TABLE OF CONTENTS

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 and www.acvp.org.

Annual Meeting Information

Combined Annual Meeting Overview ...................... 2
Welcome Letter..........................................................3
Committees and Council Recognition ..................... 4
ACVP and ASVCP Committee Meetings .................... 7
STP Committee Meetings ........................................... 8
ACVP/ASVCP Awards ............................................... 9
STP Awards............................................................12

General Information and Maps ............................ 16
Meeting Events ...................................................... 16
Registration Information ........................................ 17
Headquarters Hotel ............................................... 17
Guest/Hospitality Suite .......................................... 17
Speaker Ready Room ............................................. 18
Safety and Security Tips ......................................... 20
Minneapolis Convention Center Maps ................... 21
Hyatt Regency Minneapolis Hotel Maps ................. 23

Program

STP Pre-Meeting CE Course 1, ACVP Primate Pathology Pre-Meeting Workshop ......................... 25
ASVCP and STP CPIG Combined Pre-Meeting Workshop .............................................. 26
C.L. Davis Foundation Pre-Meeting Workshop, NTP Satellite Symposium .............................. 27
STP Pre-Meeting CE Course 2, ACVP Career Session, ASVCP Education Forum for Discussion .... 28
ACVP, ASVCP, and STP Combined Career Development Session, ASVCP Education Symposium .................................................. 29
Concurrent Session I, Natural Disease Focused Scientific Session I .................................... 29
STP and Industrial and Toxicologic Pathology Focused Scientific Session .......................... 31
ASVCP Veterinary Laboratory Professionals Session I, Emerging Disease Focused Seminar, Clinical Pathology Focused Scientific Session I .................... 32
Diagnostic Pathology Focused Scientific Session I...... 32
Experimental Disease Focused Scientific Session I .... 33
Natural Disease Focused Scientific Session II, STP Focused Topic Scientific Session I ............ 34
Combined ACVP and STP Town Hall Meeting, ACVP-STP Mystery Slide Review Session: Skin ...... 36

ACVP/ASVCP/STP Combined Plenary Session:
Biomarkers, ASVCP Veterinary Laboratory Professionals Session II, ASVCP-STP Case Discussion Session .......................................................... 37
Meet the Pathologists: A Discussion of Careers in Pathology, Mystery Slide Review and Neuropathology Case Presentations .............................. 38
Clinical Pathology Focused Scientific Session II, Concurrent Session II .............................................. 39
Education Focused Scientific Session, Mini-Symposium ........................................................ 40
STP Focused Topic Scientific Session 2, ASVCP Veterinary Laboratory Professionals Session III ...... 41
Helpful Advice or Disparaging Critic? Your Role as a Peer Reviewer for Manuscripts in Toxicologic Pathology and Veterinary Pathology, ASVCP and STP Mystery Slide Case Session, Diagnostic Pathology Focused Scientific Session II ............................................................. 42
Experimental Disease Focused Scientific Session II .................................................................. 43
STP Focused Topic Scientific Session 3 ...................... 44
Concurrent Session III, Concurrent Session IV ....... 45
Mini-Symposium II, STP Focused Topic Scientific Session 4 .................................................................. 46
ACVP/ASVCP/STP Post-Meeting Workshop I, Post-Meeting Workshop II ................................... 47

Poster Presentations

Poster Times and Setup.............................................17, 48
Poster Index..................................................................50

Faculty List

Session Chairs ......................................................... 73
Faculty........................................................................ 74

Exhibits

Exhibit Hall Information/Policies .................................. 18
Exhibit Hall Map and Booth Numbers ........................... 49
Exhibitor Hosted Sessions ........................................ 77
Exhibitor Descriptions ............................................... 78
Exhibitor Listing......................................................Inside Back Cover

Sponsorship

ACVP and ASVCP Sponsors .................. Inside Front Cover
STP Sponsors ......................................................... Back Cover
## Combined Annual Meeting Overview

### Saturday, October 17

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

### Sunday, October 18

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

### Monday, October 19

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

### Tuesday, October 20

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

### Wednesday, October 21

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

Dimity Danilenko
2015 STP Meeting Chair

Laura Snyder
2015 ASVCP Meeting Chair
## 2015 ACVP and ASVCP Committees

### 2015 ACVP Education Committee

**Education Committee Chair**  
Alicia K. Olivier, DVM, PhD*

**Program Chair**  
Kelli L. Boyd, DVM, PhD*

**Education Committee**  
Erica Behling-Kelly, DVM, PhD*  
Erin M. Brannick, DVM, MS*  
Lauri J. Diehl, DVM, PhD*  
Wayne Dochterman, DVM*  
Krista M. LaPerle, DVM, PhD*  
Christiane Lohr, DVM, PhD*  
David K. Meyerholz, DVM, PhD*  
James B. Rottman, DVM, PhD*  
Laura A. Snyder, DVM*  
Francisco Uzal, DVM, PhD, MSc*

**Advisory Group**  
Mark Evans, DVM, PhD*  
Jessica Grieves, DVM*  
Tim LaBranche, DVM, PhD*  
Kevin S. McDorman, DVM, PhD*

**Special Interest Groups**  
Kelli L. Boyd, DVM, PhD*  
Gary L. Cockerell, DVM, PhD*  
Kendall S. Frazier, DVM, PhD*  
Vito Sasseville, DVM, PhD*  
Piper Treuting, DVM*  
Bruce H. Williams, DVM*

**Focused Scientific Groups**

**Focused Scientific Group Chair**  
Lauri J. Diehl, DVM, PhD*

**Focused Scientific Group Co-Chair and Awards Chair**  
Christiane Lohr, DVM, PhD*

**Clinical Pathology**  
Shelley Burton, DVM, MSc* (Chair)  
Erica Behling-Kelly, DVM, PhD*  
Sara L. Connolly, DVM, MS*  
Niraj K. Tripathi, DVM*

**Diagnostic Pathology**  
Stephen A. Raverty, DVM, PhD* (Chair)  
Eric Burrough, DVM, PhD*  
Aline Rodrigues Hoffmann, DVM, PhD*  
Laura Kennedy, DVM*  
Barbara Lewis, DVM* (Past Chair)  
Fabiano Oliveira, DVM, MS*  
David S. Rotstein, DVM, MPVM* (Co-Chair)

**Education**  
Linden E. Craig, DVM, PhD* (Chair)  
K. Paige Carmichael, DVM, PhD* (Co-Chair)  
Thomas E. Cecere, DVM, PhD* (Past Chair)  
Rachel M. Peters, DVM*  
Melissa D. Sanchez, VMD, PhD*  
Arnaud J. Van Wettere, DVM, PhD*

**Experimental Disease**  
Sebastien Monette, DVM, MVSc* (Chair)  
Hibret Adissu, DVM, PhD*  
Oded Foreman, DVM*  
Mihai Gagea, DVM, DVSSc*  
Sanjeev Gumber, DVM*  
Laura Janke, DVM, PhD* (Co-Chair)  
Brandon L. Plattner, DVM, PhD* (Past Chair)  
Robert W. Read, DVM, PhD*

**Industrial and Toxicologic Pathology**  
Daniela Ennulat, DVM, PhD* (Chair)  
Mike Conner, DVM* (Past Chair)  
Curtis Colleton, DVM*  
Torrie A. Crabb, DVM* (Co-Chair)  
Kristi Heike, DVM, PhD*  
Janardhan Kyathanahalli, BVSc, PhD*  
Katherine A. Knostman, DVM, PhD*  
Gopinath S. Palaisamy, MVSc, PhD*  
Manu M. Sebastian, DVM, PhD*

**Natural Disease**  
Andrew Miller, DVM* (Chair)  
Ingeborg Langohr, DVM, PhD* (Past Chair)  
Gary Haldorson, DVM, PhD* (Co-Chair)  
Angela Pillatzki, DVM*  
Daniel R. Rissi, DVM, PhD*  
Francisco A. Uzal, DVM, PhD*  

* ACVP Diplomate
2015 ASVCP PROGRAM COMMITTEE

Chair: Laura Snyder, DVM*

Program Committee
Shelley Burton, DVM, MSc*
Cindy E. Fishman, VMD, PhD*
Bruce E. LeRoy, DVM, PhD*
Jeffrey McCartney, DVM, MSc, DABT*
Janelle Renschler, DVM PhD*
Lynne T. Shanahan, BSMT
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

President:
Mark Simpson, DVM, PhD*

President-Elect:
David Malarkey, DVM, PhD*

Secretary/Treasurer:
Mark R. Ackermann, DVM, PhD*

Immediate Past President:
Cory Brayton, DVM, DACLAM*

Councilors:
Anne M. Barger, DVM*
Glenn Cantor, DVM, PhD*
Krista La Perle, DVM, PhD*
Susan J. Tornquist, DVM, PhD*

ASVCP Executive Board

President
Jeffrey McCartney, DVM, MSc, DABT*

President-Elect
Shelley Burton, DVM*

Immediate Past President
Anne Provencher Bolliger, DVM, MSc, DECVP*

Board Members
Tracy Stokol, BVSc, PhD*
Linda Vap, DVM*

Secretary
Mark Johnson, DVM

Treasurer
Jennifer Johns, DVM, PhD*

*ACVP Diplomate
2015 STP Committees

Executive Committee

STP President: Kenneth A. Schafer, DVM, PhD, DACVP
Vet Path Services, Inc.

President-Elect: Brad Bolon, DVM, MS, PhD, DACVP, DABT, ATS, FIATP
GEMpath, Inc.

Secretary-Treasurer: Rani Sellers, DVM, PhD, DACVP
Albert Einstein College of Medicine

Past President: Anne M. Ryan, DVM, PhD, DACVP
Pfizer, Inc.

Councilors:

Denise I. Bounous, DVM, PhD, DACVP
Bristol-Myers Squibb

John Michael Cullen, VMD, PhD, DACVP
North Carolina State University

Jack R. Harkema, DVM, PhD, DACVP
Michigan State University

John L. Vahle, DVM, PhD, DACVP
Eli Lilly & Company

Douglas C. Wolf, DVM, PhD, FIATP, ATS
Syngenta

2015 Annual Symposium Committee

Mark F. Cesta, DVM, PhD, DACVP
(ASC Chair) National Institute of Environmental Health Sciences

Mark James Hoenerhoff, DVM, PhD, DACVP
(ASC Co-Chair) University of Michigan Medical School

Brad Bolon, DVM, MS, PhD, DACVP, DABT, ATS, FIATP
(2015 Steering Committee Liaison) GEMpath, Inc.

David Caudell, DVM, PhD
Wake Forest University

Dimitry M. Danilenko, DVM, PhD, DACVP
(2015 Scientific Co-Chair) Genentech, Inc.

Darlene Dixon, DVM, PhD, DACVP
(2015 Scientific Co-Chair) National Toxicology Program/ National Institute of Environmental Health Sciences

Robert Dunstan, DVM, MS, DACVP
(2015 Scientific Co-Chair) Biogen Idec

Susan A. Elmore, MS, DVM, DABT, FIATP, DACVP
(NTP Symposium Liaison) National Toxicology Program and National Institute of Environmental Health Sciences

Kathryn E. Gropp, DVM, PhD, DACVP
(2016 Scientific Co-Chair) Pfizer, Inc.

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

Jessica S. Hoane, DVM, DACVP
(2015 CE Chair) Charles River Laboratories Pathology Associates

Bruce Homer, DVM, PhD
Pfizer, Inc.

Armando Irizarry, DVM, PhD, DACVP
(2016 Scientific Co-Chair) Eli Lilly & Company

Calvert Louden, DVM, PhD, DACVP
Johnson & Johnson Pharmaceuticals

Mark G. Mense, MBA, DVM, PhD
Covance, Inc.

Emily Meseck, DVM
(2015 CE Co-Chair) Novartis Institutes for Biomedical Research

Murali Vara Prasad Nadella, BVSc, PhD, DACVP
AstraZeneca Pharmaceuticals

Richard Peterson, DVM, PhD, DACVP
AbbVie, Inc.

Aaron M. Sargeant, DVM, PhD, DACVP
(2015 Co-Chair) Charles River Laboratories Preclinical Services

Rani Sellers, DVM, PhD, DACVP
(2015 EC Liaison) Albert Einstein College of Medicine

Alok K. Sharma, BVSc, MVSc, MS, PhD, DACVP, DABT
(2016 Scientific Co-Chair) Covance Laboratories, Inc.

Jerrold M. Ward, DVM, PhD, DACVP
(2015 CE Chair) Global VetPathology

Diann Weddle, DVM, PhD
Huntingdon Life Sciences

Zbigniew W. Wojcinski, DVM, DVSc, DACVP, DABT
(2015 Scientific Co-Chair) Drug Development Preclinical Services, LLC

2015 Scientific Program Committee

Dimitry M. Danilenko, DVM, PhD, DACVP
(2015 Scientific Co-Chair) Genentech, Inc.

Robert Dunstan, DVM, MS, DACVP
(2015 Scientific Co-Chair) Biogen Idec

Zbigniew W. Wojcinski, DVM, DVSc, DACVP, DABT
(2015 Scientific Co-Chair) Drug Development Preclinical Services, LLC

Duane Alan Belote, DVM, DACVP
Covance Laboratories, Inc.

Sebastian Brennan, DVM, MVSc, DACVP
Novartis Pharmaceuticals Corporation

Kelly Diegel, DVM, PhD, DACVP
Boehringer Ingelheim

Jack R. Harkema, DVM, PhD, DACVP
(EC Liaison) Michigan State University

Elizabeth A. Mouldin, DVM, DACVD, DACVP
University of Pennsylvania School of Veterinary Medicine

Aaron M. Sargeant, DVM, PhD, DACVP
Charles River Laboratories Preclinical Services

2015 Continuing Education Subcommittee

Jessica S. Hoane, DVM, DACVP
(2015 CE Chair) Charles River Laboratories Pathology Associates

Emily Meseck, DVM
(2015 CE Co-Chair) Novartis Institutes for Biomedical Research

Lydia L. Andrews-Jones, DVM, PhD, DACVP
Allergan

Brian J. Christian, PhD, DABT
Covance Laboratories, Inc.

Margaritha M. Gruebbel, DVM, PhD
EPL, Inc.

Kristie Mozachio, DVM, PhD
WIL Research

Rani Sellers, DVM, PhD, DACVP
(2015 EC Liaison) Albert Einstein College of Medicine
### ACVP and ASVCP Committee Meetings

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

#### Friday, October 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM–5:00 PM</td>
<td><strong>ACVP Council</strong> Room 202A, Minneapolis Convention Center</td>
<td></td>
</tr>
<tr>
<td>3:00 PM–9:00 PM</td>
<td><strong>ASVCP Executive Board</strong> Lake Harriet, Hyatt Regency Hotel <em>(4th floor)</em></td>
<td></td>
</tr>
</tbody>
</table>

#### Saturday, October 17

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

#### Sunday, October 18

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

#### Monday, October 19

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:00 AM</td>
<td><strong>ASVCP Program Committee</strong> Skyway A, Hyatt Regency Hotel <em>(2nd floor)</em></td>
<td></td>
</tr>
</tbody>
</table>

#### Tuesday, October 20

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:00 AM</td>
<td><strong>ASVCP Veterinary Laboratory Professionals Program Committee</strong> Lakeshore B, Hyatt Regency Hotel <em>(Lobby Level)</em></td>
<td></td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td><strong>Awards Committee</strong> Greenway A, Hyatt Regency Hotel <em>(2nd floor)</em></td>
<td></td>
</tr>
<tr>
<td>7:30 AM–12:00 Noon</td>
<td><strong>ACVP Strategy Workshop</strong> Lake Harriet, Hyatt Regency Hotel <em>(4th floor)</em></td>
<td></td>
</tr>
<tr>
<td>8:00 AM–12:00 Noon</td>
<td><strong>ACVP Council</strong> Room 202A, Minneapolis Convention Center</td>
<td></td>
</tr>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td><strong>ACVP Strategy Workshop Debriefing Luncheon</strong> Lakeshore A, Hyatt Regency Hotel <em>(Lobby Level)</em></td>
<td></td>
</tr>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td><strong>ACVP/STP Coalition for Veterinary Pathology Business Luncheon</strong> Lakeshore B, Hyatt Regency Hotel <em>(Lobby Level)</em></td>
<td></td>
</tr>
<tr>
<td>1:30 PM–3:30 PM</td>
<td><strong>ACVP/STP Coalition for Veterinary Pathology Fellows Board of Governors Meeting</strong> Skyway A, Hyatt Regency Hotel <em>(2nd floor)</em></td>
<td></td>
</tr>
<tr>
<td>2:00 PM–5:00 PM</td>
<td><strong>ACVP Council</strong> Executive Boardroom, Hyatt Regency Hotel <em>(4th floor)</em></td>
<td></td>
</tr>
<tr>
<td>3:00 PM–4:00 PM</td>
<td><strong>Certification Examination Board</strong> Lakeshore B, Hyatt Regency Hotel <em>(Lobby Level)</em></td>
<td></td>
</tr>
</tbody>
</table>

#### Wednesday, October 21

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:00 AM</td>
<td><strong>Focused Scientific Groups Meeting</strong> Regency Room, Hyatt Regency Hotel <em>(2nd floor)</em></td>
<td></td>
</tr>
<tr>
<td>8:00 AM–12:00 Noon</td>
<td><strong>ACVP Council</strong> Room 202A, Minneapolis Convention Center</td>
<td></td>
</tr>
</tbody>
</table>
## 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

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 PM–6:00 PM</td>
<td>Executive Committee Meeting</td>
<td>Lakeshore C (Lobby Level)</td>
</tr>
</tbody>
</table>

### Sunday, October 18

All Sunday meetings will be held at the Hyatt Regency Hotel

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td>INHAND Minipig Working Group</td>
<td>Greenway (2nd floor)</td>
</tr>
<tr>
<td>7:30 PM–9:00 PM</td>
<td>ACVP Council and STP Executive Committee Dinner</td>
<td>Lakeshore B (Lobby Level)</td>
</tr>
</tbody>
</table>

### Monday, October 19

All Monday meetings will be held at the Hyatt Regency Hotel

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:10 AM–8:00 AM</td>
<td>Clinical Pathology Interest Group</td>
<td>Greenway E (2nd floor)</td>
</tr>
<tr>
<td>6:30 AM–7:45 AM</td>
<td>Environmental Toxicologic Pathology Interest Group</td>
<td>Greenway D (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–7:30 AM</td>
<td>INHAND Global Editorial and Steering Committee (GESC)</td>
<td>Greenway C (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Fundraising Committee</td>
<td>Greenway G (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Newsletter Committee</td>
<td>Greenway H (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Education Committee</td>
<td>Greenway I (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Internet Committee</td>
<td>Greenway J (2nd floor)</td>
</tr>
<tr>
<td>7:30 AM–9:00 AM</td>
<td>INHAND GESC/OWG Chairs Joint Meeting</td>
<td>Greenway C (2nd floor)</td>
</tr>
<tr>
<td>12:00 Noon–1:00 PM</td>
<td>Joint Education-Based Committee</td>
<td>Greenway G (2nd floor)</td>
</tr>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td>Scientific and Regulatory Policy Committee</td>
<td>Greenway H (2nd floor)</td>
</tr>
<tr>
<td>1:30 PM–2:30 PM</td>
<td>Committee Chairs/Executive Committee</td>
<td>Greenway D (2nd floor)</td>
</tr>
<tr>
<td>2:30 PM–6:00 PM</td>
<td>Executive Committee Meeting</td>
<td>Greenway D (2nd floor)</td>
</tr>
</tbody>
</table>

### Tuesday, October 20

All Tuesday meetings will be held at the Hyatt Regency Hotel

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 AM–8:00 AM</td>
<td>Neuropathology Interest Group</td>
<td>Greenway DE (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>CDOC Career Development Subcommittee</td>
<td>Greenway I (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Membership Committee</td>
<td>Greenway J (2nd floor)</td>
</tr>
<tr>
<td>7:00 AM–9:00 AM</td>
<td>Cardiovascular Toxicologic Pathology Interest Group</td>
<td>Greenway H (2nd floor)</td>
</tr>
<tr>
<td>8:00 AM–9:00 AM</td>
<td>CDOC Student Interactions Subcommittee</td>
<td>Greenway I (2nd floor)</td>
</tr>
<tr>
<td>12:00 Noon–1:00 PM</td>
<td>INHAND Non-Rodent Working Group Chairs</td>
<td>Greenway I (2nd floor)</td>
</tr>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td>ACVP/STP Coalition for Veterinary Pathology Business Luncheon</td>
<td>Lakeshore B (Lobby Level)</td>
</tr>
<tr>
<td>12:00 Noon–2:00 PM</td>
<td>2016 Annual Symposium Committee</td>
<td>Greenway J (2nd floor)</td>
</tr>
<tr>
<td>12:00 Noon–2:00 PM</td>
<td>Career Development and Outreach Committee</td>
<td>Greenway H (2nd floor)</td>
</tr>
<tr>
<td>1:30 PM–3:30 PM</td>
<td>ACVP/STP Coalition for Veterinary Pathology Fellows Board of Governors Meeting</td>
<td>Skyway A (2nd floor)</td>
</tr>
</tbody>
</table>

### Wednesday, October 21

All Wednesday meetings will be held at the Hyatt Regency Hotel

<table>
<thead>
<tr>
<th>Time</th>
<th>Meeting Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>INHAND Rabbit Working Group</td>
<td>Lake Calhoun (4th floor)</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Reproductive Pathology Interest Group</td>
<td>Lake Harriet (4th floor)</td>
</tr>
<tr>
<td>8:00 AM–9:00 AM</td>
<td>CDOC Advocacy Subcommittee</td>
<td>Lake Minnetonka (4th floor)</td>
</tr>
<tr>
<td>8:00 AM–10:00 AM</td>
<td>INHAND NHP Working Group</td>
<td>Executive Boardroom (4th floor)</td>
</tr>
<tr>
<td>12:15 PM–1:15 PM</td>
<td>Executive Committee Leadership Meeting</td>
<td>Executive Boardroom (4th floor)</td>
</tr>
</tbody>
</table>
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 Langigan, 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*
Awards

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*, PhD; Tracy Carlson, BS, DVM, PhD*; Vinicius S. Carreira, DVM, PhD*; Mary E. Carshall, DVM, PhD*; Beth Chaffee, DVM, PhD*; L. Wayne Dochtermann, DVM*, Rodney K. Frank, DVM, PhD*; Lisa Lanigan, BS, DVM, PhD*; Keith G. Nelson, DVM, PhD*; Aaron M. Sargeant, DVM, PhD*; Leah Schutt, DVM, DVMSc*; 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 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

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 Massachuesetts 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 α and γ 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, 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.

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 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 a Veterinary Anatomic Pathology Resident (ACVP/STP Coalition Fellow) at the University of California-Davis School of Veterinary Medicine, Davis, California, 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 lipidosis 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 track 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 currently serves 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**

**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.

*A 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 101E**  
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. 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). 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**  
The 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).
Registration

Registration will be located in the 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 President’s 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 President’s 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.

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–11:00 AM
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

Poster Teardown:
Tuesday, October 20 ..................... 3:30 PM–4:30 PM
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:**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Presentation Load Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, October 18</td>
<td>Report prior to 7:00 PM on</td>
</tr>
<tr>
<td>8:00 AM–12:00 Noon</td>
<td>Saturday, October 17</td>
</tr>
<tr>
<td>Sunday, October 18</td>
<td>Report prior to 10:30 AM on</td>
</tr>
<tr>
<td>1:30 PM–5:00 PM</td>
<td>Sunday, October 18</td>
</tr>
<tr>
<td>Monday, October 19</td>
<td>Report prior to 6:00 PM on</td>
</tr>
<tr>
<td>8:00 AM–12:00 Noon</td>
<td>Sunday, October 18</td>
</tr>
<tr>
<td>Tuesday, October 20</td>
<td>Report prior to 6:00 PM on</td>
</tr>
<tr>
<td>8:00 AM–12:00 Noon</td>
<td>Monday, October 19</td>
</tr>
<tr>
<td>Tuesday, October 20</td>
<td>Report prior to 10:30 AM on</td>
</tr>
<tr>
<td>1:30 PM–5:00 PM</td>
<td>Tuesday, October 20</td>
</tr>
<tr>
<td>Wednesday, October 21</td>
<td>Report prior to 6:00 PM on</td>
</tr>
<tr>
<td>8:00 AM–1:00 PM</td>
<td>Tuesday, October 20</td>
</tr>
<tr>
<td>Wednesday, October 21</td>
<td>Report prior to 10:30 AM on</td>
</tr>
<tr>
<td>1:00 PM–5:00 PM</td>
<td>Wednesday, October 21</td>
</tr>
</tbody>
</table>

*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 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.

**Exhibit 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-TP 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-TP 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 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.
General Information

Minneapolis, Minnesota

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

Minneapolis Convention Center

All events are in the Minneapolis Convention Center unless otherwise indicated.

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
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
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.
Lobby Level

Minneapolis Convention Center Maps
Minneapolis Convention Center Maps

Second Level
Hyatt Regency Minneapolis Hotel Maps

Fourth Level

GREAT LAKES BALLROOM
GREAT LAKES C
GREAT LAKES B
GREAT LAKES A3
GREAT LAKES A2
GREAT LAKES A1

LAKE MINNETONKA
LAKE CALHOUN
LAKE HARRIET

CEDAR LAKE
LAKE OF THE ISLES
LAKE NOKOMIS
EXECUTIVE BOARDROOM

RESTROOMS

ESCALATORS

CONFERENCE ELEVATORS (FLOORS 1-6)
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 toxicity 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 toxicity 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

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

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, DAACLAM, 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
Program

Saturday

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
(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. Pescevento, 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

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 Bradly, 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
### Sunday, October 18

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

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

**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**

**8:00 AM–8:50 AM**

**Tips and Tricks for Visualizing Numerical Data**

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

---

### 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**
All events are in the Minneapolis Convention Center unless otherwise indicated.

Program

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, DECVP, 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, DECVP, 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: Andrea 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. Fawkes, 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. Lühr
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
Keyword: Nervous System
Invited Speaker
9:15 AM–10:00 AM Pathology of Adverse Reactions to Vaccines
Donal O’Toole, MVB, PhD, MRCVS, DECVP, 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. Gibble, J.S. Lankton, and B.L. Bodenstein
Keyword: Wildlife
10:45 AM–11:00 AM Clinopathological Findings and Virus Antigen Distribution during Natural Infection of Ring-Necked Pheasants in Washington State, USA with Highly Pathogenic Avian Influenza Virus A (H5N2)
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**
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**

*Room 101E*

8:00 AM–12:00 Noon

**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. Kiyathamallhi, 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. Kobakken
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**

**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

Sunday

All events are in the Minneapolis Convention Center unless otherwise indicated.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM–5:00 PM</td>
<td>Guest/Hospitality Suite Skyway Suite B, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>9:00 AM–5:00 PM</td>
<td>Career Center Room 206B</td>
</tr>
<tr>
<td>9:30 AM–4:30 PM</td>
<td>Exhibits and Silent Auction Exhibit Hall B</td>
</tr>
<tr>
<td>9:30 AM–4:30 PM</td>
<td>Focused Scientific Poster Session and ACVP Veterinary Student Posters Exhibit Hall B</td>
</tr>
<tr>
<td>12:00 Noon–1:30 PM</td>
<td>Veterinary Pathology Resident/Trainee Luncheon Sponsored by IDEXX Room 102D</td>
</tr>
</tbody>
</table>
| 12:15 AM–12:45 PM | Emergence of Porcine Enteric Corona Viruses in North America: Differential Features and Diagnostic Trends Eric R. Barrough, DVM, PhD, Iowa State University, Ames, IA 12:45 AM–1:15 PM Pathogenesis and Histopathology of Porcine Epidemic Diarrhea Virus (PEDV) and Porcine Delta Corona Virus (PDCV) in Swine Jeff Hayes, DVM, MSc, Ohio Department of Agriculture Animal Disease Diagnostic Laboratory, Reynoldsburg, OH

Clinical Pathology Focused Scientific Session I

1:30 PM–4:30 PM

Room 101E

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

Invited Speaker

1:30 PM–2:30 PM Urinalysis–Getting Specific about Specific Gravity and Other Important Features Jody Lulich, DVM, PhD, DACVIM, University of Minnesota, St. Paul, MN

Platform Presentations

2:30 PM–2:45 PM Application of Current Automated Microscopy Technology to Qualitative Identification of Urine Formed Elements in Veterinary Medicine J. Hammond, C. Myrick, D.J. McCrann, M. Scott, G. Bilbrough, and D.B. DeNicola

Keyword: Clinical Pathology

2:45 PM–3:00 PM Cytologic Grading of Copper in Canine Liver Samples A.R. Moore, E. Coffey, and D. Hamar

Keyword: Liver

3:00 PM–3:30 PM Refreshment Break

Exhibit Hall B

Emerging Disease Focused Seminar

12:15 PM–1:15 PM

Room 101A

Corona Virus

Chair: Francisco A. Uzal, DVM, MSc, PhD, DACVP, University of California, Davis, CA

ASVCP Veterinary Laboratory Professionals Session I

12:00 Noon–4:00 PM Room 200E

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

12:00 Noon–12:30 PM Welcome

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

12:30 PM–1:30 PM Advances in Veterinary Diagnostic and Comparative Hemostatic Testing Marjory Brooks, DVM, DACVIM, Cornell University, Ithaca, NY

1:30 PM–2:30 PM Establishing Reference Intervals

Kristen R. Friedrichs, DVM, DACVP, University of Wisconsin, Madison, WI

2:30 PM–3:00 PM Refreshment Break

Exhibit Hall B

3:00 PM–4:00 PM Sample Handling and Sources of Pre-analytical Variation in Laboratory Animals Kirstin Barnhart, DVM, PhD, DACVP, AbbVie, Inc., North Chicago, IL

Emerging Disease Focused Seminar

12:15 PM–1:15 PM Room 101A

Corona Virus

Chair: Francisco A. Uzal, DVM, MSc, PhD, DACVP, University of California, Davis, CA
Program

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
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. Pecoranov*, S.P. McDonogh, S.A. Center, S.M. Liu, and K. Gisselmann
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 Obstructive Ostipation 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. Kiepel, J. Stiles, M. Operacz, and D. Sledge
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. Milevancev, C.V. Lühr, and D.S. Russell
Keyword: General Topic

3:40 PM–3:50 PM
Systemic Ranaviral Infection in an African Spurred Tortoise (Centrochelys sulcata)
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

Sunday

All events are in the Minneapolis Convention Center unless otherwise indicated.

**Program**

**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. Vieson†, 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†, F. Carvallo, and F. Uzal
*Keyword: Infectious Disease*

**4:20 PM–4:30 PM**
**Intracoelomic Neoplasia in a Crowntail Siamese Fighting Fish (Betta splendens)**
K. Eden†, 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. Papponega, G. Sykes, C. Le, D. Krieger, and D. Rotstein
*Keyword: General Topic*

**4:50 PM–5:00 PM**
**Primary Leptomeningeal Gliomatosis in a Domestic Shorthair Cat**
W.M. Zoll†, J.M. Rudnick, T. Keeshen, C. Bandt, A.D. Miller, and J.R. Abbott
*Keyword: Nervous System*

†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 J.R. Abbot

**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 Mucopolysaccharidoses Type I (Hurler Syndrome): Longitudinal Echocardiographic Evaluation and Correlative Histopathology**
*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**
*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. Fullgren, 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. Janiantito, T. Izawa, M. Kawamura, 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
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, Universita 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

Program
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 PM–3:20 PM</td>
<td>Student Presentation: Gastrin-Releasing Peptide Receptor (GRPR) Signaling in Prostate Cancer</td>
<td>Auditorium Lecture Hall 1</td>
</tr>
<tr>
<td>3:20 PM–3:40 PM</td>
<td>Student Presentation: Inhibition of Islet Amyloid Polypeptide Aggregation and Associated Cytotoxicity by Non-steroidal Anti-inflammatory Drugs</td>
<td>Auditorium Lecture Hall 1</td>
</tr>
</tbody>
</table>

**Monday, October 19**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–6:00 PM</td>
<td>Speaker Ready Room Room 200F</td>
<td></td>
</tr>
<tr>
<td>7:00 AM–7:00 PM</td>
<td>Internet Station Sponsored by VIN Exhibit Hall B Foyer</td>
<td></td>
</tr>
<tr>
<td>7:00 AM–1:30 PM</td>
<td>C.L. Davis Board of Directors Meeting Lakeshore C, Hyatt Regency Hotel</td>
<td></td>
</tr>
<tr>
<td>7:30 AM–1:30 PM</td>
<td>Registration Exhibit Hall B Foyer</td>
<td></td>
</tr>
</tbody>
</table>
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–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 ASVCP 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

**Minneapolis, Minnesota**  
**Minneapolis Convention Center**

#### Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 PM–4:30 PM</td>
<td>Community Outreach Activity (CO-Act)</td>
<td>Room 208A</td>
</tr>
<tr>
<td>3:00 PM–5:00 PM</td>
<td>Veterinary Student and Resident Forum</td>
<td>Room 208</td>
</tr>
<tr>
<td>5:00 PM–6:30 PM</td>
<td>C.L. Davis Foundation Reception</td>
<td>Mirage Room, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>5:15 PM–7:45 PM</td>
<td>ASVCP Reception</td>
<td>Lakeshore B, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>5:30 PM–7:00 PM</td>
<td>IDEXX Reception</td>
<td>Regency Room</td>
</tr>
<tr>
<td>6:00 PM–7:00 PM</td>
<td>ACVP Council and Corporate Partners Reception</td>
<td>Greenway F, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>6:00 PM–7:00 PM</td>
<td>STP Committee Chair Mixer</td>
<td>Greenway A, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>6:00 PM–7:30 PM</td>
<td>University of Pennsylvania Alumni Reception</td>
<td>Greenway J, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>6:00 PM–8:00 PM</td>
<td>Comparative Pathologists Consortium Reception</td>
<td>Market Bar-B-Que (1414 Nicollet Avenue)</td>
</tr>
<tr>
<td>6:30 PM–8:00 PM</td>
<td>Iowa State University College of Veterinary Medicine Alumni Reception</td>
<td>Greenway B, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>6:30 PM–8:00 PM</td>
<td>University of Georgia College of Veterinary Medicine Alumni Reception</td>
<td>Greenway C, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>6:30 PM–9:00 PM</td>
<td>University of Minnesota Alumni Reception</td>
<td>Market Bar-B-Que (1414 Nicollet Avenue)</td>
</tr>
<tr>
<td>7:00 PM–9:00 PM</td>
<td>Colorado State University Alumni Reception</td>
<td>Greenway E, Hyatt Regency Hotel</td>
</tr>
</tbody>
</table>

**Mystery Slide Review and Neuropathology Case Presentations**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>ACVP Past Presidents Breakfast</td>
<td>Lakeshore C, Hyatt Regency Hotel</td>
</tr>
<tr>
<td>7:00 AM–6:00 PM</td>
<td>Speaker Ready Room</td>
<td>Room 200F</td>
</tr>
<tr>
<td>7:00 AM–7:00 PM</td>
<td>Internet Station</td>
<td>Sponsored by VIN</td>
</tr>
<tr>
<td>7:30 AM–5:00 PM</td>
<td>Registration</td>
<td>Exhibit Hall B Foyer</td>
</tr>
<tr>
<td>8:00 AM–10:00 AM</td>
<td>International Veterinary Pathology Coalition</td>
<td>Lakeshore A, Hyatt Regency Hotel</td>
</tr>
</tbody>
</table>

All events are in the Minneapolis Convention Center unless otherwise indicated.
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. Lawo, 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
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, Ithica, 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
Program

Tuesday

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

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

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
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. Wünschmann, S.P. McDonough, J. Gereditis, 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 D. T. Broome, Research Triangle Park, NC; and Jeff Caswell, DVM, DVS, 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)
Program

Tuesday

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. Pannelard, 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. Mele
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. Fabini, 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)
C. Krane, A. Miller, C. Cummings, D. Wolf, and S. Craft
Keyword: Wildlife
4:40 PM–5:00 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

Wednesday

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
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
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, FRCPath, FRSE, University of Wisconsin, Madison, WI

Platform Presentations
4:30 PM–4:45 PM

Histopathological Changes in Liver Due to Bile Acid Toxicity
S.K. Shanmukkappa, B. Dipasquale, and A. Mietlbe
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. McKerlie
Keyword: Reproductive System

STP Focused Topic Scientific Session 3
1:30 PM–5:00 PM

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

All events are in the Minneapolis Convention Center unless otherwise indicated.
Molecular Biology and Animal Surrogates Inadequately Inform?
Robert W. Dunstan, DVM, MS, DACVP, Biogen Idec, Cambridge, MA

Wednesday, October 21

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

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
Program

Wednesday

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, DECVP, University of Guelph, Guelph, Ontario, Canada; Dorothee Bienzle, 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

10:25 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. Rippy, DVM, PhD, DACVP, Rippy 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. Rippy, DVM, PhD, DACVP, Rippy 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
Program

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 Brenn, PhD, CBiol, FSB, North Carolina State University, Raleigh, NC

Case #3: Molecular Biomarkers in Determining the Prognosis of Canine Mast Cell Tumors
Matti Kispel, 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 Rossov, 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 Presentations

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 during 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/index.asp, on the ACVP website at www.acvp.org, and on the mobile app.
Minneapolis Convention Center—Exhibit Hall

Booths, Posters, Microscope and Digital Slide Viewing Area
| C-1 | Trypanosoma Theileiri Infection in a Calf from Indiana  
     | Keyword: Infectious Disease |
| C-2 | Hematological Disorders Associated to Bartonella spp. in Shelter Cats from Rio de Janeiro, Brazil  
     | 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  
     | 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. Bourgès-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. Geraldes, 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  
     | 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  
Keyword: Hematology

C-14 Assessment of Two Glucose Meters for Glycemic Control in Horses  
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  
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. Breshares, 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  
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-Stagall, 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
Poster Presentations

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
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. Kiser1, M. Milovancev, C.V. Löhr, and D.S. Russell
Keyword: General Topic

D-2 Acanthomatous Ameloblastoma with Atypical Foci in Five Dogs
J. Malmberg1, B. Powers, and P. Schaffer
Keyword: Neoplasia

D-3 Adult-Onset, Cyclic Thrombocytopenia in a Rhesus Macaque
G. Frydman1, K. Pate, R.P. Marinini, A.M. de la Forcade, 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 (Cyprinidae carpio) Water Garden Associated with the Stress of Relocation During Temperature Climactic Conditions
N. Crossland1, 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 palpebrosum)
W.M. Zoll1, 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. Epperson1 and W.L. Castleman
Keyword: Neoplasia

D-7 Causes of Canine Meningoencephalitis and Meningomyelitis in Georgia: 129 Cases
W. Yau1 and D.R. Rissi
Keyword: Nervous System

D-8 CD10, PAX8, and Napsin-A as Immunohistochemical Markers of Canine Renal Cell Carcinoma
T.J. Peat1,2, 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. Sokol1 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. Bailey1, J. Koehler, T. Hathcock, and A. White
Keyword: Skin
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-12</td>
</tr>
<tr>
<td>K. Barnes¹, M. Kiupel, J. Stiles, M. Operacz, and D. Sledge</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>D-13</td>
</tr>
<tr>
<td>M. Vieson¹, E.M. Shore, M. Xu, and G.K. Saunders</td>
</tr>
<tr>
<td>Keyword: Bone and Joint</td>
</tr>
<tr>
<td>D-14</td>
</tr>
<tr>
<td>G. Krane¹, C. Cummings, and S. Craft</td>
</tr>
<tr>
<td>Keyword: Alimentary</td>
</tr>
<tr>
<td>D-15</td>
</tr>
<tr>
<td>K. Casey¹, V. Affolter, and P. Moore</td>
</tr>
<tr>
<td>Keyword: Hematopoietic System</td>
</tr>
<tr>
<td>D-16</td>
</tr>
<tr>
<td>G. Krane¹, S. Campos, C. Cummings, J. Abbott, and J. Struthers</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>D-17</td>
</tr>
<tr>
<td>S. Vaidyanathan, A. Li, B.A. Didion, and P. Morrissey</td>
</tr>
<tr>
<td>Keyword: Reproduction</td>
</tr>
<tr>
<td>D-18</td>
</tr>
<tr>
<td>G. Shaw¹, S.N. Miller, R.R. Dubielzig, and L.B.C. Teixeira</td>
</tr>
<tr>
<td>Keyword: Eye and Ear</td>
</tr>
<tr>
<td>D-19</td>
</tr>
<tr>
<td>S.F. Santagostino¹, J.B. Engiles, B.J. Turek, and M.D. Sánchez</td>
</tr>
<tr>
<td>Keyword: Bone and Joint</td>
</tr>
<tr>
<td>D-20</td>
</tr>
<tr>
<td>M.A. McCarthy¹, P. Pesavento, and S. Marks</td>
</tr>
<tr>
<td>Keyword: Alimentary</td>
</tr>
<tr>
<td>D-21</td>
</tr>
<tr>
<td>H.L Pecoraro¹, B. Thompson, and G.E. Duhamel</td>
</tr>
<tr>
<td>Keyword: Alimentary</td>
</tr>
<tr>
<td>D-22</td>
</tr>
<tr>
<td>S. Choudhary¹, G. Andrews, D.S. Biller, S. Hocker, and J. Ryseff</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>D-23</td>
</tr>
<tr>
<td>H. Davero¹, S.A. Center, S.P. McDonough, and A.D. Miller</td>
</tr>
<tr>
<td>Keyword: Liver and Pancreas</td>
</tr>
<tr>
<td>D-24</td>
</tr>
<tr>
<td>L. Clarke¹ and D.R. Rissi</td>
</tr>
<tr>
<td>Keyword: Infectious Disease</td>
</tr>
</tbody>
</table>
## Poster Presentations

**Minneapolis, Minnesota**  
**Minneapolis Convention Center**

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-25</td>
<td>Infiltrative Extramedullary Plasmacytoma of the Respiratory Tract with Lymph Node Metastasis and Intrahistiocytic Amyloid</td>
<td>S. Sykes¹, V. Byfield, L. Sullivan, S. Bender, P.F. Moore, and M.D. Sánchez</td>
<td>Respiratory System</td>
</tr>
<tr>
<td>D-26</td>
<td>Intracoelomic Neoplasia in a Crowntail Siamese Fighting Fish (Betta splendens)</td>
<td>K. Eden¹, J.F. Edwards, D.P. Sponenberg, and B.F. Porter</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-27</td>
<td>Liver and Spleen Light Chain Deposition Disease in a Dog</td>
<td>H.L. Pecoraro¹, S.P. McDonough, S.A. Center, S.M. Liu, and K. Gisselman</td>
<td>General Topic</td>
</tr>
<tr>
<td>D-28</td>
<td>Mammary Rhabdomyosarcoma with Widespread Metastasis in an Adult Female Dog</td>
<td>L. Dagher¹, A.G. Armién, J. Dundas, and M.M. Dennis</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-29</td>
<td>Metastatic Thymoma in a Dog</td>
<td>K.L. Hughes¹, V. Wiles, N. Leibman, and A.C. Avery</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-30</td>
<td>Microsporidiosis in a Bearded Dragon (Pogona vitticeps)</td>
<td>K. Sakaguchi¹, Y. Sokolova, C. Higbie, J. Nevarez, and D. Paulsen</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>D-32</td>
<td>Olfactory Neuroblastoma in a Florida Black Bear (Ursus americanus floridanus)</td>
<td>G. Krane¹, A. Miller, C. Cummings, D. Wolf, and S. Craft</td>
<td>Wildlife</td>
</tr>
<tr>
<td>D-33</td>
<td>Oligodendrogloma with Spinal Metastasis in Dogs: An Underreported Neoplasm?</td>
<td>T. Huynh¹, M.J. Cruz Penn, and A.B. Rogers</td>
<td>Nervous System</td>
</tr>
<tr>
<td>D-34</td>
<td>Pathological Study on Primary Leptomeningeal Histiocytic Sarcoma in Dogs</td>
<td>A. Thongtharb¹, K. Uchida, J.K. Chambers, and H. Nakayama</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-35</td>
<td>Pigmented Villonodular Tenosynovitis in a Reticulated Giraffe (Giraffe camelopardalis reticulata)</td>
<td>E.A. Ihms¹, A. Rivas, E. Bronson, and L.M. Mangus</td>
<td>Bone and Joint</td>
</tr>
<tr>
<td>D-36</td>
<td>Primary Leptomeningeal Gliomatosis in a Domestic Shorthair Cat</td>
<td>W.M. Zoll¹, J.M. Rudnick, T. Keeshen, C. Bandt, A.D. Miller, and J.R. Abbott</td>
<td>Nervous System</td>
</tr>
<tr>
<td>D-37</td>
<td>Primary Malignant Histiocytosis in the Brain of an Italian Greyhound</td>
<td>N. Pate¹, A. Roland, L. Gainsburg, D.L. Kratchman, P.R. Gavin, and J. Mankowski</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-38</td>
<td>Pulmonary Carcinosarcoma in a Rabbit</td>
<td>S. Choudhary¹, A. Kumar, and G. Andrews</td>
<td>Rabbit</td>
</tr>
<tr>
<td>D-39</td>
<td>Spontaneous Pulmonary Hyalinosis in Three Sugar Gliders (Petaurus breviceps)</td>
<td>S.A. Sokol¹, T.L. Southard, and A.D. Miller</td>
<td>Respiratory System</td>
</tr>
</tbody>
</table>
D-40  Subsequent Unrelated Cutaneous T-Cell Lymphoma in a Dog with Previously Diagnosed T-Zone Lymphoma
F. Brooks¹, 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. Kim¹, J.C. Nietfeld, D.M. Lindemann, and D. Eshar
Keyword: Avian

D-42  Suspected Hepatic Osteodystrophy in a Golden Lion Tamarin (Leontopithecus rosalia)
E. Choi¹, 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. Krane¹, N. Steckler, C. Cummings, T. Waltzek, J. Wellehan, and L. Farina
Keyword: Wildlife

D-44  The Pathology of Tyzzer’s Disease in Horses
K. Fresneda¹, 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. Krane¹, 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. Lorbach¹, K. Wilson, and P. Stromberg
Keyword: Nervous System

D-47  Eosinophilic Granulomatous Dermatitis Induced by the Oomycete Lagenidium Sp. in a Cat
L.K. Manning¹, 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. Hoover¹, 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
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D-54</strong> Benign and Malignant Renal Vascular Tumors in Captive Aged Chimpanzees (<em>Pan troglodytes</em>) from Alamogordo Primate Facility</td>
</tr>
<tr>
<td>J. Chilton and M. Lammey</td>
</tr>
<tr>
<td>Keyword: Urinary System</td>
</tr>
<tr>
<td><strong>D-55</strong> Bovine “Winter Dysentery” Outbreak during the Summer in Southern California</td>
</tr>
<tr>
<td>S. Diab</td>
</tr>
<tr>
<td>Keyword: Infectious Disease</td>
</tr>
<tr>
<td><strong>D-56</strong> Bovine Fetal Emphysema Associated with <em>In Utero Clostridium chauvoei</em> Infection</td>
</tr>
<tr>
<td>Keyword: Muscle</td>
</tr>
<tr>
<td><strong>D-57</strong> Bovine Neosporosis and Abortions in British Columbia, Canada</td>
</tr>
<tr>
<td>S. Raverty, D. Wilson, K. Orsel, J. Waddington, M. Rajeev, A. Sweeney, T. Joseph, and M. Grigg</td>
</tr>
<tr>
<td>Keyword: Reproductive System</td>
</tr>
<tr>
<td><strong>D-58</strong> Canine Herpesvirus-1-Induced Acute Systemic Respiratory Disease in Three Clinically Healthy Adult Dogs with Evidence of Horizontal Transmission</td>
</tr>
<tr>
<td>S. Yang and J. Cooley</td>
</tr>
<tr>
<td>Keyword: Infectious Disease</td>
</tr>
<tr>
<td><strong>D-59</strong> CCDC85C Expression in Mammary Gland Tumors in Animals</td>
</tr>
<tr>
<td>N. Tanaka, T. Izawa, J. Yamate, and M. Kuwamura</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td><strong>D-60</strong> Cerebellomedullary Neuronal Degeneration in a Havanese Puppy: A New Syndrome?</td>
</tr>
<tr>
<td>J. Perkins, J.H. Hammond, B.A. Summers, and A.D. Miller</td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
</tr>
<tr>
<td><strong>D-61</strong> Characterization of Neuropathological Changes in Murine Models of Mucopolysaccharide Storage Disease</td>
</tr>
<tr>
<td>N. Robinson</td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
</tr>
<tr>
<td><strong>D-62</strong> <em>Clostridium difficile</em> Colonic Infection in a White-Tailed Deer (<em>Odocoileus virginianus</em>) with Caprine Herpesvirus-2-Associated Malignant Catarrhal Fever</td>
</tr>
<tr>
<td>F. Giannitti, H. Li, D. Patnayak, K. Olsen, B. Crossly, H. Moore, and F. Uzal</td>
</tr>
<tr>
<td>Keyword: Infectious Disease</td>
</tr>
<tr>
<td><strong>D-63</strong> Comparison of Cutaneous Mast Cell Tumour Grading in Histological Two-Tier Grading System with Ki-67 Grading</td>
</tr>
<tr>
<td>M. Van Erp, R. de Kroon, C. Dirken, and J.S. McKay</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td><strong>D-64</strong> Demonstration of Spontaneous Transplacental Transmission of Ovine Herpesvirus Type 2 in Cattle with Sheep-Associated Malignant Catarrhal Fever</td>
</tr>
<tr>
<td>Keyword: Infectious Disease</td>
</tr>
<tr>
<td><strong>D-65</strong> Estimating Shooting Distance in Gunshot Wounds to Animals</td>
</tr>
<tr>
<td>Keyword: Forensic Veterinary Pathology</td>
</tr>
<tr>
<td><strong>D-66</strong> Extra-gastrointestinal Stromal Tumor from the Mesentery of Small Bowel in a Dog</td>
</tr>
<tr>
<td>T. Furukawa, A. Shiotsuki, K. Nibe, K. Ono, and H. Hirao</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td><strong>D-67</strong> Feline Decapitation: Pre-mortem Cause of Death or Post-mortem Mutilation?</td>
</tr>
<tr>
<td>A. Keggan and S. McDonough</td>
</tr>
<tr>
<td>Keyword: Forensic Veterinary Pathology</td>
</tr>
<tr>
<td>Poster Presentations</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
</tbody>
</table>
| **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  
Keyword: Wildlife |
| **D-72** Intracerebral Malignant Plasmacytoma in a Mule Deer (Odocoileus hemionus)  
C.S. Clancy, A. Rougb, and A.J. Van Wetterea  
Keyword: Wildlife |
| **D-73** Intranasal Osteolipoma in a Cynomolgus Monkey  
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!  
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 |
**Poster Presentations**

<table>
<thead>
<tr>
<th>Poster #</th>
<th>Title</th>
<th>Authors</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-83</td>
<td>Pathological, Immunohistochemical, and Molecular Confirmation of Senecavirus A in Piglets from Southern Brazil</td>
<td>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</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>D-84</td>
<td>Pathology and Diagnostic Criteria for Necrotic Enteritis of Chickens</td>
<td>D. Gornatti, H. Sivaprasad, and F.A. Uzal</td>
<td>Avian</td>
</tr>
<tr>
<td>D-86</td>
<td>Persistent Thrombocytosis in a Dog</td>
<td>D. Hoffman, N. Hoepp, and A. Royal</td>
<td>Hematopoietic System</td>
</tr>
<tr>
<td>D-87</td>
<td>Pleomorphic Adenoma of the Submandibular Salivary Gland in a Horse</td>
<td>S. Diab</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-88</td>
<td>Plexiform Pulmonary Arteriopathy in a Dog</td>
<td>S. Kumar and A.J. Cooley</td>
<td>Cardiovascular</td>
</tr>
<tr>
<td>D-91</td>
<td>Soda and Snacks: Applying Veterinary Forensic Techniques to Food Contamination</td>
<td>A.B. Schaffer-White and R.E. Allavena</td>
<td>General</td>
</tr>
<tr>
<td>D-92</td>
<td>Surfactant Protein-A As an Immunohistochemical Marker of Canine Primary Pulmonary Carcinomas</td>
<td>J.A. Beck, M.A. Miller, C.B. Frank, D.M. DuSold, and J.A. Ramos-Vara</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>D-93</td>
<td>Systemic Coronavirus-Associated Disease Caused by “Ferret Enteric Coronavirus” in a Ferret (Mustela putorius furo)</td>
<td>H. Kondo, H. Toge, S. Tsuruno, Y. Une, S. Minami, and K. Maeda</td>
<td>Ferret</td>
</tr>
<tr>
<td>D-94</td>
<td>Systemic Histoplasmosis in an Adult Porcupine (Erethizon dorsatum)</td>
<td>A. Hattel, R. Graboski, and J. Brown</td>
<td>Wildlife</td>
</tr>
<tr>
<td>D-95</td>
<td>Trichomonads and Brachyspira murdochii Infection in Pigs with Colitis</td>
<td>F. Giannitti, C. Gebhart, J. Sarradell, K. Sverlow, and M. Culhane</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>D-96</td>
<td>Undifferentiated Carcinoma in the Mandible of a Holstein Cow</td>
<td>N. Horiiuchi, S. Kayo, K. Yoshimoto, H. Inokuma, and Y. Kobayashi</td>
<td>Alimentary</td>
</tr>
</tbody>
</table>
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-Garcia, 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 Kohnken1, Page Yaxley, and Christopher Premanandan  
Keyword: Cardiovascular

D-103 **Complete Splenic Abscessation with Septic Peritonitis in a Hunting Dog**  
K. Schlicher1,2, K. Wycislo, M. Bates, P. Roady, and A. Barger  
Keyword: Infectious Disease

1Competitor for the ACVP Young Investigator Award
2Competitor 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**  
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. Alnajjar1, 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. Alnajjar1, A. Larios-Mora, A. Geelen, J.M. Gallup, D. Roymans, A. Koul, P. Rigaux, and M.R. Ackermann  
Keyword: Infectious Disease
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-6</td>
<td>Velogenic and Mesogenic Newcastle Disease Virus Protein within Neurons, Astrocytes, and Microglia</td>
<td>S.L. Butt¹, C.L. Afonso, V.M.B.D. Moura, L. Susta, S. Cardenas-Garcia, P.J. Miller, C.C. Brown, and J.B. Stanton</td>
<td>Avian</td>
</tr>
<tr>
<td>E-7</td>
<td>Thyroid Hypertrophy in Cats Infected with Highly Pathogenic Feline Immunodeficiency Virus</td>
<td>S.R. Rolf³, A.M. Aranyos, R. Pu, J.L. Owen, W.M. Zoll, and J.K. Yamamoto</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-10</td>
<td>An Experimental Model for Studying the Pathogenesis of a Newly Emergent Turkey Arthritis/Tenosynovitis Reovirus in Turkeys</td>
<td>T.A. Sharafeldin¹,³, S.K. Mor, S.M. Goyal, and R.E. Porter</td>
<td>Avian</td>
</tr>
<tr>
<td>E-12</td>
<td>Glycoinhibitors of Adherence of Streptococcus agalactiae to Intestinal Epithelium in Tilapia (Oreochromis sp.)</td>
<td>P. Barato³, G.M. Vasquez, and C. Iregui</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-13</td>
<td>Effect of Amblyomma maculatum Feeding on the Cutaneous Immune Response to Rickettsia Parkeri Infection in a Murine Model</td>
<td>K.H. Banajee¹ and K.R. Macaluso</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-15</td>
<td>Histomorphological Aspects of Experimental Trypanosoma brucei Infection</td>
<td>T. Carvalho, F. Rijo-Ferreira, S. Trindade, and L.M. Figueiredo</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-16</td>
<td>Matrix Metalloproteinase 2 Activity in Scrapie Permissive and Nonpermissive Cultured Sheep Microglia</td>
<td>J.B. Stanton, V.R. McElliott, J.F. Muñoz-Gutiérrez, and D.A. Schneider</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-17</td>
<td>Scrapie Transmits to White-Tailed Deer by the Oral Route and Has a Molecular Profile Similar to Chronic Wasting Disease</td>
<td>J.J. Greenlee, S.J. Moore, J.D. Smith, R.A. Kunkle, and M.H. West Greenlee</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>E-19</td>
<td>Brain Derived Lipids Inhibit Prion Amyloid Formation In Vitro</td>
<td>C.E. Hoover², D.M. Henderson, M. Zabel, and E.A. Hoover</td>
<td>Infectious Disease</td>
</tr>
</tbody>
</table>

¹University of Texas at Austin, ²University of Manitoba, ³University of California, San Francisco
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
</table>
| **E-20** Exploring Anti-tumor Properties of Human CD8+BTLa+Tumor Infiltrating Lymphocyte Subset Using NSG Mouse Model  
K. Rithipichai, 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. Himmel1,2, 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. Henderson1,2, 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-Ott1, 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  
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. Pinelli1,2, S.D. Kim, and G.A. Wood  
Keyword: Neoplasia |
| **E-28** Aurora kinase Inhibition in Ewing Sarcoma Xenografts  
A.C. McCalla1,3, 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. Michael1, 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. Gao1, 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. Edmondson1,2, D.M. Gatti, C.M. Fallgren1, R.R. Rampersad, and M.M. Weil  
Keyword: Neoplasia |
| **E-33** Prostate Inflammation Increases Carcinoma Development in the POET3+Pten/- Mouse Model of Prostate Carcinogenesis  
Keyword: Neoplasia |
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-34</strong></td>
</tr>
<tr>
<td>J.L. Phillips, C.V. Lohr, and S.K. Kolluri</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td><strong>E-35</strong></td>
</tr>
<tr>
<td>S. Barrett1, N. Regna, A. Gojmerac, C. Chafin, M. Vieson, and C. Reilly</td>
</tr>
<tr>
<td>Keyword: Immune System</td>
</tr>
<tr>
<td><strong>E-36</strong></td>
</tr>
<tr>
<td>M.D. Vieson1, A. Gojmerac, D. Caudell, S.H. Barrett, and C.M. Reilly</td>
</tr>
<tr>
<td>Keyword: Immune System</td>
</tr>
<tr>
<td><strong>E-37</strong></td>
</tr>
<tr>
<td>Keyword: Immune System</td>
</tr>
<tr>
<td><strong>E-38</strong></td>
</tr>
<tr>
<td>C. Andrews1,2, M. McLean, M.L. Hanson, and S.K. Durum</td>
</tr>
<tr>
<td>Keyword: Alimentary</td>
</tr>
<tr>
<td><strong>E-39</strong></td>
</tr>
<tr>
<td>Keyword: Alimentary</td>
</tr>
<tr>
<td><strong>E-40</strong></td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
</tr>
<tr>
<td><strong>E-41</strong></td>
</tr>
<tr>
<td>A. Tellez, K.N. Dillon, J.A. Wicks, and S.D. Rousselle</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td><strong>E-42</strong></td>
</tr>
<tr>
<td>K. Dillon, S. Wilson, J. Guerrero, D. Brady, W. Grundy, J. Wicks, S. Rousselle, and A. Tellez</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td><strong>E-43</strong></td>
</tr>
<tr>
<td>L. Zadrozy, B. Lucotte, and R. Balaban</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td><strong>E-44</strong></td>
</tr>
<tr>
<td>G.C. Johnson, S. Leach, B. Williamson, W. Young, L. Castaner, J.R. Coates, B.L. Davidson, and M.L. Katz</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td><strong>E-45</strong></td>
</tr>
<tr>
<td>J.G. Vilches-Moure and C.A. Erickson</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td><strong>E-47</strong></td>
</tr>
<tr>
<td>K. Kuroki, C.R. Kennedy, A.M. Stoker, and J.L. Cook</td>
</tr>
<tr>
<td>Keyword: Bone and Joint</td>
</tr>
</tbody>
</table>
**Poster Presentations**

<table>
<thead>
<tr>
<th>E-48</th>
<th>Evaluation of Partial Transection versus Synovial Debridement of the ACL as Novel Canine Models for Management of ACL Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.C. Bozynski, K. Kuroki, J.P. Stannard, P.A. Smith, A.M. Stoker, C.R. Cook, and J.L. Cook</td>
<td></td>
</tr>
<tr>
<td>Keyword: Bone and Joint</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-49</th>
<th>Calprotectin Expression is Constitutively Altered in the Cystic Fibrosis Pig at Birth Prior to the Onset of Neutrophil Mediated Inflammation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Respiratory System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-50</th>
<th>Morphologic Artifacts Related to Insufflation Material for Lung Cryo Sectioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Respiratory System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-51</th>
<th>Comparison of IBA1 Localization in Common Model Species Used to Study Human Lung Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.K. Meyerholz, A.M. Lambertz, H.A. Flaherty, and K.N. Gibson-Corley</td>
<td></td>
</tr>
<tr>
<td>Keyword: Respiratory System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-52</th>
<th>A Novel Porcine Model of Ataxia Telangiectasia Reproduces Neurological Features and Motor Deficits of Human Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Nervous System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-53</th>
<th>Histological and Ultrastructural Studies on the Canavan Disease Model Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. Kuwamura, S. Tanimura, M. Tanaka, T. Izawa, T. Kuramoto, and J. Yamate</td>
<td></td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-54</th>
<th>Pathogenesis of Forebrain Abnormalities in a Teratogen-Induced Model of Orofacial Clefting</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Ansen-Wilson², J. Everson, G. Heyne, and R. Lipinski</td>
<td></td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-55</th>
<th>In Situ Identification of Brain Lipid Alterations by Imaging Mass Spectrometry (IMS) in Mouse Models of Toxin-Induced Experimental Demyelination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Nervous System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-56</th>
<th>Probing the Role of Low-Threshold Mechanoceptors in the Pathophysiology of Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Nervous System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-57</th>
<th>Investigation of Clomiphene Citrate Treatment on Spermatogenesis and Testicular Histomorphology in Rats</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.N. Gibson-Corley, P. Kogan, P.W. Naumann, J.A. Goeken, and M. Wald</td>
<td></td>
</tr>
<tr>
<td>Keyword: Reproductive System</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-59</th>
<th>Dietary Iron Overload Alters Hepatic Inflammation in a Rat Model of Nonalcoholic Steatohepatitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Izawa, M. Atarashi, R. Miyagi, M. Kuwamura, and J. Yamate</td>
<td></td>
</tr>
<tr>
<td>Keyword: Liver and Pancreas</td>
<td></td>
</tr>
</tbody>
</table>

¹Competitor for the ACVP Young Investigator Award
²Competitor for the STP Student Poster Award
³Competitor for the ACVP/ASIP Trainee Travel Award
⁴Competitor for the STP/ACVP Young Investigator Award

**Natural Disease Focused Scientific Poster Presentations**

<table>
<thead>
<tr>
<th>N-1</th>
<th>Lectin Histochemistry Evaluation of Liver and Mesenteric Lymph Node of Buffaloes Kept in Brachiaria spp. Pastures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword: Liver and Pancreas</td>
<td></td>
</tr>
<tr>
<td>Poster Presentations</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 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  
Keyword: Nervous System |
| N-7 Phaeohyphomycosis of the Upper Respiratory Tract in Four Horses  
J.B. Harvey¹, 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. Bourque¹, 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. Fortin¹ 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. Zavadovskaya, 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. Burnum¹, 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. Schott¹ and G.A. Wood  
Keyword: Neoplasia |
| N-16 Pathology and Causes of Death of Stranded Cetaceans in the Canary Islands (2006–2012) |
| 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. Goldsmith¹, F. Delacruz, and P. Pesavento |
| Keyword: Urinary System |

| N-20 Papillary Mucosal Hyperplasia of the Gall Bladder in Five Cats |
| A. Talley¹ 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. López¹, 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 |

| 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. Shirata |
| Keyword: Urinary System |

| N-25 Spontaneous Reproductive Pathology in Guinea Pigs |
| T. Veiga-Parga¹ 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 |

<p>| 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 |</p>
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
</table>
| **N-30** Involvement of Interleukin 13 for Expression of Periostin in the Canine Atopic Skin  
  T. Mineshige¹, J. Kamiie, G. Sughara, and K. Shirota  
  Keyword: Skin |
| **N-31** Global Gene Expression Profile in Canine Mammary Carcinoma  
  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 Dophin  
  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  
  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. Hensel¹, 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. Albarrak¹, R. Waters, J. Stabel, and J. Hostetler  
  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  
  Keyword: Infectious Disease |
### Poster Presentations

**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  
Keyword: Reproductive System

**N-46** Relationship of Antibody Titer and IL-4, IL-10, IL-12, and IFNγ Expression with Persistent Lymphocytosis Development in Bovine Leukosis Virus Infected Cows  
Keyword: Infectious Disease

**N-47** *Felis catus* Papillomavirus Type 2 Oncogene Expression in Feline Cutaneous Squamous Cell Carcinomas  
N.A. Thomson¹, 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. Rout¹, 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. Kiser¹ and C.V. Löhr  
Keyword: Neoplasia

**N-50** Chlamydiosis in Farmed Alligators (*Alligator mississippiensis*) in Louisiana  
K. Sakaguchi¹, 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. Clark¹ and R. Cianciolo  
Keyword: Urinary System

¹Competitor 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. Kumagai¹, D.N. Jackson-Humbles, R. Lewandowski, N. Li, J.G. Wagner, and J.R. Harkema  
Keyword: Respiratory System

**S²T-2** Exposures to Carbon Nanotubes and Asbestos Induce Related but Distinct Profiles of Toxicologic Lung Pathology  
E. Frank¹², 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  
Keyword: Industrial and Toxicologic Pathology

**T-4** Immunohistochemical Characterization of Uterine Tumors with Spindle Cell Morphology in Wistar Han Rats  
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
<table>
<thead>
<tr>
<th>Poster Presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-6</td>
</tr>
<tr>
<td>R. Haworth, F. Chanut, M. York, and Y. Cui</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td>T-7</td>
</tr>
<tr>
<td>N. Kolawole, J. Ogunsola, and O. Adeleji</td>
</tr>
<tr>
<td>Keyword: Industrial and Toxicologic Pathology</td>
</tr>
<tr>
<td>T-8</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>T-9</td>
</tr>
<tr>
<td>J. Ooi, X. Chen, L. Wang, K. Kang, and J. Jin</td>
</tr>
<tr>
<td>Keyword: Liver and Pancreas</td>
</tr>
<tr>
<td>T-10</td>
</tr>
<tr>
<td>Keyword: Industrial and Toxicologic Pathology</td>
</tr>
<tr>
<td>T-11</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td>T-12</td>
</tr>
<tr>
<td>J. Keating, A. Tzafriri, and J.R.L. Stanley</td>
</tr>
<tr>
<td>Keyword: Cardiovascular</td>
</tr>
<tr>
<td>T-13</td>
</tr>
<tr>
<td>Keyword: Industrial and Toxicologic Pathology</td>
</tr>
<tr>
<td>T-14</td>
</tr>
<tr>
<td>S. Elshafaei, B. Hassan, W. Supsavhad, W. Dirksen, H. Ding, M. Tweedle, and T. Rosol</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>T-15</td>
</tr>
<tr>
<td>P.M Vaysse, G. Hamm, A.M. Sargeant, F. Pamelael, D. Bonnel, T.N. Merriman, J. Stauber, and A. Heron</td>
</tr>
<tr>
<td>Keyword: Skin</td>
</tr>
<tr>
<td>T-16</td>
</tr>
<tr>
<td>Keyword: Neoplasia</td>
</tr>
<tr>
<td>T-17</td>
</tr>
<tr>
<td>T. Peterson, A. Dedea, N. Welborn, K. Ryan, and F. Del Piero</td>
</tr>
<tr>
<td>Keyword: Nervous System</td>
</tr>
<tr>
<td>T-18</td>
</tr>
<tr>
<td>Keyword: Industrial and Toxicologic Pathology</td>
</tr>
<tr>
<td>T-19</td>
</tr>
<tr>
<td>Keyword: Industrial and Toxicologic Pathology</td>
</tr>
</tbody>
</table>
**T-20** Quantitative Analysis of Multiple Subtypes of Immune System Cells in Cancer Tissues  
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  
Keyword: Industrial and Toxicologic Pathology

**T-22** Induced Interstitial Pulmonary Fibrosis (IPF) Model: Unlabeled Biomycin Distribution and Early IPF Markers Identification by MALDI Imaging  
D. Bonnel, M. McElroy, E. Faiaux, 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  
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  
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. Quist1,2, 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  
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. Fortin2, M-O Benoit-Biancamano  
Keyword: Endocrine
Poster Presentations

Minneapolis Convention Center

Minneapolis, Minnesota

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

T-33  Changes of the Osteoclast Induced by Repeated Administration of a Cathepsin K Inhibitor and Bisphosphonate in Rats
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. Langley1,2, 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
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.L. Butt1, 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
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

70
T-46  Fluoroquinolone-Induced Retinal Degeneration in a Domestic Shorthair Feline  
T. Peterson 1, 2, 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  
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. Schiffenbauer, 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 1, 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 2, P.L. Cole, and R.L. Tapp  
Keyword: Industrial and Toxicologic Pathology

T-54  Normal Physiological and Pathological Values for the Sinclair Miniature Swine  
C. Shoemake, D. Brocksmith, A. Stricker-Krongrad, and G. Bouchard  
Keyword: Industrial and Toxicologic Pathology

T-55  Normal Physiological Ranges for Hanford Miniature Swine  
C. Shoemake, 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  
J.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
## Poster Presentations

### 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, 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. Friedman¹, 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. Sung¹², 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. Edmondson¹², 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

### 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. Pohlmeyer-Esch, and ESTP Adversity Working Group

¹ Competitor for the ACVP/STP Young Investigator Award
² 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

Carolyne 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 Iowa, Iowa City, IA

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, MS, 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
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. Gruebbel, 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
WIR 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, DECVP
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
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.
### ACVP Student Chapters

2424 American Lane  
Madison, WI 53704  
Tel: 608-443-2466  
Fax: 608-443-2474  
Email: info@acvp.org  
Website: www.acvp.org  

Stop by the ACVP Student Chapters Booth to meet the next generation of veterinary pathologists and to support their fundraising efforts.

### American College of Veterinary Pathologists (ACVP)

2424 American Lane  
Madison, WI 53704  
Tel: 608-443-2466  
Fax: 608-443-2474  
Email: info@acvp.org  
Website: 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)

9650 Rockville Pike, Suite E133  
Bethesda, MD 20814  
Tel: 301-634-7130  
Fax: 301-634-7990  
Email: 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

600 Airport Blvd., Suite 500  
Morrisville, NC 27560  
Tel: 919-277-0822  
Fax: 919-277-0825  
Email: david.brown@antechmail.com  
Website: www.antechglp.com  

Antech Diagnostics GLP offers a full service Good Laboratory Practice compliant clinical pathology reference laboratory performing hematology, chemistry, urinalysis, coagulation, immunoassays, hormone analysis and esoteric tests. Antech now offers veterinary clinical trial testing and non-GLP studies.
### Aspect Imaging

60 St. Clair Avenue East, Suite 703  
Toronto, ON M4T 1N5  
Canada  
Tel: 647-260-1991  
Email: ywineberg@aspectimaging.com  
Website: www.aspectimaging.com

Aspect Imaging’s M2™ 3D MR-based histology system enables 3D imaging and quantification of intact tissue samples or whole body mice and rats for the modern toxicological pathologist. The M2’s novel MRI platform non-invasively generates digital slices of specimens in multiple planes of intact organs. A compliment to conventional histology, MR-based histology enables the rapid acquisition of 3D data of the entire target organ for a more comprehensive assessment of the toxicological effect. In vivo imaging of the animal is also possible for longitudinal studies preceding ex vivo imaging.

### Bradley Products, Inc.

1700 West 94th Street  
Bloomington, MN 88431  
Tel: 952-881-1430  
Fax: 852-881-1873  
Email: dms@bradleyproducts.com  
Website: www.bradleyproducts.com

Bradley Products is the manufacturer of The Davidson Marking System, the first tissue marking system specifically developed for use in orienting tissue specimens. Economical, efficient, visible, reliable and safe, the Davidson Marking System tissue marking dyes have been in use worldwide since 1984 and are CE marked for Europe. DMS dyes are appropriate for both fresh and frozen tissue processing.

### Bruker Daltonics

40 Manning Road  
Billerica, MA 01821  
Tel: 978-663-3660  
Fax: 978-667-5993  
Email: ms-sales@bruker.com  
Website: www.bruker.com

Bruker Corporation is a leading provider of Chromatography and Mass Spectrometry instruments and solutions for the Analytical Sciences. Our innovative and easy-to-use product families (ESI-QTOF, Ion Trap, FTMS, MALDI-TOF, LC-Triple Quads and GC-Triple Quads) provide the highest performance, ruggedness, and value for a wide range of applications in the food, environmental, forensic, industrial, pharmaceutical, and life science research markets.

### Charles River

251 Ballardvale Street  
Wilmington, MA 01887  
Tel: 781-222-6548  
Email: jessica.janiak@crl.com  
Website: www.criver.com

Charles River offers extensive resources dedicated to pathology support for your product discovery and development activities. Our multidisciplinary expertise, state-of-the-art technology and depth of experience with large and small molecules and devices enables us to offer a wide array of integrated anatomic and clinical pathology services with flexibility and timeliness to our clients’ needs every step of the way.
CiToxLAB

445 Armand-Frappier BLVD
Laval, QC H7V 4B3
Canada
Tel: 450-973-2240
Email: duguayf@ca.citoxlab.com
Website: www.citoxlab.com

CiToxLAB is a global preclinical CRO with facilities in France, Canada, Denmark and Hungary. CiToxLAB offers a range of preclinical services to meet the needs of Pharma, Biotech and Chemical industries worldwide. These include: Toxicology (general, DART, juvenile, infusion, inhalation, carcinogenicity, transgenics) and Safety pharmacology (including EEGs). Other expertise include: Drug discovery, metabolism/PK, genotoxicology, toxicogenomics, bioanalysis, immunology, ecotoxicology, radiation safety (ARS), NHPs and minipigs. CiToxLAB offers scientific support and on-time quality reporting.

Datacolor Inc.

5 Princess Road
Lawrenceville, NJ 08648
Tel: 610-704-7272
Email: mclymerr@datacolor.com
Website: scientific.datacolor.com

Datacolor is pleased to demonstrate Datacolor CHROMACAL™, an innovative image standardization solution for brightfield microscopy. The first of its kind, Datacolor CHROMACAL standardizes the color in digital images to deliver a consistent and reliable basis for evaluation, analysis, documentation and publication. With both image and monitor calibration, and imaging system quality control diagnostics, Datacolor CHROMACAL ensures color consistency throughout the imaging process. Visit BOOTH #403 and experience Datacolor CHROMACAL for yourself.

Elixir Software Ltd

Alderley BioHub, Alderley Park
Macclesfield, Cheshire SK10 4TG
United Kingdom
Tel: +44 (0)1625 238646 / (0)7557640269
Email: enquiries@elixirsoftware.co.uk
Website: www.elixirsoftware.co.uk

Elixir Software provides visual software tools to co-ordinate and deliver science successfully and efficiently. We are experienced in meeting scientific workflow co-ordination problems with responsive software solutions - quickly. We have various solutions used in Safety Science, including Pathology and externalization of safety studies.

Elsevier, Inc.

1600 John F Kennedy Blvd, Suite 1800
Philadelphia, PA 19103
Tel: 215-239-3722
Fax: 215-239-3494
Email: k.pollock@elsevier.com
Website: www.elsevierhealth.com

ELSEVIER is a leading publisher of health science publications, advancing medicine by delivering superior reference information and decision support tools to doctors, nurses, health practitioners and students. With an extensive media spectrum — print, online and handheld, we are able to supply the information you need in the most convenient format.
<table>
<thead>
<tr>
<th>Exhibitor</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPL Archives</strong></td>
<td></td>
</tr>
<tr>
<td>45610 Terminal Drive</td>
<td></td>
</tr>
<tr>
<td>Sterling, VA 20166</td>
<td></td>
</tr>
<tr>
<td>Tel: 703-435-8780</td>
<td></td>
</tr>
<tr>
<td>Fax: 703-435-1330</td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:atyler@eplarchives.com">atyler@eplarchives.com</a></td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.eplarchives.com">www.eplarchives.com</a></td>
<td></td>
</tr>
<tr>
<td>EPL Archives provides its service to approximately 85% of the top 50 pharmaceutical companies in the industry, and to more than 700 total clients. EPL Archives has been providing regulatory-compliant archiving and related services since it was founded in 1978, and is recognized internationally as a leader in the archival field. Our professional services include packaging, transportation, material preparation, inventory, and specialized archiving of wet tissue, blocks, slides, paper data, test articles, radio-labeled specimens, refrigerated and frozen samples, film, microfilm, &amp; computer media.</td>
<td></td>
</tr>
<tr>
<td><strong>EPL, Inc</strong></td>
<td></td>
</tr>
<tr>
<td>45600 Terminal Drive</td>
<td></td>
</tr>
<tr>
<td>Sterling, VA 20166</td>
<td></td>
</tr>
<tr>
<td>Tel: 703-471-7060</td>
<td></td>
</tr>
<tr>
<td>Fax: 703-471-8447</td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:psanders@epl-inc.com">psanders@epl-inc.com</a></td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.epl-inc.com">www.epl-inc.com</a></td>
<td></td>
</tr>
<tr>
<td>Experimental Pathology Laboratories, Inc. (EPL) is the world's largest independent provider of GLP-compliant toxicologic pathology services. Since 1971, EPL has provided necropsy and histology support, pathology evaluation and consultation including pathology peer review and organizing Pathology Working Groups (PWG) for industry and government clients. We are able to customize our services to meet our clients' specific scientific, regulatory and management objectives.</td>
<td></td>
</tr>
<tr>
<td><strong>Fimmic</strong></td>
<td></td>
</tr>
<tr>
<td>Tukholmankatu 8</td>
<td></td>
</tr>
<tr>
<td>00290 Helsinki, Finland</td>
<td></td>
</tr>
<tr>
<td>Tel: +358 20-734-9130</td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:contact@fimmic.com">contact@fimmic.com</a></td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.fimmic.com">www.fimmic.com</a></td>
<td></td>
</tr>
<tr>
<td>WebMicroscope® Software is a web-based platform for storing, sharing and analyzing whole slide images of scanned tissues and biopsies, acquired by any major microscope scanner. By connecting the WebMicroscope to large multitouch displays, we have created a unique virtual microscope, offering massive visualization and unique interactivity for collaboration and teaching.</td>
<td></td>
</tr>
<tr>
<td><strong>Flagship Biosciences</strong></td>
<td></td>
</tr>
<tr>
<td>7575 W. 103rd Avenue, Suite 102</td>
<td></td>
</tr>
<tr>
<td>Westminster, CO 80021</td>
<td></td>
</tr>
<tr>
<td>Tel: 303-325-5894</td>
<td></td>
</tr>
<tr>
<td>Email: <a href="mailto:PathServices@FlagshipBio.com">PathServices@FlagshipBio.com</a></td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.flagshipbio.com">www.flagshipbio.com</a></td>
<td></td>
</tr>
<tr>
<td>Flagship Biosciences is setting the standard for quantitative histopathology services. Flagship works with over 100 biotech, pharma and device clients in all disciplines of tissue analysis. Our histology and IHC laboratory has advanced over 400 antibodies. We provide substantial experience in tissue analysis and immuno-oncology with a team of pathologists, biologists, engineers, histologists and regulatory personnel. Projects range from early stage studies through large, late stage, CLIA-based clinical trials or IDE image analysis companion diagnostics filings.</td>
<td></td>
</tr>
<tr>
<td>Exhibitor Directory</td>
<td>Minneapolis, Minnesota</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------</td>
</tr>
</tbody>
</table>

### HistoTox Labs, Inc.  501

2108 55th Street, Suite 110  
Boulder, CO 80301  
Tel: 303-633-5401  
Fax: 303-565-3764  
Email: jbishop@histotoxlabs.com  
Website: www.histotoxlabs.com

HistoTox Labs is a GLP compliant contract laboratory performing routine and specialized Histology, Immunohistochemistry, Digital Image Analysis and Pathology services. Additional services include decalcified bone techniques, antibody optimization, full slide scanning, special stains and frozen techniques. Our commitment to outstanding customer service, high quality sections, competitive pricing and quick turnaround times, have made HistoTox Labs the ideal source for reliable histopathology services for over 12 years.

### HSRL, Inc. (Histo-Scientific Research Labs)  401

5930 Main Street  
Mt. Jackson, VA 22842  
Tel: 540-477-4440  
Fax: 540-477-4448  
Email: pschwartz@hsrl.org  
Website: www.hsrl.org

HSRL is known for expertise, quality and efficiency in the areas of necropsy, histology, pathology and archiving. Our necropsy team works on-site at your facility. Histology services include standard stains, special stains and immunohistochemistry. Our board-certified veterinary pathologists offer 25+ years of experience. We offer morphometry and high resolution digital imaging. Long-term storage available with 24-hour retrieval for ambient, refrigerated and frozen (-20 & -80) materials. We support GLP and non-GLP studies in a responsive and cost-effective manner.

### IDEXX BioResearch  603

2825 KOVR Drive  
West Sacramento, CA 95605  
Tel: 916-267-2545  
Fax: 916-372-2783  
Email: kristina-garner@idexx.com  
Website: idexxbioresearch.com

Service & science, hand in hand with you. Researchers involved in preclinical and veterinary clinical testing in virtually every setting-from leading pharmaceutical and biotechnology companies to respected academic institutions-trust IBR Research Reference Labs to deliver the highest quality out-sourced laboratory results, supported by board-certified pathologists, experienced technicians, and certified technologists. Using rigorously validated, state-of-the-art analyzers and methodologies, we are committed to being your one-stop, 100% accurate, trusted research partner.
### ImageIQ

26801 Miles Road, Suite 103  
Cleveland, OH 44128  
Tel: 855-462-4347  
Fax: 855-462-4347  
Email: apeters@image-iq.com  
Website: www.image-iq.com

ImageQuantify.com provides web-based image analysis software for common preclinical assays, for validated, objective quantifiable data. With the ease of online tools and cloud storage, you can now extract the quantitative data you need, provide access for all researchers involved, and manage the data over the length of your research project all while improving accuracy and consistency. With secure, web-based image analysis, storage, and results access, researchers can perform better science, faster, while reducing costs. And if you don’t find the assay you need, we can build one for you.

### Indica Labs, Inc.

2469 Corrales RD Bldg, Suite A-3  
Corrales, NM 87048  
Tel: 505-492-0979  
Email: liz@indicalab.com  
Website: indicalab.com

Indica Labs is the first company to offer tissue specific and application specific image analysis algorithms in a truly integrated digital pathology environment. Pharmaceutical, healthcare, and research organizations worldwide utilize Indica tools for high-throughput, whole-slide image quantification in areas such as neuroscience, metabolism, oncology, toxicological pathology, and more.

### Instem

161 Washington Street, Suite 1550  
Conshohocken, PA 19428  
Tel: 610-941-0990  
Fax: 610-941-0992  
Email: Beth.Concordia@instem.com  
Website: www.instem.com

The Provantis® Pathology solution is comprehensive, intuitive and extremely flexible, enabling today’s pathologist in the efficient collection, processing and reporting of data. Installed on-site or accessed via the Instem Cloud, we keep you focused on the science, not the software. Be sure to also learn about the most widely adopted set of tools and services for the creation & management of SEND datasets - backed by the industry’s leading authorities on SEND. Powerful Solutions – Unique Perspective – Global Coverage.

### International Academy of Toxicologic Pathology (IATP)

116 White Owl Trail  
Mullica Hill, NJ 08062  
Tel: 856-233-5174  
Email: iatpfellows@verizon.net  
Website: www.iatpfellow.org

The International Academy of Toxicologic Pathology (IATP) objectives are to establish standards of excellence in education, training, and practice in toxicologic pathology; to advise government policy leaders on issues relevant to toxicology and pathology; and to develop expert opinions on issues relevant to toxicologic pathology. Academy fellows are scientists globally recognized by their peers based on highest professional accomplishments in toxicologic pathology and scientific contributions.
### Exhibitors

#### inviCRO

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 Drydock Avenue, 7th Floor West, Boston, MA 02210</td>
<td>617-904-2117</td>
<td><a href="mailto:info@invicro.com">info@invicro.com</a></td>
<td><a href="http://www.invicro.com">www.invicro.com</a></td>
</tr>
</tbody>
</table>

inviCRO is an imaging informatics company offering full-service tissue-to-human imaging, analysis and data management services powered by their industry-leading software platforms. inviCRO’s image processing suite (VivoQuant™) and data management platform (iPACS®) are used by a majority of the top 25 pharmaceutical companies.

#### Leica Biosystems/Aperio

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>1360 Park Center Drive, Vista, CA 92081</td>
<td>760-539-1100</td>
<td>760-539-1164</td>
<td><a href="mailto:aperio@leicabiosystems.com">aperio@leicabiosystems.com</a></td>
<td><a href="http://www.LeicaBiosystems.com/aperio">www.LeicaBiosystems.com/aperio</a></td>
</tr>
</tbody>
</table>

Leica Biosystems, Aperio ePathology solutions, are transforming the practice of pathology. Whether performing basic research, biomarker discovery, drug safety, or toxicologic pathology studies, Aperio equips teams to accelerate innovation, increase productivity, transcend barriers, and reduce costs. Easily run studies from start to finish via a central hub that can scale across organizations. Improve consistency, accuracy, and reproducibility of study data with easy-to-use analytic tools. Streamline collaboration with global, real-time viewing of eSlides and study records.

#### Marshall BioResources

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>5800 Lake Bluff Road, North Rose, NY 14516</td>
<td>315-587-2295</td>
<td>315-587-2109</td>
<td><a href="mailto:nnavaril@marshallbio.com">nnavaril@marshallbio.com</a></td>
<td><a href="http://www.marshallbio.com">www.marshallbio.com</a></td>
</tr>
</tbody>
</table>

Marshall BioResources is a global provider of purpose bred animals for biomedical research and related services. We provide Marshall Beagles from our harmonized breeding facilities in both the United States and China. We also provide ferrets, mongrels and hounds, and Gottingen Minipigs from our AAALAC accredited facilities in the United States. Rodents and additional services are available via our facilities in the United Kingdom. Our animals have been recognized as standard research models, known for their good health, genetic consistency, gentle temperament and uniformity.

#### Morris Animal Foundation

<table>
<thead>
<tr>
<th>Address</th>
<th>Phone</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>720 S. Colorado Blvd., Suite 174A, Denver, CO 80246</td>
<td>303-708-3420</td>
<td><a href="mailto:tmcphail@morrisanimalfoundation.org">tmcphail@morrisanimalfoundation.org</a></td>
<td><a href="http://www.morrisanimalfoundation.org">www.morrisanimalfoundation.org</a></td>
</tr>
</tbody>
</table>

Morris Animal Foundation is a nonprofit organization that invests in science to advance animal health. The Foundation is a global leader in funding scientific studies for companion animals, horses and wildlife. Since its founding in 1948, Morris Animal Foundation has invested more than $92 million toward 2,300 studies that have led to significant breakthroughs in diagnostics, treatments, preventions and cures for animals.

Morris Animal Foundation is the place where science meets HOPE.
MPI Research

54943 North Main Street
Mattawan, MI 49071
Tel: 269-668-3336
Fax: 269-668-4151
Email: info@mpiresearch.com
Website: www.mpiresearch.com

MPI Research, with global headquarters in Mattawan, Michigan, provides safety evaluation, discovery, bioanalytical, and analytical – and now phase I clinical – services to the biopharmaceutical, medical device, animal health, and chemical industries. The company also offers comprehensive imaging solutions including preclinical and clinical imaging, radiochemistry, and data analysis. Scientific knowledge and experience, responsiveness, integrity, trust, teamwork, and dedication to strong and enduring Sponsor relationships are the defining attributes that characterize MPI Research as a high-performance, high-quality organization that is committed to bringing safer and more effective products to the world.

Noah’s Arkive

501 D.W. Brooks Drive
Athens, GA 30622
Tel: 706-542-5829
Fax: 706-542-5828
Email: cpmorris@uga.edu
Website: vet.uga.edu/vpp/noahsarkive

Noah’s Arkive is a collection of over 30,000 images contributed by veterinarians from all over the world. The Arkive contains veterinary medical images including gross lesions, histopathology, normal histology, cytology, hematology, parasitology, poisonous plants, animals with/without clinical signs, schematics, radiographs, electron micrographs, and techniques.

Orchard Software Corp.

701 Congressional Boulevard, Suite 360
Carmel, IN 46032
Tel: 317-573-6663
Email: mjeter@orchardsoft.com
Website: www.orchardsoft.com

Orchard Software is a leader in the LIS industry and more than 1,400 laboratories have turned to Orchard Software for their laboratory information system. While the majority of our customers are focused on the human patient, independent veterinary laboratories and university veterinary schools also utilize our comprehensive laboratory information systems for clinical, microbiology, anatomic pathology, and remote web-based access.

PDS Life Sciences

100 Valley Rd, Suite 204
Mount Arlington, NJ 07856
Tel: 973-398-2800
Email: info@PDS-America.com
Website: www.pdslifesciences.com

PDS software is built to work with scientists, laboratories and your bottom line. Our Ascentos™ software is simple to implement and intuitive, making it easier for scientists to conduct pathology and safety assessment research that drives insightful decisions. Streamline data management with software that WORKS LIKE SCIENTISTS THINK.
Poly Scientific R&D Corp

70 Cleveland Ave
Bay Shore, NY 11706
Tel: 800-645-5825
Fax: 631-297-1121
Email: ddicuffa@polyrnd.com
Website: www.PolyRnD.com

Poly Scientific R&D Corp is proud to celebrate over 46 years of service in the pathology industry. Since 1969 we have manufactured special stains & reagents used in histology, microbiology, cytology & clinical laboratories. Our products are made fresh to order with BSC certified stains and USP or ACS grade reagents ensuring you receive the highest quality & longest shelf life possible. In addition to our catalog items we will custom formulate & package according to your needs.

SAGE

2455 Teller Road
Thousand Oaks, CA 91320
Tel: 805-410-7239
Fax: 805-499-0871
Email: lisa.lamont@sagepub.com
Website: www.sagepub.com

Founded 50 years ago by Sara Miller McCune to support the dissemination of usable knowledge and educate a global community, SAGE publishes more than 800 journals and over 800 new books each year, spanning a wide range of subject areas. A growing selection of library products includes archives, data, case studies and video. SAGE remains majority owned by our founder and after her lifetime will become owned by a charitable trust that secures the company’s continued independence. Principal offices are located in Los Angeles, London, New Delhi, Singapore and Washington, DC.

Society of Toxicologic Pathology (STP)

1821 Michael Faraday Drive, Suite 300
Reston, VA 20190
Tel: 703-438-7508
Fax: 703-438-3113
Email: stp@toxpath.org
Website: www.toxpath.org

The Society of Toxicologic Pathology (STP) is a nonprofit association of pathologists and other scientists whose principal aim is the advancement of pathology as it pertains to changes elicited by pharmacological, chemical, and environmental agents, and factors that modify these responses. The Society’s Vision: Be an international leader for improvement of human, animal, and environmental health using an interdisciplinary scientific approach based in pathology and toxicology. This vision will be accomplished through four primary goals: advocacy, education, globalization, and recruitment.
Vector Laboratories

30 Ingold Road
Burlingame, CA 94010
Tel: 650-697-3600
Fax: 650-607-0339
Email: mhlee@vectorlabs.com
Website: www.vectorlabs.com

Vector Laboratories, Inc., is an established leader in immunohistochemistry and manufacturer of ImmPRESS™ (HRP and AP) Polymer Detection Systems, VECTASTAIN® ABC kits, ImmPACT™ DAB and other novel substrates, Vector® Mouse on Mouse (M.O.M.) Immunostaining kits, and VECTASHIELD® Mounting Media for fluorescence. Outstanding reagents are also offered for DNA/RNA labeling, blot detection, ISH, neuronal tracing, and glycobiology. Our secondary antibody products are affinity-purified and highly cross-adsorbed against various animal species for high sensitivity, low background staining.

Virtus Imaging

6320 Brookside Plaza, Suite 310
Kansas City, MO 64113
Tel: 913-638-2838
Fax: 360-530-2855
Email: info@virtusimaging.com
Website: www.virtusimaging.com

Virtus Imaging is the creator of the PATHpix macro imaging systems and provider of complete digital imaging solutions for pathology applications.

Visiopharm

PO Box 486
Broomfield, CO 80038
Tel: 877-843-5268-705
Fax: 877-843-5268
Email: sales@visiopharm.com
Website: www.visiopharm.com

Over the past 13 years, Visiopharm image analysis and stereology software has become the preferred Quantitative Digital Pathology solution for biopharmaceutical, life science, and clinical organizations all over the world. Our software is featured in over 650 scientific publications, and is compatible with leading slide scanner manufacturers, and a wide variety of microscopes and cameras. Visiopharm has grown into an international business with over 450 customers in more than 40 countries. Our growing network of distributors support the growth of Visiopharm solutions throughout the world.

Wake Forest Innovations

575 Patterson Avenue, Suite 550
Winston-Salem, NC 27101
Tel: 336-713-1591
Email: meveal@wakehealth.edu
Website: www.wakeforestinnovations.com

Wake Forest Innovations establishes and manages new businesses and partnerships with industry, academia and government, based on the innovative products and services of Wake Forest. Contract R&D services include: preclinical study development and management; clinical trial study development and management; core laboratory services; and applied training for health care practitioners.
WIL Research
1407 George Road
Ashland, OH  44805
Tel: 419-289-8700
Fax: 419-289-3650
Email: info@wilresearch.com
www.wilresearch.com

WIL Research is a global CRO dedicated to listening to customer needs. We custom design product safety toxicological research, bioanalytical, & formulation services for pharmaceutical, biotechnology, chemical, agrochemical, & food companies. With approximately 1,200 scientific, technical, & support personnel located throughout the world, WIL Research offers technological expertise, flexible study design, & quality results.

Wiley
200 Locust Street Apt. 19 B
Philadelphia, PA 19106
Tel: 215-913-0416
Fax: 215-913-0416
Email: steve.abel2@gmail.com
Website: www.wiley.com

Wiley new editions out this year or soon to be published: BSAVA Manual of Clinical Pathology, 3e (Villier) Clinical Pathology & Laboratory Techniques for Veterinary Techs., 1e (Barger) Exotic Animal Hematology and Cytology, 4e (Campbell) Pathology of Laboratory Rodents and Rabbits, 4e (Barthold) Pathology of Pet and Aviary Birds, 2e (Schmidt). As always we have great meeting special prices.

Xybion
201 Littleton Road
Morris Planes, NJ  07950
Tel: 973-538-5111
Email: cfrade@xybion.com
Website: www.xybion.com

Xybion is leading technology and solutions provider for companies operating in highly regulated industries. Our flagship preclinical software product, Pristima, is used by the top pharmaceutical, biotechnology and CRO’s globally. Pristima delivers complete life cycle automation and support for Pharmacology and Drug Safety Research Study Management, Vivarium Management, and Veterinary Care. From breeding and ordering through the submission process, Pristima manages the planning and recording of data, controls authorized changes, and assembles the data for submission to regulatory agencies.