

**American College of Veterinary
Pathologists/American Society for
Veterinary Clinical Pathology
Annual Meeting 2011**

**Nashville, Tennessee, USA
3-7 December 2011**

ISBN: 978-1-61839-744-7

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the American College of Veterinary Pathologists
All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact the American College of Veterinary Pathologists
at the address below.

American College of Veterinary Pathologists
2810 Crossroads Drive, Suite 3800
Madison, WI 53718

Phone: (608) 443-2466

Fax: (608) 443-2474

info@acvp.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ACVP Veterinary Student Posters 1

COAGULATION OVERVIEW AND LATEST UPDATES

Modeling Hemostasis: From Waterfalls to Cell Membranes and Beyond 23
Marjory B. Brooks

Platelet Procoagulant Activity: The Flip Side of Platelet Function 26
Marjory B. Brooks

CAREER DEVELOPMENT SESSION – ENTREPRENEURSHIP AND VETERINARY PATHOLOGY: OPPORTUNITIES AND LESSONS LEARNED

Striking Out on Your Own? Key Considerations on Entities & Experts 33
Andrew Sagartz

Consulting Opportunities for Veterinary Anatomic and Clinical Pathologists in Industry – Finding Your Way 36
Graham S. Smith

Entrepreneurship for Veterinary Pathologists in Contract Laboratory Research 41
John E. Sagartz

Leadership Roles for Veterinary Pathologists in the Biotech Industry...Beyond Consulting 44
William D. Kerns

MINI-SYMPOSIUM: BACKGROUND AND SPONTANEOUS LESIONS IN NON-HUMAN PRIMATE SPECIES USED FOR DRUG SAFETY STUDIES

Incidences and Range of Spontaneous Findings in Cynomolgus Monkeys Used in Toxicity Studies 47
Alys Bradley

Urogenital Lesions in Cynomolgus Macques 48
J. Mark Cline

Background and Spontaneous Lesions in Nonhuman Primate Species Used for Drug Safety Studies 59
Keith Mansfield, Vito Sasseville, Jim Reindel

Age-Related Pathologies of the Rhesus Macaque 61
Andrew D. Miller

The Impact of Plasmodium Infection in Nonhuman Primates on Drug Development 65
David L. Hutto

NATURAL DISEASE FOCUSES SCIENTIFIC SESSION I

Complexity of Viruses and the Type I Interferon System: Towards Understanding the Role of Plasmacytoid Dendritic Cells During Porcine Infections 66
Artur Summerfield

Insulin-Mediated Acceleration of Breast Cancer Development and Progression in a Nonobese Model of Type 2 Diabetes 71
Ruslan Novosyadhy, Danielle E. Lann, Archana Vijayakumar, Anne Rowzee, Deborah A. Lazzarino, Yvonne Fierz, Joan M. Carboni, Marco M. Gottardis, Patricia A. Pennisi, Alfredo A. Molinolo, Naamit Kurshan, Wilson Mejia, Stefania Santopietro, Shoshana Yakar, Teresa L. Wood, Derek LeRoith

EMERGING DISEASE FOCUS SEMINAR HONEYBEE COLONY COLLAPSE DISORDER

Mortality And Morbidity In The Bee Yard: Colony Collapse Disorder And Other Threats To Managed Honey Bee Populations	82
<i>Dennis Van Engelsdorp</i>	
Bee Diseases: New Insights, Old Diseases	85
<i>Eva M. Forsgren</i>	
Looking for New Honey Bee Diseases Like No One has Looked Before	90
<i>Jay D. Evans</i>	

ASVCP VETERINARY LABORATORY PROFESSIONALS SESSION I

Tales from the Wild Side: Wildlife Medicine at the Clinic for the Rehabilitation of Wildlife	91
<i>Stephanie French, Amber McNamara</i>	

CLINICAL PATHOLOGY FOCUSED SCIENTIFIC SESSION I

Monocytes: Key Mediators of Hemostasis in Inflammatory States and Their Role in the Pathogenesis of Equine Herpes Virus Infection	94
<i>Tracy Stokol</i>	
The Cell-based Model of Coagulation	99
<i>Stephanie A. Smith</i>	

EXPERIMENTAL DISEASE FOCUSED SCIENTIFIC SESSION I

Problems with Interpretation of Experimental Disease: The B6 Mouse Alopecia and Dermatitis Dilemma	104
<i>John P. Sundberg, Lloyd E. King Jr., Helen Everts</i>	
The Biology and Therapy of Cancer Metastasis to the Brain: How Tumor Cells Exploit the Host	108
<i>Isaiah J. Fidler</i>	

NATURAL DISEASE FOCUSED SCIENTIFIC SESSION II

Melanocytic Nevi, Melanoma and Malignant Peripheral Nerve Sheath Tumors: Not in the Textbooks	113
<i>Brian A. Summers</i>	

ACVP AND ASVCP JOINT PLENARY SESSION VASCULAR FUNCTION AND MALFUNCTION

Vascular Responses to Ischemia Regulated by Hypoxia-Inducible Factor 1	118
<i>Gregg L. Semenza</i>	
Endothelial Response to Flow: A Common Mechanism Directing Embryonic Valve Development and Adult Atherosclerosis	121
<i>H. Scott Baldwin</i>	
Mechanisms Of Leukocyte Transendothelial Migration	122
<i>William A. Muller</i>	
Comparative Pathogenesis Of Viral Induced Vasculitis And Its Role In CNS Disease	132
<i>Don Knowles</i>	

ASVCP VETERINARY LABORATORY PROFESSIONALS SESSION II

Thromboelastography for Evaluation of Coagulation Status: A Description of the Method and Discussion of Case Examples	134
<i>Elizabeth Spangler</i>	
Nonregenerative Anemia: Recent Advances in Understanding Mechanisms of Disease	141
<i>Michael M. Fry</i>	

THE LATIN COMPARATIVE PATHOLOGY GROUP PRESENTS

Mortalidad En Polluelos De Una Semana De Edad Producto De Infeccion Natural Con El Virus De Marek	149
<i>F. R. Carvalho, R. A. French, K. Gilbert-Marcheterre, G. Risatti, J. R. Dunn, F. Forster, M. Kiupel, J. A. Smyth</i>	
Cache Valley Virus - Targeted Cells in the Central Nervous System of Infected Ovine Fetuses	151
<i>Aline Rodriguez, Jane Welsh, Andres De La Concha, Patricia Varner, Andrew Steelman, Jianrong Li, John F. Edwards</i>	
Modelos Animales Para El Estudio De La Patogenia De Infecciones Por Clostridium Perfringens	152
<i>Francisco A. Uzal</i>	

CONCURRENT SESSION I: INNATE IMMUNITY AND INFLAMMATORY DISEASE

The Broad Impact Of NLRs On Infection And Immunity	154
<i>Jemy P. Ting</i>	
The Role of Paneth Cells in the Pathogenesis of Inflammatory Bowel Disease	155
<i>Thaddeus S. Stappenbeck</i>	
Innate Immune Responses and Respiratory Tract Inflammation	159
<i>Mark R. Ackermann</i>	
Innate Immune Responses in Autoimmunity and the Pathogenesis of SLE	165
<i>Ian R. Rifkin</i>	

CONCURRENT SESSION II: POULTRY PATHOLOGY

Perspectives from a Career in Poultry Pathology	170
<i>Oscar J. Fletcher</i>	
Histomorphometry of Bone Marrow and Other Tissues in Diseases of Broiler Chickens	189
<i>Floyd D. Wilson</i>	
Poultry Pathology of Special Senses	208
<i>H. L. Shivaprasad</i>	
Pathology of Multifactorial Diseases in Broiler Chickens	228
<i>Frederic J. Hoerr</i>	

ASVCP VETERINARY LABORATORY PROFESSIONALS SESSION III

ASVCP Laboratory Quality Assurance Guidelines: An Overview	236
<i>Bente Flatland</i>	
Coagulation Testing in Animals: Beyond APTT and PT	240
<i>Marjory B. Brooks</i>	

EXPERIMENTAL DISEASE FOCUSED SCIENTIFIC SESSION II

Comparative Oncology Modeling of Drug Development	244
<i>Melissa Paoloni</i>	

INDUSTRIAL AND TOXICOLOGIC PATHOLOGY FOCUSES SCIENTIFIC SESSION II

Nanoparticulate Pathology	245
<i>Ann F. Hubbs, Robert R. Mercer, Linda Sargent, Vincent Castranova, Krishnan Sriram, Lori A. Battelli, Dale Porter</i>	
Investigative Pathology Techniques in Ocular Drug Development	253
<i>Adelekan Oyejide</i>	

CONCURRENT SESSION III: TUBERCULOSIS

Tuberculosis in Domestic Livestock: Pathogenesis, Transmission, and Vaccination	259
<i>Mitchell V. Palmer</i>	

Animal Models of Human Tuberculosis	269
<i>Randall J. Basaraba</i>	
Wildlife Reservoirs of Tuberculosis Worldwide; Current Methods in Surveillance, Diagnostics and Control	279
<i>Scott D. Fitzgerald</i>	
The African Tuberculosis Situation including Mycobacteria Outside the TB Complex Species	289
<i>Paul D. Van Helden</i>	

CONCURRENT SESSION IV: OCULAR PATHOLOGY

Retinal Evolution and Morphology across Vertebrate Classes	298
<i>Caroline Zeiss</i>	
Animal Models of Ocular Angiogenesis	306
<i>John S. Penn, Phyllis G. Snyder, William B. Snyder</i>	
Canine, Feline and Equine Glaucoma	311
<i>Ingeborg M. Langohr</i>	
Accidental and Iatrogenic Ocular Trauma in Canine and Feline Eyes	316
<i>Elizabeth M. Whitley</i>	

MINI-SYMPOSIUM: EVOLUTIONARY GENETIC PATHOLOGY

The Positive (If Unwelcome) Power of Negative Results	320
<i>Kenneth M. Weiss</i>	
The Evolutionary Genetics of Aging	332
<i>Daniel Promizloq, D. Phil</i>	
Mapping Shar-Pei Fever And Other Canine Disease Genes	341
<i>Andrew Lundquist, Kerstin Lindblad-Toh</i>	
Defining Canine B-cell Lymphoma: A Work in Progress	345
<i>Steven Suter, Kristy Richards, Juri Fedoriv, Rachael Thomas, Eric Seiser, Paula Krimer, Elizabeth Uhl, Matthew Breen</i>	
Author Index	