The South Central Meeting  
“The Foundation’s Best Kept Secret”

It’s not the largest pathology slide conference in the US, or the one with the most cases, but it has been beloved by its attendees for over a generation. Attendees come back bubbling about the wonderful San Luis resort, the beautiful Galveston beaches, the friendliness of the participants, and the down-home informal charm of the annual South Central meeting, held each October. It is a small meeting populated largely by attendees from Texas and adjoining states, but deserving (and not entirely undesirous) of a wider base of participants.

James Britt, a longstanding member of the Foundation’s Board of Directors, recounts the history of this meeting:

The South Central Division of the C.L. Davis Foundation was organized in 1988. As the organizer, I sent a note to Davis Foundation members at area veterinary laboratories, schools, and institutes. Prof. John Edwards at Texas A & M University and Joe Scimeca at the Galveston UTMB responded with enthusiasm, and the Division was born. Dr. Scimeca volunteered to serve as the host for our first year in 1989 and compile the first study sets for the participants. At that time, most of us had no idea what a wonderful location Galveston would turn out to be. For the first several years, we held the meeting at UTMB during the day, and enjoyed the nearby Yacht Club at night. I remember the nice breakfasts that came to our doors and the view of the yachts parked outside our front doors. Originally, we planned to move the meeting’s location every year, after only a few years at Galveston, the group decided to make it our permanent location and switch organizers each year instead. A group dinner at Landry’s Seafood House on the Galveston Seawall has been a mainstay of the meeting and a highlight for the attendees and guests for its entire 22 years.

As far as the meeting itself, it occurs in October each year, and lasts all day Friday and Saturday. Each meeting has included an invited speaker, which have included some of the biggest names in veterinary pathology, including John King, ...continued on page 2
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John Edwards, Gary Baskin, Charles Clifford, Bruce Williams, Rob Moeller, Fred Clubb, Hubert Johnstone, and Dimitry Danilenko. The cases are limited to 15 minutes so the participants see many cases in a short period and have a chance to review the slides before the meeting.

Joe Scimeca eventually changed positions and left Galveston, but with great foresight, he arranged for the meeting to be held at the San Luis Resort on the Galveston Seawall, and it has been held there ever since, right next to Landry’s. In 2008, Hurricane Ike changed our plans for the meeting, hitting Galveston a month prior to our annual meeting. Ike caused severe flooding and damage to Galveston Island and destroyed our beloved Yacht Club. For the next two years, the meeting was held at Texas A&M University in College Station while Galveston rebuilt itself, and luckily, damage to the San Luis itself was minimal.

Since its inception, the South Central meeting has continued to offer wonderful CE and networking opportunities and has been strongly supported by the Department of Pathobiology at Texas A&M University and the Texas Veterinary Medical Diagnostic Laboratory. It offers an excellent opportunity for trainees, anatomic and clinical pathologists, and laboratory animal veterinarians to present short case reports and answer questions. Each year we also host participants from Mississippi State University, Louisiana State University, and various medical research and laboratory animal programs from Texas and surrounding states, including Army veterinary pathologists in San Antonio, primate pathologists from the Texas Biomedical Research Institute, lab animal veterinarians and pathologists from M.D. Anderson, Baylor College of Medicine and UTMB. Most years we also have several participants from outside the region and other countries who greatly enjoy their visit. It is the most scenic and enjoyable veterinary pathology short course and dinner anywhere! We strongly encourage our colleagues to come and visit us on beautiful Galveston Island, and see what our annual meeting has to offer.

Got Pictures of a Foundation Meeting?
We’d love them for the newsletter! Attending a meeting, using a publication, spending time in a Foundation study center anywhere in the world – it all makes the newsletter a more interesting read and shows how much we are doing around the world.

Please send any digital images to Foundation newsletter to info@cldavis.org and thanks!!!
2013 Descriptive Veterinary Pathology Course
Auburn Univ. College of Veterinary Medicine - 3-7 June 2013

Lectures include:

- Descriptive Techniques in:
  - Gross Pathology
  - Microscopic Pathology
  - Cytology
  - Electron Microscopy
  - Immunohistochemistry
- Review of Clinical Pathology
- Gross-Microscopic Correlations
- 6 Practical Examinations
  - Gross Exams
  - Histo Exams
  - 4 exams are faculty-graded for extra feedback

For more information, including tuition, venue, and hotel information, please visit
http://www.cldavis.org/courses/upcoming.html

Program Director:
Dr. Bruce Williams, DVM, DACVP
Joint Pathology Center
301-467-4024
Email: Williams@clDavis.org

This course has been submitted (but not yet approved) for 32 hours of continuing education credit in jurisdictions which recognize AAVSB RACE approval; however 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. Call Dr. James Britt, 501-907-2435, for further information.
From the Latin American Division…

DIAGNOSTIC EXERCISE for January 2013

**Contributor:** Fabio Del Piero, DVM, PhD, DACVP, Professor of Pathology, Department of Pathobiological Sciences, School of Veterinary Medicine, Louisiana State University, Baton Rouge, 70803.

**Signalment:** Pig, cross-breed, red, 2-year-old male, recently castrated.

**Clinical History:** The clinical signs were mostly attributed to a left hindlimb disorder. The affected leg appeared shorter than the right leg. Sudden hindlimb lameness was observed and pain at the hip was detected. There was also slowness to rise, and walking on tiptoes with short steps. Eventually, the patient showed marked reluctance to rise and was euthanized.

**Necropsy Findings:** Left femoral head epiphyseal detachment and moderate to severe displacement was observed. In addition, there was scrotal fibrosis, tunica vaginalis, and suppurative dermatitis.
Workshop & Symposium on Laboratory Animal Diseases
Sponsored by the C.L. Davis DVM Foundation
Chicago, Illinois, U. S. A.
Wednesday 17 April through Saturday, 20 April, 2013

- Symposium on "Diseases of the Mouse" by Dr. Cynthia Besch-Williford of IDEXX RADIL
- Full use of the Biologic Resource Center’s 14,000 kodachromes, numerous glass slides and DVD lectures on diseases of lab animal species
- Seminars on Primate Pathology, Mouse Nomenclature, Review of Behavioral Methods Used in Biomedical Research, Review of Legislature, Large Animal Cardiovascular Models and Alternatives, What’s Your Diagnosis; Diseases of Rats, Hamsters, and Guinea Pigs, and a Literature Review.

- Literature Review and What’s Your Answer Session
  Program Director: JAMES E, ARTWOHL, DVM.
  Biologic Resources Center, 1840 West Taylor Street, Chicago, Illinois
  Phone: 312.996-1217
  Email: jearn@uic.edu

For complete information on this course, please visit the Davis Foundation website at: http://www.eldavis.org/courses/upcoming.html
WNPRC Lab Animal Medicine and Pathology Seminar with Mock ACLAM Exam*

Sponsored by C.L. Davis DVM Foundation
Hosted by Wisconsin National Primate Research Center
Friday, April 5th and Saturday, April 6th 2013
Madison, WI

Lecture topics include:
- AVMA Panel on Euthanasia
- Miscellaneous rodents
- Occupational health and safety
- Mini pig diseases and pathology
- Primate taxonomy, diseases, and pathology
- USDA, OLAW, and GLP regulations

*Exam is the International Mock Exam Coalition Examination

Program Directors: Christina Cruzen DVM, DACLAM and Andres Mejia DVM, DACLAM

For complete program information and to register, visit the Davis Foundation website at: http://www.cldavis.org/courses/upcoming.html
40th Annual Gross Morbid Anatomy of Animals

Presented by the Charles Louis Davis, DVM Foundation
8-12 July 2013   University of Minnesota, Saint Paul, MN

Come join us at one of the most renowned pathology courses in the world - all species, all systems, and international experts presenting 36 hours of great CME. Each year, this in-depth course draws over 120 pathologists, lab animal practitioners, veterinary clinicians, and students from around the world. Don’t miss out in 2012!

Course Director:
Bruce Williams, DVM, DACVP
Email: Williams@cldavis.org

For more information, visit:
http://www.cldavis.org/upcoming.html

“This course has been submitted but not yet approved for 36 hours of continuing education credit in jurisdictions which recognize AAFP RACE approval; however, 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. Call James Britt, DVM at 612-997-2465 for further information.”
For the eighth year, Dr. Judy St. Leger of Sea World will host a full-day seminar combining didactic lectures, case presentations, and audience interaction to cover what's new and exciting in pathology of sea creatures. This year's keynote speaker, Dr. Melissa Miller will lecture on "Important Disease Concerns of the sea otter (Enhydra lutris)." A tuition of only $100 includes eight hours of continuing education, refreshments, syllabus and a DVD of the case slides for review.

For more info, visit: http://www.cldavis.org/courses/upcoming.html or contact Dr. St. Leger at judy.st.leger@seaworld.com
Histologic Description

**Femoral head:** The lesions are physeal and there are no significant changes involving the articular cartilage or the subchondral subarticular spongiosa. There is unusually prominent and irregular retention of physeal cartilage and separation in the middle of the hyperplastic zone with digitiform fringes on the ventral detachment side. This cartilage contains longitudinal interruptions and branching eosinophilic streaks. Areas of eosinophilic cartilage (degeneration) have some small chondrocytes with hyperchromatic nuclei. Multifocally areas of hyaline cartilage alternate with bony trabeculae and areas of eosinophilic cartilage. There is oblique to irregular arrangement of chondrocytic columns in zones of proliferation and maturation. Clustering of chondrocytes (irregular chondrones) are frequently observed. These chondrocytes are smaller, and round to polygonal, with scant cytoplasm most closely resembling the mitotic pairs of the reserve zone. Loosening of the cartilage matrix is also present. There is osteonecrosis with hypereosinophilia and loss of osteocyte nuclei, and osteoclastic bone resorption. Multifocal to coalescing intraphyseal fibroplasia extends toward the metaphysis and toward the diaphysis (the latter not in the slide). These areas are irregularly vascularized and contain foci of osteoclastic aggregation associated with small fragments of necrotic bone or short necrotic lamellae. Some osteoclasts are very large and with numerous nuclei. There is multifocal histiocytic and plasmacytic infiltration. Additionally there is mild to moderate multifocal hemorrhage.

[The contralateral femoral epiphysis had a 1 mm thick, undulant and sometimes irregular cartilaginous component with areas of abnormal chondrocyte clustering and oblique chondrocyte columns. No eosinophilic streaks, necrosis or areas of detachment were observed].

Morphologic diagnosis
- Proximal femoral physeal endochondral ossification defect with cartilage retention, necrosis, epiphysiolysis and femoral head detachment
- Microfractures of cartilage and bone, multifocal, chronic

Diagnosis
Osteochondrosis with epiphysiolysis and femoral head detachment

Discussion
This is a case of leg weakness caused by epiphysiolysis, which is a form of osteochondrosis. Trauma and consequent microfractures significantly contributed to the retention of a thick and irregular epiphyseal cartilage and to fibrous tissue formation. Osteomyelitis could have predisposed by necrosis of bone and cartilage or could have been present before (neonatal infection). “Leg weakness” is a locomotor disability of pigs unassociated with infectious arthritis. It is a combination of noninfectious arthropathy and osteopathy, and is a significant cause of mandatory culling in pig herds. Causes are defects of conformation, osteochondrosis (including epiphysiolysis), arthrosis, lumbar intervertebral disk degeneration, and spondylosis. The clinical syndrome varies from lameness to difficulty rising to recumbency. Characteristic signs are carrying of a hind leg, sitting on the haunches for long periods, and shuffling gait. Osteochondrosis is defined as a focal disturbance of endochondral ossification and is regarded as having a multifactorial etiology, with no single factor accounting for all aspects of the disease. The most commonly cited etiologic factors are heredity, rapid growth, anatomic conformation, trauma, and dietary imbalances; however, only heredity and anatomic conformation are well supported by the scientific literature. The way in which the disease is initiated has been debated.
Although formation of a fragile cartilage, failure of chondrocyte differentiation, subchondral bone necrosis, and failure of blood supply to the growth cartilage all have been proposed as the initial step in the pathogenesis, some literature supports failure of blood supply to growth cartilage as being the most likely. Based on all available evidence, the primary lesion of articular osteochondrosis could be defined as focal ischemic necrosis of growth cartilage initiated by necrosis of cartilage canal blood vessels. Because the necrotic cartilage does not undergo mineralization or vascular penetration, focal failure of endochondral ossification occurs when the ossification front approaches the lesion. Osteochondrosis can be subclassified as latens (lesion confined to ephysal cartilage), manifesta (lesion accompanied by delay in endochondral ossification), and dissecans (cleft formation through articular cartilage).

_Epipysiolysis_ is a form of osteochondrosis (OCD) and is the separation of an epiphysis from metaphyseal bone. It is a traumatic lesion predisposed by a defect in growth cartilage of the physis. It may develop either from an extended eosinophilic streak (area of matrix degeneration) or from areas of necrosis in the growth of cartilage, rather than from foci of metaphyseal dysplasia. These irregular eosinophilic streaks, associated with areas of disorganized growth plate architecture, occur in osteochondrosis. These may reflect either vestiges of cartilage canals or infraction lines occurring as a sequel to growth plate trauma. Similar eosinophilic streaks are normally present in the growth plate of young animals but are usually parallel to cartilage columns. In osteochondrosis the eosinophilic streaks are often stellate and may subdivide the epiphyseal cartilage into disorganized sometimes degenerate lobules. Common sites for epipysiolysis include femoral head, ischiatic tuberosity of females and lumbar vertebrae. The distal epiphysis of the ulna and anconal process can also be involved, although strictly speaking the lesion involving the latter should not be called epipysiolysis. In pigs, unlike dogs, the anconal process does not develop from a separate ossification center, so apophysiolysis is a more appropriate term. Separation may be complete (as is often the case with the ischiatic tuberosity) or partial (as in the head of the femur which sometimes remains attached at its lateral margin). Separation probably occurs when the process of endochondral ossification reaches or approaches the cartilage defect. The resulting fracture may extend in a jagged crack through primary and secondary spongiosa. It may be that the traumatic forces applied to the epiphyseal cartilage at the site of empty spaces near atrophic blood vessels or at eosinophilic streaks cause further separation and epiphyseal lysis.

In summary, the pathogenesis of physeal osteochondrosis is still poorly understood; however, failure of blood supply, either from the epiphyseal or metaphyseal side of the plate, may be involved.


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**SAVE THE DATE!!!**

The dates for the 2013 Current Lab Animal Science Seminar (CLASS)/Pathology of Laboratory Animals (POLA) will be 3-9 August 2013. The seminar will be held on the grounds of the Walter Reed Army Institute of Research in Silver Spring, Maryland. CLASS will be held from 3-5 August, and POLA from 6-9 August. Further details on this course will be available at the C.L. Davis website at [http://www.cldavis.org/courses/upcoming.html](http://www.cldavis.org/courses/upcoming.html) in early 2013.
ARTICLES NEEDED:  
Please Submit Articles Following Your Courses or Workshops

NEWSLETTER DEADLINES

All materials must be received no later than the 15th of the previous month in order to be included in the newsletter.

Articles should be submitted as MS Word documents. Photos should be submitted as a JPEG.

Any advertisements or registration material for symposia or courses should be submitted at least 3-4 months in advance.