AM–5:00 PM
Wednesday, October 21.....	8:00 AM–1:00 PM

### Registration Materials

Badges, Program, event tickets, and ribbons are available for pick up at the Registration Desk.

### Meeting Materials

Meeting publications, handouts, ancillary meetings schedule, and evaluation forms are posted on the “Meeting Materials” page of the Combined Annual Meeting website.

### Meeting Registration

Member, Nonmember, and Student full meeting registration fees include the symposium proceedings, access to scientific sessions, Exhibit Hall access, morning and afternoon breaks during the scientific sessions, and admission for one to the Opening Reception and Presidents’ Reception.

### Exhibitor Registration

Three complimentary registrations are provided to exhibiting companies with the purchase of each booth. The Exhibitor registration fee includes admission to the scientific sessions, Exhibit Hall access, morning and afternoon refreshment breaks, and admission for one to the Opening Reception and Presidents’ Reception. Exhibitor Registration does not include RACE credits.

### Guest Registration

The Guest registration fee includes daily access to the Guest Hospitality Suite (Skyway Suite B) at the Hyatt Regency Hotel, one admission to the Opening Reception, and one admission to the Presidents’ Reception.

### One-Day Registration

One-Day Registration is offered Sunday through Wednesday and includes scientific sessions, refreshment breaks, and Exhibit Hall access (Sunday–Tuesday). Tuesday includes admission for one to the Presidents’ Reception.

## Headquarters Hotel

### Hyatt Regency Minneapolis

1300 Nicollet Mall  
Minneapolis, Minnesota, USA, 55403  
612-370-1234

## Career Center

### Room 206B

ACVP and STP are hosting the Career Center at the 2015 Combined Annual Meeting, offering an uncommon opportunity for recruiters, employers, veterinary pathologists, trainees, and students to meet each other, drop off or receive CVs, arrange on-site interviews, or just explore opportunities in veterinary pathology.

### Career Center Hours:

Saturday, October 17.....	3:00 PM–8:30 PM
Sunday, October 18.....	9:00 AM–5:00 PM
Monday, October 19.....	9:00 AM–5:00 PM
Tuesday, October 20.....	9:00 AM–5:00 PM

The online Career Center continues until December 30 on the ACVP website at [www.acvp.org](http://www.acvp.org).

## Guest/Hospitality Suite

### Skyway Suite B, Hyatt Regency Hotel

Meet friends and other guests in this area. All students are welcome.

### Guest/Hospitality Suite Hours:

Sunday, October 18.....	8:00 AM–5:00 PM
Monday, October 19.....	8:00 AM–5:00 PM
Tuesday, October 20.....	8:00 AM–5:00 PM
Wednesday, October 21.....	8:00 AM–11:00 AM

## Poster Information

### Exhibit Hall B

### Poster Viewing Hours:

Sunday, October 18.....	9:30 AM–4:30 PM
Monday, October 19.....	9:30 AM–1:00 PM
Tuesday, October 20.....	9:30 AM–3:30 PM

### Poster Setup:

Saturday, October 17.....	1:00 PM–6:30 PM
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### Poster Teardown:

Tuesday, October 20.....	3:30 PM–4:30 PM
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# General Information

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

Session chairs at the Focused Scientific Session platform presentations will be asking their attendees to visit the posters of their respective focused groups during the refreshment break. See page 48 for more information.

**ACVP Veterinary Student Posters** will be available for viewing in Exhibit Hall B during the same hours as listed above. The setup and teardown dates and times are the same as the Focused Scientific posters.

## Speaker Ready Room

### Room 200F

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

### Speaker Ready Room Hours:

Saturday, October 17 .....	12:00 Noon–7:00 PM
Sunday, October 18 .....	7:00 AM–6:00 PM
Monday, October 19 .....	7:00 AM–6:00 PM
Tuesday, October 20 .....	7:00 AM–6:00 PM
Wednesday, October 21 .....	7:00 AM–11:30 AM

Below are scheduled check-in times for speakers. Please review and make note of these times.\*

If Your Presentation Date/Time is...	Then Your Time to Load Your Presentation is...
Sunday, October 18 8:00 AM–12:00 Noon	Report prior to 7:00 PM on Saturday, October 17
Sunday, October 18 1:30 PM–5:00 PM	Report prior to 10:30 AM on Sunday, October 18
Monday, October 19 8:00 AM–12:00 Noon	Report prior to 6:00 PM on Sunday, October 18
Tuesday, October 20 8:00 AM–12:00 Noon	Report prior to 6:00 PM on Monday, October 19
Tuesday, October 20 1:30 PM–5:00 PM	Report prior to 10:30 AM on Tuesday, October 20
Wednesday, October 21 8:00 AM–1:00 PM	Report prior to 6:00 PM on Tuesday, October 20
Wednesday, October 21 1:00 PM–5:00 PM	Report prior to 10:30 AM on Wednesday, October 21

*\*All pre-meeting workshop presenters are to report to their meeting rooms thirty (30) minutes in advance of the session start time. They do not need to check in at the Speaker Ready Room. All other speakers need to report to the Speaker Ready Room (does not apply to poster presenters).*

## Exhibit Hall

### Exhibit Hall B

The Exhibit Hall will be a center of activity during this year's combined meeting, kicking off with an Opening Reception on Saturday evening, October 17.

Scientific poster sessions and refreshment breaks will be held Sunday through Tuesday in the Exhibit Hall.

Microscopes will be available in the Exhibit Hall on Sunday, Monday, and Tuesday. This is a great opportunity for attendees to meet and discuss slides.

Visit the ACVP Silent Auction to place your bid on a treasure trove of items contributed by ACVP members and exhibitors. The Silent Auction supports externship scholarships for veterinary students exploring veterinary pathology as a career. Silent Auction bids will be closed at 10:30 am on Tuesday, October 20 and winners will be announced on Tuesday afternoon at the Silent Auction area.

We value the support of exhibitors and believe the relationship between exhibiting companies and our membership is a mutually beneficial one. Be sure to visit Exhibit Hall B!

### Exhibit Hall Policies

Out of courtesy for the scientific presenters and exhibitors, we appreciate your compliance with the following policies:

#### Photography Policy

- Photography of poster presentations is prohibited without the specific consent of the presenter(s)/author(s).
- Photography of exhibitor booths and/or equipment is prohibited without the specific consent of the exhibitor.

#### Children Under 18 Years of Age

To ensure their safety, children under the age of 18 are not permitted in the Exhibit Hall at any time including during the Exhibits Opening, regular hours, Opening Reception, and Poster Sessions.

#### Exhibitor Setup:

Saturday, October 17 ..... 1:00 PM–6:30 PM  
..... All exhibits must be set up by 6:30 PM

#### Exhibit Hall Hours:

Saturday, October 17 ..... 7:00 PM–8:30 PM  
..... Opening Reception  
Sunday, October 18 ..... 9:30 AM–4:30 PM  
Monday, October 19 ..... 9:30 AM–1:00 PM  
Tuesday, October 20 ..... 9:30 AM–3:30 PM

See inside back cover for a listing of 2015 exhibitors.

#### Exhibitor Teardown:

Tuesday, October 20 ..... 3:30 PM–8:00 PM





## Continuing Education Credits

### AAVSB RACE Provider #35

This program was reviewed and approved by the AAVSB RACE program for 118.00 CE Credits (44.00 max). Participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions on certain methods of delivery of continuing education. Please contact the AAVSB RACE program if you have any comments/concerns regarding this program's validity or relevancy to the veterinary profession.

Verification of RACE credit will be sent to individuals by email after the meeting.

## Continuing Education Credits for CE Courses and NTP Satellite Symposium

### AAVSB RACE Provider #56

The STP CE Courses have been reviewed and approved for three to four hours of Continuing Education credits (per course) in jurisdictions which recognize AAVSB RACE approval. The NTP Satellite Symposium has been submitted but not yet approved for 5.5 hours. Participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions on certain methods of delivery of Continuing Education. Certificates of attendance will be provided at the conclusion each CE Course. Please contact the AAVSB RACE program if you have any comments/concerns regarding this program's validity or relevancy to the veterinary profession.

## Mobile App

Download the free ACVP/ASVCP/STP Combined Annual Meeting mobile app through the iTunes store or Google Play. Access the personal scheduler, abstracts, program, proceedings, and more information about the Combined Annual Meeting!

## Wireless Internet Access

Wireless internet service will be available free of charge in your hotel room if you have booked at one of the official meeting hotels. Complimentary basic wireless internet service is available at the Minneapolis Convention Center only in the lobby areas. Faster speed wireless internet is available for purchase at an additional fee.

If you are traveling from another country, please check your cell phone plan for international rates. Otherwise, we recommend putting your phone on airplane mode while accessing the mobile app at the Convention Center.

## Internet Station

### Sponsored by VIN

*An Internet Station will be available in the Hall B Foyer near Registration.*

### Internet Station Hours:

Saturday, October 17 .....	1:00 PM–8:30 PM
Sunday, October 18 .....	7:00 AM–7:30 PM
Monday, October 19 .....	7:00 AM–1:30 PM
Tuesday, October 20 .....	7:00 AM–7:00 PM
Wednesday, October 21 .....	7:00 AM–11:00 AM

## Microscopes and Slide Sets

### ACVP-STP Mystery Slide Review Session: Skin

Sunday, October 18 ..... 7:30 PM–9:30 PM  
**Room 102A**

Slide sets will be available for review in Hall B on Sunday and Monday. Microscopes will be available at Room 102A one hour prior to the session.

### ASVCP-STP Case Discussion Session

Monday, October 19 ..... 1:30 PM–3:30 PM  
**Room 101E**

Slide sets will be available for review in Hall B on Sunday and Monday. Please be sure to leave the slide sets intact when you are finished so that others can review them.

### Mystery Slide Review and Neuropathology Case Presentations

Monday, October 19 ..... 7:00 PM–9:00 PM  
**Room 102A**

Slide sets will be available for viewing in Hall B on Sunday, October 18 from 9:30 AM–4:30 PM. Microscopes will be available at Room 102A one hour prior to the session.

You can preview the Mystery Slide Session slides by going to [www.scanscope.com](http://www.scanscope.com) and clicking on the ACVP folder. Viewing is available for all PC and Mac users with WebViewer.

Thanks to Nikon Instruments, Inc. for facilitating the slide previews!

## Program Evaluation Forms

A link to the online evaluation survey will be emailed to you after the meeting is over. Please complete the survey online. Your comments and suggestions will be reviewed for use in future meetings. Complete your form by November 21 to be eligible to win a complimentary registration to the 2016 ACVP and ASVCP Annual Meeting in New Orleans.



### Safety and Security Tips

1. When inside the conference venue, nametags should be worn and visibly displayed at all times. For security reasons, we recommend that you DO NOT wear your badge outside of the conference venue. If you lose your badge, please notify registration immediately.
2. Walk in well-lighted areas, especially at night, and never alone.
3. Do not leave any bags or articles unsecured in any display area, meeting room, or public area. Laptops and other small computers are easy targets for thieves. If you note any suspicious articles, packages, persons, or activity, please contact the event staff or security immediately.
4. Due to the nature of our meeting, there is a risk that we may be the target of protest activity. Here are some guidelines to deal with protest activity:
  - a. If you see a protest forming or in progress, you should notify meeting or venue staff immediately. We will implement our response plan to ensure our meeting is safe and secure.
  - b. Do not attempt to engage or argue with protestors. These groups seek confrontation as a tool for publicity.
  - c. Do not give interviews to press personnel. Meeting representatives will respond to the press.
  - d. If you notice any suspicious individuals in the meeting areas or hotel, especially handing out literature, please notify meeting security or venue security personnel. You should not attempt to engage these persons or stop them yourself.
  - e. If there is a disruption in a meeting room, you should remain calm. Notify security and allow them to deal with the disruption.
5. Do not give your lodging information to any person outside of known meeting staff.
6. Photography is not permitted in the Exhibit Hall. This includes digital pictures taken using cell phone cameras.
7. Large packages and bags are not permitted in the Exhibit Hall area.

### ACVP and ASVCP Future Annual Meetings

#### 2016 Annual Meeting

December 3–7, 2016

*Hyatt Regency Hotel, New Orleans, Louisiana, USA*

#### 2017 Annual Meeting

November 4–8, 2017

*Vancouver Convention Centre, Vancouver, BC, Canada*

#### 2018 Annual Meeting

November 3–7, 2018

*Marriott Wardman Park Hotel, Washington, DC, USA*

### STP Future Annual Meetings

#### STP 35th Annual Symposium

##### The Basis and Relevance of Variation in Toxicologic Responses

June 26–30, 2016

*Manchester Grand Hyatt San Diego, San Diego, California, USA*

#### STP 36th Annual Symposium

June 24–29, 2017

*Palais des Congrès, Montréal, Québec, Canada*

#### STP 37th Annual Symposium

June 16–21, 2018

*JW Marriott, Indianapolis, Indiana, USA*

#### STP 38th Annual Symposium

June 22–27, 2019

*Raleigh Convention Center, Raleigh, North Carolina, USA*

### Social Media

#### Facebook: [www.facebook.com](http://www.facebook.com)

Please contribute to our ACVP Meetings and Topics Facebook page and our Student Facebook page during the Annual Meeting. Let other members know your impressions of the sessions you attend, as well as your overall experience at this year's meeting in Minneapolis.

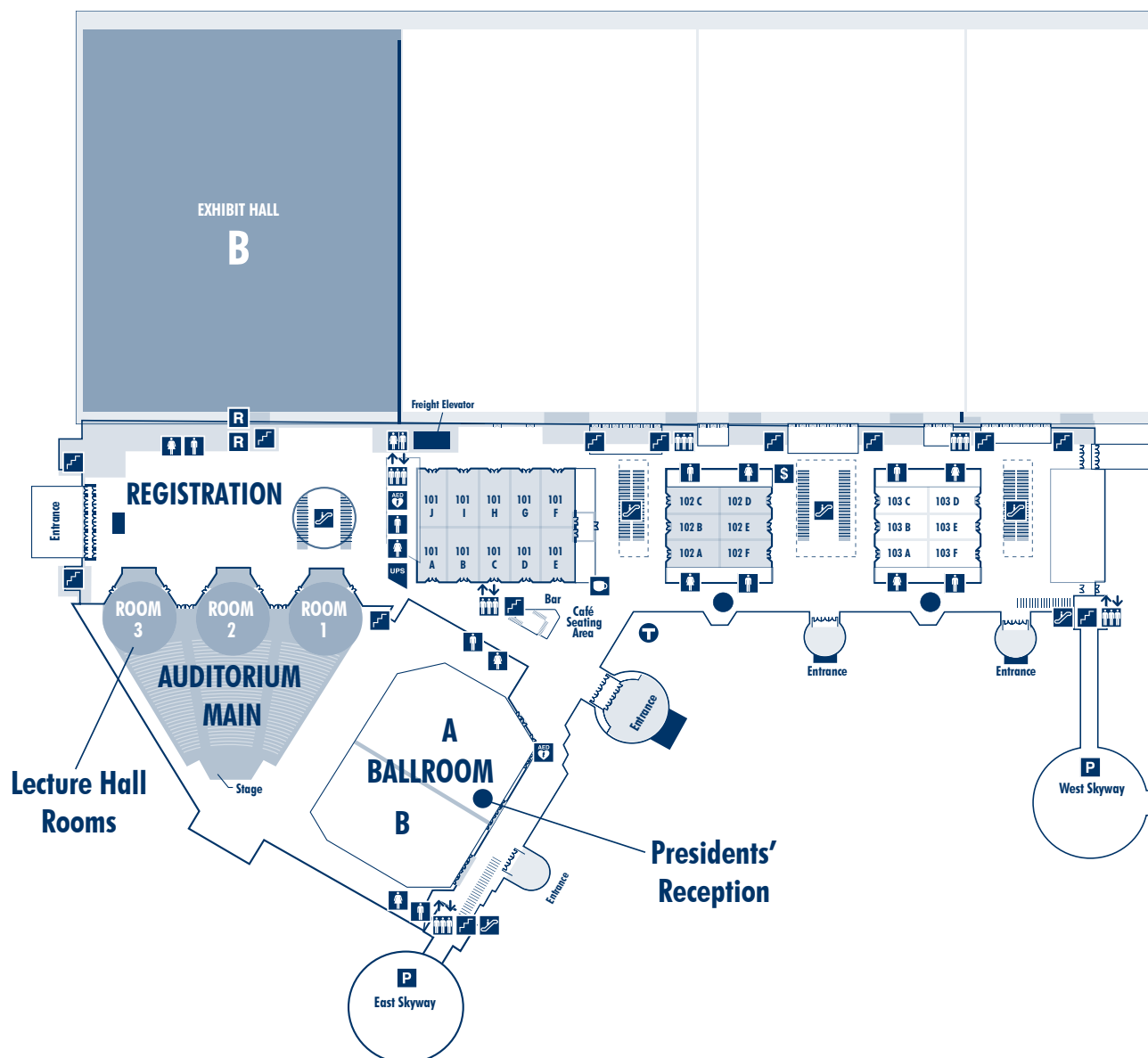
#### Twitter: [www.twitter.com](http://www.twitter.com)

Want to stay connected with @ACVP and other meeting attendees? Are you excited about a session? Or a poster? Or want your friends to bid on a silent auction item for a great cause? Or you just found the best restaurant in Minneapolis for lunch? Follow us on Twitter for information about sessions and new findings revealed by our presenters. We want to hear from you too! Hashtag your tweets #ACVPmeet or comments to @ACVP directly and keep us in the loop.



## Minneapolis Convention Center Maps

### Lobby Level

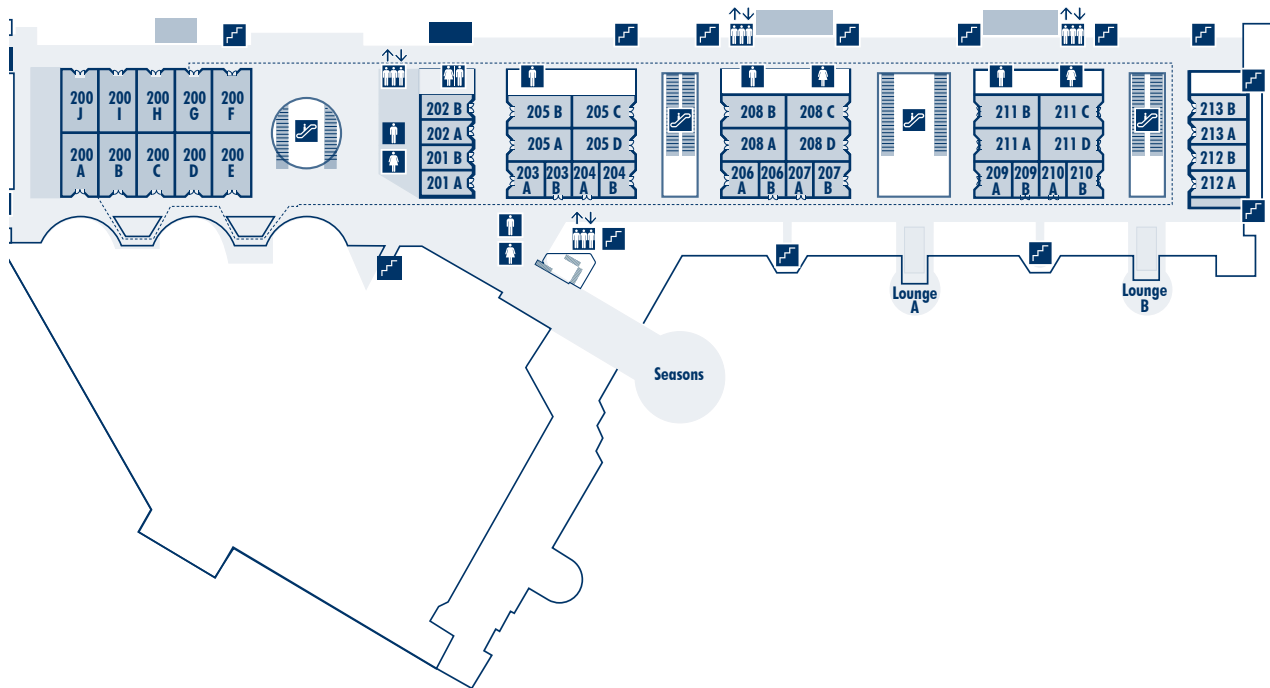




# Minneapolis Convention Center Maps

## Second Level

Information

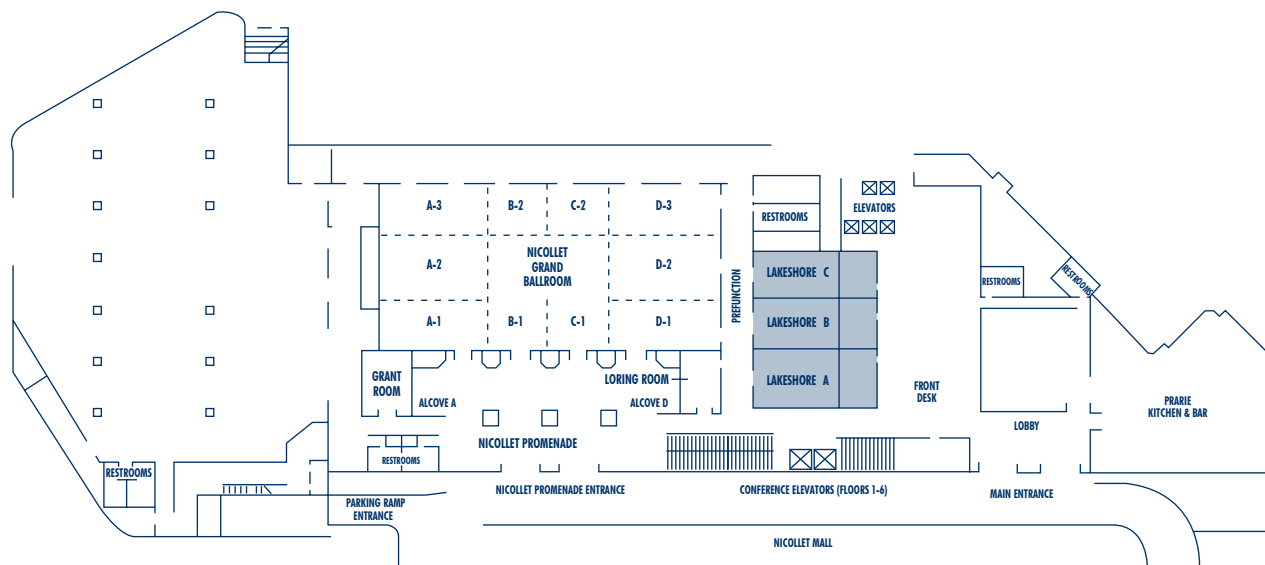






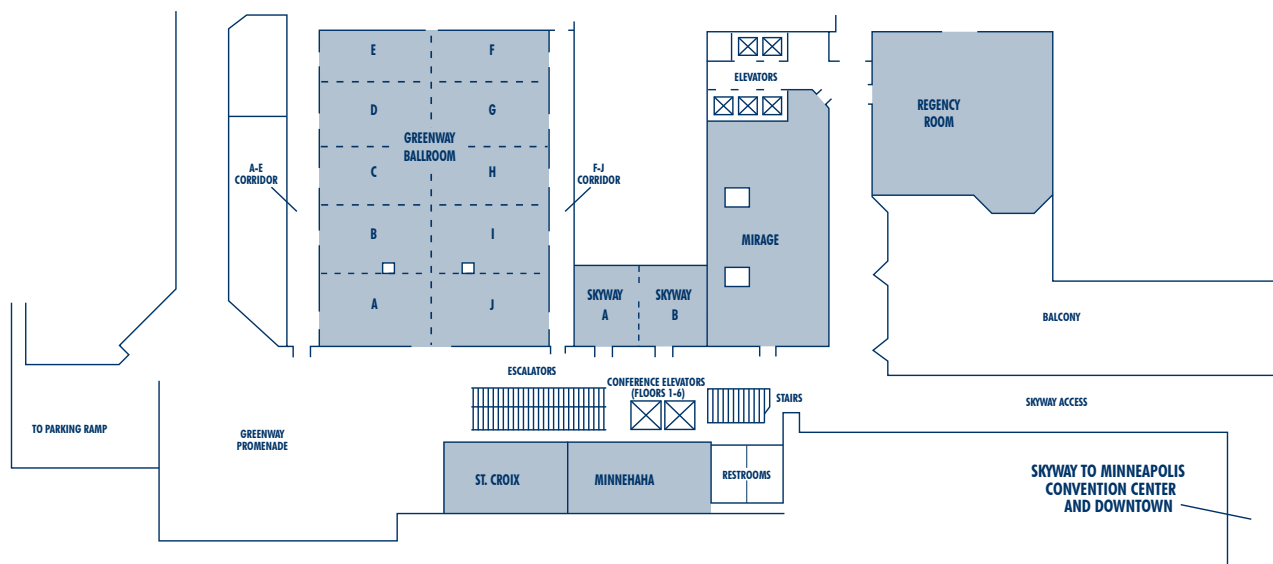
## Hyatt Regency Minneapolis Hotel Maps

### Lobby Level



Information

### Second Level

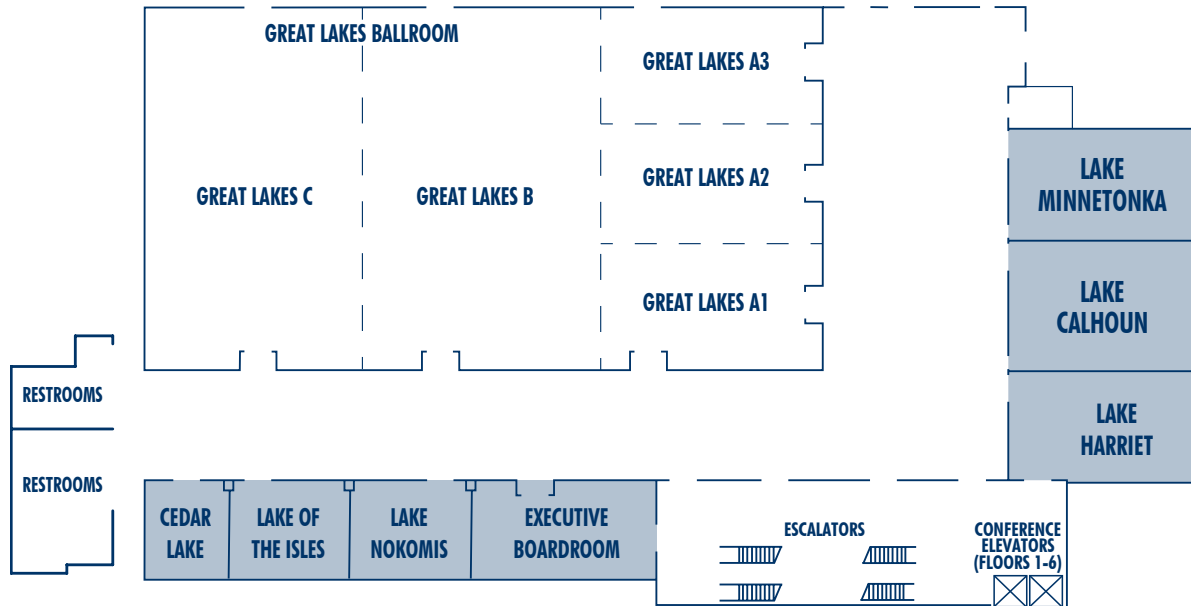




## Hyatt Regency Minneapolis Hotel Maps

### Fourth Level

Information





## Friday, October 16

6:00 PM–8:00 PM      **Registration**  
**Exhibit Hall B Foyer**

## Saturday, October 17

7:00 AM–7:30 PM      **Registration**  
**Exhibit Hall B Foyer**  
12:00 Noon–7:00 PM      **Speaker Ready Room**  
**Room 200F**

### STP Pre-Meeting CE Course 1

(Registration required)

8:00 AM–12:00 Noon      **Room 101J**

#### **All Eyes Focused on Ocular Toxicology and Pathology—Sponsored by the American College of Toxicology (ACT)**

*Co-Chairs: Brian J. Christian, PhD, DABT, Covance Laboratories, Inc., Madison, WI; and Margarita M. Gruebbel, DVM, PhD, DACVP, EPL, Inc., Research Triangle Park, NC*

The eye is often a target organ in toxicology studies. In order to determine the toxicological significance of effects in the eye, it is important to understand the basic structure and function of ocular tissues. Designing protocols for ocular toxicology studies also requires knowledge of species differences among the common testing laboratories as well as current methods for evaluation of ocular structures and functions. This session includes detailed reviews of anterior and posterior segments of the eye of common laboratory species; different tools used to determine treatment-related effects in ocular structures; and spontaneous and induced changes observed in each segment of the eye.

8:00 AM–8:10 AM

#### **Introduction**

*Brian J. Christian, PhD, DABT, Covance Laboratories, Inc., Madison, WI*

8:10 AM–9:00 AM

#### **Comparative Anatomy and Histology of the Eye of Laboratory Animals**

*Margarita M. Gruebbel, DVM, PhD, DACVP, EPL, Inc., Research Triangle Park, NC*

9:00 AM–9:45 AM

#### **“Clinical” Assessment of the Anterior Segment in Laboratory Animals**

*Robert J. Munger, DVM, DACVO, Animal Ophthalmology Clinic, Dallas, TX*

9:45 AM–10:15 AM

#### **Break**

10:15 AM–11:00 AM

#### **Evaluation of the Anterior and Posterior Chambers and Iridocorneal Angle**

*Leandro Teixeira, DVM, MS, DACVP, University of Wisconsin, Madison, WI*

11:00 AM–11:45 AM

#### **Examination and Evaluation of the Posterior Segment in Toxicology Studies—Retina**

*Steven D. Sorden, DVM, PhD, DACVP, Covance Laboratories, Inc., Madison, WI*

11:45 AM–12:00 Noon

#### **Questions and Discussion**

### ACVP Primate Pathology Pre-Meeting Workshop

(Registration required)

8:00 AM–5:00 PM      **Room 101E**

#### **Non-human Primate Genetics and Geography: Impact on Study Design, Interpretation, and Results**

*Chair: Vito Sasseville, DVM, PhD, DACVP, Novartis Institutes for Biomedical Research, Cambridge, MA*

8:00 AM–8:15 AM

#### **Welcome and Program Overview**

*Vito Sasseville, DVM, PhD, DACVP, Novartis Institutes for Biomedical Research, Cambridge, MA*

8:15 AM–9:00 AM

#### **DNA-Based Ancestry Determination of Rhesus (*Macaca mulatta*) and Cynomolgus Macaques (*Macaca fascicularis*)**

*Sree Kanthaswamy, BS(HONS), MPhil, PhD, Arizona State University, Glendale, AZ*

9:00 AM–9:30 AM

#### **Cynomolgus Monkey Origin: Clinical Pathology and Immunotoxicology Considerations**

*Nancy E. Everds, DVM, DACVP, Amgen, Inc., South San Francisco, CA*

9:30 AM–10:00 AM

#### **Retrospective Program Analysis**

*Karyn Colman, BVetMed, MRCVS, Novartis Institutes for Biomedical Research, East Hanover, NJ*

10:00 AM–10:15 AM

#### **Break**

10:15 AM–10:45 AM

#### **Comparison of Background Histopathology Findings in Asian and Mauritius Cynomolgus Macaques**

*Jagannatha Mysore, MVSc, PhD, DACVP, Bristol-Myers Squibb, New Brunswick, NJ*

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

Saturday

10:45 AM–11:15 AM

## **Macaque Species Susceptibility to Simian Immunodeficiency Virus**

*Joseph Mankowski, DVM, PhD, DACVP, Johns Hopkins University, Baltimore, MD*

11:15 AM–12:00 Noon

## **Background Infections and Molecular Detection of Etiologic Agents**

*Keith Mansfield, DVM, DACVP, Novartis Institutes for Biomedical Research, Cambridge, MA*

12:00 Noon–1:00 PM

## **Lunch Break**

1:00 PM–3:00 PM

## **Case Presentations**

3:00 PM–3:30 PM

## **Break**

3:30 PM–5:00 PM

## **Case Presentations**

## **ASVCP and STP CPIG Combined Pre-Meeting Workshop**

*(Registration required)*

8:00 AM–5:00 PM

**Room 101F**

## **Application of New Renal and Hemostatic Biomarkers in Veterinary Medicine and Preclinical Safety: What Can We Learn from Each Other?**

*Co-Chairs: Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL; and Bill Reagan, DVM, PhD, DACVP, Pfizer, Inc., Groton, CT*

*Boxed lunches will be provided for registered attendees.*

8:00 AM–8:10 AM

## **Welcome**

*Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL; and Bill Reagan, DVM, PhD, DACVP, Pfizer, Inc., Groton, CT*

## **Morning Session: Renal Biomarkers**

8:10 AM–9:00 AM

## **Qualification of New Translational Kidney Safety Biomarkers for Drug Development**

*Warren Glaab, PhD, Merck, West Point, PA*

9:00 AM–9:40 AM

## **Recent Developments in Canine Urinary Biomarkers**

*Mary Nabity, DVM, PhD, DACVP, Texas A&M University, College Station, TX*

9:40 AM–10:10 AM

## **Assessing Immune Complex Glomerulopathy with Morphology and Biomarkers in Non-human Primate Kidneys during Preclinical Safety Testing of Biologics**

*Tom P. Brown, DVM, MS, PhD, DACVP, Pfizer, Inc., Groton, CT*

10:10 AM–10:30 AM

## **Break**

10:30 AM–11:00 AM

## **Early Detection of AKI and CKD in Dogs and the Role of IRIS Guidelines**

*Mary Nabity, DVM, PhD, DACVP, Texas A&M University, College Station, TX*

11:00 AM–11:50 AM

## **An Integrated Approach to Assessing Kidney Injury**

*Rachel Cianciolo, DVM, PhD, DACVP, The Ohio State University, Columbus, OH*

11:50 AM–1:00 PM

## **Lunch Break**

## **Afternoon Session: Hemostasis Biomarkers**

1:00 PM–1:50 PM

## **Hemostasis Gaps in Preclinical and Clinical Studies—Biomarkers for Procoagulant States**

*A. Eric Schultze, DVM, PhD, FIATP, DACVP, Eli Lilly & Company, Indianapolis, IN*

1:50 PM–2:40 PM

## **Comparative Hemostasis Testing: Beyond APTT and PT**

*Marjory Brooks, DVM, DACVIM, Cornell University, Ithaca, NY*

2:40 PM–3:00 PM

## **Break**

3:00 PM–3:20 PM

## **Monitoring Hypercoagulability in Pro-thrombotic Conditions and Hypocoagulability in Hemophilic Models, in Non-human Primates**

*Florence Poitout, DVM, DECVCP, DACVP, Charles River Laboratories, Senneville, Quebec, Canada*

3:20 PM–4:10 PM

## **Platelet Function Testing in Non-human Primates**

*Kelly Metcalf Pate, DVM, PhD, DACLAM, Johns Hopkins University, Baltimore, MD*

4:10 PM–4:40 PM

## **Platelet Isolation Techniques in Laboratory Animals and Platelet Function Testing in Dogs**

*Adam Aulbach, DVM, DACVP, MPI Research, Mattawan, MI*





4:40 PM–5:00 PM

**Buccal Mucosal Bleeding Time: Application in Pre-clinical Safety**

*Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL*

## C.L. Davis Foundation Pre-Meeting Workshop

*(Registration required)*

8:00 AM–5:00 PM **Room 200A**

### The Life (and Death) Aquatic

*Co-Chairs: Jeffrey C. Wolf, DVM, DACVP, EPL, Inc., Sterling, VA; and Judy St. Leger, DVM, DACVP, SeaWorld Parks and Entertainment, San Diego, CA*

This full-day course will cover topics from normal anatomy and histology to classic and important pathology in aquatic species. Species covered will include fish, amphibians, reptiles, birds, and marine mammals. The tag-team faculty will present material in a step-wise manner so that pathologists will be both engaged and educated. The workshop will focus on the identification of both normal anatomy and common diseases of these species including gross and histologic appearance, salient diagnostic features, and differential diagnosis. This exciting course should be of interest to both clinical and anatomic veterinary pathologists, pathology residents, and diagnosticians working with animals.

## NTP Satellite Symposium

*(Free event; Registration required)*

9:00 AM–4:30 PM **Room 101A**

### Pathology Potpourri

*Chair: Susan A. Elmore, MS, DVM, DABT, FIATP, DACVP, NTP and NIEHS, Research Triangle Park, NC*

9:00 AM–9:10 AM

#### Welcome and Introductory Remarks

*Susan A. Elmore, MS, DVM, DABT, FIATP, DACVP, NTP and NIEHS, Research Triangle Park, NC*

9:10 AM–9:30 AM

#### It's Not a Tumor?

*David E. Malarkey, DVM, PhD, DACVP, NTP, NIEHS, Research Triangle Park, NC*

9:30 AM–10:00 AM

#### Cardiomyopathy Shuffle

*Rick Hailey, DVM, Covance, Inc., Chantilly, VA*

10:00 AM–10:30 AM

#### Queries from the Zoo

*Patricia A. Pesavento, DVM, PhD, DACVP, University of California, Davis, CA*

10:30 AM–11:00 AM

#### Break

11:00 AM–11:30 AM

#### An Exigent Pancreatic Tumor?

*Ramesh C. Kovi, BVSc&AH, MVSc, PhD, DACVP, EPL, Inc., Research Triangle Park, NC*

11:30 AM–12:00 Noon

#### Intracranial Conundrums I

*James P. Morrison, DVM, DACVP, Charles River Laboratories Pathology Associates, Durham, NC*

12:00 Noon–1:30 PM

#### Lunch Break

1:30 PM–1:50 PM

#### Mammary Gland Development: The "Whole" Story

*Erin Quist, DVM, MS, DACVP, NTP, NIEHS, Research Triangle Park, NC*

1:50 PM–2:10 PM

#### Canine and Rodent Pulmonary Pathology: Are They the Same or Different?

*Kathleen A. Szabo, DVM, MS, DACVP, Charles River Laboratories Pathology Associates, Durham, NC*

2:10 PM–2:30 PM

#### Imprints, Smears, and Preps—Oh My!

*Jennifer Neel, DVM, DACVP, North Carolina State University, Raleigh, NC*

2:30 PM–3:00 PM

#### Neuropathology Texas-Style

*Brian F. Porter, DVM, DACVP, Texas A&M University, College Station, TX*

3:00 PM–3:30 PM

#### Break

3:30 PM–3:50 PM

#### Intracranial Conundrums II

*James P. Morrison, DVM, DACVP, Charles River Laboratories Pathology Associates, Durham, NC*

3:50 PM–4:30 PM

#### Challenging Cases from the Special Senses INHAND OWG

*Cindy A. Farman, DVM, PhD, DACVP, Genentech, Inc., South San Francisco, CA; and Leandro Teixeira, DVM, MS, DACVP, University of Wisconsin, Madison, WI*

1:00 PM–8:30 PM

#### Internet Station

*Sponsored by VIN*

**Exhibit Hall B Foyer**

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17-21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

## STP Pre-Meeting CE Course 2

(Registration required)

1:30 PM–5:30 PM

Room 101J

### The Use of Pigs in Biomedical Research

**Co-Chairs:** Lydia Andrews-Jones, DVM, PhD, DACVP, Allergan, Lake Forest, CA; and Kristie Mozzachio, DVM, DACVP, WIL Research, Hillsborough, NC

Swine are increasingly being used in biomedical research, both in toxicologic pathology and in medical devices work, including as possible organ donors for humans. This course will review the various strains of pigs used for biomedical research, their unique anatomy, clinical pathology, and background diseases and lesions. In addition to general toxicology, the use of pigs in dermatologic, ocular, and device work will be reviewed by subject matter experts.

1:30 PM–1:55 PM

#### Emergence of the Miniature Swine in Biomedical Research: Do Different Breeds Support Different Needs?

Guy Bouchard, DVM, MS, DACT, Sinclair Research Center, LLC, Columbia, MO

1:55 PM–2:20 PM

#### Background and Unique Considerations: Anatomic Pathology

Kristie Mozzachio, DVM, DACVP, WIL Research, Hillsborough, NC; and Gregory S. Travlos, DVM, National Institute of Environmental Health Sciences, Research Triangle Park, NC

2:20 PM–2:40 PM

#### Sexual Maturity in Minipigs

Paul Howroyd, MA, VETMB, MRCVS, FRCPath, WIL Research Europe-Lyon, St Germain sur L'Arbresle, Lyon, France

2:40 PM–3:15 PM

#### Pigs in General Toxicology—A European Perspective

Alys Bradley, BSc, BVSc, MAnimSc, DipRCPath, FRIPH, MRCVS, FRCPath, FIATP, Charles River Laboratories, Edinburgh, Scotland, UK

3:15 PM–3:45 PM

#### Break

3:45 PM–4:20 PM

#### Translational Relevance of the Minipig Model of Human Cardiovascular Disease

James Turk, AB, DVM, PhD, DACVP, Amgen, Inc., Thousand Oaks, CA

4:20 PM–4:55 PM

#### The Miniature Swine As a Model in Experimental and Translational Medicine

Alain Stricker-Krongrad, PhD, MSc, Sinclair Research Center, LLC, Columbia, MO

4:55 PM–5:15 PM

#### So... How DO You Work with Minipigs?

Kristie Mozzachio, DVM, DACVP, WIL Research, Hillsborough, NC

5:15 PM–5:30 PM

#### Panel Discussion

3:00 PM–8:30 PM

**Career Center  
Room 206B**

## ACVP Career Session

5:15 PM–6:15 PM

Room 101E

### Job Searching 2.0: Using Social Media and Connections to Find Your Right Job

**Chair:** Heather Jury, IDEXX Laboratories, Westbrook, ME

This interactive session is designed to help attendees get an insider view of job seeking, networking, and strategies to identify the right position and create their career path. Attendees at this session will have the opportunity to learn about "Job Searching 2.0," ask questions and hear candid advice. This program will review definitions of new media/social media, and discuss: what is social media now? How has social media changed the landscape of job searching and networking? Who is using social media to find employees? How do recruiters see you? Why is networking and connecting a critical part of job searching today?

There will be in-depth discussion about the social networking "Big Three": Facebook, Twitter, and LinkedIn, plus a review of other sites including Instagram, Indeed, Glassdoor, and more. This program will include a discussion about social strategies, privacy settings, etiquette in this new era, as well as tips and "hacks" for effective job seeking. Participants will leave with actions to take now and later to successfully identify their career path.

5:30 PM–7:30 PM

**Trainee Mixer  
Sponsored by Amgen  
Seasons Room**

## ASVCP Education Forum for Discussion

6:00 PM–8:00 PM

Room 101F

### Clinical Pathology in the DVM Curriculum

**Chair:** Carolyn Grimes, DVM, DACVP, Université de Montréal, St-Hyacinthe, Quebec, Canada

7:00 PM–8:30 PM

**Opening Reception, Exhibits,  
Silent Auction  
Exhibit Hall B**

7:00 PM–9:00 PM

**Japanese Group of ACVP  
(JaGA) Meeting  
Lakeshore A, Hyatt Regency  
Hotel**

Saturday



## Sunday, October 18

7:00 AM–8:00 AM	<b>Veterinary Student Breakfast</b> <i>All students are welcome to attend!</i> <b>Mirage Room, Hyatt Regency Hotel</b>
7:00 AM–9:00 AM	<b>ACVP Pathology Chairs Breakfast</b> <b>Lakeshore B, Hyatt Regency Hotel</b>
7:00 AM–5:00 PM	<b>Registration</b> <b>Exhibit Hall B Foyer</b>
7:00 AM–6:00 PM	<b>Speaker Ready Room</b> <b>Room 200F</b>
7:00 AM–7:30 PM	<b>Internet Station</b> <i>Sponsored by VIN</i> <b>Exhibit Hall B Foyer</b>

## ACVP, ASVCP, and STP Combined Career Development Session

8:00 AM–12:00 Noon **Room 101A**

### Visualizing Pathology Data

*Co-Chairs: Danielle L. Brown, DVM, DACVP, WIL Research, Hillsborough, NC; and Nancy E. Everds, DVM, DACVP, Amgen, Inc., South San Francisco, CA*

The assessment of quantitative and qualitative pathology data can be challenging. Large data sets can be cumbersome, and even quantitative data can be subject to bias. The goal of this session is to provide attendees with tips and tools for quickly managing quantitative and semi-quantitative data sets as well as best practices for study design, data analysis, and presentation. Topics of discussion include general tips and tricks for visualizing numerical data from quantitative studies, a discussion on the pitfalls and biases of image analysis and how to avoid them, advice on how to manage non-pathology data sets such as those resulting from “omics” studies and how to integrate those results with pathology data for toxicology studies, how to approach and apply semiquantitative scoring systems in a research or clinical setting, and how to approach mining of large databases for case series or epidemiologic studies.

8:00 AM–8:10 AM

#### Opening Remarks

8:10 AM–8:50 AM

#### Tips and Tricks for Visualizing Numerical Data

*Nancy E. Everds, DVM, DACVP, Amgen, Inc., South San Francisco, CA*

8:50 AM–9:30 AM

#### Pitfalls and Unintended Biases in Image Analysis

*Michael C. Boyle, DVM, PhD, DABT, DACVP, Amgen, Inc., Thousand Oaks, CA*

9:30 AM–10:10 AM

#### Integration of Omics Data with Pathology Data: Omics as a Tool for the Investigative Pathologist

*Mark J. Hoenerhoff, DVM, PhD, DACVP, University of Michigan, Ann Arbor, MI*

10:10 AM–10:40 AM

#### Refreshment Break

#### Exhibit Hall B

10:40 AM–11:20 AM

#### Principles for Semi-quantitative Scoring of Tissues

*David K. Meyerholz, DVM, PhD, DACVP, University of Iowa, Iowa City, IA*

11:20 AM–12:00 Noon

#### Approaches, Pitfalls, and Best Practices for Mining Large Data Sets

*Elizabeth Lund, DVM, MPH, PhD, Banfield Pet Hospital, Portland, OR*

## ASVCP Education Symposium

8:00 AM–12:00 Noon **Room 200A**

### Biomarkers in Veterinary Clinical Pathology

*Chair: Laura Snyder, DVM, DACVP, Marshfield Labs, Marshfield, WI*

8:00 AM–8:50 AM

#### Bridging Man and Preclinical Species: The Rainbow of Non-vasoactive Vasculitides

*Igor Mikaelian, DVM, DACVP, Abbott Bioresearch Center, Worcester, MA*

8:50 AM–9:40 AM

#### SDMA As a New Serum Marker of Kidney Function

*Mary Nabity, DVM, PhD, DACVP, Texas A&M University, College Station, TX*

9:40 AM–10:10 AM

#### Refreshment Break

#### Exhibit Hall B

10:10 AM–11:00 AM

#### Biomarkers for Lymphoproliferative Disorders

*Anne Avery, VMD, PhD, Colorado State University, Fort Collins, CO*

11:00 AM–11:50 AM

#### Diagnosis of Systemic Mycoses by Use of Biomarkers

*Lawrence J. Wheat, MD, MiraVista Diagnostics, Indianapolis, IN*

11:50 AM–12:00 Noon

#### Questions and Discussion

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

## Concurrent Session I

8:00 AM–12:00 Noon Room 101J

### Diagnostic Veterinary Dermatopathology

*Co-Chairs: Pauline M. Rakich, DVM, PhD, DACVP, University of Georgia, Athens, GA; and Joanne Mansell, DVM, MRCVS, DACVP, Texas A&M University, College Station, TX*

8:00 AM–8:10 AM

#### Welcome

*Pauline M. Rakich, DVM, PhD, DACVP, University of Georgia, Athens, GA; and Joanne Mansell, DVM, MRCVS, DACVP, Texas A&M University, College Station, TX*

8:10 AM–9:00 AM

#### Interface Dermatitis

*Verena K. Affolter, DrMedVet, PhD, DECV, University of California, Davis, CA*

9:00 AM–9:50 AM

#### Interface Dermatitis: The Immunologic and Clinical Perspective

*Valerie A. Fadok, DVM, PhD, DACVD, North Houston Veterinary Specialists, Spring, TX*

9:50 AM–10:20 AM

#### Refreshment Break

#### Exhibit Hall B

10:20 AM–11:10 AM

#### The Hair Follicle and the Yet Unsolved Mystery of Non-inflammatory Alopecia

*Monika Welle, Prof DrMedVet, DECV, University of Bern, Bern, Switzerland*

11:10 AM–12:00 Noon

#### Diagnostic Dermatopathology for General Veterinary Pathologists

*Elizabeth A. Mauldin, DVM, DACVD, DACVP, University of Pennsylvania, Philadelphia, PA*

## Natural Disease Focused Scientific Session I

8:00 AM–12:00 Noon Room 101F

*Chair: Andrew D. Miller, DVM, DACVP, Cornell University, Ithaca, NY*

*Committee Members: G. Haldorson (Co-Chair), D.R. Rissi, I. Langohr (Past Chair), F. Uzal, and A. Pillatzki*

### Platform Presentations

8:00 AM–8:15 AM

#### Felis catus Papillomavirus Type 2 Oncogene Expression in Feline Cutaneous Squamous Cell Carcinomas

*N.A. Thomson, J.S. Munday, and K.E. Dittmer*  
Keyword: Neoplasia

8:15 AM–8:30 AM

#### Preferential Usage of a Single Immunoglobulin Heavy Chain Variable Gene in Boxers with Chronic Lymphocytic Leukemia

*E.D. Rout, R.C. Burnett, S.A. George, C.R. Abbott, J.A. Yashimoto, and A.C. Avery*  
Keyword: Neoplasia

8:30 AM–8:45 AM

#### Identification of MicroRNA-Based Predictive Signature for Prognosis in Canine Osteosarcoma

*D.D. Dailey, A.M. Hess, J.S. Fowles, G.J. Bouma, and D.L. Duval*  
Keyword: Neoplasia

8:45 AM–9:00 AM

#### Immunophenotypic and Histomorphologic Characterization of 15 Caprine Lymphomas

*P.K. Kiser and C.V. Löhr*  
Keyword: Neoplasia

9:00 AM–9:15 AM

#### Map My Mad Cow: Investigating the Patterns of Disease-Associated Prion Protein in the Brains of Cattle with Bovine Spongiform Encephalopathy

*S.J. Moore, M. Arnold, Y. Spencer, J. Bradshaw, P. Webb, K. Beck, A. Davis, G.A.H. Wells, and M. Simmons*  
Keyword: Nervous System

### Invited Speaker

9:15 AM–10:00 AM

#### Pathology of Adverse Reactions to Vaccines

*Donal O'Toole, MVB, PhD, MRCVS, DECV, FRCPath, Wyoming State Veterinary Laboratory, Laramie, WY*  
Keyword: Immunology

10:00 AM–10:30 AM

#### Refreshment Break

#### Exhibit Hall B

### Natural Disease Focused Scientific Poster Session Exhibit Hall B

### Platform Presentations

10:30 AM–10:45 AM

#### Pathology As a Puzzle Piece: Diagnostic Findings in a Large-Scale Mortality Event Involving Cassin's Auklets (*Ptychoramphus aleuticus*) in 2014–2015

*J. Beck, R.J. Bildfell, J.D. Burco, M. Flannery, C.M. Gobble, J.S. Lankton, and B.L. Bodenstein*  
Keyword: Wildlife

10:45 AM–11:00 AM

#### Clinicopathological Findings and Virus Antigen Distribution during Natural Infection of Ring-Necked Pheasants in Washington State, USA with Highly Pathogenic Avian Influenza Virus A (H5N2)

*D.K. Ajithdoss, M.K. Torchetti, L. Badcoe, D.S. Bradway, and T.V. Baszler*  
Keyword: Infectious Disease

Sunday





11:00 AM–11:15 AM

**Immunohistochemical Characterization of Spontaneous Intestinal Neoplasms in Zebrafish (*Danio rerio*)**

C.E. Paquette, M.L. Kent, T.S. Peterson, R. Wang, R.H. Dashwood, and C.V. Löhr

Keyword: Neoplasia

11:15 AM–11:30 AM

**Chlamydiosis in Farmed Alligators (*Alligator mississippiensis*) in Louisiana**

K. Sakaguchi, J. Nevarez, D. Paulsen, I. Langohr, R. Bauer, N. Crossland, J. Ferracone, B. Ritchie, and F. Del Piero

Keyword: Infectious Disease

11:30 AM–11:45 AM

**Identifying Mechanisms of Viral Persistence and Cellular Transformation in Polyomavirus Using Primary Cell Cultures in a Naturally Occurring Disease System**

M.E. Church, P.A. Pesavento, and K.D. Woolard

Keyword: Neoplasia

11:45 AM–12:00 Noon

**Aerocystitis – A Review**

J. Dill and A. Camus

Keyword: Wildlife

## STP and Industrial and Toxicologic Pathology Focused Scientific Session

8:00 AM–12:00 Noon **Room 101E**

**Chair:** Daniela Ennulat, DVM, PhD, DACVP, GlaxoSmithKline, King of Prussia, PA

**Committee Members:** T. Crabbs (Co-Chair), M. Conner (Past-Chair), C. Colleton, K. Helke, K. Knostman, J. Kyathanahalli, and G. Palanisamy

### Invited Speaker

8:00 AM–8:30 AM

**Methodological Advancements in the Mammary Gland: New Insights for Detecting Mammary Carcinogenesis**

Suzanne E. Fenton, PhD, MS, NTP Laboratory, NIEHS, Research Triangle Park, NC

Supported by Covance Laboratories

### Platform Presentations

8:30 AM–8:45 AM

**STAT3 Modulates Chloride Channel Accessory Protein Expression during Mammary Involution: A Perturbed Relationship during Tumorigenesis**

K. Hughes

Keyword: Neoplasia

8:45 AM–9:00 AM

**Epigenetic Down-Regulation of SAMHD1 Expression in Cutaneous T Cell Lymphoma**

R. Kohnken

Keyword: Neoplasia

9:00 AM–9:15 AM

**Innate Lymphoid Cells Mediate Ozone-Induced Type 2 Immunity in the Lungs of Mice**

K. Kumagai

Keyword: Respiratory System

9:15 AM–9:30 AM

**Exposures to Carbon Nanotubes and Asbestos Induce Related but Distinct Profiles of Toxicologic Lung Pathology**

E. Frank

Keyword: Respiratory System

9:30 AM–9:45 AM

**Morphine Disrupts Gut Homeostasis and Induces Distinct Signatures of Gut Microbiome and Metabolome Partially through the Toll-Like Receptor 2 Pathway**

F. Wang

Keyword: Industrial and Toxicologic Pathology

9:45 AM–10:00 AM

**Imaging Mass Spectrometry: Visualizing Biology and Chemistry in Drug Development**

R. Groseclose

Keyword: Industrial and Toxicologic Pathology

10:00 AM–10:30 AM

**Refreshment Break**

**Exhibit Hall B**

**STP and Industrial and Toxicologic Pathology Focused Scientific Poster Session**

**Exhibit Hall B**

### Invited Speaker

10:30 AM–11:30 AM

**Building Successful Partnerships for Translational Research**

Jaime Modiano, VMD, PhD, University of Minnesota, Minneapolis, MN

Keyword: Skin

Supported by Robert Hall

### Platform Presentation

11:30 AM–12:00 Noon

**A Systems Approach to Integrate Animal Models Data for Neurodegenerative Disease**

C.J. Zeiss

Keyword: Nervous System

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

8:00 AM–5:00 PM	<b>Guest/Hospitality Suite Skyway Suite B, Hyatt Regency Hotel</b>
9:00 AM–5:00 PM	<b>Career Center Room 206B</b>
9:30 AM–4:30 PM	<b>Exhibits and Silent Auction Exhibit Hall B</b>
9:30 AM–4:30 PM	<b>Focused Scientific Poster Session and ACVP Veterinary Student Posters Exhibit Hall B</b>
12:00 Noon–1:30 PM	<b>Veterinary Pathology Resident/Trainee Luncheon</b> <i>Sponsored by IDEXX</i> <b>Room 102D</b>

## ASVCP Veterinary Laboratory Professionals Session I

12:00 Noon–4:00 PM	<b>Room 200E</b> <i>Chair: Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO</i>
12:00 Noon–12:30 PM	<b>Welcome</b> <i>Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO</i>
12:30 PM–1:30 PM	<b>Advances in Veterinary Diagnostic and Comparative Hemostatic Testing</b> <i>Marjory Brooks, DVM, DACVIM, Cornell University, Ithaca, NY</i>
1:30 PM–2:30 PM	<b>Establishing Reference Intervals</b> <i>Kristen R. Friedrichs, DVM, DACVP, University of Wisconsin, Madison, WI</i>
2:30 PM–3:00 PM	<b>Refreshment Break</b>
	<b>Exhibit Hall B</b>
3:00 PM–4:00 PM	<b>Sample Handling and Sources of Pre-analytical Variation in Laboratory Animals</b> <i>Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL</i>

## Emerging Disease Focused Seminar

12:15 PM–1:15 PM	<b>Room 101A</b> <b>Corona Virus</b> <i>Chair: Francisco A. Uzal, DVM, MSc, PhD, DACVP, University of California, Davis, CA</i>
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12:15 AM–12:45 PM	<b>Emergence of Porcine Enteric Corona Viruses in North America: Differential Features and Diagnostic Trends</b> <i>Eric R. Burrough, DVM, PhD, Iowa State University, Ames, IA</i>
12:45 AM–1:15 PM	<b>Pathogenesis and Histopathology of Porcine Epidemic Diarrhea Virus (PEDV) and Porcine Delta Corona Virus (PDCV) in Swine</b> <i>Jeff Hayes, DVM, MSc, Ohio Department of Agriculture Animal Disease Diagnostic Laboratory, Reynoldsburg, OH</i>

## Clinical Pathology Focused Scientific Session I

1:30 PM–4:30 PM	<b>Room 101E</b> <i>Chair: Shelley Burton, DVM, MSc, DACVP, University of Prince Edward Island, Charlottetown, Prince Edward Island, Canada</i> <i>Committee Members: E. Behling-Kelly, S. Connolly, N. Tripathi, C. Wagg, and V. Wong</i>
	<b>Invited Speaker</b> 1:30 PM–2:30 PM <b>Urinalysis—Getting Specific about Specific Gravity and Other Important Features</b> <i>Jody Lulich, DVM, PhD, DACVIM, University of Minnesota, St. Paul, MN</i>
	<b>Platform Presentations</b> 2:30 PM–2:45 PM <b>Application of Current Automated Microscopy Technology to Qualitative Identification of Urine Formed Elements in Veterinary Medicine</b> <i>J. Hammond, C. Myrick, D.J. McCrann, M. Scott, G. Bilbrough, and D.B. DeNicola</i> Keyword: Clinical Pathology 2:45 PM–3:00 PM <b>Cytologic Grading of Copper in Canine Liver Samples</b> <i>A.R. Moore, E. Coffey, and D. Hamar</i> Keyword: Liver 3:00 PM–3:30 PM <b>Refreshment Break</b> <b>Exhibit Hall B</b>
	<b>Platform Presentations</b> 3:30 PM–3:45 PM <b>Increased Frequency of CD45 Negative (T Zone) Cells in Older Golden Retrievers</b> <i>K. Hughes*, J. Bromberek, and A. Avery</i> Keyword: Hematopoietic System

Sunday



3:45 PM–4:00 PM

**Acute Myeloid Leukemia is Associated with a Poorer Prognosis than Acute Undifferentiated Leukemia and Acute Lymphoblastic Leukemia in the Dog**

M. Guzera\*, T.L. Williams, M. Aquino Cleto, L.G. Moreno Perez, D. Ippolito, J. Lowe, C. Leo, G. Polton, and J. Archer  
Keyword: Hematopoietic System

4:00 PM–4:15 PM

**Diagnostic Performance and Agreement of Two White Blood Cell (WBC) Estimate Formulas Compared to Automated WBC Counts**

L. Black\*, N. Stacy, and J. Hernandez  
Keyword: Hematology

4:15 PM–4:30 PM

**Hematology and Biochemistry of Aging: Evidence for “Anemia of the Elderly” in Old Dogs**

L.B. Radakovich\*, S.C. Pannone, M.P. Truelove, C.S. Olver, and K.S. Santangelo  
Keyword: Hematology

\*Competitor for the ASVCP Young Investigator Award

## Diagnostic Pathology Focused Scientific Session I

1:30 PM–5:00 PM

**Room 200A**

*Chair:* Stephen Raverty, DVM, PhD, DACVP, British Columbia Ministry of Agriculture and Lands, Abbotsford, British Columbia, Canada

*Committee Members:* E. Burrough, B. Lewis (Past-Chair), L. Kennedy, A. Rodrigues Hoffman, F. Oliveira, and D. Rotstein (Co-Chair)

Supported by Antech Diagnostics

1:30 PM–1:40 PM

**Introductions and Announcements**

### Platform Presentations

1:40 PM–1:50 PM

**Liver and Spleen Light Chain Deposition Disease in a Dog**

H.L. Pecoraro†, S.P. McDonogh, S.A. Center, S.M. Liu, and K. Gisselman  
Keyword: General Topic

1:50 PM–2:00 PM

**Spontaneous Pulmonary Hyalinosis in Three Sugar Gliders (*Petaurus breviceps*)**

S.A. Sokol†, T.L. Southard, and A.D. Miller  
Keyword: Respiratory System

2:00 PM–2:10 PM

**Enterocolic Ganglioneuritis Causing Progressive Obstipation in a Dog**

M.T. O'Brien†, J. Lidbury, M. Landry, A. Gessner, and A. Rodrigues-Hoffman  
Keyword: Alimentary

2:10 PM–2:20 PM

**Suspected Fenbendazole Toxicity in an American White Pelican (*Pelecanus erythrorhynchos*)**

I.J. Kim†, J.C. Nietfeld, D.M. Lindemann, and D. Eshar  
Keyword: Avian

2:20 PM–2:30 PM

**Starlings (*Sturnus vulgaris*) with Severe Osteomyelitis and Osteonecrosis; An Unusual Presentation of Yersinia Pseudotuberculosis**

I. Phillips† and R. Bildfell  
Keyword: Infectious Disease

2:30 PM–2:40 PM

**Concurrent Ocular T Cell Lymphoma with Lineage Infidelity and Histiocytic Sarcoma with B Cell Receptor IGH Gene Clonality in a Cat (*Felis catus*)**

K. Barnes†, M. Kiupel, J. Stiles, M. Operacz, and D. Sledge  
Keyword: Neoplasia

2:40 PM–2:50 PM

**Acanthomatous Ameloblastoma with Atypical Foci in Five Dogs**

J. Malmberg†, B. Powers, and P. Schaffer  
Keyword: General Topic

2:50 PM–3:00 PM

**Hypertrophic Osteopathy in a Dog with Disseminated Histiocytic Sarcoma**

S. Choudhary†, G. Andrews, D.S. Biller, S. Hocker, and J. Ryseff  
Keyword: Neoplasia

3:00 PM–3:30 PM

**Refreshment Break**

**Exhibit Hall B**

**Diagnostic Pathology Focused Scientific Poster Session**

**Exhibit Hall B**

### Platform Presentations

3:30 PM–3:40 PM

**A Rubric for Evaluating Processing Artifacts in Histologic Specimens with Inked Margins**

P.K. Kiser†, M. Milovancev, C.V. Löhr, and D.S. Russell  
Keyword: General Topic

3:40 PM–3:50 PM

**Systemic Ranaviral Infection in an African Spurred (*Centrochelys sulcata*) Tortoise**

G. Krane†, N. Steckler, C. Cummins, T. Waltzek, J. Wellehan, and L. Farina  
Keyword: Wildlife

3:50 PM–4:00 PM

**Adult-Onset, Cyclic Thrombocytopenia in a Rhesus Macaque**

G. Frydman†, K. Pate, R.P. Marini, A.M. de Laforcade, I. Bosch, S. Muthupalani, A.G. Swennes, and J.G. Fox  
Keyword: Hematology

# Program

**ACVP | ASVCP | STP**  
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Sunday

4:00 PM–4:10 PM

**Confirmation of Fibrodysplasia Ossificans Progressiva in a Domestic Shorthair Kitten by Detection of the R206H Mutation in the Activin Receptor 1A/Activin-Like Kinase-2 (ACVR1/ALK2) Gene**

M. Viesont<sup>†</sup>, E.M. Shore, M. Xu, and G.K. Saunders  
Keyword: Bone and Joint

4:10 PM–4:20 PM

**The Pathology of Tyzzer's Disease in Horses**

K. Fresneda<sup>†</sup>, F. Carvallo, and F. Uzal  
Keyword: Infectious Disease

4:20 PM–4:30 PM

**Intracoeleomic Neoplasia in a Crowntail Siamese Fighting Fish (*Betta splendens*)**

K. Eden<sup>†</sup>, J.F. Edwards, D.P. Sponenberg, and B.F. Porter  
Keyword: Neoplasia

4:30 PM–4:40 PM

**Definitive Diagnosis and Therapeutic Options for Dogs with Cancer Using an Automated Multiplexed Gene Signature Assay on Formalin-Fixed Paraffin-Embedded (FFPE) Tumors**

B. Davis, M. Schwarz, and G. Post  
Keyword: Neoplasia

4:40 PM–4:50 PM

**Barbiturate Exposure in Horse Meat Fed in a Large Animal Sanctuary**

A. Rink, R. Poppenga, G. Sykes, C. Le, D. Krieger, and D. Rotstein  
Keyword: General Topic

4:50 PM–5:00 PM

**Primary Leptomenigeal Gliomatosis in a Domestic Shorthair Cat**

W.M. Zoll<sup>†</sup>, J.M. Rudnick, T. Keeshen, C. Bandt, A.D. Miller, and J.R. Abbott  
Keyword: Nervous System

<sup>†</sup>Competitor for the ACVP/AAVLD Diagnostic Pathology Travel Award

## Experimental Disease Focused Scientific Session I

1:30 PM–5:00 PM

Room 101F

**Chair:** Sébastien Monette, DMV, MVSc, DACVP, Memorial Sloan Kettering Cancer Center, New York, NY

**Committee Members:** H. Adissu, O. Foreman, M. Gagea, S. Gumber, L. Janke (Co-Chair), B.L. Plattner (Past Chair), and R. Read

### Invited Speaker

1:30 PM–2:30 PM

**A Pig Model of Renovascular Disease: Development and Evaluation**

Lilach Lerman, MD, PhD, Mayo Clinic, Rochester, MN

### Platform Presentations

2:30 PM–2:45 PM

**Cardiovascular Pathology in a Mouse Model of Mucopolysaccharidosis Type I (Hurler Syndrome): Longitudinal Echocardiographic Evaluation and Correlative Histopathology**

D.S. Bangari, J. Marshall, J. Johnson, J.B. Nietupski, J. Cao, C. Maloney, E. Roberts, P. Piepenhagen, X. Ying, K.M. Keeling, D.M. Bedwell, S.H. Cheng, and B.L. Thurberg  
Keyword: Cardiovascular

2:45 PM–3:00 PM

**Loss of NLRX1 Results in Increased Intestinal Pathology and Exacerbated T Cell Responses in Mice with Inflammatory Bowel Disease**

K. Eden, R. Hontecillas, M. Viladomiu, C. Philipson, A. Carbo, A. Leber, N. Philipson, I. Tattoli, S.E. Girardin, I.C. Allen, and J. Bassaganya-Riera  
Keyword: Alimentary

3:00 PM–3:30 PM

### Refreshment Break

### Invited Speaker

3:30 PM–4:15 PM

**Comparative Biology of Breast Cancer: Lessons from Human and Nonhuman Primates, Rodents, and Other Species**

J. Mark Cline, DVM, PhD, DACVP, Wake Forest University, Winston-Salem, NC

### Platform Presentations

4:15 PM–4:30 PM

**Genome Wide Identification of Susceptibility Loci for Malignant Phenotypes in Pulmonary Adenocarcinoma**

E.F. Edmondson, D.M. Gatti, C.M. Fallgren, R.R. Rampersad, and M.M. Weil  
Keyword: Neoplasia

4:30 PM–4:45 PM

**Modulation of Cell Death Pathways by RIP Kinase 1**

J.D. Webster, K. Newton, K. Wickliffe, A. Maltzman, D. Dugger, M. Solon, and V.M. Dixit  
Keyword: Other (Cell Death)

4:45 PM–5:00 PM

**Pathogenic Role and Regulation of Galectin-3 Expression in Renal Fibrosis and TGF-BETA-1-Induced Fibrogenesis**

V. Juniantito, T. Izawa, M. Kuwamura, B.P. Priosoeryanto, E. Harlina, and J. Yamate  
Keyword: Toxicologic Pathology



## Natural Disease Focused Scientific Session II

1:30 PM–5:00 PM

**Room 101A**

*Chair:* Andrew D. Miller, DVM, DACVP, Cornell University, Ithaca, NY

*Committee Members:* G. Haldorson (Co-Chair), D.R. Rissi, I. Langohr (Past Chair), F. Uzal, and A. Pillatzki

### Platform Presentations

1:30 PM–1:45 PM

#### **Expanding the Spectrum of Glomerular Basement Membrane Lesions**

*E.S. Clark and R. Cianciolo*

Keyword: Urinary System

1:45 PM–2:00 PM

#### **Novel Immunotherapeutics in Canine Cancer: Manipulating the Immunology to Alter the Pathology**

*K. Elliott, P.J. Macpherson, J. Alawneh, C. Palmieri, G. Simmons, M.M. Brennan, L. Setyo, C. Weir, A.M. Fahrer, and R.E. Allavena*

Keyword: Neoplasia

2:00 PM–2:15 PM

#### **Histopathologic Findings of Spontaneous Hypertensive Encephalopathy in Cats**

*B.J. Turek and A.C. Durham*

Keyword: Nervous System

### Invited Speaker

2:15 PM–3:00 PM

#### **Diagnostic Approach to Spontaneous Neuropathic Lysosomal Storage Diseases of Dogs and Cats**

*Carlo Cantile, DVM, PhD, Università di Pisa, Pisa, Italy*

3:00 PM–3:30 PM

#### **Refreshment Break**

#### **Exhibit Hall B**

### Platform Presentations

3:30 PM–3:45 PM

#### **The Kentucky Horse Racing Necropsy Program – An Integrative Approach to the Investigation of Catastrophic Injuries in Thoroughbred Racehorses**

*L. Kennedy*

Keyword: Bone and Joint

3:45 PM–4:00 PM

#### **A Novel Polyomavirus Identified in the Respiratory Tract of Alpaca (*Vicugna pacos*)**

*F.N. Dela Cruz, Jr, L. Li, E. Delwart, and P. Pesavento*

Keyword: Infectious Disease

4:00 PM–4:15 PM

#### **An Outbreak of Pyrrolizidine Alkaloids Toxicosis in Equids in California**

*G. Rimoldi, M. Booth, and R. Poppenga*

Keyword: Toxicology

### Invited Speaker

4:15 PM–5:00 PM

#### **The Structural and Molecular Pathology, Chemistry, and Current Diagnostic Techniques of Toxic Plant Induced Disease**

*Bryan Stegelmeier, DVM, PhD, DACVP, USDA/ARS Poisonous Plant Research Laboratory, Logan, UT*

## STP Focused Topic Scientific Session 1

1:30 PM–5:00 PM

**Room 101J**

### Functional Anatomy and Physiology of Skin

*Co-Chairs:* Kelly Diegel, DVM, PhD, DACVP, Boehringer Ingelheim, Ridgefield, CT; and Aaron M. Sargeant, DVM, PhD, DACVP, Charles River Laboratories Preclinical Services, Spencerville, OH

This session will provide an overview of skin immunology and comparative and functional anatomy with emphasis on aspects important to toxicologic assessment. The pros and cons of different species will be discussed, including the use of hairless rodent models and models of human disease being used in discovery work to screen compounds for efficacy endpoints. Pitfalls and concerns of study design, especially with regards to rodent versus pig, will be covered. Finally, formulation and pharmacokinetic endpoints will be discussed, including the challenges of delivering a drug to a specific component of the skin, and issues surrounding 1) developing a formulation that will target a specific area, 2) measuring concentrations in different areas without cross contamination, and 3) appropriate endpoints for high throughput screening of compounds *in vitro* and how these endpoints translate *in vivo*.

1:30 PM–2:15 PM

#### **Skin Deep: The Thick, the Thin, and the Therapeutic Target**

*Lydia Andrews-Jones, DVM, PhD, DACVP, Allergan, Lake Forest, CA*

2:15 PM–3:05 PM

#### **Dermal Drug Development and Delivery to the Skin**

*Jon Lenn, MS, PhD, GlaxoSmithKline, Research Triangle Park, NC*

3:05 PM–3:35 PM

#### **Refreshment Break**

#### **Exhibit Hall B**

3:35 PM–4:25 PM

#### **Look into the Skin**

*Jonathan Stauber, PhD, ImaBiotech, Loos, France*



# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

4:25 PM–4:45 PM

## **Student Presentation: Gastrin-Releasing Peptide Receptor (GRPR) Signaling in Prostate Cancer**

Said Elshafae, The Ohio State University

4:45 PM–5:00 PM

## **Student Presentation: Inhibition of Islet Amyloid Polypeptide Aggregation and Associated Cytotoxicity by Non-steroidal Anti-inflammatory Drugs**

Jessica Fortin, Université de Montréal

4:30 PM–6:00 PM

## **ASVCP Business Meeting Room 101E**

5:15 PM–6:00 PM

## **ACVP Business Meeting Auditorium Lecture Hall 2**

## **Combined ACVP and STP Town Hall Meeting**

*Coordinated by the ACVP/STP Coalition*

6:15 PM–7:30 PM

## **Auditorium Lecture Hall 1**

### **Core and Specialized Skill Sets for Veterinary Pathologists: An Interactive Town Hall Meeting on Future Needs**

The practice of veterinary pathology and interactions with related disciplines continue to evolve. It is essential for training programs and those who mentor future pathologists to be aware of the shifting needs of various employment sectors. Undoubtedly, there are common requisite skill sets for trainees to develop to be successful as pathologists. However, specialized skill sets necessary to be successful in various sectors, such as academia, industry, and government, may not be common across all segments. Therefore, it is important to identify these differential needs and incorporate the respective learning opportunities into training programs. In addition to core pathology expertise, it is recognized that emotional intelligence, including soft skills like writing and presenting, and having a collaborative spirit are equally important. Consequently, an open forum for discussion will take place during the Town Hall Meeting to help more fully understand the perceived core and specialized needs for the next generation of pathologists. Active audience participation, including mentors and trainees, will be paramount to ensuring the opinions of the ACVP, STP, and ASVCP memberships are captured. A white paper summarizing the discussion points will be published, which will help drive future discussions on pathology training.

## **ACVP-STP Mystery Slide Review Session: Skin**

7:30 PM–9:30 PM

## **Room 102A**

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

**Panelists:** Dimitry M. Danilenko, DVM, PhD, DACVP, Genentech, Inc., South San Francisco, CA; Kelly Diegel, DVM, PhD, DACVP, Boehringer Ingelheim, Ridgefield, CT; Robert W. Dunstan, DVM, MS, DACVP, Biogen Idec, Cambridge, MA; Joanne Mansell, DVM, MRCVS, DACVP, Texas A&M University, College Station, TX; Elizabeth A. Mauldin, DVM, DACVD, DACVP, University of Pennsylvania, Philadelphia, PA; Kim Newkirk, DVM, PhD, DACVP, University of Tennessee, Knoxville, TN

7:00 PM–9:00 PM

## **Cornell University College of Veterinary Medicine Alumni Reception Mirage Room, Hyatt Regency Hotel**

7:30 PM–9:00 PM

## **North Carolina State University Alumni Reception Lakeshore A, Hyatt Regency Hotel**

7:30 PM–9:30 PM

## **University of Illinois College of Veterinary Medicine Alumni Reception Brit's Pub (1110 Nicollet Mall)**

7:30 PM–9:30 PM

## **Washington State University College of Veterinary Medicine Alumni Reception Lakeshore B, Hyatt Regency Hotel**

## **Monday, October 19**

7:00 AM–6:00 PM

## **Speaker Ready Room Room 200F**

7:00 AM–1:30 PM

## **Internet Station *Sponsored by VIN* Exhibit Hall B Foyer**

7:00 AM–1:30 PM

## **C.L. Davis Board of Directors Meeting Lakeshore C, Hyatt Regency Hotel**

7:30 AM–1:30 PM

## **Registration Exhibit Hall B Foyer**

Monday



## ACVP/ASVCP/STP Combined Plenary Session: Biomarkers

8:00 AM–12:00 Noon **Main Auditorium**

**Co-Chairs:** Robert W. Dunstan, DVM, MS, DACVP, Biogen Idec, Cambridge, MA; Elizabeth Howerth, DMV, PhD, DACVP, University of Georgia, Athens, GA; and Anne Provencher, DVM, MSc, DECVP, FIATP, DACVP, Charles River Laboratories, Sherbrooke, Quebec, Canada

For over a decade, the pursuit of biomarkers to diagnose and prognose disease and, more importantly, to predict which patients will respond to targeted therapies, has been a major goal of both FDA and the pharmaceutical industry. However, only a handful of biomarkers have been approved by the Agency. In this session, there will be a discussion of what biomarkers are, the types of biomarkers that are currently being developed, and what it takes to validate them for regulatory approval.

8:00 AM–8:50 AM

### **Biomarkers: You May Remember Them As...**

Michael Bleavins, PhD, DABT, White Crow Innovation, LLC, Dexter, MI

8:50 AM–9:40 AM

### **Translational Biomarkers – Integration and Innovation**

Dana Walker, DVM, MS, PhD, DACVP, Novartis Institutes for Biomedical Research, Cambridge, MA

9:40 AM–10:10 AM

### **Refreshment Break**

### **Exhibit Hall B**

10:10 AM–11:00 AM

### **Translational, Tomographic Imaging Biomarkers**

Jack Hoppin, PhD, inviCRO, Boston, MA

11:00 AM–11:50 AM

### **Considerations for the Successful Development of New Biomarkers**

Daniela Enmulat, DVM, PhD, DACVP, GlaxoSmithKline, King of Prussia, PA

11:50 AM–12:00 Noon

### **Questions and Discussion**

## ASVCP Veterinary Laboratory Professionals Session II

8:00 AM–12:00 Noon **Room 200E**

**Chair:** Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO

8:00 AM–8:30 AM

### **Multi-generational Employees in the Workplace**

Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO

8:30 AM–9:30 AM

### **Comparative Hematology of Laboratory Animals**

Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL

9:30 AM–10:00 AM

### **Refreshment Break**

### **Exhibit Hall B**

10:00 AM–11:00 AM

### **Routine Clinical Chemistry, Urinalysis, and Coagulation Testing in Laboratory Animals**

Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL

11:00 AM–12:00 Noon

### **Specialized Biomarkers in Laboratory Animals**

Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL

8:00 AM–5:00 PM

### **Guest/Hospitality Suite Skyway Suite B, Hyatt Regency Hotel**

9:00 AM–5:00 PM

### **Career Center Room 206B**

9:30 AM–1:00 PM

### **Exhibits and Silent Auction Exhibit Hall B**

9:30 AM–1:00 PM

### **Focused Scientific Poster Session and ACVP Veterinary Student Posters Exhibit Hall B**

12:15 PM–3:00 PM

### **Latin Comparative Pathology Group Presents Room 200E**

12:15 PM–1:45 PM

### **ACVP Examination Re-Design Concept Town Hall Meeting Main Auditorium**

Join the CER team for a brief overview of changes to the certifying examination and a question/answer session.

## ASVCP-STP Case Discussion Session

1:30 PM–3:30 PM

### **101E**

**Chair:** Tracy Stokol, BVSc, PhD, DACVP, Cornell University, Ithaca, NY

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17-21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

Tuesday

1:30 PM-4:30 PM **Community Outreach Activity (CO-Act)**  
Room 208A

## Meet the Pathologists: A Discussion of Careers in Pathology

1:45 PM-3:00 PM **Room 101F**

*Panelists: Kevin Woolard, DVM, PhD, University of California, Davis, CA; David E. Malarkey, DVM, PhD, DACVP, NTP, NIEHS, Research Triangle Park, NC; Lila Ramaiah, DVM, PhD, DACVP, Huntingdon Life Sciences, Jersey City, NJ; Stacey Fossey, DVM, PhD, DABT, DACVP, AbbVie, Inc., North Chicago, IL*

3:00 PM-5:00 PM **Veterinary Student and Resident Forum**  
Room 208

5:00 PM-6:30 PM **C.L. Davis Foundation Reception**  
Mirage Room, Hyatt Regency Hotel

5:15 PM-7:45 PM **ASVCP Reception**  
*All members welcome*  
Lakeshore B, Hyatt Regency Hotel

5:30 PM-7:00 PM **IDEXX Reception**  
*Invited guests, residents, and international attendees - please join us in honoring and celebrating the hard work of those individuals who sat for the 2015 ACVP Certifying Examination.*  
Regency Room

6:00 PM-7:00 PM **ACVP Council and Corporate Partners Reception**  
Greenway F, Hyatt Regency Hotel

6:00 PM-7:00 PM **STP Committee Chair Mixer**  
Greenway A, Hyatt Regency Hotel

6:00 PM-7:30 PM **University of Pennsylvania Alumni Reception**  
Greenway J, Hyatt Regency Hotel

6:00 PM-8:00PM **Comparative Pathologists Consortium Reception**  
Market Bar-B-Que (1414 Nicollet Avenue)

6:30 PM-8:00 PM **Iowa State University College of Veterinary Medicine Alumni Reception**  
Greenway B, Hyatt Regency Hotel

6:30 PM-8:00 PM **University of Georgia College of Veterinary Medicine Alumni Reception**  
Greenway C, Hyatt Regency Hotel

6:30 PM-9:00 PM **University of Minnesota Alumni Reception**  
Market Bar-B-Que (1414 Nicollet Avenue)

7:00 PM-9:00 PM **Colorado State University Alumni Reception**  
Greenway E, Hyatt Regency Hotel

## Mystery Slide Review and Neuropathology Case Presentations

7:00 PM-9:00 PM **Room 102A**  
*Chair: Jey Koehler, DVM, PhD, DACVP, Auburn University, Auburn, AL*  
Supported by Tox Path Specialists, LLC

7:00 PM-9:00 PM **Ohio State University College of Veterinary Medicine Alumni Reception**  
Northwoods, Hyatt Regency Hotel

7:00 PM-9:00 PM **University of California Davis College of Veterinary Medicine Alumni Reception**  
Greenway D, Hyatt Regency Hotel

## Tuesday, October 20

7:00 AM-8:00 AM **ACVP Past Presidents Breakfast**  
Lakeshore C, Hyatt Regency Hotel

7:00 AM-6:00 PM **Speaker Ready Room**  
Room 200F

7:00 AM-7:00 PM **Internet Station**  
*Sponsored by VIN*  
Exhibit Hall B Foyer

7:30 AM-5:00 PM **Registration**  
Exhibit Hall B Foyer

8:00 AM-10:00 AM **International Veterinary Pathology Coalition**  
Lakeshore A, Hyatt Regency Hotel



## Clinical Pathology Focused Scientific Session II

8:00 AM–12:00 Noon **Room 200A**

*Chair: Shelley Burton, DVM, MSc, DACVP, University of Prince Edward Island, Charlottetown, Prince Edward Island, Canada*

*Committee Members: E. Behling-Kelly, S. Connolly, N. Tripathi, C. Wagg, and V. Wong*

### Platform Presentations

8:00 AM–8:15 AM

#### **Cytologic Characteristics and World Health Organization Classification in 45 Dogs with Lymphoma**

*M.M. Fry, C.J. LeBlanc, S.E. Suter, L.B. Borst, and G.R. Reed*  
Keyword: Cytology

8:15 AM–8:30 AM

#### **Evaluation of the Cell Block Method in the Diagnosis of Canine Peripheral Lymphadenopathy and the Immunophenotyping of Canine Lymphoma**

*D. Heinrich\*, J. Overmann, M. Henson, J. Zientek, A. Avery, and D. Seelig*  
Keyword: Cytology

8:30 AM–8:45 AM

#### **Prognostication of Canine T-Cell Lymphoma**

*N. Deravi\*, O. Berke, and D. Bienzle*  
Keyword: Hematopoietic System

8:45 AM–9:00 AM

#### **Apoptosis-Regulating Proteins BCL-2 and BAX in Canine Lymphoma**

*K. Meichner\*, J. Fogle, L. English, and S. Suter*  
Keyword: Neoplasia

9:00 AM–9:15 AM

#### **Canine Lipoproteins Enhance Fibrinolysis and Alter Fibrin Clot Structure**

*M.G. Asakawa\*, D.J. Fletcher, C.J. Wong, and E. Behling-Kelly*  
Keyword: Clinical Pathology

9:15 AM–9:30 AM

#### **Effect of Various Anti-platelet Drugs on Ex Vivo Herpesvirus Type-1-Induced Platelet Activation**

*D. Hernandez\*, W.M. Yeo, and T. Stokol*  
Keyword: Clinical Pathology

9:30 AM–9:45 AM

#### **In Vitro Evaluation of the Biological Response of Canine Macrophages Challenged with Poly Lactic-co-Glycolic Acid (PLGA) Nanoparticles**

*D. Guldner\*, P. Ziaei, E. Laws, M.G. Norton, and C.D. Souza*  
Keyword: Immune System

9:45 AM–10:00 AM

#### **Development of a Plasminogen Activator Inhibitor-1 (PAI-1) Assay and Determination of PAI-1 Activity in Plasma from Hyperlipidemic and Healthy Dogs**

*C.J. Wong, M.J. Koch, and E. Behling-Kelly*  
Keyword: Clinical Pathology

10:00 AM–10:30 AM

#### **Refreshment Break Exhibit Hall**

#### **Clinical Pathology Focused Scientific Poster Session Exhibit Hall B**

### Invited Speaker

10:30 AM–11:30 AM

#### **Garbage In, Garbage Out: Improving Oncology Care Through Collaboration**

*Michael Henson, DVM, PhD, DACVIM, University of Minnesota, St. Paul, MN*

11:30 AM–11:45 AM

#### **A Spectrophotometric Fibrinolysis Assay for Dog Plasma**

*U. Jeffery, A. Schneider, M. Brooks, and D.N. LeVine*  
Keyword: Hematology

11:45 AM–12:00 Noon

#### **The Many Cytologic Faces of Fat**

*H. Tvedten*  
Keyword: Clinical Pathology

*\*Competitor for the ASVCP Young Investigator Award*

## Concurrent Session II

8:00 AM–12:00 Noon **Room 101E**

### Genetically Engineered Large Animals

*Co-Chairs: David K. Meyerholz, DVM, PhD, DACVP, University of Iowa, Iowa City, IA; and Katherine Gibson-Corley, DVM, PhD, DACVP, University of Iowa, Iowa City, IA*

8:00 AM–8:50 AM

#### **Translational Imaging and Characterization of a TP53 Cancer Model in Yucatan Miniature Pigs**

*Jessica C. Sieren, PhD, University of Iowa, Iowa City, IA*

8:50 AM–9:40 AM

#### **Congenital Cerebellar Disease in a Porcine Model of Ataxia Telangiectasia**

*David Pearce, PhD, Sanford Research and Sanford Children's Health Research Center, Sioux Falls, SD*

9:40 AM–10:15 AM

#### **Refreshment Break Exhibit Hall**

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

10:15 AM–11:05 AM

## **Cystic Fibrosis-Related Diabetes in Ferrets**

Katherine Gibson-Corley, DVM, PhD, DACVP, University of Iowa, Iowa City, IA

11:05 AM–11:55 AM

## **Origins of CF Lung Disease: Insights from a Pig Model**

David K. Meyerholz, DVM, PhD, DACVP, University of Iowa, Iowa City, IA

11:55 AM–12:00 Noon

## **Questions and Discussion**

### **Education Focused Scientific Session**

8:00 AM–12:00 Noon

**Room 102A**

#### **Resident Training\***

*Chair:* Linden Craig, DVM, PhD, DACVP, University of Tennessee, Memphis, TN

8:00 AM–8:05 AM

#### **Introductions and Acknowledgements**

Linden Craig, DVM, PhD, DACVP, University of Tennessee, Memphis, TN

8:05 AM–8:15 AM

#### **The Importance of Mentoring in a Pathology Residency Program**

Paige Carmichael, DVM, PhD, DACVP, University of Georgia, Athens, GA

8:15 AM–8:30 AM

#### **Combined Veterinary Pathology Residency/PhD Programs**

Krista La Perle, DVM, PhD, DACVP, The Ohio State University, Columbus, OH

8:30 AM–8:45 AM

#### **Strategies to Recruit and Retain a Diverse Pool of Residency Applicants**

Susan Williams, DVM, PhD, DACVP, University of Georgia, Athens, GA

8:45 AM–9:00 AM

#### **Use of Technology in Resident Teaching**

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

9:00 AM–9:15 AM

#### **Inventing the Future: Partnerships between Creative Faculty and Software Engineers to Build the Open Source Software Tool, ThinkSpace 2.0**

Holly Bender, DVM, PhD, DACVP, Iowa State University, Ames, IA

9:15 AM–9:30 AM

#### **Veterinary Anatomic Pathology Training in a Medical School Setting**

Nancy D. Kock, BS, DVM, MS, PhD, DACVP, Wake Forest University, Winston-Salem, NC

9:30 AM–10:00 AM

#### **Strategies and Success Stories (Panel Discussion)**

H. Bender (moderator), K. LaPerle, P. Carmichael, A. Durham, and N. Kock

10:00 AM–10:30 AM

#### **Refreshment Break**

#### **Exhibit Hall**

#### **Education Focused Group Scientific Poster Session**

#### **Exhibit Hall B**

10:30 AM–10:45 AM

#### **Relevance of Mock Board Examinations during Anatomic Pathology Residency Training**

Kim Newkirk, DVM, PhD, DACVP, University of Tennessee, Knoxville, TN

10:45 AM–11:00 AM

#### **What's Happening with the Certification Exam?**

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

11:00 AM–11:30 AM

#### **Board Exam Myth-Busters**

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

11:30 AM–12:00 Noon

#### **Panel Discussion: The ACVP Board Examination: Questions, Comments, Concerns**

P. Pesavento (Moderator), N. Kock, K. LaPerle, and A. Barger

*\*Session Disclaimer: This session is for informational purposes only. The advice, opinions, statements, materials, and other information expressed and contained during the session are solely those of the speakers and do not necessarily reflect the views, policies, or opinions of the ACVP. The ACVP is not responsible for the accuracy, currency, completeness, reliability, or usefulness of any advice, opinions, statements, or content contained in the session. The ACVP makes no claim that the use of the information provided will assure a successful outcome on the certifying examination.*

### **Mini-Symposium**

8:00 AM–12:00 Noon

**Room 101A**

#### **Forensic Pathology**

*Co-Chairs:* Arno Wuenschmann, DrMedVet, University of Minnesota, St. Paul, MN; and Sean P. McDonough, DVM, PhD, DACVP, Cornell University, Ithaca, NY

8:00 AM–8:50 AM

#### **Traumatic Head Injuries: Mechanisms and Pathological Findings in Humans and Animals**

Mary E. Case, MD, St. Louis University, St. Louis, MO

8:50 AM–9:40 AM

#### **Forensic Pathology of Organized Dog Fighting**

Jodie Gerdin, DVM, DACVP, Antech Diagnostics, Albany, NY

Tuesday





9:40 AM–10:00 AM

## **Survey Results on Attitudes of ACVP Diplomates on Forensic Pathology**

*Beverly McEwan, DVM, MSc, PhD, DACVP, University of Guelph, Guelph, Ontario, Canada*

10:00 AM–10:30 AM

## **Refreshment Break**

## **Exhibit Hall**

10:30 AM–11:20 AM

## **Gunshot Wounds**

*Andrew Baker, MD, Hennepin County Medical Examiner's Office, Minneapolis, MN*

11:20 AM–12:00 Noon

## **Demystifying the Courtroom: the Role of Veterinary Fact and Expert Witnesses in Animal Cruelty Trials**

*Reese Frederickson, JD, MBA, BS, Pine County Attorney's Office, Pine City, MN*

## **STP Focused Topic Scientific Session 2**

8:00 AM–12:00 Noon **Room 101J**

### **Pathology and Mechanisms of Skin Injury**

*Co-Chairs: Dimitry M. Danilenko, DVM, PhD, DACVP, Genentech, Inc., South San Francisco, CA; and Sebastian Brennan, DVM, MVSc, DACVP, Novartis Pharmaceuticals Corporation, East Hanover, NJ*

The skin, like other organ systems, has a relatively limited range of responses to injury regardless of the specific mechanism underlying the insult. Despite this, there is still a great deal that can be ascertained from the different morphologic, physiologic, and molecular alterations that arise in response to injury. One of the skin's primary functions is to serve as a physical and physiologic protective barrier against injury from the external environment in order to prevent the loss of water and solutes from the body. When the skin is exposed to irritants that disrupt this barrier, it mounts an inflammatory and proliferative response in an effort to restore these essential functions. The epidermis, particularly epidermal keratinocytes and dendritic cells, are central to the initiation of the skin's response, triggering an immunologic cascade tailored to cope with a wide range of injurious stimuli and leading to the stereotypic morphologic responses that we encounter as pathologists.

This session will cover the pathology and mechanisms of cutaneous injury, beginning with an overview of our current understanding of immune-mediated mechanisms, both the adaptive and innate that underlie the pathogenesis of cutaneous injury. Following this introduction, we will present relevant applications for utilization of the delayed-type hypersensitivity response in nonclinical studies that support biotherapeutic drug development programs in cynomolgus monkeys, followed by a

presentation on the cutaneous phototoxicity pathologic changes caused by two phototoxins and the relationship of these findings with clinical observations. The final presentation will discuss exciting new data on how UV-induced chemical reactions can excite electrons to high energies and the importance of this process in cutaneous malignant melanoma and in other diseases.

8:00 AM–8:50 AM

## **An Overview of the Pathogenesis and Lesions of Immune-Mediated Skin Injury**

*Dimitry M. Danilenko, DVM, PhD, DACVP, Genentech, Inc., South San Francisco, CA*

8:50 AM–9:40 AM

## **An In Vivo Delayed-Type Hypersensitivity (DTH) Model in Non-human Primates and Applications in Nonclinical Studies Supporting Biotherapeutic Drug Development**

*Christina M. Satterwhite, PhD, Charles River Laboratories Preclinical Services, Reno, NV*

9:40 AM–10:10 AM

## **Refreshment Break**

## **Exhibit Hall**

10:10 AM–11:00 AM

## **Assessment of Cutaneous Phototoxicity for Regulatory Submission: Does Microscopic Evaluation Enhance Visual Evaluations?**

*Douglas B. Learn, PhD, Charles River Laboratories Preclinical Services, Horsham, PA*

11:00 AM–11:50 AM

## **UV-Induced Melanin Chemiexcitation: A New Mode of Melanoma Pathogenesis**

*Douglas E. Brash, PhD, Yale University, New Haven, CT*

8:00 AM–5:00 PM

**Guest/Hospitality Suite  
Skyway Suite B, Hyatt  
Regency Hotel**

## **ASVCP Veterinary Laboratory Professionals Session III**

8:15 AM–12:00 Noon **Room 200E**

*Chair: Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO*

8:15 AM–8:30 AM

## **SOP Document Requirements**

*Lynne Shanahan, MT, ASCP, Colorado State University, Ft. Collins, CO*

8:30 AM–9:30 AM

## **Comparative Erythrology**

*Deanna Schaefer, DVM, MS, MT (ASCP), DACVP, University of Tennessee, Knoxville, TN*

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

Tuesday

9:30 AM–10:00 AM

## Break

10:00 AM–11:00 AM

## Update on Novel Urine Biomarkers for Detection of Glomerular and Tubular Damage in Dogs and Cats

Jessica Hokamp, DVM, Texas A&M University, College Station, TX

11:00 AM–12:00 Noon

## Roundtable Discussions: Staffing Demands in the Clinical Laboratory

9:00 AM–5:00 PM

**Career Center  
Room 206B**

9:30 AM–3:30 PM

**Exhibits and Silent Auction  
Exhibit Hall B**

9:30 AM–3:30 PM

**Focused Scientific Poster  
Session and ACVP  
Veterinary Student Posters  
Exhibit Hall B**

## Forensic Pathology Special Poster Session

12:00 Noon–12:30 PM

**Exhibit Hall B**

### D-51A Double Homicide: Man and His Best Friend

A. Stern

Keyword: Forensic Veterinary Pathology

### D-53 A Review of the Cause and Manner of Death of 100 Forensic Necropsy Cases

A. Stern and E. Asrow

Keyword: Forensic Veterinary Pathology

### D-65 Estimating Shooting Distance in Gunshot Wounds to Animals

J.W. Brooks, R. Ristenbatt, I. Gronchi, S. O'Brien, M. Lyman, and K. Mantz

Keyword: Forensic Veterinary Pathology

### D-67 Feline Decapitation: Pre-mortem Cause of Death or Post-mortem Mutilation?

A. Keggan and S. McDonough

Keyword: Forensic Veterinary Pathology

### D-79 National Registry of Forensic Veterinary Pathology: It Might Be a Worthwhile Effort!

A. Wienschmann, S.P. McDonough, J. Gerdin, B.J. McEwen, and J.W. Brooks

Keyword: Forensic Veterinary Pathology

### D-91 Soda and Snacks: Applying Veterinary Forensic Techniques to Food Contamination

A.B. Schaffer-White and R.E. Allavena

Keyword: General

## Helpful Advice or Disparaging Critic? Your Role as a Peer Reviewer for Manuscripts in Toxicologic Pathology and Veterinary Pathology

12:00 Noon–2:00 PM

**Room 208A-D**

**Co-Chairs:** Susan A. Elmore, MS, DVM, DABT, FIATP, DACVP, NTP and NIEHS, Research Triangle Park, NC; and Jeff Caswell, DVM, DVSc, PhD, DACVP, University of Guelph, Guelph, Ontario, Canada

This seminar will be presented by the Editor-in-Chief of *Toxicologic Pathology*, Dr. Susan A. Elmore and the Editor-in-Chief of *Veterinary Pathology*, Dr. Jeff Caswell.

Currently, no formal or standardized training for peer reviewers exists; this seminar will attempt to fill that gap by providing a series of practical tips on how to review a manuscript. Helpful advice will be provided for both novice and seasoned reviewers.

## ASVCP and STP Mystery Slide Case Session

1:30 PM–5:00 PM

**Room 101F**

**Chair:** Tracy Stokol, BVSc, PhD, DACVP, Cornell University, Ithaca, NY

## Diagnostic Pathology Focused Scientific Session II

1:30 PM–4:50 PM

**Room 200A**

**Chair:** Stephen Raverty, DVM, PhD, DACVP, British Columbia Ministry of Agriculture and Lands, Abbotsford, British Columbia, Canada

**Committee Members:** E. Burrough, B. Lewis (Past-Chair), L. Kennedy, A. Rodrigues Hoffman, F. Oliveira, and D. Rotstein (Co-Chair)

## Platform Presentations

1:30 PM–1:40 PM

### Observation of Pre-existing Lesions of the Third Metacarpal and Metatarsal Bone in Thoroughbred Catastrophic Breakdown Injuries

J. Janes, L. Kennedy, and K. Garrett

Keyword: Bone and Joint

1:40 PM–1:50 PM

### Swim Bladder Distress, Craniospinal Osteopathy, and Mycobacteriosis in a Group of Spotted Gar (*Lepisosteus oculatus*)

C.V. Löhr, K. Snell, T.J. Mason, and J.R. Heidel

Keyword: Aquatic Animals (Fish)



1:50 PM–2:00 PM

**Development of Cytologic Criteria for Mast Cell Tumor Grading with Clinical Outcome Evaluation**

*M. Camus, H. Priest, J. Koehler, E. Driskell, P. Rakich, M. Ilha, and P. Krimer*

Keyword: Neoplasia

2:00 PM–2:10 PM

**Eosinophilic Granulomatous Dermatitis Induced by the Oomycete *Lagenidium* Sp. in a Cat**

*L.K. Manning, D.M. Hertzke, L.V. Reiter, and E.J. Olson*

Keyword: Infectious Disease

2:10 PM–2:20 PM

**Expression of KIR7.1 in Canine Brain Tumors: A Diagnostic Immunomarker for Choroid Plexus Tumors**

*E. Choi, E.A. Sloma, and A.D. Miller*

Keyword: Nervous System

2:20 PM–2:30 PM

**Identification of *Bordetella Bronchiseptica* in Fatal Pneumonia of Dogs and Cats**

*L. Bassel, K. Abdelaziz, M.L. Harness, M.E. Clark, K.B. Register, and J.L. Caswell*

Keyword: Respiratory System

2:30 PM–2:40 PM

**2014 AAVLD/ACVP Diagnostic Pathology Travel Award Recipient**

**Characterization of *Histomonas meleagridis* Infection in Peafowl**

*L. Clarke, H.L. Shivaprasad, S. Carnaccini, R.B. Beckstead, and D.R. Ricci*

Keyword: Avian

2:40 PM–2:50 PM

**Rapid Detection of CWD Prions in Fixed Paraffin Embedded Tissues Using the Real-Time Quaking Induced Conversion Assay**

*C.E. Hoover, D.M. Henderson, M. Zabel, and E.A. Hoover*

Keyword: Infectious Disease

2:50 PM–3:00 PM

**New Biomarkers Discovery Approach Based on Morphometric Evaluation of Mass Spectrometry Imaging (MSI) Dataset: A Case Study**

*G. Picard de Muller, G. Hamm, K. Pearson, Y. Li, T. Painter, F. Pamelard, D. Bonnel, W. Glaab, and J. Stauber*

Keyword: Liver and Pancreas

3:00 PM–3:30 PM

**Refreshment Break  
Exhibit Hall**

**Platform Presentations**

3:30 PM–3:40 PM

**Congenital Fetal Rhabdomyoma (Intermediate Type) in an Ardi Goat Kid**

*A. Ali, D. Derar, E.M. El-Manakhly, F. Al-Sobail, A. Piersigilli, and D.K. Meyerholz*

Keyword: Neoplasia

3:40 PM–3:50 PM

**Melanoma in the Central Nervous System of a Chicken with Concomitant Marek's Disease**

*A. Montiel-Del Valle and A. Mete*

Keyword: Neoplasia

3:50 PM–4:00 PM

**Primary Mast Cell Tumor Arising in the Brachial Plexus of a Dog with Invasion into the Thoracic Cavity and Cervical Spinal Canal**

*F.D. Gray and A.C. Durham*

Keyword: Nervous System

4:00 PM–4:10 PM

**Salmonella Sp. as a Cause of Sepsis with DIC in a Group of American Alligators (*Alligator mississippiensis*)**

*M. Woldemeskel, I. Hawkins, and S. Rajeev*

Keyword: Infectious Disease

4:10 PM–4:20 PM

**Surgical Margin Evaluation of Equine Small Intestinal Resections: A Prospective Study**

*R.E. Ruby, A.D. Miller, S.L. Fubini, and G.E. Duhamel*

Keyword: Alimentary

4:20 PM–4:30 PM

**Histopathologic Characterization of Holstein Cattle Naturally Infected with Salmonella Dublin**

*H.L. Pecoraro, B. Thompson, and G.E. Duhamel*

Keyword: Alimentary

4:30 PM–4:40 PM

**Olfactory Neuroblastoma in a Florida Black Bear (*Ursus americanus floridanus*)**

*G. Krane, A. Miller, C. Cummings, D. Wolf, and S. Craft*

Keyword: Wildlife

4:40 PM–4:50 PM

**Complete Splenic Abscessation with Septic Peritonitis in a Hunting Dog**

*K. Schlicher, K. Wycislo, M. Bates, P. Roady, and A. Barger*

Keyword: Infectious Disease

**Experimental Disease Focused Scientific Session II**

1:30 PM–5:00 PM

**Room 101A**

*Chair: Sébastien Monette, DMV, MVSc, DACVP, Memorial Sloan Kettering Cancer Center, New York, NY*

# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

Tuesday

*Committee Members: H. Adissu, O. Foreman, M. Gagea, S. Gumber, L. Janke (Co-Chair), B.L. Plattner (Past Chair), and R. Read*

## Invited Speaker

1:30 PM–2:15 PM

### **Holoprosencephaly, Cleft Lip, and Cleft Palate Result from Acute Hedgehog Signaling Inhibition in the Mouse: Timing is Everything**

*Robert J. Lipinski, PhD, University of Wisconsin, Madison, WI*

## Platform Presentations

2:15 PM–2:30 PM

### **Tissue Tropism, Infection Kinetics, and Liver Disease Associated with Equine Hepacivirus and Equine Pegivirus Infection**

*J.D. Ramsay, R. Evanoff, T.E. Wilkinson, T.J. Divers, D.P. Knowles, and R.H. Mealey*

Keyword: Infectious Disease

2:30 PM–2:45 PM

### **Pathological Evaluation of a Mouse Model for Middle East Respiratory Syndrome**

*D.K. Meyerholz, K. Li, C.L. Wohlford-Lenane, S. Perlman, A.M. Lambertz, K.N. Gibson-Corley, and P.B. McCray, Jr.*

Keyword: Respiratory System

2:45 PM–3:00 PM

### **Cross-Disciplinary Synergy: Combining Histopathology and Systems Biology to Characterize Experimental Pandemic H1N1 Influenza Infections in Ferrets**

*D. Gasper, J. Tisoncik-Go, J. Kyle, A. Eisfeld, C. Selinger, M. Hatta, J. Morrison, E. Zink, Y. Kim, A. Schepmoes, S. Purvine, K. Weitz, R. Green, S. Tilton, B. Webb-Robertson, K. Waters, T. Metz, R. Smith, Y. Kawaoka, M. Suresh, L. Josset, and M. Katze*

Keyword: Ferret

3:00 PM–3:30 PM

## Refreshment Break

## Exhibit Hall

## Experimental Disease Focused Scientific Poster Session

## Exhibit Hall B

## Invited Speaker

3:30 PM–4:30 PM

### **Modeling the Natural History of Pelizaeus Merzbacher Disease in a Canine X-Linked Disorder**

*Ian D. Duncan, BVMS, PhD, FRCPPath, FRSE, University of Wisconsin, Madison, WI*

## Platform Presentations

4:30 PM–4:45 PM

### **Pharmacological Inhibition of Bile Acid Uptake Ameliorates Ultrastructural and**

### **Histopathological Changes in Liver Due to Bile Acid Toxicity**

*S.K. Shanmukhappa, B. Dipasquale, and A. Miethke*

Keyword: Toxicologic Pathology

4:45 PM–5:00 PM

### **Infertility and Testicular Pathology in C57BL/6N Mutant Mice from Large Scale Mouse Phenotyping Screens: Gene-Phenotype Associations and Potential "Druggable" Targets for Contraception**

*H.A. Adissu, S. Newbigging, L. Morikawa, J.K. White, R. Ramirez-Solis, and C. McKelvie*

Keyword: Reproductive System

## STP Focused Topic Scientific Session 3

1:30 PM–5:00 PM

Room 101J

## Models of Skin Disease

*Co-Chairs: Robert W. Dunstan, DVM, MS, DACVP, Biogen Idec, Cambridge, MA; and Elizabeth A. Mauldin, DVM, DACVD, DACVP, University of Pennsylvania, Philadelphia, PA*

The objective of this session will be to describe the diversity of animal models available to investigate skin diseases. A secondary goal will be to provide a session that will be of interest to both STP and ACVP attendees. This will start with a discussion of *in vitro* models followed by presentations on the epidermis, the hair follicle, and the dermis. At the end, the attendees should have a better understanding of both dermatopathology and diseases affecting the major structural complements of the skin.

1:30 PM–2:15 PM

### **In Vitro Skin Models and Their Predictability in Defining Normal and Disease Biology, Pharmacology, and Toxicity**

*Dimitry M. Danilenko, DVM, PhD, DACVP, Genentech, Inc., South San Francisco, CA*

2:15 PM–3:05 PM

### **Spontaneous Animal Models for the Study of Epidermal Diseases**

*Elizabeth A. Mauldin, DVM, DACVD, DACVP, University of Pennsylvania, Philadelphia, PA*

3:05 PM–3:35 PM

## Refreshment Break

## Exhibit Hall

3:35 PM–4:25 PM

### **The Hair Follicle: A Fascinating Mini-organ**

*Monika Welle, Prof DrMedVet, DECVP, University of Bern, Bern, Switzerland*

4:25 PM–5:00 PM

### **Scleroderma As a Model for the Dilemma of Fibrosing Diseases: Where Do We Go When**





## Molecular Biology and Animal Surrogates Inadequately Inform?

*Robert W. Dunstan, DVM, MS, DACVP, Biogen Idec, Cambridge, MA*

5:15 PM–6:00 PM	<b>STP Business Meeting Room 101E</b>
6:00 PM–7:00 PM	<b>IATP Business Meeting Room 200G</b>
6:15 PM–7:30 PM	<b>ACVP and STP Combined Awards and Recognition Event Room 101A</b>
7:45 PM–10:00 PM	<b>Presidents' Reception Ballroom A</b>

## Wednesday, October 21

7:00 AM–8:00 AM	<b>STP Past Presidents Breakfast Mirage Room, Hyatt Regency Hotel</b>
7:00 AM–11:00 AM	<b>Internet Station</b> <i>Sponsored by VIN</i> <b>Exhibit Hall B Foyer</b>
7:00 AM–11:30 AM	<b>Speaker Ready Room Room 200F</b>
8:00 AM–11:00 AM	<b>Guest/Hospitality Suite Skyway Suite B, Hyatt Regency Hotel</b>
8:00 AM–1:00 PM	<b>Registration Exhibit Hall B Foyer</b>

## Concurrent Session III

8:00 AM–12:00 Noon **Room 200A**

### Pathology of Avian/Exotics

*Co-Chairs: Nancy Stedman, DVM, PhD, Busch Gardens/SeaWorld Parks and Entertainment, Tampa, FL; and Rita McManamon, DVM, University of Georgia, Athens, GA*

8:00 AM–8:45 AM

### Select Emerging, Infectious, and Poorly Understood Disease Entities of Reptiles

*Mike Garner, DVM, DACVP, Northwest ZooPath, Monroe, WA*

8:45 AM–9:15 AM

### Selected Topics in Avian Pathology

*Nancy Stedman, DVM, PhD, Busch Gardens/SeaWorld Parks and Entertainment, Tampa, FL*

9:15 AM–9:40 AM

### Selected Topics in Small Mammal Pathology

*Rita McManamon, DVM, University of Georgia, Athens, GA*

9:40 AM–10:10 AM

### Refreshment Break

### Exhibit Hall B Foyer

10:10 AM–10:55 AM

### Current/Selected Topics in Wildlife Pathology

*Valerie Shearn-Bochsler, DVM, MPH, USGS National Wildlife Health Center, Madison, WI*

10:55 AM–11:40 AM

### Emerging Zoonotic Diseases: Critical Role of Pathology in Identification and Discovery

*Sherif Zaki, MD, PhD, National Center for Emerging and Zoonotic Diseases, Centers for Disease Control and Prevention, Atlanta, GA*

11:40 AM–12:00 Noon

### Questions and Discussion

## Concurrent Session IV

8:00 AM–12:00 Noon **Room 101E**

### Flow Cytometry and Clonality Assays in Diagnostic Hematopathology

*Co-Chairs: Dorothee Bienzle, DVM, PhD, DACVP, University of Guelph, Guelph, Ontario, Canada; and Mary Jo Burkhard, DVM, PhD, DACVP, Ohio State University, Columbus, OH*

8:00 AM–8:05 AM

### Introduction

*Dorothee Bienzle, DVM, PhD, DACVP, University of Guelph, Guelph, Ontario, Canada; and Mary Jo Burkhard, DVM, PhD, DACVP, Ohio State University, Columbus, OH*

8:05 AM–8:50 AM

### Principles of Flow Cytometry of Human Non-Hodgkin Lymphoma and Applications to Comparative Pathology

*Michael Linden, MD, PhD, DABP, University of Minnesota, Minneapolis, MN*

8:50 AM–9:20 AM

### Concepts and Conundrums of Clinical Flow Cytometry

*Mary Jo Burkhard, DVM, PhD, DACVP, Ohio State University, Columbus, OH*

9:20 AM–9:50 AM

### Principles, Potential, and Pitfalls of Clonality Testing

*Stefan M. Keller, DVM, DrMedVet, PhD, DECVP, University of Guelph, Guelph, Ontario, Canada*

9:50 AM–10:10 AM

### Current Status of Proficiency Testing and Consensus Effort

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

10:10 AM–10:25 AM

### Refreshment Break

### Exhibit Hall B Foyer



# Program

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17–21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

10:25 AM–12:00 Noon

## **Flow Cytometry and Clonality Cases to Demonstrate Diagnostic Challenges and Rewards**

Melinda Wilkerson, DVM, PhD, DACVP, Kansas State University, Manhattan, KS; Stefan M. Keller, DVM, DrMedVet, PhD, DECV, University of Guelph, Guelph, Ontario, Canada; Dorothee Bienze, DVM, PhD, DACVP, University of Guelph, Guelph, Ontario, Canada; Tracy Stokol, BVSc, PhD, DACVP, Cornell University, Ithaca, NY; and Mary Jo Burkhard, DVM, PhD, DACVP, Ohio State University, Columbus, OH

## **Mini-Symposium II**

8:00 AM–12:00 Noon

**Room 101A**

### **Medical Device Pathology**

**Co-Chairs:** Laura E. Leigh Perkins, DVM, PhD, DACVP, Abbott Vascular, Mattaponi, VA; and Marian K. Rippey, DVM, PhD, DACVP, Rippey Pathology Solutions, Inc., Woodbury, MN

8:00 AM–8:15 AM

### **Welcome to the World of Cardiovascular Medical Devices**

Laura E. Leigh Perkins, DVM, PhD, DACVP, Abbott Vascular, Mattaponi, VA

8:15 AM–8:50 AM

### **Handling, Processing, and Evaluation of Medical Devices**

Serge D. Rousselle, DVM, DACVP, Alizée Pathology, LLC, Thurmont, MD

8:50 AM–9:25 AM

### **Medical Device Regulatory Considerations and Biocompatibility**

Victoria Hampshire, VMD, Capital Preclinical Scientific Regulatory Consulting, LLC, Bethesda, MD

9:25 AM–10:00 AM

### **Medical Device Imaging and the Pathologist**

Amit Vasanji, PhD, Image IQ, Inc., Cleveland, OH

10:00 AM–10:20 AM

### **Refreshment Break**

### **Exhibit Hall B Foyer**

10:20 AM–10:50 AM

### **Cardiovascular and Combination Devices**

Marian K. Rippey, DVM, PhD, DACVP, Rippey Pathology Solutions, Inc., Woodbury, MN

10:50 AM–11:10 AM

### **Morphologic Evaluation of Nervous System Devices**

Mark T. Butt, DVM, DACVP, Tox Path Specialists, LLC, Frederick, MD

11:10 AM–11:30 AM

### **Preparation and Analysis of Orthopedic Implanted Devices**

Madeline Chagnon, DVM, MSc, AccelLAB, Boisbriand, Quebec, Canada

11:30 AM–11:50 AM

### **Staying in the Game: Evaluation of Safety and Efficacy of Orthopedic Devices**

Joan Wicks, DVM, PhD, DACVP, Alizée Pathology, LLC, Thurmont, MD

11:50 AM–12:00 Noon

### **Questions and Discussion**

## **STP Focused Topic Scientific Session 4**

8:00 AM–12:00 Noon

**Room 101J**

### **Case Studies of Cutaneous Toxicity, Direct and Systemic**

**Co-Chairs:** Zbigniew Wojcinski, DVM, DVSc, DABT, DACVP, Drug Development Preclinical Services, LLC, Ann Arbor, MI; and Duane Belote, DVM, DACVP, Covance Laboratories, Inc., Chantilly, VA

During development of compounds intended to treat skin diseases, manifestations of cutaneous toxicity may occur after topical application or systemic administration. Many factors, including selection of the appropriate animal model and parameters for evaluation, must be taken into consideration in designing nonclinical safety strategies to support initiation of clinical trials with potential therapeutic compounds.

This session will cover the unique challenges of drug development of compounds intended to treat dermal disease conditions from technical and pathology perspectives. The first presentation will provide an overview of the numerous factors that can influence the conduct of dermal toxicity studies and subsequent interpretation of findings. Subsequent presentations in this session will include the use of pigs in toxicity testing with respect to the influence of differences in metabolism and background findings; a review of a systematic approach to assessing adverse drug reactions manifested as cutaneous drug eruptions in non-human primates; and a case study of drug-induced cutaneous toxicity in cynomolgus monkeys including strategies for investigation of the mechanism of toxicity.

8:00 AM–8:50 AM

### **Pragmatic Issues in Dermal Toxicity Studies: Expected and Unexpected**

Christine L. Merrill, DVM, PhD, DACVP, GlaxoSmithKline, Research Triangle Park, NC

8:50 AM–9:40 AM

### **Pigs in Toxicology: Differences in Metabolism and Background Findings**

Kristi L. Helke, DVM, PhD, DACVP, Medical University of South Carolina, Charleston, SC

9:40 AM–10:10 AM

### **Refreshment Break**

### **Exhibit Hall B Foyer**

Wednesday



10:10 AM–10:50 AM

## Cutaneous Toxicity in Non-human Primates

Annette Romeike, DMV, DACVP, Covance Laboratories SAS, Porcheville, France

10:50 AM–11:40 AM

## A Case of Drug-Induced Cutaneous Toxicity Observed in Cynomolgus Monkeys

Rie Kikkawa, DVM, PhD, DABT, DJCVP, DJSOT, DACVP, Novartis Institutes for Biomedical Research, East Hanover, NJ

8:00 AM–12:00 Noon

**Young Investigator Award  
Poster Session  
Exhibit Hall B Foyer**

12:00 Noon

**Meeting Adjourned**

## ACVP/ASVCP/STP Post-Meeting Workshop I

(Registration required)

1:00 PM–5:00 PM

**Room 101F**

### Case-Based Molecular Pathology: State-of-the-Art

**Co-Chairs:** David E. Malarkey, DVM, PhD, DACVP, NTP, NIEHS, Research Triangle Park, NC; and Gerry O'Sullivan, MVB, MSc, PhD, DECVP, DACVP, University of Minnesota, St. Paul, MN

1:00 PM–1:10 PM

### Overview of Workshop

David Malarkey, DVM, PhD, DACVP, NTP, NIEHS, Research Triangle Park, NC; and Gerry O'Sullivan, MVB, MSc, PhD, DECVP, DACVP, University of Minnesota, St. Paul, MN

### Case #1: Utility of Clonality Assays in the Diagnosis of Malignant Lymphoma

Anne Avery, VMD, PhD, Colorado State University, Fort Collins, CO

### Case #2: Application of Cytogenomics for the Diagnosis and Prognosis of Canine Neoplasms

Matthew Breen, PhD, CBiol, FSB, North Carolina State University, Raleigh, NC

### Case #3: Molecular Biomarkers in Determining the Prognosis of Canine Mast Cell Tumors

Matti Kiupel, DrVetMed, BS, MS, PhD, DACVP, Michigan State University, Lansing, MI

### Case #4: Genomics of Rat Liver Cancer: Origin and Evolution of Hepatoblastomas in the Mouse

Arun K. Pandiri, BVSc&AH, MS, PhD, DABT, DACVP, EPL, Inc./NTP, Research Triangle Park, NC

### Case #5: Predictive Gene Profiling of Liver Toxicants and Carcinogens

Scott S. Auerbach, PhD, DABT, NTP/NIEHS, Research Triangle Park, NC

### Case #6: Diagnosis of Porcine Epidemic Diarrhea: Which is the Latest New Important Disease in Swine

Stephanie Rossow, DVM, PhD, University of Minnesota, Minneapolis, MN

### Case #7: Fulfilling Koch's Postulate: The Role of Molecular Biology in Establishing Illnesses Caused by Bartonellosis

Ricardo G. Maggi, MS, PhD, North Carolina State University, and Galaxy Diagnostics, Raleigh, NC

4:15 PM–4:45 PM

### Panel Discussion with Workshop Faculty

4:45 PM–5:00 PM

### Questions and Discussion

## Post-Meeting Workshop II

(Registration required)

1:00 PM–5:00 PM

**Room 200E**

### Mouse Central Nervous System Neuropathology

**Co-Chairs:** Jerrold M. Ward, DVM, PhD, DACVP, Global VetPathology, Montgomery Village, MD; and Caroline Zeiss, BVSc, PhD, DACLAM, DACVP, Yale University, New Haven, CT

1:00 PM–1:45 PM

### Mouse Brain Evaluation: How and Where to Look—An Overview of Mouse Neuroanatomy

Deepa B. Rao, BVSc, MS, PhD, DABT, DACVP, FDA, Silver Spring, MD

1:45 PM–2:30 PM

### An Overview of Mouse CNS Neuropathology: Spontaneous Findings, Artifacts, and Selected Induced Lesions

Ingrid D. Pardo, DVM, MS, DACVP, Pfizer, Inc., Groton, CT

2:30 PM–3:00 PM

### Break with Review of Digital Slide Cases

3:00 PM–3:30 PM

### Mouse Brain Tumors: GEM and Preclinical Models

Jerrold M. Ward, DVM, PhD, DACVP, Global VetPathology, Montgomery Village, MD

3:30 PM–4:15 PM

### Translational Preclinical CNS Mouse Models I—Discovery

Caroline Zeiss, BVSc, PhD, DACLAM, DACVP, Yale University, New Haven, CT

4:15 PM–5:00 PM

### Translational Preclinical CNS Mouse Models II—Safety

Ingrid D. Pardo, DVM, MS, DACVP, Pfizer, Inc., Groton, CT



## Poster Times and Poster Setup

### Poster Setup

Saturday, October 17 ..... 1:00 PM–6:30 PM

**Focused Scientific Posters will be available for viewing in Hall B at the following times:**

Sunday, October 18 ..... 9:30 AM–4:30 PM

Monday, October 19 ..... 9:30 AM–1:00 PM

Tuesday, October 20 ..... 9:30 AM–3:30 PM

### Poster Teardown

Tuesday, October 20 ..... 3:30 PM–4:30 PM

*If your poster is not removed before 4:30 pm on Tuesday, it will be removed and placed near the Registration Desk for pick up.*

**Session chairs at the Focused Scientific Session platform presentations will ask their attendees to visit the posters of their respective focused groups during the breaks. Please see below for the corresponding breaks at which you should be present at your poster:**

- Clinical Pathology Posters: Tuesday morning break
- Diagnostic Pathology Posters: Sunday afternoon break
- Education Posters: Tuesday morning break
- Experimental Disease Posters: Tuesday afternoon break
- Industrial and Toxicologic Pathology Posters: Sunday morning break
- Natural Disease Posters: Sunday morning break

***The poster abstracts are available on the combined meeting website at [www.toxpath.org/am2015/materials.asp](http://www.toxpath.org/am2015/materials.asp), on the ACVP website at [www.acvp.org](http://www.acvp.org), and on the mobile app.***



## Minneapolis Convention Center—Exhibit Hall

Booths, Posters, Microscope and Digital Slide Viewing Area





## Poster Presentation Index

§ STP Student Travel Award Winners

### Clinical Pathology Poster Presentations

**C-1 Trypanosoma Theileiri Infection in a Calf from Indiana**

A.P. Santos, P.L. Deshuillers, N.C. Nascimento, S.D. Taylor, A.W. Bianco, J.B. Messick, and C.T. Thompson

Keyword: Infectious Disease

**C-2 Hematological Disorders Associated to *Bartonella* spp. in Shelter Cats from Rio de Janeiro, Brazil**

J.M. Raimundo, A. Guimarães, A.T. da Silva, R.B. Rodrigues, G.M. Amaro, C.F.M. Botelho, E.R.S. Lemos, A.R.M. Favacho, and C.D. Baldani

Keyword: Infectious Disease

**C-3 Two Dogs Infected with *Babesia* Sp. (CoCo) in Oklahoma**

S. Fujita, L.A. Starkey, R.W. Allison, and J.H. Meinkoth

Keyword: Infectious Disease

**C-4 Molecular Survey of *Mycoplasma* spp. in Dogs from Shelters of Rio de Janeiro State, Brazil Using Real Time PCR**

A.T. da Silva, J. M. Raimundo, A. Guimarães, G.M. Amaro, C.F.M. Botelho, H.A. Santos, and C.D. Baldani

Keyword: Infectious Disease

**C-5 Biological Variation, Index of Individuality and Reference Change Value of Hematological and Biochemical Variables in Laboratory Cats**

C. Trumel, C. Monzali, A. Geffré, D. Concordet, L. Hourqueig, J.P. Braun, and N. Bourguès-Abella

Keyword: Clinical Pathology

**C-6 Reactive Lymphocytosis in a Bearded Dragon**

B. Meyer, K. Fisher, L. Corriveau, and R. Raskin

Keyword: Hematology

**C-7 Changes in Hemostatic Tests in Dogs with Chronic Kidney Disease**

D.S. Gonçalves, S.S. Gerales, P.T.C. Guimarães-Okamoto, and R.K. Takahira

Keyword: Clinical Pathology

**C-8 Blood Gas Analysis in Cats: A Retrospective Study of the Classification of Common Disorders in Domestic Felines**

F.A.V. Costa, E.R. Monteiro, D.D. Lerner, and F.H.D. González

Keyword: Clinical Pathology

**C-9 Application of Current Automated Urine Microscopy in Veterinary Medicine**

D.B. DeNicola, J. Hammond, G. Bayer, G. Bilbrough, A. Rebar, and R. Cowell

Keyword: Clinical Pathology

**C-10 Erythrocyte and Leukocyte Count Precision with an In-Clinic Automated Urine Sediment Microscopy System**

J. Hammond, L. Moisan, G. Bilbrough, and D.B. DeNicola

Keyword: Clinical Pathology

**C-11 Examination of Imprecision and Effectiveness of Different Centrifugation and Uncentrifugation Methods for Urine Sediment Microscopic Evaluation**

J. Chase, J. Hammond, G. Bilbrough, and D.B. DeNicola

Keyword: Clinical Pathology

**C-12 Evaluation of (1,3)-Beta-D-Glucan as a Biomarker of Systemic Fungal Infection in Dogs and Cats**

J. Renschler and L.J. Wheat

Keyword: Infectious Disease





**C-13 Evaluation of a Chromogenic Assay to Measure the Factor Xa Inhibitory Activity of Low Molecular Weight Heparin in Rabbit Plasma**

F. Poitout-Belissent, L. Huard, M. Fergusson-Graton, D. Lourdel, J. McCartney, T. Nekoroski, and R. Sekulovich

Keyword: Hematology

**C-14 Assessment of Two Glucose Meters for Glycemic Control in Horses**

A.G. Pöppel, S.F. Valle, N.J.S. Nunes, T.S. Mikhailenko, D. Zaro, K.M.S.C. Souto Maior, and C.A.C. Beck

Keyword: Clinical Chemistry

**C-15 Evaluation of a Human Glycated Hemoglobin Test for the Diagnosis of Diabetes Mellitus in Dogs**

N-Y Kim, M-C Kim, G-W Ha, J-H Kim, S-W Yeh, and H. Kim

Keyword: Endocrine

**C-16 Soluble CD163 (sCD163), a Novel Biomarker of Macrophage Activation and Proliferation in Cynomolgus Monkeys**

M. Winter, F. Christen, E. Atzpodien, J. Funk, F. Regenass, and M. Odin

Keyword: Immune System

**C-17 The DNA-Alkylating, Anticancer Drug Temozolomide Protects Rats from Dose-Limiting Pancreatic Toxicity Produced by the Smac-Mimetic Anticancer Drug TL3271**

Z. Zakaria, P.J. O'Brien, M.F. O'Brien, A. Byrne, and J.H.M. Prehn

Keyword: Clinical Chemistry

**C-18 Sensitivity and Specificity of the PCR-Based Lymphocyte Clonality Assay (PARR) for the Diagnosis of B- and T-Cell Lymphoma in Cats**

S.E. Hammer, S. Groiss, A. Fuchs-Baumgartinger, N. Nedorost, N. Luckschander-Zeller, S.M. Keller, A. Saalmüller, I. Schwendenwein, and B.C. Rütgen

Keyword: Clinical Pathology

**C-19 First Report of Circulating Double Positive CD4/CD8 T Lymphocytes in a Cat with Thymoma**

P.L. Deshuillers, A.P. Santos, and R.E. Raskin

Keyword: Hematology

**C-20 Concurrent Multiple Myeloma and Mast Cell Neoplasia in a Thirteen-Year-Old Castrated Male Maine Coon Cat**

J.M. Bagwell, H.R. Herd, M.A. Breshears, and T.E. Rizzi

Keyword: Clinical Pathology

**C-21 Application of Hemostatic Tests in the Thrombotic Risk in Dogs with Mammary Carcinoma**

R.K. Takahira, T.C. Trentin, D.S. Gonçalves, and C.Z. Garcia

Keyword: Neoplasia

**C-22 Molecular Characterization of an Intraerythrocytic Organism in an Anemic Louisiana Black Bear**

S. Dehghanpir, Y. Sokolova, J. LaCour, K. Banajee, and B. Grasperge

Keyword: Wildlife

**C-23 Occurrence of Hemoplasmosis in Wild Captive Dogs and Cats from the Federal District, Brazil**

F.T. Carneiro, G. Amorim, M.C. Scalón, L.C. Aquino, F.M.A.M. Pereira, B.P. Borges, and G.R. Paludo

Keyword: Wildlife

**C-24 Bone Marrow Cytology of Healthy Adult Coatis (*Nasua nasua*) Raised in Captivity**

R.K. Takahira, D.S. Gonçalves, B.P. Monteiro-Steagall, and L.M. Ozeki

Keyword: Wildlife

**C-25 Serum Biochemistry of Adult Free-Living *Didelphis albiventris***

J.Y. Shimono, D.S. Gonçalves, F. Fornazari, and R.K. Takahira

Keyword: Wildlife



**C-26 Effect of Supplementation with Vitamin E on Malondialdehyde Level in Equines Submitted to Different Intensities of Exercise on a Treadmill High-Speed**

T.S. Barbosa, L.A. Yonezawa, C.L. Marinho, J.L. Knaut, M.J. Watanabe, and A. Kohayagawa

Keyword: Clinical Pathology

**C-27 Technical Validation and Biologic Qualification of Serum Iron Homeostasis Biomarkers in Juvenile Rats and Monkeys**

D. Carraher, J. Stejskal, N.R. Vansell, J. Dybowski, S. Schelling, T. Cummings, and S.K. Ramaiah

Keyword: Toxicologic Pathology

**Diagnostic Pathology Focused Scientific Session Poster Presentations**

**D-1 A Rubric for Evaluating Processing Artifacts in Histologic Specimens with Inked Margins**

P.K. Kiser<sup>1</sup>, M. Milovancev, C.V. Löhr, and D.S. Russell

Keyword: General Topic

**D-2 Acanthomatous Ameloblastoma with Atypical Foci in Five Dogs**

J. Malmberg<sup>1</sup>, B. Powers, and P. Schaffer

Keyword: Neoplasia

**D-3 Adult-Onset, Cyclic Thrombocytopenia in a Rhesus Macaque**

G. Frydman<sup>1</sup>, K. Pate, R.P. Marini, A.M. de Laforcade, I. Bosch, S. Muthupalani, A.G. Swennes, and J.G. Fox

Keyword: Hematology

**D-4 An Outbreak of Cyprinid Herpesvirus-1 in a Backyard Koi (*Cyprinus carpio*) Water Garden Associated with the Stress of Relocation During Temperature Climactic Conditions**

N. Crossland<sup>1</sup>, J. Hawke, Y. Sokolova, P. Viadanna, T. Waltzek, and F. Del Pier

Keyword: Infectious Disease

**D-5 Bilaterally Symmetrical Encephalomalacia in a Dwarf Caiman (*Paleosuchus palpebrosus*)**

W.M. Zoll<sup>1</sup>, S.P. Terrell, B.A. Stacy, L.L. Farina, D.J. Heard, M. Bercier, D.C. Honeyfield, and J.R. Abbott

Keyword: Nervous System

**D-6 Bovine Papillomavirus DNA and S100 Protein Profiles in Sarcoid and Other Equine Spindle Cell Tumors**

E.D. Epperson<sup>1</sup> and W.L. Castleman

Keyword: Neoplasia

**D-7 Causes of Canine Meningoencephalitis and Meningomyelitis in Georgia: 129 Cases**

W. Yau<sup>1</sup> and D.R. Rissi

Keyword: Nervous System

**D-8 CD10, PAX8, and Napsin-A as Immunohistochemical Markers of Canine Renal Cell Carcinoma**

T.J. Peat<sup>1,2</sup>, E. Edmondson, M.A. Miller, D.M. DuSold, and J.A. Ramos-Vara

Keyword: Neoplasia

**D-9 Comparison of Immunohistochemical Detection of Ionized Calcium-Binding Adaptor Molecule 1 (IBA1) with CD18 and HLA-DR in Canine Histiocytic Sarcoma**

S.A. Sokol<sup>1</sup> and A.D. Miller

Keyword: Neoplasia

**D-10 Alkaline Phosphatase Immunohistochemical Staining to Differentiate Osteosarcoma from Other Primary Bone Neoplasms**

K. Schlicher, A. Barger, E. Driskell, T. Fan, and K. Terio

Keyword: Bone and Joint

**D-11 Concurrent Cutaneous Phaeohyphomycosis and Nocardiosis in a Dog**

J. Bailey<sup>1</sup>, J. Koehler, T. Hathcock, and A. White

Keyword: Skin



- D-12 Concurrent Ocular T Cell Lymphoma with Lineage Infidelity and Histiocytic Sarcoma with B Cell Receptor IGH Gene Clonality in a Cat (*Felis catus*)**  
K. Barnes<sup>1</sup>, M. Kiupel, J. Stiles, M. Operacz, and D. Sledge  
Keyword: Neoplasia
- D-13 Confirmation of Fibrodysplasia Ossificans Progressiva in a Domestic Shorthair Kitten by Detection of the R206H Mutation in the Activin Receptor 1A/Activin-Like KINASE-2 (ACVR1/ALK2) Gene**  
M. Vieson<sup>1</sup>, E.M. Shore, M. Xu, and G.K. Saunders  
Keyword: Bone and Joint
- D-14 Cryptococcal Granuloma as a Newly Reported Cause of Canine Jejunal Intussusception**  
G. Krane<sup>1</sup>, C. Cummings, and S. Craft  
Keyword: Alimentary
- D-15 Diagnostic Utility of CD204, CD163, and IBA1 in Canine Articular Histiocytic Sarcoma and Synovial Cell Sarcoma**  
K. Casey<sup>1</sup>, V. Affolter, and P. Moore  
Keyword: Hematopoietic System
- D-16 Discordance between PARR and Histopathology/Immunohistochemistry in an Atypical Lymphocyte Population in a Canine Gallbladder**  
G. Krane<sup>1</sup>, S. Campos, C. Cummings, J. Abbott, and J. Struthers  
Keyword: Neoplasia
- D-17 Label-Free Sperm Morphology Assessment Using Imaging Flow Cytometry**  
S. Vaidyanathan, A. Li, B.A. Didion, and P. Morrissey  
Keyword: Reproduction
- D-18 Granular Cell Variant of a Canine Orbital Meningioma: A Case Report**  
G. Shaw<sup>1</sup>, S.N. Miller, R.R. Dubielzig, and L.B.C. Teixeira  
Keyword: Eye and Ear
- D-19 Hemophilic Polyarthropathy in a Dog: Clinico-Pathologic Findings**  
S.F. Santagostino<sup>1</sup>, J.B. Engiles, B.J. Turek, and M.D. Sánchez  
Keyword: Bone and Joint
- D-20 Histologic Characterization of the Canine Esophagus and Correlations with Primary and Secondary Esophageal Diseases**  
M.A. McCarthy<sup>1</sup>, P. Pesavento, and S. Marks  
Keyword: Alimentary
- D-21 Histopathologic Characterization of Holstein Cattle Naturally Infected with Salmonella Dublin**  
H.I. Pecoraro<sup>1</sup>, B. Thompson, and G.E. Duhamel  
Keyword: Alimentary
- D-22 Hypertrophic Osteopathy in a Dog with Disseminated Histiocytic Sarcoma**  
S. Choudhary<sup>1</sup>, G. Andrews, D.S. Biller, S. Hocker, and J. Ryseff  
Keyword: Neoplasia
- D-23 Immunohistochemical Characterization of Combined Hepatocellular and Cholangiocellular Carcinoma in the Dog**  
H. Daverio<sup>1</sup>, S.A. Center, S.P. McDonough, and A.D. Miller  
Keyword: Liver and Pancreas
- D-24 Immunohistochemical Characterization of the Global Ischemic-Related Changes and the Role of Apoptosis in the Brains of Cats Infected with Cytauxzoon**  
L. Clarke<sup>1</sup> and D.R. Rissi  
Keyword: Infectious Disease



**D-25 Infiltrative Extramedullary Plasmacytoma of the Respiratory Tract with Lymph Node Metastasis and Intrahistiocytic Amyloid**

S. Sykes<sup>1</sup>, V. Byfield, L. Sullivan, S. Bender, P.F. Moore, and M.D. Sánchez

Keyword: Respiratory System

**D-26 Intracoelomic Neoplasia in a Crowntail Siamese Fighting Fish (*Betta splendens*)**

K. Eden<sup>1</sup>, J.F. Edwards, D.P. Sponenberg, and B.F. Porter

Keyword: Neoplasia

**D-27 Liver and Spleen Light Chain Deposition Disease in a Dog**

H.L. Pecoraro<sup>1</sup>, S.P. McDonough, S.A. Center, S.M. Liu, and K. Gisselman

Keyword: General Topic

**D-28 Mammary Rhabdomyosarcoma with Widespread Metastasis in an Adult Female Dog**

L. Dagher<sup>1</sup>, A.G. Armien, J. Dundas, and M.M. Dennis

Keyword: Neoplasia

**D-29 Metastatic Thymoma in a Dog**

K.L. Hughes<sup>1</sup>, V. Wiles, N. Leibman, and A.C. Avery

Keyword: Neoplasia

**D-30 Microsporidiosis in a Bearded Dragon (*Pogona vitticeps*)**

K. Sakaguchi<sup>1</sup>, Y. Sokolova, C. Higbie, J. Nevarez, and D. Paulsen

Keyword: Infectious Disease

**D-31 Neurologic Amebiasis Caused by *Balamuthia mandrillaris* in an Indian Flying Fox (*Pteropus giganteus*)**

N. Crossland<sup>1</sup>, I.K. Ali, C.T. Higbie, J.W. Jackson, G. Pirie, and R.W. Bauer

Keyword: Nervous System

**D-32 Olfactory Neuroblastoma in a Florida Black Bear (*Ursus americanus floridanus*)**

G. Krane<sup>1</sup>, A. Miller, C. Cummings, D. Wolf, and S. Craft

Keyword: Wildlife

**D-33 Oligodendroglioma with Spinal Metastasis in Dogs: An Underreported Neoplasm?**

T. Huynh<sup>1</sup>, M.J. Cruz Penn, and A.B. Rogers

Keyword: Nervous System

**D-34 Pathological Study on Primary Leptomeningeal Histiocytic Sarcoma in Dogs**

A. Thongtharb<sup>1</sup>, K. Uchida, J.K. Chambers, and H. Nakayama

Keyword: Neoplasia

**D-35 Pigmented Villonodular Tenosynovitis in a Reticulated Giraffe (*Giraffe camelopardalis reticulata*)**

E.A. Ihms<sup>1</sup>, A. Rivas, E. Bronson, and L.M. Mangus

Keyword: Bone and Joint

**D-36 Primary Leptomeningeal Gliomatosis in a Domestic Shorthair Cat**

W.M. Zoll<sup>1</sup>, J.M. Rudnick, T. Keeshen, C. Bandt, A.D. Miller, and J.R. Abbott

Keyword: Nervous System

**D-37 Primary Malignant Histiocytosis in the Brain of an Italian Greyhound**

N. Pate<sup>1</sup>, A. Roland, L. Gainsburg, D.L. Kraitchman, P.R. Gavin, and J. Mankowski

Keyword: Neoplasia

**D-38 Pulmonary Carcinosarcoma in a Rabbit**

S. Choudhary<sup>1</sup>, A. Kumar, and G. Andrews

Keyword: Rabbit

**D-39 Spontaneous Pulmonary Hyalinosis in Three Sugar Gliders (*Petaurus breviceps*)**

S.A. Sokol<sup>1</sup>, T.L. Southard, and A.D. Miller

Keyword: Respiratory System



**D-40 Subsequent Unrelated Cutaneous T-Cell Lymphoma in a Dog with Previously Diagnosed T-Zone Lymphoma**

F. Brooks<sup>1</sup>, K. Santangelo, A.C. Avery, and A.R. Moore

Keyword: Neoplasia

**D-41 Suspected Fenbendazole Toxicity in an American White Pelican (*Pelecanus erythrorhynchos*)**

I. J. Kim<sup>1</sup>, J.C. Niefeld, D.M. Lindemann, and D. Eshar

Keyword: Avian

**D-42 Suspected Hepatic Osteodystrophy in a Golden Lion Tamarin (*Leontopithecus rosalia*)**

E. Choi<sup>1</sup>, S.E. Childs-Sanford, N. Abou-Madi, E.E. King, B.G. Caserto, H. Priest, and A.D. Miller

Keyword: Bone and Joint

**D-43 Systemic Ranaviral Infection in an African Spurred (*Centrochelys sulcata*) Tortoise**

G. Krane<sup>1</sup>, N. Steckler, C. Cummings, T. Waltzek, J. Wellehan, and L. Farina

Keyword: Wildlife

**D-44 The Pathology of Tyzzer's Disease in Horses**

K. Fresneda<sup>1</sup>, F. Carvallo, and F. Uzal

Keyword: Infectious Disease

**D-45 Use of an Azure Histochemical Stain to Assist in Distinguishing between Poorly Differentiated Enteric Mast Cell Tumors and Large Granular Cell Lymphoma**

G. Krane<sup>1</sup>, C. Cummings, J. Abbott, and J.A. Conway

Keyword: Neoplasia

**D-46 Verminous Meningoencephalitis and Hypophysitis: A Case of Halicephalobus Gingivalis in a Brown Swiss Heifer**

J. Lorbach<sup>1</sup>, K. Wilson, and P. Stromberg

Keyword: Nervous System

**D-47 Eosinophilic Granulomatous Dermatitis Induced by the Oomycete *Lagenidium Sp.* in a Cat**

L.K. Manning<sup>1</sup>, D.M. Hertzke, L.V. Reiter, and E.J. Olson

Keyword: Infectious Disease

**D-48 Rapid Detection of CWD Prions in Fixed Paraffin Embedded Tissues Using the Real-Time Quaking Induced Conversion Assay**

C.E. Hoover<sup>1</sup>, D.M. Henderson, M. Zabel, and E.A. Hoover

Keyword: Infectious Disease

**D-49 A Case of Feline Gastrointestinal Eosinophilic Sclerosing Fibroplasia in Singapore: Histochemical and Immunohistochemical Investigation**

C.B. Ong, M.K. Kosnan, F.M. Ibrahim, and M. Al-Haddawi

Keyword: Alimentary

**D-50 A Case Report of Yolk Sac Carcinoma in Pulmonary Artery in a Young Female Sprague-Dawley Rat**

Y. Sakamoto, T. Nagaoka, K. Tamura, and H. Kaneko

Keyword: Neoplasia

**D-51 A Double Homicide: Man and His Best Friend**

A. Stern

Keyword: Forensic Veterinary Pathology

**D-52 A High-Grade Myxoid Liposarcoma in a Dog**

Q.D. Plumlee, A. Hernandez, S. Clark, A. Bascunan, J. Davidson, and J. Mansell

Keyword: Neoplasia

**D-53 A Review of the Cause and Manner of Death of 100 Forensic Necropsy Cases**

A. Stern and E. Asrow

Keyword: Forensic Veterinary Pathology



# Poster Presentations

**ACVP | ASVCP | STP**  
Combined Annual Meeting | October 17-21, 2015



Minneapolis, Minnesota

Minneapolis Convention Center

**D-54 Benign and Malignant Renal Vascular Tumors in Captive Aged Chimpanzees (*Pan troglodytes*) from Alamogordo Primate Facility**

J. Chilton and M. Lammey

Keyword: Urinary System

**D-55 Bovine "Winter Dysentery" Outbreak during the Summer in Southern California**

S. Diab

Keyword: Infectious Disease

**D-56 Bovine Fetal Emphysema Associated with *In Utero Clostridium chauvoei* Infection**

E.E. Edwards, J.F. Edwards, F.A. Uzal, and R.R. Rech

Keyword: Muscle

**D-57 Bovine Neosporosis and Abortions in British Columbia, Canada**

S. Raverty, D. Wilson, K. Orsel, J. Waddington, M. Rajeev, A. Sweeny, T. Joseph, and M. Grigg

Keyword: Reproductive System

**D-58 Canine Herpesvirus-1-Induced Acute Systemic Respiratory Disease in Three Clinically Healthy Adult Dogs with Evidence of Horizontal Transmission**

S. Yang and J. Cooley

Keyword: Infectious Disease

**D-59 CCDC85C Expression in Mammary Gland Tumors in Animals**

N. Tanaka, T. Izawa, J. Yamate, and M. Kuwamura

Keyword: Neoplasia

**D-60 Cerebellomedullary Neuronal Degeneration in a Havanese Puppy: A New Syndrome?**

J. Perkins, J.H. Hammond, B.A. Summers, and A.D. Miller

Keyword: Nervous System

**D-61 Characterization of Neuropathological Changes in Murine Models of Mucopolysaccharide Storage Disease**

N. Robinson

Keyword: Nervous System

**D-62 *Clostridium difficile* Colonic Infection in a White-Tailed Deer (*Odocoileus virginianus*) with Caprine Herpesvirus-2-Associated Malignant Catarrhal Fever**

F. Giannitti, H. Li, D. Patnayak, K. Olsen, B. Crossly, H. Moore, and F. Uzal

Keyword: Infectious Disease

**D-63 Comparison of Cutaneous Mast Cell Tumour Grading in Histological Two-Tier Grading System with Ki-67 Grading**

M. Van Erp, R. de Kroon, C. Dirken, and J.S. McKay

Keyword: Neoplasia

**D-64 Demonstration of Spontaneous Transplacental Transmission of Ovine Herpesvirus Type 2 in Cattle with Sheep-Associated Malignant Catarrhal Fever**

S.A. Headley, L.A. Pimentel, V.H.S. Oliveira, H.S. Toma, A.F. Alfieri, A.M. Carvalho, M.D. dos Santos, and A.A. Alfieri

Keyword: Infectious Disease

**D-65 Estimating Shooting Distance in Gunshot Wounds to Animals**

J.W. Brooks, R. Ristenbatt, I. Gronchi, S. O'Brien, M. Lyman, and K. Mantz

Keyword: Forensic Veterinary Pathology

**D-66 Extra-gastrointestinal Stromal Tumor from the Mesentrey of Small Bowel in a Dog**

T. Furukawa, A. Shiotsuki, K. Nibe, K. Ono, and H. Hirao

Keyword: Neoplasia

**D-67 Feline Decapitation: Pre-mortem Cause of Death or Post-mortem Mutilation?**

A. Keggan and S. McDonough

Keyword: Forensic Veterinary Pathology



**D-68 Flouro-Jade C: A Marker for Neuronal Degeneration in Equine Neonatal Maladjustment Syndrome**

R.E. Ruby, A.D. Miller, and T. Southard

Keyword: Nervous System

**D-69 *Haemoproteus meleagridis* in an Ocellated Turkey (*Meleagris ocellata*)**

H. Grodi, M. Davis, and L. Farina

Keyword: Avian

**D-70 Immunohistochemical Characterization of Lymphocytic and Granulomatous Lesions in Beef Cattle with Citrus Pulp Toxicity**

W.L. Castleman and M.T. Long

Keyword: Toxicologic Pathology

**D-71 Intestinal Giardiasis and Post-treatment Enteritis in Wild-Caught Prairie Dogs**

J.M. Ritter, R.M. Engel, J.S. Salzer, N.F. Gallardo-Romero, C.L. Hutson, M.G. Metcalfe, G.S. Visvesvara, D.M. Roellig, G.L. Langham, D.S. Carroll, and I.K. Damon

Keyword: Wildlife

**D-72 Intracerebral Malignant Plasmacytoma in a Mule Deer (*Odocoileus hemionus*)**

C.S. Clancy, A. Rougb, and A.J. Van Wettarea

Keyword: Wildlife

**D-73 Intranasal Osteolipoma in a Cynomolgus Monkey**

O. Katsuta, T. Shibata, Y. Kuriki-Yamamoto, T. Mochizuki, M. Yoshimi, and T. Noto

Keyword: Primates

**D-74 Liver Failure by Hypoplasia of the Gallbladder in a Dog**

J.C. Osorio-Baños, J. Ocampo-López, and M.A. ServiN-Trujillo

Keyword: Liver and Pancreas

**D-75 Mast Cell Rich Epitheliotropic Lymphoma in a Cat**

J. Ragsdale, N. Takács, and K. Kuroki

Keyword: Neoplasia

**D-76 Micro-CT of Formalin Fixed Cardiac Tissue Detects Mineralization in GRMD Cardiomyopathy**

S.M. Schneider, S. Lee, and B.R. Weeks

Keyword: Cardiovascular

**D-77 *Mycoplasma haemocanis* in a Splenectomized, Thrombocytopenic Dog with a Recent History of a Coyote Bite**

L. Kelly, D. Volokhov, N. Gottdenker, A. Page-Karjian, and M. Camus

Keyword: Infectious Disease

**D-78 Myopathy of the Tail Muscles in Beagle Dogs Used in Preclinical Toxicity Studies**

M. Abdi, H. White, and J. Boxal

Keyword: Muscle

**D-79 National Registry of Forensic Veterinary Pathology: It Might Be a Worthwhile Effort!**

A. Wünschmann, S.P. McDonough, J. Gerdin, B.J. McEwen, and J.W. Brooks

Keyword: Forensic Veterinary Pathology

**D-80 Olfactory Neuroblastoma and Neuroendocrine Carcinoma in Two Dogs. Immunohistochemistry Diagnostic Criteria - Case Report**

M.D. Ronderos, N.A. Cortés, B. Doncel, P. Barato, and J.C. Ospina

Keyword: Neoplasia

**D-81 Parvoviral Myocarditis in a Litter of Puppies**

K. Atkinson, J. Ragsdale, and N. Takács

Keyword: Infectious Disease

**D-82 Pathologic Features of a Nasal Adenocarcinoma in a Cynomolgus Macaque (*Macaca fascicularis*)**

M. Novilla, M. Cottingham, E. Mendoza, J. Bernal, K. Breyer, and S.Jacobson

Keyword: Neoplasia



**D-83 Pathological, Immunohistochemical, and Molecular Confirmation of Senecavirus A in Piglets from Southern Brazil**

S.A. Headley, R.A. Leme, T.E.S. Oliveira, B.K. Alcântara, L.A. Freitas, A.F. Alfieri, M. Yang, and A.A. Alfieri

Keyword: Infectious Disease

**D-84 Pathology and Diagnostic Criteria for Necrotic Enteritis of Chickens**

D. Gornatti, H. Sivaprasad, and F.A. Uzal

Keyword: Avian

**D-85 Peritoneal Rhabdomyosarcoma in a Cat**

L.A. Garcia-Camacho, M. López-Montaña, C. Cedillo-Pelaez, F.J. Vazquez-Garcia, E. Farfán-Morales, and I.C. Rangel-Rodríguez

Keyword: Neoplasia

**D-86 Persistent Thrombocytosis in a Dog**

D. Hoffman, N. Hoepf, and A. Royal

Keyword: Hematopoietic System

**D-87 Pleomorphic Adenoma of the Submandibular Salivary Gland in a Horse**

S. Diab

Keyword: Neoplasia

**D-88 Plexiform Pulmonary Arteriopathy in a Dog**

S. Kumar and A.J. Cooley

Keyword: Cardiovascular

**D-89 Pseudotuberculosis: An Easily Missed Respiratory Pathogen in Immunosuppressed Rats**

T-Y Chen, Y-H Chang, Y-L Chen, and K-H Lee

Keyword: Infectious Disease

**D-90 Septicemia with Necrotizing Enteritis by *Listeria Monocytogenes* in a Bovine Calf**

H. Taylor, W. Fales, M. Calcutt, T. Reilly, I. Ganjam, J. Bowman, and D.Y. Kim

Keyword: Alimentary

**D-91 Soda and Snacks: Applying Veterinary Forensic Techniques to Food Contamination**

A.B. Schaffer-White and R.E. Allavena

Keyword: General

**D-92 Surfactant Protein-A As an Immunohistochemical Marker of Canine Primary Pulmonary Carcinomas**

J.A. Beck, M.A. Miller, C.B. Frank, D.M. DuSold, and J.A. Ramos-Vara

Keyword: Neoplasia

**D-93 Systemic Coronavirus-Associated Disease Caused by “Ferret Enteric Coronavirus” in a Ferret (*Mustela putorius furo*)**

H. Kondo, H. Toge, S. Tsuruno, Y. Une, S. Minami, and K. Maeda

Keyword: Ferret

**D-94 Systemic Histoplasmosis in an Adult Porcupine (*Erethizon dorsatum*)**

A. Hattel, R. Graboski, and J. Brown

Keyword: Wildlife

**D-95 Trichomonads and *Brachyspira murdochii* Infection in Pigs with Colitis**

F. Giannitti, C. Gebhart, J. Sarradell, K. Sverlow, and M. Culhane

Keyword: Infectious Disease

**D-96 Undifferentiated Carcinoma in the Mandible of a Holstein Cow**

S. Nakagun, N. Horiuchi, S. Kayo, K. Yoshimoto, H. Inokuma, and Y. Kobayashi

Keyword: Alimentary



**D-97 Unilateral Ureteral Fibroepithelial Polyp in a Dog**

A. Berrocal and W. Moreno

Keyword: Urinary System

**D-98 Vascular Leiomyosarcoma in a Dog**

L.A. Garcia-Camacho, C. Cedillo-Pelaez, F.J. Vázquez-García, E. Farfan-Morales, and I.C. Rangel-Rodriguez

Keyword: Neoplasia

**D-99 Necropsies of Four Cats Seized from a Hoarding Situation**

A. Sarfaty and S.P. McDonough

Keyword: Forensic Veterinary Pathology

**D-100 An Effort to Increase Necropsy Rate of Companion Animals in Japan**

I. Mitsui

Keyword: General

**D-101 Two Cases of Neoplasia in Captive White Spotted Bamboo Sharks (*Chiloscyllium plagiosum*)**

J. Rosenberg, M. Haulena, B. Culp, H. Evans, H. Snyman, and S. Raverty

Keyword: Neoplasia

**D-102 Vasa Vasorum Arteriopathy in Hypertensive Cats**

Rebecca Kohnken<sup>1</sup>, Page Yaxley, and Christopher Premanandan

Keyword: Cardiovascular

**D-103 Complete Splenic Abscessation with Septic Peritonitis in a Hunting Dog**

K. Schlicher<sup>1,2</sup>, K. Wycislo, M. Bates, P. Roady, and A. Barger

Keyword: Infectious Disease

<sup>1</sup>Competitor for the ACVP Young Investigator Award

<sup>2</sup>Competitor for the STP Student Poster Award

**Education Focused Scientific Poster Presentations**

**ED-1 The Importance of Ergonomics in Minimizing Postural Stress and Associated Pathology**

M. Camus

**ED-2 Building an Internal Pathology Technician Certification Program at MPI Research**

C. Hollinger

**ED-3 Augmenting General Pathology Labs with Case Reports Authored by Senior Veterinary Students**

A. Fales-Williams

**Experimental Disease Focused Scientific Poster Presentations**

**E-1 Cross-Disciplinary Synergy: Combining Histopathology and Systems Biology to Characterize Experimental Pandemic H1N1 Influenza Infections in Ferrets**

D. Gasper<sup>1</sup>, J. Tisoncik-Go, J. Kyle, A. Eisfeld, C. Selinger, M. Hatta, J. Morrison, E. Zink, Y. Kim, A. Schepmoes, S. Purvine, K. Weitz, R. Green, S. Tilton, B. Webb-Robertson, K. Waters, T. Metz, R. Smith, Y. Kawaoka, M. Suresh, L. Josset, and M. Katze

Keyword: Ferret

**E-2 Induced Bronchus-Associated Lymphoid Tissue and Germinal Center Formation in the Murine Lung Following Influenza A Virus Infection**

K.N. Gibson-Corley, A.W. Boyden, L. Tygrett, and T.J. Waldschmidt

Keyword: Immune System

**E-3 The Role of Club Cell Secretory Protein (CC10) in Respiratory Syncytial Virus Infection**

S. S. Alnajjar<sup>1</sup>, A. Larios-Mora, A. van Geelen, J. M. Gallup, A. Pilon, and M.R. Ackermann

Keyword: Infectious Disease

**E-4 JNJ-49214698 Efficacy in a Neonatal Lamb Model of RSV Infection**

S.S. Alnajjar<sup>1</sup>, A. Larios-Mora, A. Geelen, J.M. Gallup, D. Roymans, A. Koul, P. Rigaux, and M.R. Ackermann

Keyword: Infectious Disease



**E-5 Cellular Distribution of Dipeptidyl Peptidase-4 (CD26) in the Respiratory Tract: Implications for Animal Models of Middle East Respiratory Syndrome**

D.K. Meyerholz, A.M. Lambertz, and P.B. McCray, Jr.

Keyword: Respiratory System

**E-6 Velogenic and Mesogenic Newcastle Disease Virus Protein within Neurons, Astrocytes, and Microglia**

S.L. Butt<sup>1</sup>, C.L. Afonso, V.M.B.D. Moura, L. Susta, S. Cardenas-Garcia, P.J. Miller, C.C. Brown, and J.B. Stanton

Keyword: Avian

**E-7 Thyroid Hypertrophy in Cats Infected with Highly Pathogenic Feline Immunodeficiency Virus**

S.R. Roff<sup>1</sup>, A.M. Aranyos, R. Pu, J.L. Owen, W.M. Zoll, and J.K. Yamamoto

Keyword: Infectious Disease

**E-9 Susceptibility of Deer Mouse (*Peromyscus maniculatus*) to Vesicular Stomatitis New Jersey Virus Infection via Black Fly (*Simulium vittatum*) Bite**

L.P. Mesquita, M.H. Abbott, E.W. Howerth, D.E. Stallknecht, R. Noblet, E.W. Gray, and D.G. Mead

Keyword: Infectious Disease

**E-10 An Experimental Model for Studying the Pathogenesis of a Newly Emergent Turkey Arthritis/Tenosynovitis Reovirus in Turkeys**

T.A. Sharafeldin<sup>1,3</sup>, S.K. Mor, S.M. Goyal, and R.E. Porter

Keyword: Avian

**E-11 Pathogenesis of *Pasteurella multocida* Lipopolysaccharide in the Respiratory Tract of Rabbits**

M.P. Patiño, P.A. Barato, G.G. Gonzalez, and C.A. Iregui

Keyword: Respiratory System

**E-12 Glyco-inhibitors of Adherence of *Streptococcus agalactiae* to Intestinal Epithelium in Tilapia (*Oreochromis sp.*)**

P. Barato<sup>3</sup>, G.M. Vasquez, and C. Iregui

Keyword: Infectious Disease

**E-13 Effect of *Amblyomma maculatum* Feeding on the Cutaneous Immune Response to Rickettsia Parkeri Infection in a Murine Model**

K.H. Banajee<sup>1</sup> and K.R. Macaluso

Keyword: Infectious Disease

**E-14 Fatal *Plasmodium knowlesi* Infection in Three Bolivian Squirrel Monkeys**

M.K. Keating, J.M. Ritter, C.P. Drew, C.S. Goldsmith, J.W. Barnwell, and A. Muehlenbachs

Keyword: Infectious Disease

**E-15 Histomorphological Aspects of Experimental *Trypanosoma brucei* Infection**

T. Carvalho, F. Rijo-Ferreira, S. Trindade, and L.M. Figueiredo

Keyword: Infectious Disease

**E-16 Matrix Metalloproteinase 2 Activity in Scrapie Permissive and Nonpermissive Cultured Sheep Microglia**

J.B. Stanton, V.R. McElliot, J.F. Muñoz-Gutiérrez, and D.A. Schneider

Keyword: Infectious Disease

**E-17 Scrapie Transmits to White-Tailed Deer by the Oral Route and Has a Molecular Profile Similar to Chronic Wasting Disease**

J.J. Greenlee, S.J. Moore, J.D. Smith, R.A. Kunkle, and M.H. West Greenlee

Keyword: Infectious Disease

**E-18 Transmission of Chronic Wasting Disease to Sentinel Reindeer (*Rangifer tarandus tarandus*)**

S.J. Moore, R.A. Kunkle, E.M. Nicholson, J.A. Richt, A. Hamir, W.R. Waters, and J.J. Greenlee

Keyword: Nervous System

**E-19 Brain Derived Lipids Inhibit Prion Amyloid Formation *In Vitro***

C.E. Hoover<sup>1,2</sup>, D.M. Henderson, M. Zabel, and E.A. Hoover

Keyword: Infectious Disease





**E-20 Exploring Anti-tumor Properties of Human CD8+BTLA+Tumor Infiltrating Lymphocyte Subset Using NSG Mouse Model**

K. Ritthipichai, C. Haymaker, R. Nurieva, P. Hwu, and C. Bernatchez

Keyword: Immune System

**§E-21 Suppression of Breast Cancer Stem Cells in the MMTV-HER2/NEU Mouse Model by the HDAC Inhibitor AR-42**

L.E. Himmel<sup>1,2</sup>, M-W Chao, E-C Hsu, L.D. Yee, S.K. Kulp, and C-S Chen

Keyword: Mammary

**§E-22 The Histone Deacetylase Inhibitor AR-42 Suppresses Tumor Growth in Mouse Models of Pancreatic Cancer**

S.E. Henderson<sup>1,2</sup>, P.H. Huang, L.Y. Ding, T. Bekaii-Saab, S.K. Kulp, and C.S. Chen

Keyword: Liver and Pancreas

**E-23 NLRX1 Attenuates Tumorigenesis through the Negative Regulation of AKT and NF-κB Signaling**

S. Coutermarsh-Ott<sup>1</sup>, T. LeRoith, C. Washington, N. Dervisis, R. Hontecillas-Magarzo, J. Bassaganya-Riera, and I. Allen

Keyword: Neoplasia

**E-24 Transforming Growth Factor Beta Inhibition Reduces Osteosarcoma Pulmonary Metastases**

K.L. Wycislo, M. Byrum, H. Pondenis, B. Fadl-Alla, A. Gal, and T.M. Fan

Keyword: Immune System

**E-25 Activation of K-rasG12D in K-rasLSLErGFPcre Mouse Model Leads to Hematopoietic, Vascular, and Epithelial Defects**

S.R. Jayapal, M. Al-Haddawi, C.Q. Wang, F.M. Ibrahim, M. Osato, and P. Kaldis

Keyword: Neoplasia

**E-26 Spontaneous Tumors in Chimeric Rats Generated from Dark Agouti ES Cells**

K. Yekkala, J.M. McGrath, T. Nottoli, Y. Yang, and C.J. Zeiss

Keyword: Neoplasia

**E-27 Determining the Role of Post-castration Inflammation in the Progression of Prostate Cancer Using a Syngeneic Mouse Model**

C.J. Pinelli<sup>1,2</sup>, S.D. Kim, and G.A. Wood

Keyword: Neoplasia

**E-28 Aurora kinase Inhibition in Ewing Sarcoma Xenografts**

A.C. McCalla<sup>1,3,4</sup>, N.J. Caplen, and L.J. Helman

Keyword: Neoplasia

**E-29 Human-Like Histology in a UV-Induced BRAF V600E Mutant Mouse Model of Melanoma**

H. Michael<sup>1</sup>, C-P Day, and G. Merlino

Keyword: Neoplasia

**§E-30 Quantification of Telomerase in an Oral Squamous Cell Carcinoma Model**

W. Supsavhad, W. Dirksen, and T. Rosol

Keyword: Neoplasia

**E-31 Expression of Stem Cell and Epithelial-Mesenchymal Transition (EMT) Markers in Progression of Human Cervical Neoplasia and Following Cigarette Smoke Condensate Exposure in Human Ectocervical Cells**

X. Gao<sup>2</sup>, C. Fulbright, L. Yu, L. Castro, D. Walmer, and D. Dixon

Keyword: Reproductive System

**E-32 Genome-Wide Identification of Susceptibility Loci for Malignant Phenotypes in Pulmonary Adenocarcinoma**

E.F. Edmondson<sup>1,3</sup>, D.M. Gatti, C.M. Fallgren, R.R. Rampersad, and M.M. Weil

Keyword: Neoplasia

**E-33 Prostate Inflammation Increases Carcinoma Development in the POET3+Pten<sup>-/-</sup> Mouse Model of Prostate Carcinogenesis**

G.N. Burcham, G.M. Cresswell, R.E. Vickman, P.W. Snyder, L. Chen, X. Liu, S.A. Crist, M.D. Henry, and T.L. Ratliff

Keyword: Neoplasia



**E-34 Ahr Deletion Increases Rate of Thymic Lymphoma and Decreases Survival in P53-Deficient Mice**

J.L. Phillips, C.V. Lohr, and S.K. Kolluri

Keyword: Neoplasia

**E-35 Conjugated Linoleic Acid in the Treatment of Murine Autoimmune Disease**

S. Barrett<sup>1</sup>, N. Regna, A. Gojmerac, C. Chafin, M. Vieson, and C. Reilly

Keyword: Immune System

**E-36 Treatment with a Selective Histone Deacetylase 6 Inhibitor Decreases Lupus Nephritis in NZB/W Mice**

M.D. Vieson<sup>1</sup>, A. Gojmerac, D. Caudell, S.H. Barrett, and C.M. Reilly

Keyword: Immune System

**E-37 Loss of NLRX1 Results in Increased Intestinal Pathology and Exacerbated T Cell Responses in Mice with Inflammatory Bowel Disease**

K. Eden<sup>1</sup>, R. Hontecillas, M. Viladomiu, C. Philipson, A. Carbo, A. Leber, N. Philipson, I. Tattoli, S.E. Girardin, I.C. Allen, and J. Bassaganya-Riera

Keyword: Alimentary

**E-38 IL-27 Acts on Epithelial and Inflammatory Cells in the Resolution of Murine Colitis**

C. Andrews<sup>1,3</sup>, M. McLean, M.L. Hanson, and S.K. Durum

Keyword: Alimentary

**E-39 The Effect of PI3K Gamma KD and PI3K Delta KD on Intestinal Lesions in Mice with DSS-Induced Colitis**

A. Klein, A. Guy, J. Vegas, F. Schoetens, J.E. McDuffie, W. Fung-Leung, T. Rao, B. Zimmerman, and C. Loudon

Keyword: Alimentary

**E-40 A Method for Histopathologic Study of the Multifocal Nature of Spinal Cord Lesions in Experimental Autoimmune Encephalitis**

K.N. Gibson-Corley, A.W. Boyden, M.R. Leidinger, A.M. Lambert, G. Ofori-Amanfo, P.W. Naumann, J.A. Goeken, D.K. Meyerholz, and N.J. Karandikar

Keyword: Nervous System

**E-41 Vascular Lumen Preservation and Optimization for *In Vivo*-Like Peripheral Vasculature Dimensions in Histology for Proper Preclinical Device Evaluation**

A. Tellez, K.N. Dillon, J.A. Wicks, and S.D. Rousselle

Keyword: Cardiovascular

**E-42 Cell Proliferation Markers as a Valuable Tool for Preclinical Evaluation of Vascular Interventions**

K. Dillon, S. Wilson, J. Guerrero, D. Brady, W. Grundy, J. Wicks, S. Rousselle, and A. Tellez

Keyword: Cardiovascular

**E-43 Early Three-Dimensional Atherosclerotic Lesion Development in Scavenger Receptor Class B Type I-Deficient, Hypomorphic Apolipoprotein ER61 Mice and the Association with Endothelial and Smooth Muscle Cell Damage**

L. Zadrozny, B. Lucotte, and R. Balaban

Keyword: Cardiovascular

**E-44 Cardiomyopathy in a Canine Model of CLN2 Disease**

G.C. Johnson, S. Leach, B. Williamson, W. Young, L. Castaner, J.R. Coates, B.L. Davidson, and M.L. Katz

Keyword: Cardiovascular

**E-45 A Novel Way of Epithelial Spreading: Lessons from the Developing Epicardium**

J.G. Vilches-Moure and C.A. Erickson

Keyword: Cardiovascular

**E-47 Effects of Oxidized Low Density Lipoprotein on an *In Vitro* Model of Osteoarthritis**

K. Kuroki, C.R. Kennedy, A.M. Stoker, and J.L. Cook

Keyword: Bone and Joint



**E-48 Evaluation of Partial Transection versus Synovial Debridement of the ACL as Novel Canine Models for Management of ACL Injuries**

C.C. Bozynski, K. Kuroki, J.P. Stannard, P.A. Smith, A.M. Stoker, C.R. Cook, and J.L. Cook

Keyword: Bone and Joint

**E-49 Calprotectin Expression is Constitutively Altered in the Cystic Fibrosis Pig at Birth Prior to the Onset of Neutrophil Mediated Inflammation**

D.K. Meyerholz, L. Paemka, D.A. Stoltz, M.J. Welsh, P.B. McCray, and R.D. Gray

Keyword: Respiratory System

**E-50 Morphologic Artifacts Related to Insufflation Material for Lung Cryo Sectioning**

K.N. Gibson-Corley, M. Leidinger, J.A. Goeken, P.W. Naumann, A. Lambertz, G.K. Ofori-Amanfo, and D.K. Meyerholz

Keyword: Respiratory System

**E-51 Comparison of IBA1 Localization in Common Model Species Used to Study Human Lung Disease**

D.K. Meyerholz, A.M. Lambertz, H.A. Flaherty, and K.N. Gibson-Corley

Keyword: Respiratory System

**E-52 A Novel Porcine Model of Ataxia Telangiectasia Reproduces Neurological Features and Motor Deficits of Human Disease**

D.K. Meyerholz, R. Beraldi, C. Chan, C.S. Rogers, J.M. Weimer, A.D. Kovács, B.W. Darbro, B.A. Dacken, and D.A. Pearce

Keyword: Nervous System

**E-53 Histological and Ultrastructural Studies on the Canavan Disease Model Rat**

M. Kuwamura, S. Tanimura, M. Tanaka, T. Izawa, T. Kuramoto, and J. Yamate

Keyword: Nervous System

**E-54 Pathogenesis of Forebrain Abnormalities in a Teratogen-Induced Model of Orofacial Clefting**

L. Ansen-Wilson<sup>2</sup>, J. Everson, G. Heyne, and R. Lipinski

Keyword: Nervous System

**§E-55 *In Situ* Identification of Brain Lipid Alterations by Imaging Mass Spectrometry (IMS) in Mouse Models of Toxin-Induced Experimental Demyelination**

R.J. Maganti<sup>1,2</sup>, X. Hronowski, P. Juhasz, B. Wipke, A.B. Rogers, and R.W. Dunstan

Keyword: Nervous System

**E-56 Probing the Role of Low-Threshold Mechanoreceptors in the Pathophysiology of Pain**

L.K. Crawford<sup>1,2,3</sup>, X. Dong, D.D. Ginty, and M.J. Caterina

Keyword: Nervous System

**E-57 Investigation of Clomiphene Citrate Treatment on Spermatogenesis and Testicular Histomorphology in Rats**

K.N. Gibson-Corley, P. Kogan, P.W. Naumann, J.A. Goeken, and M. Wald

Keyword: Reproductive System

**E-59 Dietary Iron Overload Alters Hepatic Inflammation in a Rat Model of Nonalcoholic Steatohepatitis**

T. Izawa, M. Atarashi, R. Miyagi, M. Kuwamura, and J. Yamate

Keyword: Liver and Pancreas

<sup>1</sup>Competitor for the ACVP Young Investigator Award

<sup>2</sup>Competitor for the STP Student Poster Award

<sup>3</sup>Competitor for the ACVP/ASIP Trainee Travel Award

<sup>4</sup>Competitor for the STP/ACVP Young Investigator Award

## Natural Disease Focused Scientific Poster Presentations

**N-1 Lectin Histochemistry Evaluation of Liver and Mesenteric Lymph Node of Buffaloes Kept in *Brachiaria* spp. Pastures**

I.C. Miranda, G. Riet-Correa, B. Riet-Correa, P.V. Peixoto, S.Z. Costa, M.S. d'Ávila, G.C. Cid, and T.N. França

Keyword: Liver and Pancreas



**N-2 A Retrospective Study of Canine Skull Base Neoplasia**

D.R. Rissi

Keyword: Nervous System

**N-3 A Novel Inherited Cerebellar Abiotrophy in a Cohort of Related Goats**

J.W. Koehler

Keyword: Nervous System

**N-4 Stromal Changes within *In Situ* Carcinoma and Early Invasive Carcinomas in Mammary Gland of Female Dogs without Clinical Signs of Mammary Tumor: Histopathologic Study**

J. Caicedo, N. Martinez, and C. Iregui

Keyword: Mammary

**N-5 Endogenous Lipid Pneumonia in a 15 Year Old African Lynx (*Caracal caracal*)**

R.M. Tan and R. Dhuet

Keyword: Wildlife

**N-6 Beta-Amyloid Oligomer, Neurofibrillary Tangles, and Neuronal Loss in Brains of Aged Domestic Cats**

J.K. Chambers, T. Tokuda, K. Uchida, R. Ishii, H. Tatebe, E. Takahashi, T. Tomiyama, Y. Une, and H. Nakayama

Keyword: Nervous System

**N-7 Phaeohyphomycosis of the Upper Respiratory Tract in Four Horses**

J.B. Harvey<sup>1</sup>, L.B. Mamo, L.B. Borst, T. Prange, P. Bizikova, and K.E. Linder

Keyword: Infectious Disease

**N-8 Environmental Toxicants and Innate Pulmonary Defence: The Effects of Polycyclic Aromatic Hydrocarbons on *In Vitro* Expression of Beta Defensins in Tracheal Epithelial Cells**

L. Bourque<sup>1</sup>, J. Caswell, P.Y. Daoust, B. Lillie, and S. Raverty

Keyword: Respiratory

**N-9 Intestinal Parasitism in Three Wild Howler Monkeys**

A. Berrocal, J. Hernández, and K. Carvajal

Keyword: Wildlife

**N-10 Wildlife Sequences of Islet Amyloid Polypeptide (IAPP) Identify Critical Species Variants for Fibrillization**

J.S. Fortin<sup>1</sup> and M-O Benoit-Biancamano

Keyword: Endocrine

**N-11 Naspin-A as an Immunohistochemical Marker of Thyroid Differentiation in Canine Thyroid Neoplasia**

J.A. Ramos-Vara, C.B. Frank, D.M. DuSold, and M.A. Miller

Keyword: Neoplasia

**N-12 Alterations in the Equine Fecal Microbiome Associated with Antimicrobials during Hospitalization for Elective Surgical Procedures**

J.B. Engiles, D. Pitta, N. Indugu, D. Stefanowski, B. Vecchiarelli, S. Stewart, and L. Southwood

Keyword: Alimentary

**N-13 Equine Silicate Associated Osteoporosis Mimicking Osteolytic Neoplasia**

R. Zavodovskaya, M. Eckert, B. Murphy, S.M. Stover, and S. Diab

Keyword: Bone and Joint

**N-14 Diagnostic Features of Canine Spinal Cord Gliomas**

A.L. Burnum<sup>1</sup>, A.D. Miller, and D.R. Rissi

Keyword: Nervous System

**N-15 Autophagy in Canine Appendicular Osteosarcoma: Expression Patterns of Positive and Negative Regulators**

C.R. Schott<sup>1</sup> and G.A. Wood

Keyword: Neoplasia



**N-16 Pathology and Causes of Death of Stranded Cetaceans in the Canary Islands (2006–2012)**

J. Díaz-Delgado<sup>1</sup>, M. Arbelo, E. Sierra, S. Sacchini, D. Zucca, J. de la Fuente, N. García-Álvarez, Y. de Quirós, M. Andradá, O. Quesada-Canales, Y. Paz, A. Suarez-Bonnet, A. Vela, L. Dominguez, M. Dominguez, and A. Fernandez

Keyword: Wildlife

**N-17 Fatal H1N1 Influenza in a Canadian Cat**

C.G. Knight, J.L. Davies, T. Joseph, S. Ondrich, and B.V. Rosa

Keyword: Infectious Disease

**N-18 Disseminated Alimentary Mycobacteriosis in the Horse: A Retrospective Study of Nine Cases**

S. Hahn

Keyword: Alimentary

**N-19 Exploring a Role for Viruses in Feline Urinary Tract Disease**

D. Goldsmith<sup>1</sup>, F. Delacruz, and P. Pesavento

Keyword: Urinary System

**N-20 Papillary Mucosal Hyperplasia of the Gall Bladder in Five Cats**

A. Talley<sup>1</sup> and J. Cullen

Keyword: Liver and Pancreas

**N-21 Acarás (*Geophagus brasiliensis*) as an Environmental Pollution Bioindicator of the Billings Dam, São Paulo: Pathology Analysis of Gills and Hepatopancreas**

A.C.C. López<sup>1</sup>, V.L.G.S. Paiva, I.T. Gomes, B. Held, G.A. Quinaglia, and L.R.M. Sá

Keyword: Wildlife

**N-22 Severe Simian Immunodeficiency Virus Infection in a Sooty Mangabey**

D. Machiah, G. Smith, and P. Sharma

Keyword: Primates

**N-23 Spontaneous Neoplasms in Virginia Opossums (*Didelphis virginiana*): A Retrospective Case Series (1989–2014)**

J. Pope and R. Donnell

Keyword: Neoplasia

**N-24 Expression of Phospholipase A2 Receptor in Normal Glomeruli and Membranous Nephropathy in Dogs**

G. Sugahara, J. Kamiie, T. Mineshige, and K. Shiota

Keyword: Urinary System

**N-25 Spontaneous Reproductive Pathology in Guinea Pigs**

T. Veiga-Parga<sup>1</sup> and S.J. Newman

Keyword: Neoplasia

**N-26 An Outbreak of Toe-Tip Necrosis in Angus Feedlot Cattle**

G. Rimoldi and P.C. Blanchard

Keyword: Bone and Joint

**N-27 CXCR4 and ITS Ligand CXCL12 Regulate Canine Hemangiosarcoma Cell Migration and Invasion**

K.S. Im, A.J. Graef, J.H. Kim, and J.F. Modiano

Keyword: Neoplasia

**N-28 Pyogranulomatous Inflammation in Response to Intervertebral Disc Rupture in a Dog**

C.G. Knight, J. Diaz, and J.L. Davies

Keyword: Bone and Joint

**N-29 Evidence of the Sick Lobe Carcinogenesis Theory in Mammary Intraepithelial Lesions of Female Canines without Clinical Signs of Mammary Tumors**

J. Caicedo and C. Iregui

Keyword: Mammary





**N-30 Involvement of Interleukin 13 for Expression of Periostin in the Canine Atopic Skin**

T. Mineshige<sup>1</sup>, J. Kamiie, G. Sugihara, and K. Shiota

Keyword: Skin

**N-31 Global Gene Expression Profile in Canine Mammary Carcinoma**

R. Laufer Amorim, T.M.M. Raposo-Ferreira, R.C.L. Salvador, E.M. Terra, A.R. Vilacis, and S.R. Rogatto

Keyword: Neoplasia

**N-32 Multicentric and Metastatic Embryonal Rhabdomyosarcoma in a Yellow Crowned Amazon (*Amazona ochrocephala*): Case Report**

M.D. Ronderos, P. Barato, B. Doncel, and J.C. Ospina

Keyword: Avian

**N-33 Comparative Pathology of Aging Long Evans and Fischer 344 Rats**

K. Patil, T. Iwata, V. Tryon, S. Mizumori, P.M. Treuting, and J.M. Snyder

Keyword: Neoplasia

**N-34 Morbidity and Mortality of the Koala (*Phascolarctos cinereus*) in South East Queensland: Combining Pathology and Epidemiology to Understand the Decline of an Iconic Species**

V. Gonzalez-Astudillo, A.B. Schaffer-White, L. Valenza, A.J. McKinnon, R.A. Larkin, J. Henning, and R.E. Allavena

Keyword: Wildlife

**N-35 Post-surgical Volvulus and Infarction in an Adult Pacific White-Sided Dolphin**

S. Raverty, M. Haulena, J. Rosenberg, D. Hendrickson, J. Bailey, B. Sheehan, and M. Ivančić

Keyword: Wildlife

**N-36 *Cryptococcus gattii* Type VGIIa Infection in Harbor Seals (*Phoca vitulina*) in British Columbia, Canada**

J. Rosenberg, M. Haulena, L. Hoang, M. Morshed, E. Zabek, J. Osei-Appiah, and S. Raverty

Keyword: Wildlife

**N-37 Extracellular Vesicles and Small RNA of the Cervicovaginal Compartment in Macaques**

D. Muth, M. McAlexander, L. Ostrenga, G. Hancock, N. Pate, B. Karim, J. Izzi, R. Adams, S. Beck, K. Pate, and K. Witwer

Keyword: Reproductive System

**N-38 Phylogenetic Analysis of *Histoplasma capsulatum* var *duboisii* in Baboons from Archived Formalin-Fixed, Paraffin Embedded Tissues**

M. Hensel<sup>1</sup>, C.M. Smith, M. Gonzales, A. Rodrigues Hoffmann, M.A. Owston, and E.J. Dick, Jr.

Keyword: Primates

**N-39 Gamma-Delta T Cell Responses in Subclinical and Clinical Stages of Bovine *Mycobacterium avium* paratuberculosis Infection**

S. Albarrak<sup>1</sup>, R. Waters, J. Stabel, and J. Hostetter

Keyword: Infectious Disease

**N-40 Pathology of Killer Whales Stranded in the Eastern Pacific Between 2004 and 2013**

S. Raverty, J. St. Leger, K. Burek-Huntington, D. Rotstein, and J.K. Gaydos

Keyword: Wildlife

**N-41 Pathologic Findings in Raptors Infected with Two Novel Highly Pathogenic Avian Influenza Viruses, USA, 2014-2015**

V.I. Shearn-Bochsler, S. Knowles, D.E. Green, T. Baszler, and H.S. Ip

Keyword: Wildlife

**N-42 Necrotizing Myocarditis Secondary to *Listeria Monocytogenes* in an Ameraucana Bantam Chicken**

H. Daverio, J. Jagne, E.A. Buckles, and A.D. Miller

Keyword: Avian

**N-43 Verotoxigenic *E. Coli* Associated with Diarrhea and Mortality in Young Calves**

A. Brooks, D. Slavic, M. Stalker, M. Hazlett, M. Spinato, and B. McEwen

Keyword: Infectious Disease



**N-44 Histopathology of Feline Tooth Resorption as Identified by Computed Tomography**

K.A. Potter, L.G. Lang, and T.E. Wilkinson

Keyword: Alimentary

**N-45 Thickening of Vascular Walls in Yearling Ram Testes with and without Testicular Degeneration**

T. Cheng, J. Dascanio, J. Roberson, K. Alexander, B. Roberts, D. Cope, R. Bridger, D. Wooley, and M. Arauz

Keyword: Reproductive System

**N-46 Relationship of Antibody Titer and IL-4, IL-10, IL-12, and IFN $\gamma$  Expression with Persistent Lymphocytosis Development in Bovine Leukosis Virus Infected Cows**

R. Favila de Alba, J. Zavaleta-Hernandez, H. Ramirez-Alvarez, J. Hernandez-Balderas, H.A. Martínez, M.A. Perez-Razo, and L.A. Garcia-Camacho

Keyword: Infectious Disease

**N-47 *Felis catus* Papillomavirus Type 2 Oncogene Expression in Feline Cutaneous Squamous Cell Carcinomas**

N.A. Thomson<sup>1</sup>, J.S. Munday, and K.E. Dittmer

Keyword: Neoplasia

**N-48 Preferential Usage of a Single Immunoglobulin Heavy Chain Variable Gene in Boxers with Chronic Lymphocytic Leukemia**

E.D. Rout<sup>1</sup>, R.C. Burnett, S.A. George, C.R. Abbott, J.A. Yashimoto, and A.C. Avery

Keyword: Neoplasia

**N-49 Immunophenotypic and Histomorphologic Characterization of 15 Caprine Lymphomas**

P.K. Kiser<sup>1</sup> and C.V. Löhr

Keyword: Neoplasia

**N-50 Chlamydiosis in Farmed Alligators (*Alligator mississippiensis*) in Louisiana**

K. Sakaguchi<sup>1</sup>, J. Nevarez, D. Paulsen, I. Langohr, R. Bauer, N. Crossland, J. Ferracone, B. Ritchie, and F. Del Piero

Keyword: Infectious Disease

**N-52 Expanding the Spectrum of Glomerular Basement Membrane Lesions**

E.S. Clark<sup>1</sup> and R. Cianciolo

Keyword: Urinary System

<sup>1</sup>Competitor for the ACVP Young Investigator Award

**STP and Industrial and Toxicologic Pathology Focused Scientific Poster Presentations**

**T-1 Innate Lymphoid Cells Mediate Ozone-Induced Type 2 Immunity in the Lungs of Mice**

K. Kumagai<sup>1</sup>, D.N. Jackson-Humbles, R. Lewandowski, N. Li, J.G. Wagner, and J.R. Harkema

Keyword: Respiratory System

**§T-2 Exposures to Carbon Nanotubes and Asbestos Induce Related but Distinct Profiles of Toxicologic Lung Pathology**

E. Frank<sup>1,2</sup>, V. Carreira, M. Birch, and J. Yadav

Keyword: Respiratory System

**T-3 Morphine Disrupts Gut Homeostasis and Induces Distinct Signatures of Gut Microbiome and Metabolome Partially through the Toll-Like Receptor 2 Pathway**

F. Wang<sup>1,2</sup>, J. Meng, T. Johnson, C. Chen, and S. Roy

Keyword: Industrial and Toxicologic Pathology

**T-4 Immunohistochemical Characterization of Uterine Tumors with Spindle Cell Morphology in Wistar Han Rats**

K.S. Janardhan, D. Malarkey, D. Dixon, C.J. Willson, H. Jensen, N. Clayton, and G. Flake

Keyword: Reproductive System

**T-5 An Ethanol Extract of Black Cohosh Causes Hematological and Clinical Chemistry Changes Consistent with Folate or Cobalamin Deficiency in Female Mice**

M.C. Cora, C. Blystone, W. Gwinn, R. Wilson, D. King, G. Kissling, S. Waidyanatha, and G.S. Travlos

Keyword: Industrial and Toxicologic Pathology



**T-6 Minimal Myocardial Degeneration and Inflammation in the Rat: Adverse or Non-adverse?**

R. Haworth, F. Chanut, M. York, and Y. Cui

Keyword: Cardiovascular

**T-7 Histo-Morphological Alterations in Organs and Tissues of the African Catfish Exposed to Dexamethasone**

N. Kolawole, J.Ogunsola, and O. Adediji

Keyword: Industrial and Toxicologic Pathology

**T-8 Mechanistic Studies Demonstrated That Renal Tubular and Adrenal Tumors in the Two-Year Rat Study with Canagliflozin Were Rat Specific and Not Relevant for Human Risk Assessment**

S. De Jonghe, M. Johnson, R. Mamidi, B. Feyen, P. Vinken, L. Lammens, J.Y. Ma, D. Abbott, and J. Proctor

Keyword: Neoplasia

**T-9 Safety Assessment and Transgene Expression of Hydrodynamic Gene Delivery in C57BL6 Mice**

J. Ooi, X. Chen, L. Wang, K. Kang, and J. Jin

Keyword: Liver and Pancreas

**T-10 Ingested Silver Nanoparticles: Effects on the Intestinal Microbiome and Physicochemical Alterations in a Simulated Gastric Environment**

I.L. Bergin, A.P. Ault, L.A. Wilding, J.L. Axson, C.M. Bassis, D.I. Stark, K. Walacavage, S.S. Capracotta, S.A. Hashway, M. Morishita, P.R. Leroueil, A.D. Maynard, and M.A. Philbert

Keyword: Industrial and Toxicologic Pathology

**T-11 Endovascular Interventions in an Ovine Model of Tissue Engineered Vascular Graft Stenosis**

E.S. Clark<sup>1,2</sup>, V.K. Pepper, C.A. Best, E.A. Onwuka, T. Sugiura, S. Cheatham, T. Shinoka, D. Berman, C.K. Breuer, and J.P. Cheatham

Keyword: Cardiovascular

**T-12 Microanatomic Determinants of Efficacy of Endovascular Radiofrequency Renal Denervation in Swine**

J. Keating<sup>1</sup>, A. Tzafirri, and J.R.L. Stanley

Keyword: Cardiovascular

**T-13 Long-Term Implantation with Titanium Alloys Results in a Pro-inflammatory and Pro-thrombotic State**

G.H. Frydman<sup>1</sup>, R.P. Marini, P. Bendapudi, C.R. Vanderburg, B. Lai, V. Bakthavatchalu, R.G. Tompkins, and J.G. Fox

Keyword: Industrial and Toxicologic Pathology

**§T-14 Gastrin-Releasing Peptide Receptor (GRPR) Signaling in Prostate Cancer**

S. Elshafae<sup>1</sup>, B. Hassan, W. Supsavhad, W. Dirksen, H. Ding, M. Tweedle, and T. Rosol

Keyword: Neoplasia

**T-15 Evaluation of Drug Phototoxicity in Skin Layers by Multimodal Molecular Imaging Techniques**

P-M Vaysse, G. Hamm, A.M. Sargeant, F. Pamelard, D. Bonnel, T.N. Merriman, J. Stauber, and A. Heron

Keyword: Skin

**T-16 Novel Trimodal Theranostic Nanoporphyrins in an Orthotopic Patient-Derived Xenograft (PDX) Bladder Cancer Mouse Model**

T.Y. Lin, Y. Li, Q. Liu, J. Chen, H. Zhang, K. Ferrara, S. Airhart, K.S. Lam, and C.X. Pan

Keyword: Neoplasia

**T-17 Suspect Melarsomine Dihydrochloride Related Myelopathy in a German Shepherd Dog**

T. Peterson<sup>1</sup>, A. Dedeaux, N. Welborn, K. Ryan, and F. Del Piero

Keyword: Nervous System

**T-18 An Integrated Optical Density-Based Measurement to Evaluate CISH Staining in Tissue Sections**

F. Aeffner, C. Schnatwinkel, H. Stern, V. Villegas, A.J. Milici, G.D. Young, and J.S. Krueger

Keyword: Industrial and Toxicologic Pathology

**T-19 Quantifying PD-L1 Spatial Distribution Signatures for Patient Selection Approaches**

G.D. Young, F. Aeffner, N.T. Martin, K. Wilson, C.R. Mahrt, H. Lange, A.J. Milici, and J.S. Krueger

Keyword: Industrial and Toxicologic Pathology



**T-20 Quantitative Analysis of Multiple Subtypes of Immune System Cells in Cancer Tissues**

G.D. Young, F. Aeffner, K. Wilson, M. Peltjo, J. Major, N.T. Martin, J.S. Krueger, H. Lange, J.D. Alvarez, M. Sharp, M.A. Sepulveda, and A.J. Milici

Keyword: Immune System

**T-21 Establishment of Routine, Fully Automated RNA *In Situ* Hybridization Readouts of Apoptosis and Proliferation-Related Biomarkers in Preclinical Animal Model Tissue Panels Using RNAscope® LS Assay on Leica Biosystems' BOND RX**

M-H He, D. Kim, T. Franks, M. Roy, C. Bunker, Y. Luo, X-J Ma, and E. Park

Keyword: Industrial and Toxicologic Pathology

**T-22 Induced Interstitial Pulmonary Fibrosis (IPF) Model: Unlabeled Biomeycin Distribution and Early IPF Markers Identification by MALDI Imaging**

D. Bonnel, M. McElroy, E. Faloux, G. Picard de Muller, G. Hamm, F. Pamelard, S. Madden, J. Stauber, and A. Heron

Keyword: Respiratory System

**T-23 Novel Digital Measurement Strategy to Assess Extent of Thermal Damage in Evaluation of Electrosurgical Medical Devices**

F. Aeffner, C.R. Mahrt, E. Hagendorn, F.X. Sicotte, E.A. Johnson, and G.D. Young

Keyword: Industrial and Toxicologic Pathology

**T-24 Histopathologic Evaluation of a Novel Percutaneous Intramedullary (IM) Photodynamic Balloon Stabilization System (PBSS) in Sheep Tibia**

B.G. Zani and R. Baird

Keyword: Bone and Joint

**T-25 Erythropoiesis-Stimulating Agents: Clinical Pathology Effects in Rats Secondary to Extreme Erythrocytosis**

L. Cregar

Keyword: Clinical Pathology

**T-26 Histopathological Pancreas, Liver, and Gallbladder Changes after Oral Administration of TGR5 Agonists to DB/DB Mice**

M. Stolte, T. Kissner, F. Schmidt, A. Czich, G. Zech, S. Theis, M. Méndez Pérez, K. Schroeter, T. Hübschle, and P. Larsen

Keyword: Industrial and Toxicologic Pathology

**T-27 Biomarkers of Hepatofibrosis for Subacute Oral Exposure to Prototypic Liver Toxins**

E. Carroll, J. Koontz, C. Baer, and D.L. Ippolito

Keyword: Liver and Pancreas

**§T-28 Potential Modes of Action for Perfluorooctanoic Acid (PFOA)-Induced Hepatocellular Hypertrophy in Mice**

E.M. Quist<sup>1,2</sup>, V.A. Chappell, A.J. Filgo, Y. Wang, G.E. Kissling, and S.E. Fenton

Keyword: Industrial and Toxicologic Pathology

**T-29 Application of a Compact Magnetic Resonance Imaging System for Toxicologic Pathology: Evaluation of Lithium Pilocarpine-Induced Rat Brain Lesions**

Y. Taketa, M. Shiotani, Y. Tsuru, S. Kotani, Y. Osada, T. Fukushima, A. Inomata, J. Sonoda, K. Hayakawa, K. Nakano-Ito, E. Ohta, Y. Seki, A. Goto, and S. Hosokawa

Keyword: Nervous System

**T-30 Pathology of a Pegylated Therapeutic Peptide**

G. Tyagi, A. Braendli-Baiocco, M. Albassam, and I. Mikaelian

Keyword: Industrial and Toxicologic Pathology

**T-31 The Histopathological Examination of Urethane-Induced Neoplastic Changes in Tg.rasH2 Mice**

T. Sano, T. Watanabe, Y. Ishimura, and H. Anayama

Keyword: Industrial and Toxicologic Pathology

**§T-32 Inhibition of Islet Amyloid Polypeptide Aggregation and Associated Cytotoxicity by Non-steroidal Anti-inflammatory Drugs**

J.S. Fortin<sup>2</sup>, M-O Benoit-Biancamano

Keyword: Endocrine



**T-33 Changes of the Osteoclast Induced by Repeated Administration of a Cathepsin K Inhibitor and Bisphosphonate in Rats**

Y. Kagawa, K. Kijima, D. Muramatsu, M. Suehiro, Y. Minamisawa, Y. Kojima, I. Kitazawa, K. Imai, and A. Nii

Keyword: Bone and Joint

**T-34 Histopathological Difference in Lymphoid Tissues of SD and F344 Rats in T-Cell Dependent Antibody Response Assay**

B. Ogawa, Y. Nakanishi, T. Koyama, K. Arima, and M. Sasaki

Keyword: Immune System

**T-35 The Value of Longitudinal Sections of Female Reproductive Tissues for NTP Studies**

S. Elmore, C. Blystone, and C. Johnson

Keyword: Reproductive System

**T-36 Preclinical Efficacy Testing of the Mitochondria-Targeted Antioxidant Mitoapocynin in the Transgenic Mitopark Mouse Model of Chronic Dopaminergic Neurodegeneration**

M.R. Langley<sup>1,2</sup>, A. Ghosh, M. Ay, B. Bennett, H. Jin, V. Anantharam, B. Kalyanaraman, A. Kanthasamy, and A.G. Kanthasamy

Keyword: Nervous System

**T-37 Genetic and Rat Toxicity Studies of Cyclodextrin Glucanotransferase**

S. Hayashi, J. Davis, C. Hobbs, C. Swartz, M. Boyle, L. Recio, and R. Maronpot

Keyword: Industrial and Toxicologic Pathology

**T-38 Flow Cytometry and Immunophenotyping in Drug Development**

T. Papenfuss, J. Figueiredo, R. Tadagavadi, N. Markori, and G. Parker

Keyword: Immune System

**T-39 Comparison of Renal Amyloid and Hyaline Glomerulopathy in B6C3F1 Mice: an NTP Retrospective Study**

J.S. Hoane, C.L. Johnson, J.P. Morrison, and S.A. Elmore

Keyword: Urinary System

**T-40 In Vivo Assessment of Rituximab-EU (Mabthera®) and PF-05280586 in Cynomolgus Monkeys**

A. Ryan, S. Sokolowski, M. Collinge, A. Shen, J. Arrington, N. Shirai, T. Cummings, S. Ploch, S. Stephenson, N. Tripathi, S. Hurst, G. Finch, and M. Leach

Keyword: Industrial and Toxicologic Pathology

**T-41 Comparative Pharmacokinetics and Safety of Trastuzumab-US and Trastuzumab-EU and the Potential Biosimilar PF-05280014 in CD-1 Mice**

A. Ryan, S. Hurst, J. McNally, L. Lorello, P. Schmidt, G. Finch, S. Ploch, J. Fohey, and M. Leach

Keyword: Industrial and Toxicologic Pathology

**T-42 Lens Capsule Perforation without Inflammation in Four Rabbits from Intravitreal Injection Studies**

C. Farman, E. Thackaberry, C. Schuetz, F. Lorget, and V. Bantseev

Keyword: Eye and Ear

**T-43 Cadmium Induced Nephrotoxicity and Gonadotoxicity in Female Japanese Quail (*Coturnix japonica*) and Amelioration by Silymarin**

S.I. Butt<sup>1</sup>, M.Z. Khan, A. Khan, M.K. Saleemi, and M.W. Tahir

Keyword: Industrial and Toxicologic Pathology

**T-44 Technical Considerations for Semi-quantitative Thyroid Histomorphometry Evaluation and Interpretation**

S.K. Bommegowda, J.C. Seely, A. Krygsman, J.J. Wrubel, and D.S. Dandekar

Keyword: General Topic

**T-45 Intramuscular Injections in Rabbits: Improving Tissue Collection and Assessing Multiple Tissue Sections for Accurate Histopathologic Evaluation**

K. Nelson, A. Doan, M. Ashley, and C. Hollinger

Keyword: Industrial and Toxicologic Pathology





**T-46 Fluoroquinolone-Induced Retinal Degeneration in a Domestic Shorthair Feline**

T. Peterson<sup>1,2</sup>, S. Merchant, J. Taboada, E. Storey, and R. Bauer

Keyword: Eye and Ear

**T-47 Characterization of Rat Malignant Fibrous Histiocytoma (MFH)-Derived Cloned Cell Lines (MT-8 and MT-9) Based on the Tumor Stem Cell Theory**

T. Kotera, C. Katou-Ichikawa, A.H. Tennakoon, M. Tanaka, N. Tanaka, T. Izawa, M. Kuwamura, and J. Yamate

Keyword: Neoplasia

**T-48 Ex Vivo Compact Magnetic Resonance Imaging (MRI) of the Brain with Histopathology Validation in a Rat Model of Huntington Disease**

Y. Schifffenbauer, E. Vezzali, E. Weber, R. Pietrek, M. Steiner, and A. Nyska

Keyword: Nervous System

**T-49 Examples of Pathology Related to Opportunistic Infections Consecutive to Immunosuppressive or Immunomodulating Agents in Macaques**

C. Sobry, F. Gervais, R. Forster, and B. Palate

Keyword: Primates

**T-50 Keeping an Eye on Molecular Imaging: Assessment of Drug Toxicity in Small Ocular Structure Using Mass Spectrometry Imaging**

G. Hamm, F. Brignole-Baudouin, N. Desbenoit, A. Brunelle, J. Stauber, C. Baudouin, and A. Heron

Keyword: Eye and Ear

**T-51 A Guide to the Collection and Morphological Assessment of Adipose Tissue in the Normal, Diabetic, and Obese Mouse**

J. Ooi, K. Kang, and K. Keane

Keyword: Industrial and Toxicologic Pathology

**T-52 Acute Renal Failure and Papillary Crest Necrosis in a Young Adult Cat following Incidental Contact with a Compounded Topical Medication Containing Flurbiprofen**

M.T. O'Brien<sup>1</sup>, S.C. Griffin, and B.F. Porter

Keyword: Urinary System

**§T-53 Spontaneous Background Findings in Albino Hartley Guinea Pigs at MPI Research**

D.B. Snider<sup>2</sup>, P.I. Cole, and R.L. Tapp

Keyword: Industrial and Toxicologic Pathology

**T-54 Normal Physiological and Pathological Values for the Sinclair Miniature Swine**

C. Shoemaker, D. Brocksmith, A. Stricker-Krongrad, and G. Bouchard

Keyword: Industrial and Toxicologic Pathology

**T-55 Normal Physiological Ranges for Hanford Miniature Swine**

C. Shoemaker, D. Brocksmith, A. Stricker-Krongrad, and G. Bouchard

Keyword: Industrial and Toxicologic Pathology

**T-56 A Retrospective Analysis of Housing Condition-Related Effects in Two-Year Rat Carcinogenicity Studies**

D. Zhao, L. Shu, D. Davila, R. Yeager, C. Papagiannis, D. Poage, J. Hiner, and D. Patrick

Keyword: Industrial and Toxicologic Pathology

**T-57 Keeping Balance of ELOVL1 May Be Important to Improve Skin Barrier**

I.H. Bae, D-M Go, S-H Lee, and D-Y Kim

Keyword: Skin

**§T-58 Meningeal Thrombosis Associated with Use of Elizabethan Collars in Rats**

C. Hollinger, J. Ibanes, Z. Lloyd, and K. Storves

Keyword: Industrial and Toxicologic Pathology



**T-59 An Unique Population of Natural Killer Cells Is Associated with Transmural Inflammation and Vasculitis in the Adoptive T Cell Transfer Model of Colitis**

I. Mikaelian<sup>2</sup>, H. Knight, A. Schmidt, G.A. Kingsbury, J. Godwin, B. McRae, and J. Paez-Cortez

Keyword: Immune System

**T-60 Spontaneous Urolithiasis with Diverticula of Urothelium in Two Male Sprague Dawley Rats**

J.L. Grieves, K.S. Regan, S.M. Cohen, R.M. Peters, and M.E. Carsillo

Keyword: Urinary System

**T-61 Quantitative Assessment of Acute Kidney Injury**

T. Friedman<sup>2</sup>, H. Shankaran, D. Snow, D. Hughes, M. Blais, and K. Maratea

Keyword: Urinary System

**T-62 Ataxin-2 (ATX2) Is Among 100 New Regulators of IP3-Dependent CA2+ Signaling Identified through a Genome-Wide RNAi Screen in Drosophila S3 Cells**

E.J. Sung<sup>1,2</sup>, G.S. Bird, and S.B. Shears

Keyword: Nervous System

**T-63 Spontaneous Tumors in Common Laboratory Animal Species Used in 1-, 3-, and 6-Month Nonclinical Safety Studies**

S. Beazley and C. Dean

Keyword: Neoplasia

**§T-65 Characterization of the Tumor Spectrum Arising in HZE Ion Irradiated Outbred Mice**

E.F. Edmondson<sup>1,2</sup>, D.A. Kamstock, C.M. Fallgren, and M.M. Weil

Keyword: Neoplasia

**T-66 Body Weight Decrease Is Associated with a Greater Variation in the Weight of Pituitary Gland and Reproductive Organs**

C. Amuzie, C. Dykstra, and S. Denham

Keyword: Industrial and Toxicologic Pathology

**T-67 A Comparison of Negative and Positive Control Tumor Incidence in rasH2 Mice with Previously Published Data**

M. Morse, B. Jacob, A. Sargeant, and K. Bonnette

Keyword: Other

**T-68 Veterinary Pathologist Involvement in Experiments Using Human Tissue in Pharmaceutical Research and Development**

C. Fishman and R. Adler

Keyword: Other

**T-69 Challenges and Solutions for Mapping Pathology Data to Send**

M. Wasko, F. Mura, R. Buchanan, and L. Kaufman

Keyword: Other

**T-70 INHAND and Collaboration with the FDA on SEND – Background and Current Status**

C.M. Keenan, J. Baker, A. Bradley, D.G. Goodman, T. Harada, R. Herbert, W. Kaufmann, R. Kellner, B. Mahler, E. Meseck, T. Nolte, S. Rittinghausen, J. Vahle, and K. Yoshizawa

**T-71 “Adversity” in Toxicity Studies, the Pathologists’ Point of View – Results from the 4th ESTP International Expert Workshop in Paris, June 8-9, 2015**

B. Lenz, W. Kaufmann, X. Palazzi, G. Pohlmeier-Esch, and ESTP Adversity Working Group

<sup>1</sup>Competitor for the ACVP/STP Young Investigator Award

<sup>2</sup>Competitor for the STP Student Poster Award

## Session Chairs

**Lydia Andrews-Jones, DVM, PhD, DACVP**

Allergan, Lake Forest, CA

**Kirstin Barnhart, DVM, PhD, DACVP**

AbbVie, Inc., North Chicago, IL

**Duane Belote, DVM, DACVP**

Covance Laboratories, Inc., Chantilly, VA

**Dorothee Bienzle, DVM, PhD, DACVP**

University of Guelph, Guelph, Ontario, Canada

**Sebastian Brennan, DVM, MVSc, DACVP**

Novartis Pharmaceuticals Corporation, East Hanover, NJ

**Danielle L. Brown, DVM, DACVP**

WIL Research, Hillsborough, NC

**Mary Jo Burkhard, DVM, PhD, DACVP**

College of Veterinary Medicine, Ohio State University, Columbus, OH

**Shelley Burton, DVM, MSc, DACVP**

University of Prince Edward Island, Charlottetown, Prince Edward Island, Canada

**Jeff Caswell, DVM, DVSc, PhD, DACVP**

University of Guelph, Guelph, Ontario, Canada

**Brian J. Christian, PhD, DABT**

Covance Laboratories, Inc., Madison, WI

**Linden Craig, DVM, PhD, DACVP**

University of Tennessee College of Veterinary Medicine, Memphis, TN

**Dimitry M. Danilenko, DVM, PhD, DACVP**

Genentech, Inc., South San Francisco, CA

**Kelly Diegel, DVM, PhD, DACVP**

Boehringer Ingelheim, Ridgefield, CT

**Robert W. Dunstan, DVM, MS, DACVP**

Biogen Idec, Cambridge, MA

**Susan A. Elmore, MS, DVM, DABT, FIATP, DACVP**

NTP and NIEHS, Research Triangle Park, NC

**Daniela Ennulat, DVM, PhD, DACVP**

GlaxoSmithKline, King of Prussia, PA

**Nancy E. Everds, DVM, DACVP**

Amgen, Inc., South San Francisco, CA

**Katherine Gibson-Corley, DVM, PhD, DACVP**

University of Iowa, Iowa City, IA

**Carolyn Grimes, DVM, DACVP**

Université de Montréal Faculté de Médecine Vétérinaire, St-Hyacinthe, Quebec, Canada

**Margarita M. Gruebbel, DVM, PhD, DACVP**

EPL, Inc., Research Triangle Park, NC

**Elizabeth Howerth, DMV, PhD, DACVP**

University of Georgia, Athens, GA

**Heather Jury**

IDEXX Laboratories, Westbrook, ME

**Jey Koehler, DVM, PhD, DACVP**

Auburn College of Veterinary Medicine, Auburn, AL

**David E. Malarkey, DVM, PhD, DACVP**

National Toxicology Program Pathology Group, National Institute of Environmental Health Sciences, Research Triangle Park, NC

**Joanne Mansell, DVM, MRCVS, DACVP**

College of Veterinary Medicine, Texas A&M University, College Station, TX

**Elizabeth A. Mauldin, DVM, DACVD, DACVP**

University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA

**Sean P. McDonough, DVM, PhD, DACVP**

Cornell University, Ithaca, NY

**Rita McManamon, DVM**

UGA Zoo and Exotic Animal Pathology Service, University of Georgia, Athens, GA

**David K. Meyerholz, DVM, PhD, DACVP**

University of Iowa Carver College of Medicine, Iowa City, IA

**Andrew D. Miller, DVM, DACVP**

Cornell University College of Veterinary Medicine, Ithaca, NY

**Sébastien Monette, DMV, MVSc, DACVP**

Memorial Sloan Kettering Cancer Center, The Rockefeller University, Weill Cornell Medical College, New York, NY

**Kristie Mozzachio, DVM, DACVP**

WIL Research, Hillsborough, NC

**Gerry O'Sullivan, MVB, MSc, PhD, DECVP, DACVP**

University of Minnesota College of Veterinary Medicine, St. Paul, MN

**Laura E. Leigh Perkins, DVM, PhD, DACVP**

Abbott Vascular, Mattaponi, VA

**Anne Provencher, DVM, MSc, DECVP, FIATP, DACVP**

Charles River Laboratories, Sherbrooke, Quebec, Canada

**Pauline M. Rakich, DVM, PhD, DACVP**

University of Georgia, Athens, GA

**Stephen Raverty, DVM, PhD, DACVP**

British Columbia Ministry of Agriculture and Lands, Abbotsford, British Columbia, Canada

**William Reagan, DVM, PhD, DACVP**

Pfizer, Inc., Groton, CT

**Marian K. Rippy, DVM, PhD, DACVP**

Rippy Pathology Solutions, Inc., Woodbury, MN

**Daniel R. Rissi, DVM, PhD, DACVP**

University of Georgia, Athens, GA

**Aaron M. Sargeant, DVM, PhD, DACVP**

Charles River Laboratories Preclinical Services, Spencerville, OH

**Vito Sasseville, DVM, PhD, DACVP**

Novartis Institutes for Biomedical Research, Cambridge, MA

**Lynne Shanahan, MT, ASCP**

Colorado State University, Ft. Collins, CO

**Laura Snyder, DVM, DACVP**

Marshfield Labs, Marshfield, WI

**Judy St. Leger, DVM, DACVP**

SeaWorld Parks and Entertainment, San Diego, CA

**Nancy Stedman, DVM, PhD**

Busch Gardens/SeaWorld Parks and Entertainment, Tampa, FL

**Tracy Stokol, BVSc, PhD, DACVP**

College of Veterinary Medicine, Cornell University, Ithaca, NY

**Francisco A. Uzal, DVM, MSc, PhD, DACVP**

California Animal Health and Food Safety Lab, School of Veterinary Medicine, University of California, Davis, San Bernardino, CA

**Jerrold M. Ward, DVM, PhD, DACVP**

Global VetPathology, Montgomery Village, MD

**Zbigniew Wojcinski, DVM, DVSc, DABT, DACVP**

Drug Development Preclinical Services, LLC, Ann Arbor, MI

**Jeffrey C. Wolf, DVM, DACVP**

EPL, Inc., Sterling, VA

**Arno Wuenschmann, DrMedVet**

College of Veterinary Medicine, University of Minnesota, St. Paul, MN

**Caroline Zeiss, BVSc, PhD, DACLAM, DACVP**

Yale University School of Medicine, New Haven, CT

**Faculty****Verena K. Affolter, DrMedVet, PhD, DECVP**

University of California, Davis, CA

**Lydia Andrews-Jones, DVM, PhD, DACVP**

Allergan, Lake Forest, CA

**Scott S. Auerbach, PhD, DABT**

National Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC

**Adam Aulbach, DVM, DACVP**

MPI Research, Mattawan, MI

**Anne Avery, VMD, PhD**

Colorado State University, Fort Collins, CO

**Andrew Baker, MD**

Hennepin County Medical Examiner's Office, Minneapolis, MN

**Kirstin Barnhart, DVM, PhD, DACVP**

AbbVie, Inc., North Chicago, IL

**Holly Bender, DVM, PhD, DACVP**

Iowa State University College of Veterinary Medicine, Ames, IA

**Dorothee Bienzle, DVM, PhD, DACVP**

University of Guelph, Guelph, Ontario, Canada

**Michael Bleavins, PhD, DABT**

White Crow Innovation, LLC, Dexter, MI

**Guy Bouchard, DVM, MS, DACT**

Sinclair Research Center, LLC, Columbia, MO

**Michael C. Boyle, DVM, PhD, DABT, DACVP**

Amgen, Inc., Thousand Oaks, CA

**Alys Bradley, BSc, BVSc, MAnimSc, DipRCPath, FRIPH, MRCVS, FRCPath, FIATP**

Charles River Laboratories, Edinburgh, Scotland, UK

**Douglas E. Brash, PhD**

Yale University, New Haven, CT

**Matthew Breen, PhD, CBiol, FSB**

College of Veterinary Medicine, North Carolina State University, Raleigh, NC

**Marjory Brooks, DVM, DACVIM**

Cornell University, Ithaca, NY

**Tom P. Brown, DVM, MS, PhD, DACVP**

Pfizer, Inc., Groton, CT

**Mary Jo Burkhard, DVM, PhD, DACVP**

College of Veterinary Medicine, Ohio State University, Columbus, OH

**Eric R. Burrough, DVM, PhD**

Iowa State University, Ames, IA

**Mark T. Butt, DVM, DACVP**

Tox Path Specialists, LLC, Frederick, MD

**Carlo Cantile, DVM, PhD**

Universita di Pisa, Pisa, Italy

**Paige Carmichael, DVM, PhD, DACVP**

College of Veterinary Medicine, University of Georgia, Athens, GA

**Mary E. Case, MD**

St. Louis University Health Sciences Center, St. Louis, MO

**Madeleine Chagnon, DVM, MSc**

AccelLAB, Boisbriand, Quebec, Canada

**Rachel Cianciolo, DVM, PhD, DACVP**

The Ohio State University, Columbus, OH

**J. Mark Cline, DVM, PhD, DACVP**

Wake Forest University School of Medicine, Winston-Salem, NC

**Karyn Colman, BVetMed, MRCVS**

Novartis Institutes for Biomedical Research, East Hanover, NJ

**Dimitry M. Danilenko, DVM, PhD, DACVP**

Genentech, Inc., South San Francisco, CA

**Kelly Diegel, DVM, PhD, DACVP**

Boehringer Ingelheim, Ridgefield, CT

**Ian D. Duncan, BVMS, PhD, FRCPath, FRSE**

School of Veterinary Medicine, University of Wisconsin, Madison, WI

**Robert W. Dunstan, DVM, MS, DACVP**

Biogen Idec, Cambridge, MA

**Amy Durham, BA, MS, VMD, DACVP**

School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA

**Daniela Ennulat, DVM, PhD, DACVP**

GlaxoSmithKline, King of Prussia, PA

**Nancy E. Everds, DVM, DACVP**

Amgen, Inc., South San Francisco, CA

**Valerie A. Fadok, DVM, PhD, DACVD**

North Houston Veterinary Specialists, Spring, TX

**Cindy A. Farman, DVM, PhD, DACVP**

Genentech, Inc., South San Francisco, CA

**Suzanne E. Fenton, PhD, MS**

National Toxicology Program Laboratory, National Institute of Environmental Health Sciences, Research Triangle Park, NC

**Stacey Fossey, DVM, PhD, DABT, DACVP**

AbbVie, Inc., North Chicago, IL

**Reese Frederickson, JD, MBA, BS**

Pine County Attorney's Office, Pine City, MN

**Kristen R. Friedrichs, DVM, DACVP**

School of Veterinary Medicine, University of Wisconsin,  
Madison, WI

**Mike Garner, DVM, DACVP**

Northwest ZooPath, Monroe, WA

**Jodie Gerdin, DVM, DACVP**

Antech Diagnostics, Albany, NY

**Katherine Gibson-Corley, DVM, PhD, DACVP**

University of Iowa, Iowa City, IA

**Warren Glaab, PhD**

Merck, West Point, PA

**Margarita M. Gruebbl, DVM, PhD, DACVP**

EPL, Inc., Research Triangle Park, NC

**Rick Hailey, DVM**

Covance, Inc., Chantilly, VA

**Victoria Hampshire, VMD**

Capital Preclinical Scientific Regulatory Consulting, LLC,  
Bethesda, MD

**Jeff Hayes, DVM, MSc**

Ohio Department of Agriculture Animal Disease Diagnostic  
Laboratory, Reynoldsburg, OH

**Kristi L. Helke, DVM, PhD, DACVP**

Medical University of South Carolina, Charleston, SC

**Michael Henson, DVM, PhD, DACVIM**

University of Minnesota College of Veterinary Medicine,  
St. Paul, MN

**Mark J. Hoenerhoff, DVM, PhD, DACVP**

University of Michigan, Ann Arbor, MI

**Jessica Hokamp, DVM**

Texas A&M University, College Station, TX

**Jack Hoppin, PhD**

inviCRO LLC, Boston, MA

**Elizabeth Howerth, DVM, PhD, DACVP**

University of Georgia, Athens, GA

**Paul Howroyd, MA, VETMB, MRCVS, FRCPath**

WIL Research Europe-Lyon, St Germain sur L'Arbresle, Lyon,  
France

**Sree Kanthaswamy, BS(HONS), MPhil, PhD**

School of Mathematical and Natural Sciences, Arizona State  
University, Glendale, AZ

**Stefan M. Keller, DVM, DrMedVet, PhD, DECV**

University of Guelph, Guelph, Ontario, Canada

**Rie Kikkawa, DVM, PhD, DABT, DJCVP, DJSOT, DACVP**

Novartis Institutes for Biomedical Research, East Hanover, NJ

**Matti Kiupel, DrVetMed, BS, MS, PhD, DACVP**

College of Veterinary Medicine, Michigan State University,  
Lansing, MI

**Nancy D. Kock, BS, DVM, MS, PhD, DACVP**

Center for Comparative Medicine Research, Translational  
Science Institute, Wake Forest University, Winston-Salem, NC

**Ramesh C. Kovi, BVSc&AH, MVSc, PhD, DACVP**

National Toxicology Program, National Institute of  
Environmental Health Sciences and EPL, Inc., Research Triangle  
Park, NC

**Krista LaPerle, DVM, PhD, DACVP**

The Ohio State University, Columbus, OH

**Douglas B. Learn, PhD**

Charles River Laboratories Preclinical Services, Horsham, PA

**Jon Lenn, MS, PhD**

GlaxoSmithKline, Research Triangle Park, NC

**Lilach Lerman, MD, PhD**

Mayo Clinic, Rochester, MN

**Michael Linden, MD, PhD, DABP**

University of Minnesota, Minneapolis, MN

**Robert J. Lipinski, PhD**

School of Veterinary Medicine, University of Wisconsin,  
Madison, WI

**Jody Lulich, DVM, PhD, DACVIM**

University of Minnesota College of Veterinary Medicine,  
St. Paul, MN

**Elizabeth Lund, DVM, MPH, PhD**

Banfield Pet Hospital, Portland, OR

**Ricardo G. Maggi, MS, PhD**

North Carolina State University and Galaxy Diagnostics,  
Raleigh, NC

**David E. Malarkey, DVM, PhD, DACVP**

National Toxicology Program Pathology Group, National  
Institute of Environmental Health Sciences, Research Triangle  
Park, NC

**Joseph Mankowski, DVM, PhD, DACVP**

Johns Hopkins University School of Medicine, Baltimore, MD

**Joanne Mansell, DVM, MRCVS, DACVP**

College of Veterinary Medicine, Texas A&M University,  
College Station, TX

**Keith Mansfield, DVM, DACVP**

Novartis Institutes for Biomedical Research, Cambridge, MA

**Elizabeth A. Mauldin, DVM, DACVD, DACVP**

University of Pennsylvania School of Veterinary Medicine,  
Philadelphia, PA

**Beverly McEwan, DVM, MSc, PhD, DACVP**

University of Guelph, Guelph, Ontario, Canada

**Rita McManamon, DVM**

UGA Zoo and Exotic Animal Pathology Service, College of  
Veterinary Medicine, University of Georgia, Athens, GA

**Christine L. Merrill, DVM, PhD, DACVP**

GlaxoSmithKline, Research Triangle Park, NC

**David K. Meyerholz, DVM, PhD, DACVP**

University of Iowa Carver College of Medicine, Iowa City, IA

**Igor Mikaelian, DVM, DACVP**

Abbott Bioresearch Center, Worcester, MA

**Jaime Modiano, VMD, PhD**

University of Minnesota, Minneapolis, MN

**James P. Morrison, DVM, DACVP**

Charles River Laboratories Pathology Associates, Durham, NC

**Kristie Mozzachio, DVM, DACVP**

WIL Research, Hillsborough, NC

**Robert J. Munger, DVM, DACVO**

Animal Ophthalmology Clinic, Ltd., Dallas, TX



**Jagannatha Mysore, MVSc, PhD, DACVP**  
Bristol-Myers Squibb, New Brunswick, NJ

**Mary Nabity, DVM, PhD, DACVP**  
Texas A&M University, College Station, TX

**Jennifer Neel, DVM, DACVP**  
North Carolina State University, Raleigh, NC

**Kim Newkirk, DVM, PhD, DACVP**  
College of Veterinary Medicine, University of Tennessee,  
Knoxville, TN

**Donal O'Toole, MVB, PhD, MRCVS, DECVP, FRCPath**  
Wyoming State Veterinary Laboratory, Laramie, WY

**Arun K. Pandiri, BVSc&AH, MS, PhD, DABT, DACVP**  
EPL, Inc./NTP, Research Triangle Park, NC

**Ingrid D. Pardo, DVM, MS, DACVP**  
Pfizer, Inc., Groton, CT

**Kelly Metcalf Pate, DVM, PhD, DACLAM**  
Johns Hopkins University School of Medicine, Baltimore, MD

**David Pearce, PhD**  
Sanford Research and Sanford Children's Health Research  
Center, Sioux Falls, SD

**Patricia A. Pesavento, DVM, PhD, DACVP**  
School of Veterinary Medicine, University of California,  
Davis, CA

**Florence Poitout, DVM, DECVCVP, DACVP**  
Charles River Laboratories, Senneville, Quebec, Canada

**Brian F. Porter, DVM, DACVP**  
College of Veterinary Medicine, Texas A&M University,  
College Station, TX

**Erin Quist, DVM, MS, DACVP**  
National Toxicology Program, National Institute of  
Environmental Health Sciences, Research Triangle Park, NC

**Lila Ramaiah, DVM, PhD, DACVP**  
Huntingdon Life Sciences, Jersey City, NJ

**Deepa B. Rao, BVSc, MS, PhD, DABT, DACVP**  
FDA, Silver Spring, MD

**Marian K. Rippy, DVM, PhD, DACVP**  
Rippy Pathology Solutions, Inc., Woodbury, MN

**Annette Romeike, DMV, DACVP**  
Covance Laboratories SAS, Porcheville, France

**Stephanie Rossow, DVM, PhD**  
University of Minnesota, Minneapolis, MN

**Serge D. Rousselle, DVM, DACVP**  
Alizée Pathology, LLC, Thurmont, MD

**Vito Sasseville, DVM, PhD, DACVP**  
Novartis Institutes for Biomedical Research, Cambridge, MA

**Christina M. Satterwhite, PhD**  
Charles River Laboratories Preclinical Services, Reno, NV

**Deanna Schaefer, DVM, MS, MT (ASCP), DACVP**  
University of Tennessee, Knoxville, TN

**A. Eric Schultze, DVM, PhD, FIATP, DACVP**  
Eli Lilly & Company, Indianapolis, IN

**Lynne Shanahan, MT, ASCP**  
Colorado State University, Ft. Collins, CO

**Valerie Shearn-Bochsler, DVM, MPH**  
USGS National Wildlife Health Center, Madison, WI

**Jessica C. Sieren, PhD**  
University of Iowa, Iowa City, IA

**Steven D. Sorden, DVM, PhD, DACVP**  
Covance Laboratories, Inc., Madison, WI

**Jonathan Stauber, PhD**  
ImaBiotech, Loos, France

**Nancy Stedman, DVM, PhD**  
Busch Gardens/SeaWorld Parks and Entertainment, Tampa, FL

**Bryan Stegelmeier, DVM, PhD, DACVP**  
USDA/ARS Poisonous Plant Research Laboratory, Logan, UT

**Tracy Stokol, BVSc PhD, DACVP**  
College of Veterinary Medicine, Cornell University, Ithaca, NY

**Alain Stricker-Krongrad, PhD, MSc**  
Sinclair Research Center, LLC, Columbia, MO

**Kathleen A. Szabo, DVM, MS, DACVP**  
Charles River Laboratories Pathology Associates, Durham, NC

**Leandro Teixeira, DVM, MS, DACVP**  
University of Wisconsin, Madison, WI

**Gregory S. Travlos, DVM**  
National Institute of Environmental Health Sciences, Research  
Triangle Park, NC

**James Turk, AB, DVM, PhD, DACVP**  
Amgen, Inc., Thousand Oaks, CA

**Amit Vasanji, PhD**  
Image IQ, Inc., Cleveland, OH

**Dana Walker, DVM, MS, PhD, DACVP**  
Novartis Institutes for Biomedical Research, Cambridge, MA

**Jerrold M. Ward, DVM, PhD, DACVP**  
Global VetPathology, Montgomery Village, MD

**Monika Welle, Prof DrMedVet, DECVP**  
Institute of Animal Pathology, Vetsuisse Faculty, University of  
Bern, Bern, Switzerland

**Lawrence J. Wheat, MD**  
MiraVista Diagnostics, Indianapolis, IN

**Joan Wicks, PhD, DACVP**  
Alizée Pathology, LLC, Thurmont, MD

**Melinda Wilkerson, DVM, PhD, DACVP**  
College of Veterinary Medicine, Kansas State University,  
Manhattan, KS

**Susan Williams, DVM, PhD, DACVP**  
College of Veterinary Medicine, University of Georgia, Athens, GA

**Kevin Woolard, DVM, PhD**  
University of California, Davis, CA

**Sherif Zaki, MD, PhD**  
National Center for Emerging and Zoonotic Diseases, Centers  
for Disease Control and Prevention, Atlanta, GA

**Caroline Zeiss, BVSc, PhD, DACLAM, DACVP**  
Yale University School of Medicine, New Haven, CT



## Exhibitor Hosted Sessions

**Sunday, October 18**

**7:00 AM-8:00 AM**

**Room 200G**

**Datacolor Inc.**

***Application of Color Calibration in  
Photomicrography for Research Pathology***

In research pathology, it is critical that color in photomicrographs and gross images accurately represents what is seen in the specimen. Consistency between images and image color rendering on computer monitors is essential for viewing and evaluating images. Several case studies will illustrate the importance of color calibration to assessments in research studies.

**Monday, October 19**

**7:00 AM-8:00 AM**

**Room 200G**

**Leica Biosystems/Aperio**

***Peer-to-Peer Opportunity to Learn How Your  
Colleagues Are Using Digital Pathology Solutions  
to Improve Turnaround Time and Expedite  
Results***

Learn about the latest advances in the Aperio Digital Pathology portfolio including: new tissue imaging instruments, anytime, anywhere image sharing and collaboration applications, and easy-to-use quantitative image analysis tools.

**Monday, October 19**

**12:15 PM-1:15 PM**

**Room 200G**

**Marshall BioResources**

***Sexual Maturity of The Gottingen Minipig: A  
Complex Story***

We will describe the stages of spermatogenesis in young Gottingen Minipig males aged 5-8 weeks. It is also evident that the environment influences puberty in swine. Therefore, we will also present our current work exploring the role the environment plays in the induction of estrous in female minipigs.

**Tuesday, October 20**

**12:15 PM-1:15 PM**

**Room 200G**

**Visiopharm and HistoTox Labs, Inc.**

***Quantitative Digital Pathology Services for  
Discovery and Pre-Clinical: Raising the Bar on  
Quality, Innovation, and Productivity***

*Advance registration is requested.*

Quantitative Digital Pathology (QDP) is the automated, quantitative assessment of whole slide images of tissue sections. QDP is an extremely important tool to better understand disease, target validation, determine the safety and efficacy of lead compounds, and for the qualification of biomarkers to support companion diagnostics. Yet, to precisely measure changes in hundreds of tissue samples for a research, discovery, or pre-clinical study, the workflow from histology to report must be optimized and standardized.



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607

2424 American Lane  
Madison, WI 53704  
Tel: 608-443-2466  
Fax: 608-443-2474  
Email: [info@acvp.org](mailto:info@acvp.org)  
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Stop by the ACVP Student Chapters Booth to meet the next generation of veterinary pathologists and to support their fundraising efforts.

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Madison, WI 53704  
Tel: 608-443-2466  
Fax: 608-443-2474  
Email: [info@acvp.org](mailto:info@acvp.org)  
Website: [www.acvp.org](http://www.acvp.org)

The mission of the College is to foster excellence in veterinary pathology to protect and improve animal, human and environmental health to benefit society. Visit our Booth #608 for samples of journals, membership materials and other items of interest.

### American Society for Investigative Pathology (ASIP)

303

9650 Rockville Pike, Suite E133  
Bethesda, MD 20814  
Tel: 301-634-7130  
Fax: 301-634-7990  
Email: [asip@asip.org](mailto:asip@asip.org)

The American Society for Investigative Pathology (ASIP) promotes the discovery, advancement, and dissemination of knowledge in experimental pathology. ASIP fosters investigation into the pathogenesis, classification, diagnosis, and manifestations of disease through meetings, publications, and educational activities. ASIP owns The American Journal of Pathology and co-owns The Journal of Molecular Diagnostics.

### Antech Diagnostics GLP

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600 Airport Blvd., Suite 500  
Morrisville, NC 27560  
Tel: 919-277-0822  
Fax: 919-277-0825  
Email: [david.brown@antechmail.com](mailto:david.brown@antechmail.com)  
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**415**

60 St. Clair Avenue East, Suite 703  
Toronto, ON M4T 1N5  
Canada  
Tel: 647-260-1991  
Email: [ywineberg@aspectimaging.com](mailto:ywineberg@aspectimaging.com)  
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**409**

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Bloomington, MN 88431  
Tel: 952-881-1430  
Fax: 852-881-1873  
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Billerica, MA 01821  
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Fax: 978-667-5993  
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445 Armand-Frappier BLVD  
Laval, QC H7V 4B3  
Canada  
Tel: 450-973-2240  
Email: [duguayf@ca.citoxlab.com](mailto:duguayf@ca.citoxlab.com)  
Website: [www.citoxlab.com](http://www.citoxlab.com)

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5 Princess Road  
Lawrenceville, NJ 08648  
Tel: 610-704-7272  
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Email: [enquiries@elixirsoftware.co.uk](mailto:enquiries@elixirsoftware.co.uk)  
Website: [www.elixirsoftware.co.uk](http://www.elixirsoftware.co.uk)

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**505**

45600 Terminal Drive  
Sterling, VA 20166  
Tel: 703-471-7060  
Fax: 703-471-8447  
Email: [psanders@epl-inc.com](mailto:psanders@epl-inc.com)  
Website: [www.epl-inc.com](http://www.epl-inc.com)

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Tukholmankatu 8  
00290 Helsinki, Finland  
Tel: +358 20-734-9130  
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Website: [www.fimmic.com](http://www.fimmic.com)

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7575 W. 103rd Avenue, Suite 102  
Westminster, CO 80021  
Tel: 303-325-5894  
Email: [PathServices@FlagshipBio.com](mailto:PathServices@FlagshipBio.com)  
Website: [www.flagshipbio.com](http://www.flagshipbio.com)

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### HistoTox Labs, Inc.

501

2108 55th Street, Suite 110  
Boulder, CO 80301  
Tel: 303-633-5401  
Fax: 303-565-3764  
Email: [jbishop@histotoxlabs.com](mailto:jbishop@histotoxlabs.com)  
Website: [www.histotoxlabs.com](http://www.histotoxlabs.com)

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Fax: 540-477-4448  
Email: [pschwartz@hsrl.org](mailto:pschwartz@hsrl.org)  
Website: [www.hsrl.org](http://www.hsrl.org)

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Website: [www.image-iq.com](http://www.image-iq.com)

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Corrales, NM 87048  
Tel: 505-492-0979  
Email: [liz@indicalab.com](mailto:liz@indicalab.com)  
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Tel: 610-941-0990  
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Tel: 703-438-7508  
Fax: 703-438-3113  
Email: [stp@toxpath.org](mailto:stp@toxpath.org)  
Website: [www.toxpath.org](http://www.toxpath.org)

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