



**Davis-Thompson
Foundation**

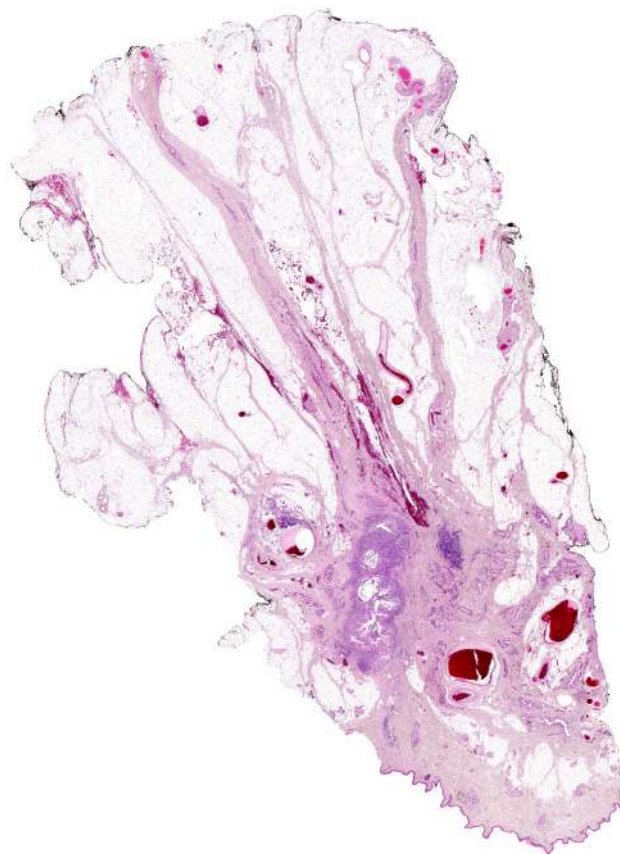
C.L. DAVIS/S.W. THOMPSON
DVM FOUNDATION

A tax-exempt, donative,
publicly-supported charity
For the advancement of veterinary
and comparative pathology

THE DAVIS-THOMPSON FOUNDATION NEWSLETTER

October

VOL. 54



What ghoulish character do you see?

- A. Bride of Frankenstein
- B. Flaming Skull
- C. Ursula de sea witch
- D. Martian from Mars Attacks!
- E. Other

INSIDE THIS ISSUE

Monthly cover photograph winners:

Kate Oca and Karen Oslund

VDx, Davis, CA

Answer: Check our Instagram and let us know what you see!

Scar tissue from a 14-year-old female, spayed, mixed-breed dog in the region of a previously excised mammary adenocarcinoma. Histologically, the tissue showed reactive and inflammatory changes consistent with the history of prior surgery at the site with no evidence of neoplasia.

-Dr. Katherine D. Watson - Cover Image Editor

-Dr. M. Donald McGavin - Cover Image Composition Analyst

- | | | | |
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MESSAGE FROM THE CEO

Dear colleagues

Welcome to the October issue of the Davis-Thompson Foundation newsletter, with the compliments of our brilliant managing editors, Javier Asin and Jeann Leal. Thank you, Javier and Jeann!

As usual, this newsletter is full of training opportunities around the world, and in several languages. Please review the following pages to see these opportunities as well as the reports on the many training activities offered by the Foundation over the past few weeks.

The annual meeting of AAVLD is upon us and amongst the myriad pathology activities for trainees (and fully fledged pathologists) offered at the meeting, is the DTF Pre-meeting Workshop on Dermatopathology with keynote speakers Dominique J. Wiener and Aline Rodrigues Hoffmann. Did you miss the pre-registration for the meeting? It does not matter; you can still register on site. And our fully revamped Descriptive course, now Foundations of Pathology is already in full swing with the first on line sessions already offered and the face-to-face sessions during the annual meeting of ACVP coming up soon.

Looking forward to seeing you in one of our upcoming seminars.

Warm regards

Francisco (Paco) Uzal
Chief Executive Officer
Davis-Thompson Foundation



JVDI IN FOCUS

Our October focus is an article appearing in the November issue: “**Lipofuscin accumulates in ganglionic neurons in chronic equine dysautonomia**” by Lydia Tan Yi Shean, Elspeth M. Milne, Darren J. Shaw, Scott Maxwell, Jorge Del-Pozo.

J Vet Diagn Invest 2024;35(6). <https://journals.sagepub.com/doi/full/10.1177/10406387241265715>

Lipofuscin is a complex mixture of highly oxidized, cross-linked macromolecules that accumulates in neurons with age and some neurodegenerative diseases. Equine dysautonomia (ED) is a polyneuropathy that mainly affects autonomic and enteric nervous systems, resulting in alimentary tract dysfunction. Our main aim was to determine whether neuronal lipofuscin increased with increasing duration of ED. We investigated the prevalence of lipofuscin in cranial cervical ganglia of horses with acute (AED), subacute (SED), and chronic ED (CED), young controls (of similar age to ED cases), and aged controls ($n = 8$ per group). We used Schmorl stain for histologic detection of lipofuscin and assessed its accumulation in neurons using image analysis software. The percentage of neurons positive for lipofuscin increased with age in individual groups and all groups combined ($p < 0.001$). There were fewer positive neurons in AED and SED compared to aged controls ($p < 0.001$) and more in CED than AED cases ($p = 0.042$) and young controls ($p = 0.012$). We found a strong positive correlation between percentage positive neurons and percentage positive area of the neuron containing lipofuscin for combined groups ($p < 0.001$). Although neuronal lipofuscin increased in cranial cervical ganglion in CED cases, it remains to be determined whether this is a cause or consequence of neuronal degeneration.

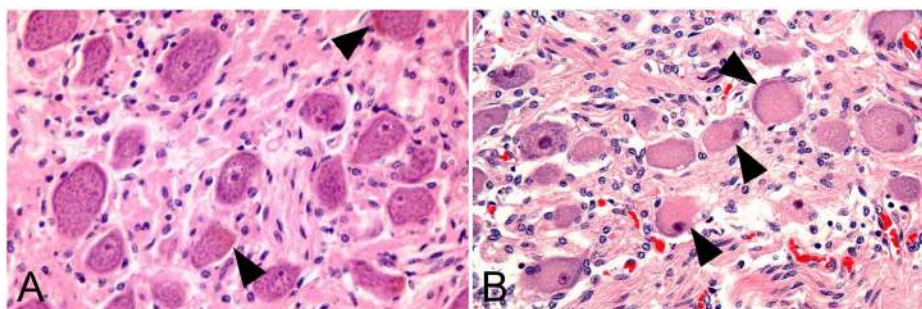


Figure 1. Cranial cervical ganglionic neurons. **A.** Control case, with granular cytoplasmic Nissl substance. Yellow-brown lipofuscin granules are present in some neurons (arrowheads). H&E. **B.** Case of acute equine dysautonomia, with chromatolysis and nuclear pyknosis or hyperchromasia (arrowheads). H&E.

The Journal of Veterinary Diagnostic Investigation is the official journal of the [American Association of Veterinary Laboratory Diagnosticians](#). The mission of the Journal is to educate by informing readers of progress in veterinary laboratory medicine and related fields of endeavor. The key objectives of the JVDI are to promote the science of veterinary laboratory medicine and the betterment of animal and public health. JVDI fully supports diversity, equity, and inclusion in our publishing activities.



DIAGNOSTIC EXERCISE



Case #: 244; **Month:** September; **Year:** 2024

Contributors: Claudio S.L. Barros¹ and Daniel R. Rissi²

¹Laboratório de Anatomia Patológica, Universidade Federal de Mato Grosso do Sul, Campo Grande, MS, Brazil

²Athens Veterinary Diagnostic Laboratory, Department of Pathology, College of Veterinary Medicine, University of Georgia, Athens, GA

Corresponding author: claudiobarros1945@gmail.com

Clinical History: Chronic wasting occurred in sheep from a flock in southern Brazil (29° 32' 16" S 53° 51' 18" O) from October 2003 to January 2004. Of a total population at risk of 460 sheep, 43 were affected, 29 died spontaneously, and 10 were euthanized. Clinical signs included weight loss, cachexia, rigid walking, retracted abdomen, and kyphosis. In some cases, terminal pulmonary edema led to oozing of abundant white foam from the nasal and oral cavities.

Necropsy findings: Twelve sheep were necropsied. The main gross lesions are depicted in Figures 1-5.

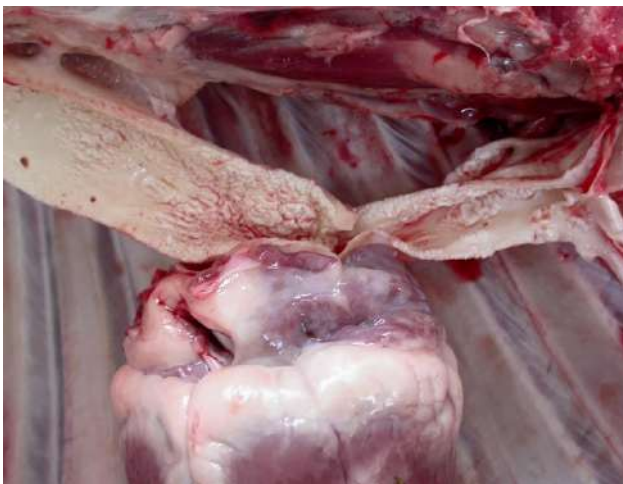


Figure 1.

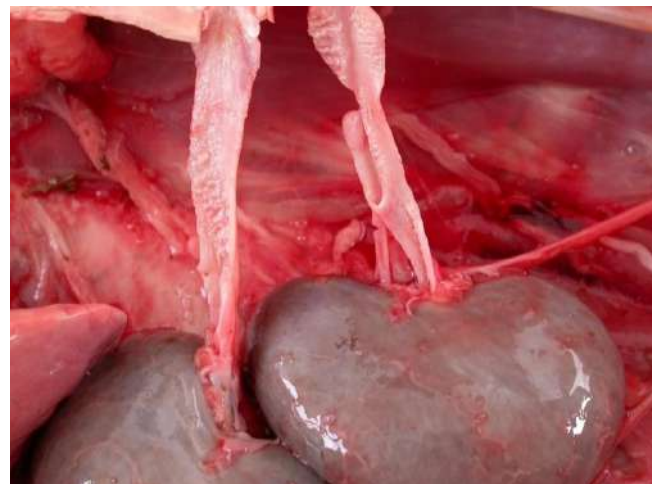


Figure 2



DIAGNOSTIC EXERCISE



Figure 3

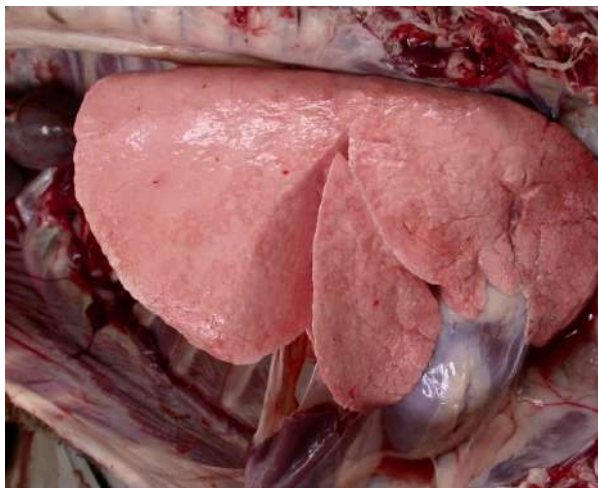


Figure 4

Follow-up questions:

- *Morphologic diagnosis*
- *Cause*
- *Name of the condition*
- *Differentials*

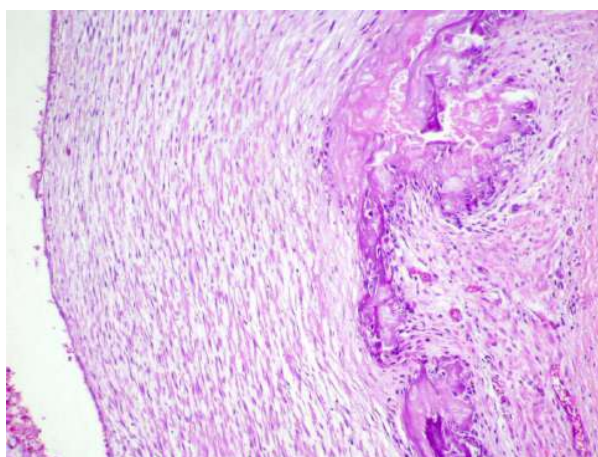


Figure 5

[Click here for answers](#)

The Diagnostic Exercises are an initiative of the Latin Comparative Pathology Group (LCPG), the Latin American subdivision of The Davis-Thompson Foundation (DTF). These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the DTF website (<https://davis-thompsonfoundation.org/diagnostic-exercise/>)

Associate Editor for this Diagnostic Exercise: Daniel Rissi
Editor-in-chief: Claudio Barros

SEMINAR REVIEWS

Report on the European Symposium of the Davis Thompson Foundation (DTF) held in San Lorenzo de El Escorial, Madrid, Spain, from 26 to 27th August, 2024

by Drs. Liz McInnes and Simon Priestnall

The 2024 Davis-Thompson Foundation European Symposium was held in San Lorenzo de El Escorial, Madrid, Spain from the 26 to 27th August, 2024. San Lorenzo is situated around 45 minutes northwest of Madrid and nestled at the foot of the mighty Sierra de Guadarrama mountains. The delegates enjoyed lectures from Prof. Verena Affolter (UC Davis School of Veterinary Medicine) and Dr. Charles Bradley (University of Pennsylvania School of Veterinary Medicine) on dermatopathology in domestic animals and mice.

In addition to many interactive case discussions, Verena and Charles also included lectures on “Using ancillary testing to assist getting a final diagnosis” and “Murine dermatology and dermatopathology”. Highlights included learning about different *Burkholderia* infections, the pitfalls of using MUM-1 for identification of plasma cells and the use of Iba-1, CD11c and CD45 and PCR for c-myc for the identification of transmissible venereal tumors. Charles and Verena pointed out difficulties in skin disease diagnosis such as false negative findings encountered with clonality testing.

We also examined “red, white and blue disease” i.e. hepatocutaneous syndrome where parakeratotic dermatitis can accompany pancreatic or neuroendocrine tumors as well as possible rewilding of laboratory mice which has been suggested to ensure that laboratory mice develop ‘normal’ microbiomes. The interactive sessions proved highly popular and the quiz at the end of the second day was most appreciated. Both speakers were highly rated in the feedback survey.

The Royal site of San Lorenzo de El Escorial is close to the conference site and is the largest Renaissance building in the world. It is one of the Spanish royal sites and functions as a monastery, basilica, royal palace, burial place for Spanish kings and queens and a library. Delegates were able to visit multiple rooms decorated with exquisite furnishings, tapestries and paintings by Titian and Goya.

SEMINAR REVIEWS

The Davis Thompson Foundation European Symposium next year will be held in Turin, Italy from 27 to 30th August, 2025 and the DTF Eastern European Symposium will be held in May, 2025 in Cluj-Napoca in Romania.



Delegates at San Lorenzo de El Escorial, Madrid



El Escorial monastery

SEMINAR REVIEWS



Delegates listening to lectures



Gardens at El Escorial monastery

SEMINAR REVIEWS



Library at El Escorial monastery



Tapestries at El Escorial monastery

SEMINAR REVIEWS

Davis-Thompson Foundaton (DTF) & Horse Integrity and Safety Authority (HISA) Racehorse Necropsy Workshop

by Drs Karen Hassan and Francisco Uzal

HISA in conjunction with the DTF, sponsored a Racehorse Necropsy Workshop at the UC Davis California Animal Health and Food Safety Veterinary Diagnostic Laboratory in San Bernadino, California on September 12-14th. The workshop was attended by veterinary pathologists, regulatory veterinarians, clinical residents and veterinary students from USA, Japan, Ireland, Hong Kong, Spain, and Mexico.

Lecturers included Sue Stover, Karen Hassan, Jeff Blea, Alina Vale, Javier Asin, Eileen Henderson, Akinyi Nyaoke, Hernando Acevedo, Carlos Schild, Julie Engiles, Laura Kennedy and Francisco Uzal. A fantastic group of volunteers worked in the background to make this seminar a total success; these include Meridith Rhea, Christina Garcia, Jessica Gonzalez, Marta Aleman, Heather Wolird and Rafaela De Negri.

This hands-on event provided expert guidance detailing racehorse anatomy, pathology, and the factors that affect racehorse health and performance. Participants discovered and discussed the critical steps in diagnosing racehorse health issues from gross examination to pathological specimens.



Dr. Akinyi Nyaoke explains leg dissection



Dr Carlos Schild leading a discussion on anatomy of bones

SEMINAR REVIEWS

The interactive environment led to thought provoking discussions on case studies, recent research and advancement in imaging diagnostics as well as equine pathology.

Attendees were exposed to the unique issues and specific examination protocols for necropsy of a racehorse. Understanding and identifying preexisting lesions in the case of catastrophic musculoskeletal injuries and heart, lung or vascular abnormalities in case of sudden death are critical to the caretakers of the horse. HISA rules require a postmortem examination and report which are used in the required mortality review. Review findings contribute to the education for the prevention of future racehorse injuries and illnesses.

Plans are coming together for the next Workshop at the University of Kentucky in the fall of 2025.



Group photo of participants, lecturers and volunteers

SEMINAR REVIEWS

31st Annual Association of Zoo Veterinarians and Davis-Thompson Foundation Zoo and Wildlife Pathology Workshop

by Dr Dalen Agnew

Over 60 participants registered for the recent 31st Annual Zoo and Wildlife Pathology Workshop held in Toronto, Ontario, Canada during the combined meeting of the American and European associations of zoo and wildlife veterinarians. The audience was international and included veterinary students, interns, residents, and clinical veterinarians as well as veterinary pathologists. As our workshop keynote speaker, Dr. Sarah Poyton from Johns Hopkins University provided an overview of aquatic parasitology entitled: "Parasites of fish: what are we looking at, and why do they matter?" This was followed by



Over 60 participants attended the 31st annual Zoo and Wildlife Pathology Workshop held in Toronto, Ontario, Canada, with the theme of parasitology. Here, junior veterinary student, Heather Sayles, presents a case of nematode-induced sarcoma in a cat snake



Dr. Sarah Poynton, (left) Johns Hopkins University was the keynote speaker with a presentation entitled "Parasites of fish: what are we looking at, and why do they matter?" She is pictured here with the event organizers, Drs. Alison Righton and Dalen Agnew

SEMINAR REVIEWS

18 presentations by participants on the theme, with individual talks covering a range of parasitic diseases including pentostomiasis in the brain of a vine snake, meningeal worm in a kudu, cryptocaryonosis in a Hi Hat fish, chiggers in an owl, sarcomas associated with nematodiasis in a cat snake, and many others. Scanned slides and full reports are now available at the Davis-Thompson website Noah's slidebox. The next Zoo and Wildlife Pathology Workshop is scheduled for 24 August 2025 in Kansas City, MO, USA. Look for a topic announcement and request for case material in the spring. equine pathology.

Click here to see the
AAZV-DTF Workshop in
Noah's slidebox



NOAH'S SLIDEBOX

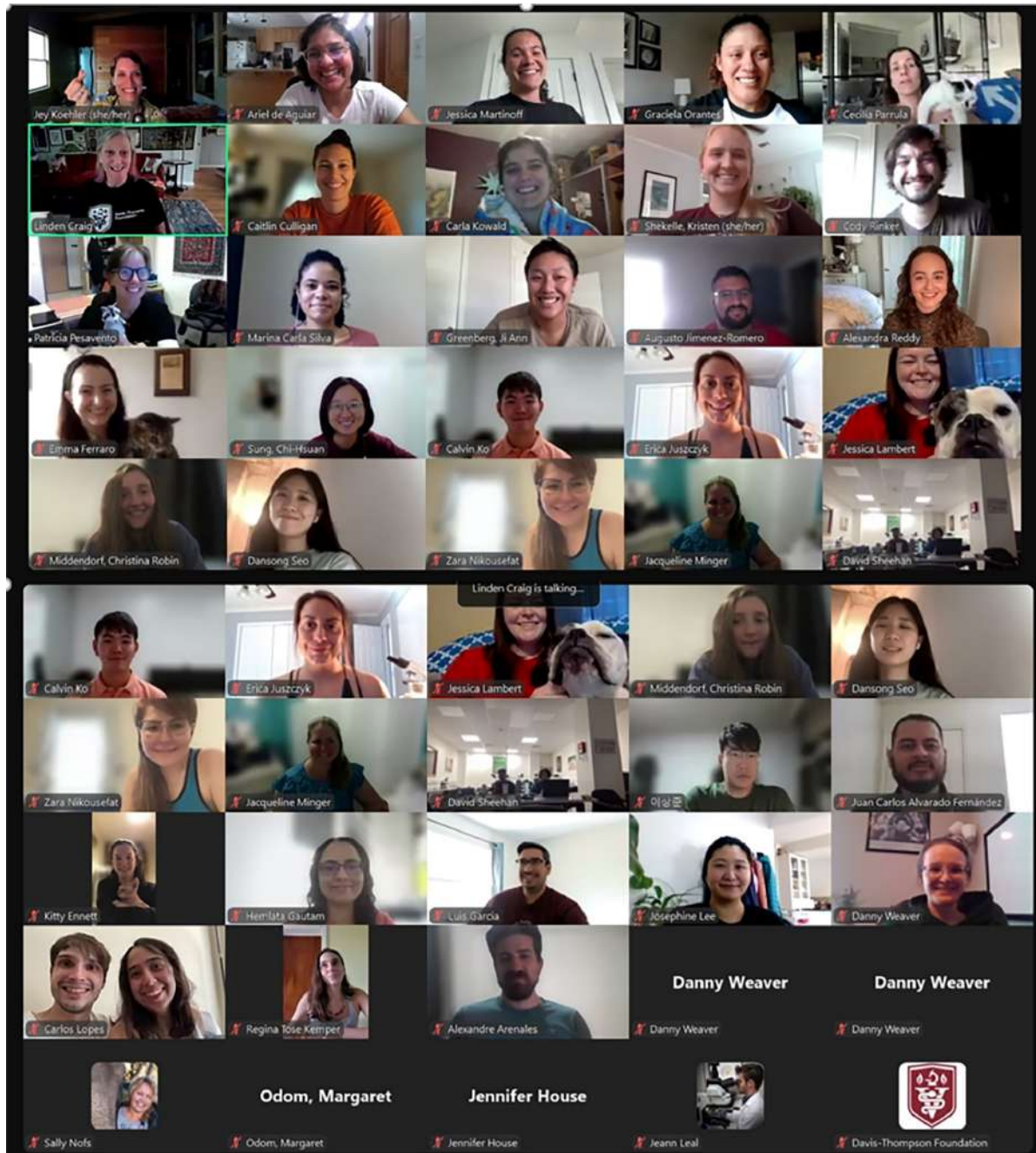
SEMINAR REVIEWS

Foundations of Pathology Course

by J Dr. Jey Koehler

On September 20-22, we held the virtual portion of the first inaugural Foundations of Pathology course via video conference. 64 participants from locations around the globe logged in to hear lectures from Drs. Linden Craig, Patty Pesavento, and Jey Koehler. We started off with Dr. Craig dropping some foundational knowledge on how to recognize, describe, and interpret changes in tissues at the macroscopic level, plus great tips for the necropsy floor and some very helpful pointers on getting great photographs of lesions. We then moved a little closer to our tissues and got a great review from Dr. Pesavento about correlating the macroscopic with the microscopic, with an emphasis on that subgross view of the microscope slide and how there is a LOT we can tell at 2x!! She discussed the use of tissue algorithms which served as the perfect transition to Dr. Koehler's lectures on microscopic pathology. Dr. Koehler covered topics ranging from the efficient use of words in descriptions to an understanding of why we say what we do when we describe neoplasms to how we approach non-neoplastic lesions and describe them in a concise and accurate way. The following day Dr. Pesavento was back in the hot seat giving folks anchors for ultrastructural interpretation and some information on how we should and shouldn't use IHC and ISH to help us in diagnosis. Overall, participation from the audience was great, with lots of interaction, polling questions, and use of the chat. We are eagerly anticipating the in-person component at the ACVP meeting in Seattle, where participants will engage in case-based small-group active learning exercises, hear some lectures on test question writing as a study tool, and participate in a panel discussion about ways to structure study during your residency. Overall, we think the course was a real success and we look forward to many more years of Foundations of Pathology to come!.

SEMINAR REVIEWS



Participants & Lecturers during the virtual portion of Foundations of Pathology Course

GHPN INFORMATION SESSION



Global Health Pathology Network (GHPN) Information Session at the ACVP meeting



Have you heard of the GHPN?

The GHPN is an organization that operates under the umbrella of the Davis-Thompson Foundation and fosters engagement of veterinary pathologists in Global Health



This year, there will be an information session about the GHPN at the ACVP/ASVCP meeting in Seattle, WA but with a special focus on hybrid diagnostic pathology training with colleagues at the University of Veterinary and Animal Sciences (UVAS) in Lahore, Pakistan

Tuesday, November 19, 2024

🕒 4-5 PM (PT)

👤 In person

📍 Hyatt Regency Hotel, Seattle, WA

🔗 Click [here](#) for more information



Ishtiaq Ahmed
DVM, Msc(Hons), PhD



Tony Alves
DVM, DACVP



Sarah Corner
DVM, PhD, DACVP



GHPN SCHOLARSHIPS



DTF-GHPN Education Scholarship For Select DTF On-Line and/or Course Material



Background. The Global Health Pathology Network (GHPN), under the umbrella of the Davis-Thompson Foundation (DTF) for Veterinary Pathology, conducts workshops in resource-constrained settings focused on enhancing veterinary diagnostic abilities using interactive educational modalities and adult learning principles. In part, the success of the GHPN training workshops is built on the successes of in-country veterinary pathologists and professionals in various locations worldwide. Consequently, to expand the sphere of the network through the development of capable, motivated professional cadre, the GHPN recognizes the importance of practicing professionals to have the opportunities for continued professional development.

Objective. Through GHPN's alignment with the DTF, the DTF will offer up to 10 educational scholarships to attend select DTF on-line courses and/or have access to the course material at no-cost.

Application Criteria. All applicants must prepare a 2-3 paragraph statement (no more than 300 words) addressing the following:

- Biographical information to include current work or academic history
- Reason(s) for applying for the DTF educational scholarship
- If awarded, the applicant's willingness to host a future GHPN workshop in his/her country.

Selection procedures and policies. GHPN leadership will screen all applications and submit the qualified applicants to the DTF for recommendation and final approval. Scholarship selection is based on the assessment of the applicant's statement and will be determined based on several factors

GHPN SCHOLARSHIPS

to include relevant background, aptitude, training and mentorship abilities in veterinary pathology and animal health. The applicant's current location of employment and/or training will also be considered to ensure equitable distribution of scholarship opportunities in the given year. Applicants should send applications 30-60 days prior to the beginning of the course to allow for adequate review of the application. A list of upcoming and/or recurring select courses can be found under "Events" tab on the DTF website: <https://davisthompsonfoundation.org/>

Application Procedures Questions and Answers:

Q: Where and when are applications available/due?

A: Open registration; applications can be received at any time

Q: Where should applications be sent?

A: A signed PDF or word document paragraph statements are sent to GH-PathNetwork@gmail.com

Q: What additional information/documents must accompany the application?

A: None; the signed paragraph statement is the only item required

Q: How and when will the scholarship award winners be notified?

A: Award winners will be notified via electronic correspondence sent to the email address in the paragraph statement

Q: When can the educational scholarships to attend select DTF on-line courses and/or have access to the course material be used?

A: Once awarded, the scholarship can be used at any time over a 365 day period from the date at which the scholarship is awarded. Any additional questions regarding the DTF-GHPN educational scholarships and/or the GHPN general can be submitted to GHPathNetwork@gmail.com

SOUTHCENTRAL DIVISION MEETING



Davis-Thompson
Foundation

34TH ANNUAL SOUTHCENTRAL DIVISION MEETING

CASE PRESENTATIONS AND KEYNOTE SPEAKER

BONE and Joint PATHOLOGY



OCTOBER 4-5, 2024



SUBMIT CASES BY SPT 4



HYBRID



\$ 50 - 200



**TEXAS A&M UNIVERSITY
AT GALVESTON**



LINDEN CRAIG
DVM, PHD, DACVP

[Click here to register](#)

AAVLD 2024 PRE-MEETING WORKSHOP



Davis-Thompson
Foundation



FRIDAY, OCT 11

2024 AAVLD ANNUAL MEETING
DAVIS-THOMPSON PRE-MEETING WORKSHOP:

**DERMATOPATHOLOGY - MORE
THAN SKINNY LAYERS**



Aline Rodrigues Hoffmann
DVM, MS, PhD, DACVP



Dominique J. Wiener
DVM, PhD, DECVP



6.5hrs RACE



In person



**GAYLORD OPRYLAND RESORT &
CONVENTION CENTER.
NASHVILLE, TENNESSEE**

Did you miss the online pre-registration deadline?
You can still register on site the day of the event!

AAVLDEI WORKSHOP

AAVLDEI
Diversity • Equity • Inclusion

Essential Skills for Civil Conversations Workshop

 **Saturday, October 12**

 **6:30 PM - 8 PM (CDT)**

 **U\$25**

 **Magnolia Ballroom
Gaylord Opryland
Nashville, TN**

- 
- Understand the value of psychological safety and learn how to recognize and foster a psychologically safe environment
 - Learn empathetic leadership skills such as de-escalation techniques and fostering emotional intelligence
 - Practice creating brave space and fostering emotional intelligence within your team
 - Develop and practice conflict resolution techniques to mitigate tensions



Presented by **Jenn Graham** of



Light refreshments provided

Sponsors:



**Davis-Thompson
Foundation**



C · E · E · Z · A · D
Center of Excellence
For Emerging and Zoonotic Animal Diseases
A Department of Homeland Security
Center of Excellence

[Click here to register](#)

HISTO ROUNDS IN SPANISH



RODADAS DE
HISTOPATOLOGÍA DA LCPG



Davis-Thompson
Foundation

ENFERMEDADES REPRODUCTIVAS EN ANIMALES DE PRODUCCION

Jueves, 17 de Octubre, 2023
10:30 AM - 11:30 AM CDT

INTERACTIVO



VIRTUAL

EN ESPAÑOL



Melissa Macias
DVM, MSC, PhD, DACVP

[Click here to register](#)

GROSS & HISTO SEMINARS ABVP

abpv.vet.br



SEMINÁRIOS DE MACROSCOPIA E HISTOPATOLOGIA DA ABPV

Mayane Faccin

DMV, MSc, PhD, DACVP

23 Outubro 2024 | 12:30 PM
1:30 PM BR



INSCRIÇÃO GRATUITA E OBRIGATÓRIA

 **EVENTO ONLINE**

**Para mais informações:
ABPV / Davis-Thompson Foundation**

[Click here to register](#)

EUROPOLA



Davis-Thompson
Foundation



COMPAT
one medicine, one pathology,
one platform.

u^b

UNIVERSITÄT
BERN

SAVE THE DATE



EuropOLA 2024

PATHOLOGY OF LAB ANIMALS



OCT 28 - NOV 1



in person

University of Bern,
BERN SWITZERLAND



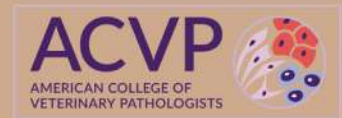
[Click here to register](#)

ACVP 2024 PRE-MEETING WORKSHOP



Davis-Thompson
Foundation

NO GUTS NO GLORY



A review of gastrointestinal tumors



6.5hrs RACE

NOVEMBER 16, 2024



In person



Francisco Uzal
DVM, MSc, PhD, DACVP



8AM- 5PM



SEATTLE, WA



John Munday
BVSc, PhD, DSc, DACVP



Jesse Hostetter
DVM, PhD, DACVP



Dorothee Bienzle
DVM, PhD, DACVP, CAHSF



Brandon Plattner
DVM, PhD, DACVP

Did you miss the online pre-registration deadline?
You can still register on site the day of the event!

NECROPSY COURSE

ECFVG CPE PREP

NECROPSY COURSE



7-8 DECEMBER 2024



9:00 AM - 5:00 PM CT



BREATHITT VETERINARY
CENTER, HOPKINSVILLE, KY

PRE-REGISTER NOW

pre-registration closes Oct 31

PREPARE FOR THE NECROPSY PORTION
OF THE ECFVG'S CPE EXAM VIA HANDS
ON PRACTICE AND MOCK EXAM WITH
VETERINARY PATHOLOGISTS.



virtual \$200



In person \$600



Davis-Thompson
Foundation



SPEAKERS

Rafaela De Negri, DVM, MSc
Nathan Helgert, VMD, DACVP

davisthompsonfoundation.org

[Click here to register](#)

WESTERN ROUND ROBIN CASE

CONTRIBUTING LABORATORY:

**California Animal Health and Food Safety Laboratory -
San Bernardino branch**

Signalment and clinical history:

1 month-old Texas Longhorn calf that died suddenly.

Gross findings:

Multiple areas of off-white discoloration in the thigh muscles.

Histology:

Skeletal muscle: there are multifocal to coalescing areas of severe myocyte degeneration and necrosis, characterized by hypereosinophilia, loss of cross striation and fragmentation of the sarcoplasm, with mineralization and proliferation of satellite cells. There are occasional attempts at regeneration characterized by myofiber basophilia with internalized nuclei. There are occasional macrophages infiltrating the peri- and endomysium.

Diagnosis:

Skeletal muscle: Multifocal to coalescing, severe, polyphasic, myocyte degeneration and necrosis with mineralization, proliferation of satellite cells and regeneration.

Ancillary tests:

Liver selenium concentration: 0.12 ppm (reference range: 0.25-0.5 ppm)

Liver vitamin E concentration: 0.70 ppm (reference for 30- to 300-day-old cattle: >3.3 ppm)

Condition:

Nutritional myopathy/ white muscle disease

Etiology:

Selenium and vitamin E deficiency

[Click here to see this slide
in Noah's slidebox](#)

WESTERN ROUND ROBIN CASE

Comments:

The lesions and laboratory findings are consistent with nutritional myopathy or “white muscle disease” (WMD). This is a condition associated with selenium and/or vitamin E deficiency. WMD occurs mainly in young animals like calves, lambs, goat kids and foals (Rodriguez et al., 2018); however, unusual cases with bilateral rupture of the serratus ventralis muscle known as “scapular displacement or flying scapula” have been described in beef heifers (Buergelt et al., 1996). Depletion of Se and/or Vit E results in oxidative damage to skeletal and cardiac muscles causing degeneration and necrosis of the muscle cells (Mu et al., 2023). This calf also had bronchopneumonia and copper deficiency. Probably several deficiencies and other management factors contributed synergistically to the development of bronchopneumonia by debilitating the immune system of this calf (Percival, 1995; Mu et al., 2023).

References:

Buergelt, C.D., Sisk, D., Clhenoweth, P.J., Gamboa, J., Nagus, R. (1996). Nutritional myodegeneration associated with dorsal scapular displacement in beef heifers. *Comp Path* 114: 445-450. [https://doi.org/10.1016/S0021-9975\(96\)80019-3](https://doi.org/10.1016/S0021-9975(96)80019-3)

Mu, J. Lei, L., Zheng, Y., Liu, J., Li, J., Li, D., Wang, G., Liu, Y. (2023) Oxidative stress induced by selenium deficiency contributes to Inflammation, apoptosis and necroptosis in the lungs of calves. *Antioxidants* 2023, 12, 796. <https://doi.org/10.3390/antiox12040796>

Percival, S.S. (1995). Neutropenia caused by copper deficiency: possible mechanisms of action. *Nutrition Reviews*, 53 (3): 59–66. <https://doi.org/10.1111/j.1753-4887.1995.tb01503.x>

Rodríguez, A.M., Schild, C.O., Cantón, G., Riet-Correa, F., Armendano, J., Caffarena, R.D., Brambilla, E., García, J.A., Morrell, E.L., Poppenga, R.H., Giannitti, F. (2018). White muscle disease in three selenium deficient beef and dairy calves in Argentina and Uruguay. *Ciência Rural*, 48 (05): e20170733. <http://dx.doi.org/10.1590/0103-8478cr20170733>

Contributor:

Carlos Omar Schild DVM, MSc, PhD; Javier Asin DVM, PhD, DECVP

ASVP CORNER



Davis-Thompson
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Australian Seminar Series 2024

Australian Schedule! (See the DTFoundation website for USA schedule)

4 PM- 5:30 PM (AEST), 3:30 PM- 5 PM (ACST), 2 PM- 3:30 PM (AWST)



**Tumor grading in animals:
merits, flaws and challenges**
Giancarlo Avallone
DVM, PhD, Dipl ECVP

10 AM- 11:30 AM (AEST), 9:30 AM- 11 AM (ACST), 8 AM- 9:30 AM (AWST)



**The hair follicle; normal,
inflammation and neoplasia**
Dominique J. Wiener
DVM-PhD, DECVP

90 mins @ 11 AM (AEDT), 10 (AEST), 10:30 AM (ACDT), 9:30 AM (ACST), 8 AM (AWST)



**Dermatopathological pattern
recognition and gross quiz**
Dominique J. Wiener
DVM-PhD, DECVP



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Australian Society for
Veterinary Pathology



Hey mate, save the date!



Australian



**Descriptive Veterinary
Pathology course**

Mar 31 to Apr 4, 2025



**In-person
Taronga Zoo
Sydney**

IDEXX CASECONNEX CORNER

Signalment: 11-year-old, male Dachshund dog

Source/ History: Left testis has been inguinal cryptorchid since patient was a puppy. Marked and rapid enlargement of the testis recently noticed.

Histopathologic Description:

Testis, left: Markedly expanding and replacing the testicular parenchyma, there is a well-demarcated, pseudoencapsulated, densely cellular neoplasm. Neoplastic growth comprises over 95% of the testis with rare remnants of highly atrophic and compressed seminiferous tubules present around the periphery of the tumor. The neoplasm is comprised by two distinct cell populations. The first consists of polygonal to elongate to spindled cells which form lobules, tubules, and trabeculae separated by prominent, variably broad, arborizing fibrous septa. The cells have moderate amounts of pale wispy cytoplasm and round to oval nuclei with lacy chromatin and variably distinct nucleoli (sustentacular cell / Sertoli cell differentiation). The second cell population forms densely cellular sheets, packets or fills the lumen of tubular structures. These cells are rounded to polygonal with distinct cell borders, small to moderate amounts of eosinophilic cytoplasm and a large round to oval nucleus which contains coarsely stippled to clumped chromatin and 1-2 large, prominent magenta nucleoli (seminomatous differentiation). There are frequent scattered macrophages containing phagocytized cell debris among this latter population. In many regions, these cell populations are intimately admixed with one another with scattered tubular structures consisting of peripheral layers of sustentacular-type cells surrounding luminal aggregates of seminomatous cells.

Interpretation:

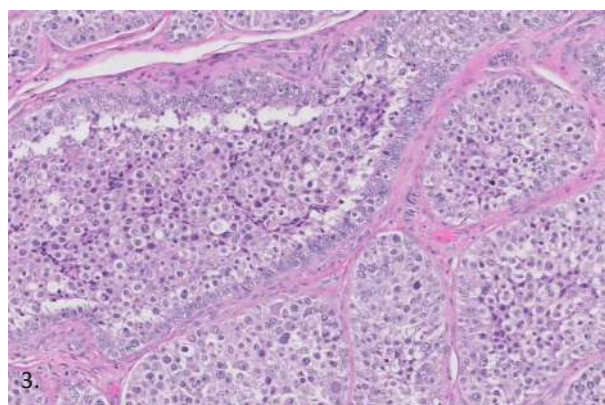
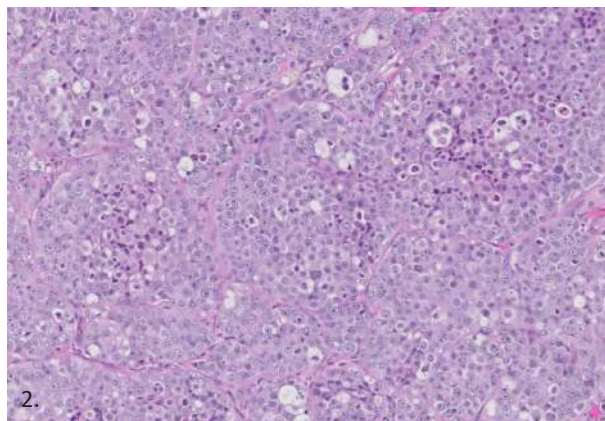
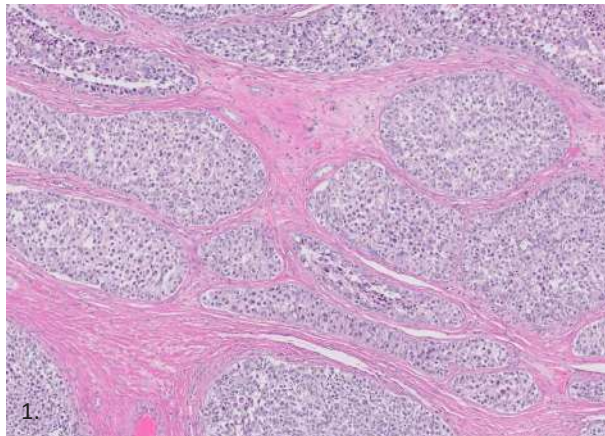
Testis, left: Mixed germ cell – sex cord stromal cell tumor

Comments:

Histopathological examination of this testis revealed a mixed germ cell - sex cord stromal tumor. The morphology and arrangement of the tumor cells within the germ cell component was compatible with seminoma while the sex cord component was compatible with sustentacular/Sertoli cell tumor. Mixed germ cell - sex cord stromal tumors are characterized by concurrent admixed proliferation of the spermatogenic cells (germ cells) and either the supporting cells of the seminiferous tubules (sustentacular cells) or interstitial endocrine cells of the testis (interstitial/Leydig cells). Cryptorchidism is a predisposing factor in the development of these neoplasms. Differentiation between benign and malignant tumors is dependent on the observation of vascular/capsular invasion, spermatic cord invasion/dissemination, or detection of distant metastases upon clinical staging. In a case series of dogs with mixed germ cell - sex cord stromal tumors, 12 dogs had available follow up information and, of these patients, 8 were alive at the time of follow up with a mean post-surgical survival period of 596 (range = 240-990 days); the remaining 4 dogs died of causes unrelated to the neoplasm.

Reference: Patnaik AK, Mostofi FK. A Clinicopathologic, Histologic, and Immunohistochemical Study of Mixed Germ Cell-Stromal Tumors of the Testis in 16 Dogs. *Veterinary Pathology*. 1993;30(3):287-295.

Figure 1. Typical sustentacular/Sertoli cell differentiation characterized by solid proliferations of polyhedral to elongate cells separated by prominent fibrous septa
Figure 2. Typical seminomatous differentiation characterized by rounded cells with large euchromatic nuclei growing in dense sheets and packets. **Figure 3.** Tubular structures displaying admixture of peripheral sustentacular type cells surrounding luminal seminomatous cells.



Case by:
 Luke Haydock BVSc (Dist.) DVSc DACVP

IDEXX

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2024 DTF-LCPG ACTIVITIES IN LATIN AMERICA

Country	Name of Seminar	Dates	Place/University	Speakers	Organizers
Argentina	XVIII Seminar of the Argentinean Subdivision of the Davis-Thompson Foundation and XII Forum on Teaching Veterinary Pathology.	Aug 22-23 	Rosario, Argentina. Facultad de Ciencias Veterinarias, Universidad Nacional de Rosario	Francisco Uzal, Fabio Vanucci, Pablo Piñeyro, Luary Carolina Martínez Chavarría	Leonardo Minatel
	Latin American roadshow: Gastrointestinal pathology	Oct 24-25	Buenos Aires, Argentina. Universidad de Buenos Aires.	Francisco Uzal	Leonardo Minatel
Brazil	2024 Brazilian Symposium of the DTF - Pathology of zoo and wildlife	Sept 20-22 	Universidade Federal de Minas Gerais - Belo Horizonte, MG, Brazil	Denise McAloose	Renato de Lima Santos / Ayisa Rodrigues de Oliveira
Chile	Pathology of wildlife	Aug 8-9 	Valdivia, Chile. Universidad Austral de Chile	Mauricio Seguel, Enrique Paredes, Mauricio Navarro, Manuel Moroni.	Mauricio Navarro
Colombia	Latin American roadshow: Gastrointestinal pathology	Nov 1-2	Barranquilla, Colombia. Universidad San Martin	Francisco Uzal	Paola Barato
Costa Rica	Workshop in freshwater fish medicine and pathology in Latin America	Mar 27-28 	San José, Costa Rica. Escuela de medicina y cirugía veterinaria San Francisco de Asís	Esteban Soto, Paola Barato	Roberto Olivares
Guatemala	Latin American roadshow: Gastrointestinal pathology	Nov 4-5	Ciudad de Guatemala, Guatemala. Universidad de San Carlos.	Francisco Uzal	Déborah Rodríguez
México	IV on-line necropsy course	Apr 8-19 	México (On-line)	Elizabeth Rodríguez, María del Carmen Carmona, Alfredo Pérez, Mario Bedolla, Carlos González, Elizabeth Morales, Gerardo Salas, Mireya Juárez, Luis García-Márquez, Diana Galván, Rubén López, Laura Romero, Francisco Carvallo.	Rubén Lopez
	V seminar of the Mexican subdivision of the Davis-Thompson Foundation: Bovine pathology	Oct 17-18	Facultad de Medicina Veterinaria y Zootecnia "Dr Norberto Treviño Zapata", Universidad Autónoma de Tamaulipas	Mario Bedolla, Luis Jorge García, Luis Mario Leyva, Alfonso López, Julio Martínez, Elizabeth Morales, Rafael Ramírez	Ubicelio Martín
	Workshop in freshwater fish medicine and pathology in Latin America	Nov 21-22	Faculta de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.	Esteban Soto, Paola Barato	Rubén Lopez
Paraguay	Latin American roadshow: Gastrointestinal pathology	Oct 28-29	Asunción, Paraguay. Universidad Nacional de Asunción.	Francisco Uzal	Leila Maidana, Mirtha Suarez
Uruguay	Latin American roadshow: Gastrointestinal pathology	Oct 21-22	Montevideo, Uruguay. Universidad de la República.	Francisco Uzal	Jose Manuel Verdes
Venezuela	II Seminar of the Venezuelan Subdivision of the Davis-Thompson Foundation	Jul 18-19 	Barquisimeto, Venezuela	Francisco Uzal, Joaquín Ortega, Yaritza Salas	Yaritza Salas

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**Interview with Dr. Francisco Uzal, DTF CEO,
during his visit to Venezuela**



Watch it here!

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RONDAS DE HISTOPATOLOGÍA DEL LCPG 2024 10:30 - 11:30 CT



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Casos variados

Omar A. Gonzales Viera, DVM, MSC, PhD, DACVP
en español



Deu zebra: casos atípicos ou misteriosos

Rachel Neto, DVM, MS, DACVP
em Português



Enfermedades reproductivas en animales de producción.

Melissa Macias, DVM, MSC, PhD, DACVP
en español



Casos variados

Rafaela De Negri, DVM, MSC
em Português



Pescando lesiones: navegando por la patología de peces de agua dulce

Paola Barato, DVM, PhD
en español

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Seminar Series in Spanish 2024



seminarios en español 11:00am-12:30pm CDT



Neoplasias de mastocitos
Valeria Grieco, DVM, PhD



Fotografia macroscopica en la sala de necropsias
Lluís Lujan, DVM, PhD, Dipl. ECVF



**Patologia forense veterinaria:
Generalidades y el caso de la asfixia**
Carlos Gonzalez, MV, MPhil, PhD



Sarcomas de tejidos blandos: del patólogo al oncólogo
Federico Cifuentes, MV, MSc, DrCs, DACVP
Rodrigo Crossley, MV, MS



Casos interactivos de dermatopatología
Joaquin Ortega, DVM, PhD, DACVP

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6^{to} SEMINARIO DE LA SUBDIVISION MEXICANA de la Fundación Davis-Thompson 17 Y 18 DE OCTUBRE, 2024

Patología en Bovinos



Davis-Thompson
Foundation



**Dr. Alfonso López
Mayagoitia**



**Dr. Mario Adán
Bedolla Alva**



**Dra. Elizabeth
Morales Salinas**



**Dr. Rafael
Ramirez Romero**



**Dr. Julio
Martinez Burnes**



**Dr. Luis Mario
Leyva Zapata**



**Dr. Luis Jorge
García Márquez**



Estudiantes: MX\$ 500.00
Socios SMPV: MX\$1500.00
Profesionales: MX\$ 1700.00



Facultad de Medicina Veterinaria y Zootecnia
Dr. Norberto Treviño Zapata, Universidad Autónoma
de Tamaulipas, Mante km 5 Cd Victoria Tamaulipas.

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LATIN AMERICAN ROAD SHOW
2024

Patologia del sistema digestivo

Francisco A. Uzal
DVM, MSc, PhD, DACVP

→  Arrivals

FECHA	DESTINO	ESTATUS
OCT 21-22	URUGUAY	EN PERSONA
OCT 24-25	ARGENTINA	EN PERSONA
OCT 28-29	PARAGUAY	EN PERSONA
NOV 1-2	COLOMBIA	EN PERSONA
NOV 4-5	GUATEMALA	EN PERSONA

Click in the following links to register to individual seminars

URUGUAY

ARGENTINA

PARAGUAY

COLOMBIA

GUATEMALA

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Universidad Nacional Autónoma de México
Facultad de Medicina Veterinaria y Zootecnia
Secretaría de Educación Continua
Departamento de Medicina y Zootecnia de Abejas,
Conejos y Organismos Acuáticos





Curso teórico-práctico

Medicina y Patología de Peces en América Latina

21 y 22 Noviembre, 2024



21 noviembre TEÓRICO de 8 a 18:30 h MODALIDAD HÍBRIDA

Presencial Auditorio Pablo Zierold Reyes 200 asistentes

En línea  zoom 300 participantes

22 noviembre PRÁCTICO 15 asistentes de 9 a 12 h
15 asistentes de 14 a 17 h

Presencial FMVZ-UNAM incluye material

Registro de inscripción del 9 de septiembre al 8 de noviembre

Fecha límite de pago: 11 de noviembre

REGISTRO A AMBAS MODALIDADES

REGISTRO: <https://forms.gle/cYN2eLPeCSbcovUp7>

Envío del link para ZOOM: 13 de noviembre

Envío de aprobaciones para unirse al evento: 18 y 19 de noviembre





Esteban Soto
MSc, DVM, PhD,
Dipl. ACVM, CertAqV



Paola Barato
DVM, Esp, PhD

Teórico-práctico	Teórico
<p> \$1600.00 Nacionales</p> <p>90 USD Extranjeros</p>	<p>\$800.00 Nacionales</p> <p>45 USD Extranjeros</p>
<p>Entregar copia de identificación</p>	

Taller orientado en anestesia, eutanasia y toma de muestras diagnósticas en peces ornamentales y de consumo



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LCPG:

- Provides Diagnostic Exercises
- Offers travel awards
- Coordinates externships in US labs for Latin Americans
- Organizes and lectures in Latin American seminars and courses

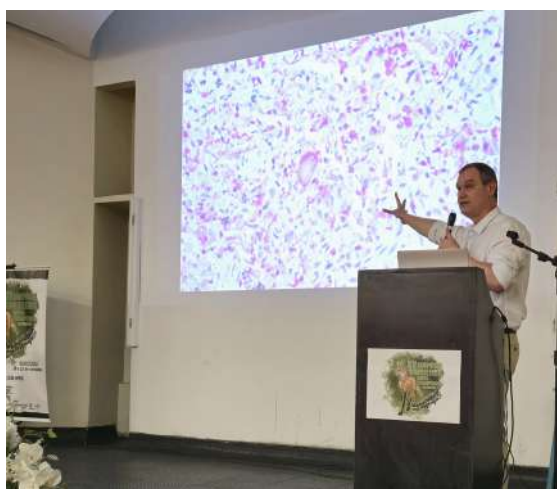
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XV Brazilian Symposium of the Davis-Thompson Foundation

by Dr Ayisa Oliveira

The XV edition of the Brazilian Symposium of the Davis-Thompson Foundation, organized by the Escola Veterinária of Universidade Federal de Minas Gerais (UFMG) together with the Latin Comparative Pathology Group (LCPG) and Associação Brasileira de Patologia Veterinária (ABPV) promoted a 5-days event of immersion in wildlife conservation and pathology. The first two days corresponded to the pre-symposium, and were hosted by two professors from UFMG, Brazil: Dr. Ayisa Rodrigues de Oliveira and Dr. Renato de Lima Santos.



Prof. Dr. Renato de Lima Santos in one of his talks at the pre-symposium



Prof. Dra. Ayisa in her talk at the pre-symposium.

Attendants were able to receive training in histopathological diagnosis of various diseases with different etiologies in wild and exotic animals, both free-ranging and kept under human care, through the presentation of real routine cases. The lectures were



Attendants watching the pre-symposium talks.

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interactive, allowing participants to ask questions and present their differentials and diagnoses during the lectures, with each module ending with a quiz asking participants questions regarding the cases presented, with prizes for the top three ranked.

All slides of the cases presented were made available to participants in advance in their digitized version so that they could be evaluated by everyone prior the event. Approximately 50 people attended the activities, ranging from undergraduate and postgraduate students to professionals and professors from various Brazilian and foreign institutions



Quiz prize at the end of the pre-symposium

On September 20th, the Symposium activities began, including in-person lectures given by Dr. Dee McAloose. She presented her projects at the Bronx Zoo, in New York, and Wildlife Conservation Society, in addition to discussing their initiatives and conservation programs on different continents and illustrating cases from her diagnostic routine.

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The event also featured virtual lectures by renowned professionals in wildlife veterinary medicine, such as Dr. Patricia Gaffney, Dr. Karen A. Terio, Dr. Tabitha Viner, Dr. Laura Keener and Dr. Tracie A. Seimon.



Dr. Dee McAloose seminar



Virtual talk with Prof. Dr. Karen A. Terio

On the last day of the Symposium, oral presentations of selected abstracts were held, totaling eight, originating from routine cases in the most diverse species and etiologies, ranging from classic cases, rare cases or diagnostic challenges.



Dr. Dee McAloose at the presentation of oral presentation certificates

During the symposium, more than 80 people attended the seminars, including undergraduate veterinary students, postgraduate students, residents, professionals and veterinary medicine professors from the most diverse locations of Latin America.

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We greatly appreciate the support of the Davis-Thompson Foundation, which, through the Latin Comparative Pathology Group (LCPG), made it possible for Dr. Dee McAloose to come to Brazil. We thank ABPV for all the support and investment, as well as the financial support granted by the CRMV-MG Continuing Education program and the financing companies: Vetmol, Outset



XV Brazilian Symposium of the Davis-Thompson Foundation event closing picture



MISCELLANEOUS ANNOUNCEMENTS



Davis-Thompson
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OCT 2024

OCT 2028

CONGRATULATIONS DR. UZAL

We are proud to announce that our CEO has been elected Vice-President of the American Association of Veterinary Laboratory Diagnosticians (AAVLD).

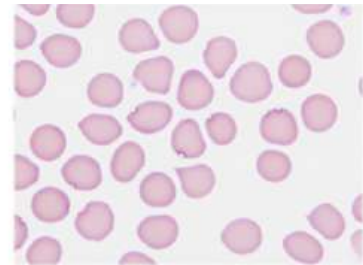
This prestigious role is a 4-year commitment, during which he will serve in a series of one-year appointments to the offices of the Vice-President, President-Elect, President, and Immediate Past-President of AAVLD.

MISCELLANEOUS ANNOUNCEMENTS

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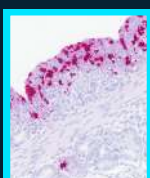
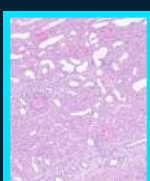


2024 AAVLD Annual Meeting



October 13th, 2024
2:00 PM-5:00 PM
Gaylord Opryland Resort
& Convention Center

PATHOLOGY COMMITTEE SUNDAY SEMINAR: PIG DISEASES SEMINAR



Program:

- 2:00 Welcome – Rachel J. Derscheid and Melissa Macías-Rioseco
- 2:10 Porcine Gastrointestinal Pathology and Laboratory Diagnosis of Disease- Dr. Eric Burrough
- 3:00 Break
- 3:10 Porcine Cardiopulmonary Pathology and Laboratory Diagnosis of Disease-Dr. Rachel J. Derscheid
- 4:00 Break
- 4:10 Diagnostic Approach to Neurological Infectious Diseases and PCV-Associated Diseases- Dr. Pablo Piñeyro

Our Presenters:



**DR. ERIC BURROUGH DVM,
PHD, DIPLOMATE ACVP**

Iowa State University
College of Veterinary Medicine
Veterinary Diagnostic Laboratory



**DR. RACHEL J. DERSCHIED,
DVM, PHD, DIPLOMATE ACVP**

Iowa State University
College of Veterinary Medicine
Veterinary Diagnostic Laboratory



**DR. PABLO PIÑEYRO,
DVM, MVSC, DVSC, PHD**

Iowa State University
College of Veterinary Medicine
Veterinary Diagnostic Laboratory

Additional Questions:

- Melissa Macías-Rioseco:
mmaciasrioseco@ucdavis.edu
- Rachel J. Derscheid:
rdersch@iastate.edu

REGISTRATION: \$75

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MISCELLANEOUS ANNOUNCEMENTS



**2024 AAVLD
Annual Meeting**

**October 12th, 2024
6:00 PM-8:30 PM**

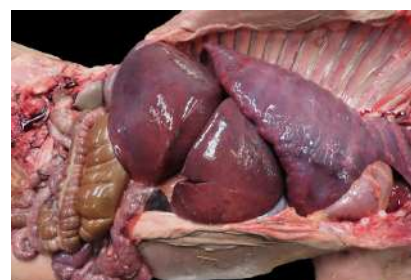
Interpretive Pathology Mock Exam

The AAVLD Pathology Committee is hosting the "interpretative pathology mock exam" (formerly the gross mock exam) aimed at preparing residents for the ACVP Anatomic Pathology Certification Exam (phase 2). Two mock exams will be offered by ACVP board-certified pathologists. While this session is primarily designed for resident training, everyone is welcome.

Registration is required but the session is free to attend. Pizza and soft drinks will be served!

Program:

- 6:00-6:10 pm Welcome and Introduction: Eileen Henderson & Heidi Pecoraro
- 6:10-6:40 pm Mock exam 1: Melissa Macías-Rioseco
- 6:40-7:10 pm Review of mock exam 1: Melissa Macías-Rioseco
- 7:10-7:30 pm Break
- 7:30-8:00 pm Mock exam 2: Melissa Swan
- 8:00-8:30 pm Review of mock exam 2: Melissa Swan



Our Presenters:



**Melissa Macías-Rioseco,
DVM, MPVM, PhD,
DACVP**

California Animal Health
and Food Safety
Laboratory, University of
California-Davis



**Melissa Swan,
DVM, MS, DACVP**

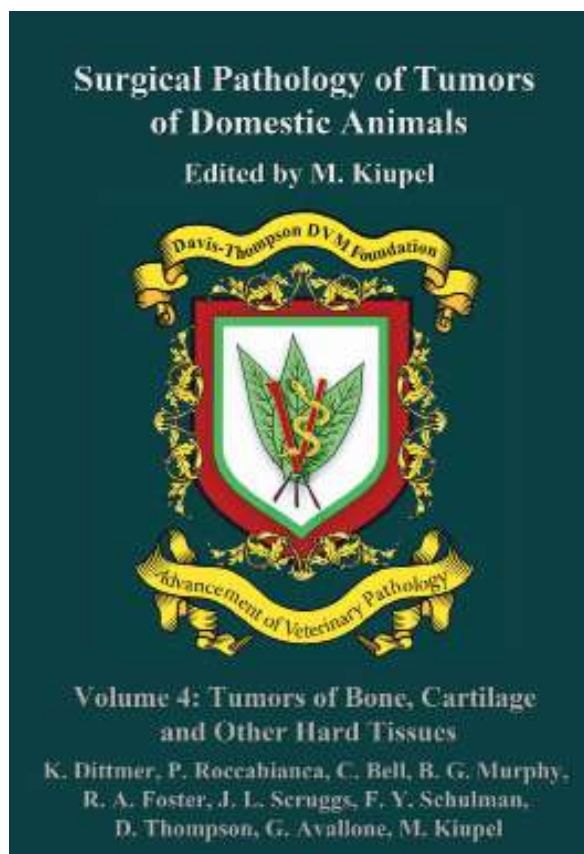
University of Kentucky

**Gaylord Opryland Resort
& Convention Center**
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Additional Questions:

- Eileen Henderson (eehenderson@ucdavis.edu)
- Heidi Pecoraro (heidi.pecoraro@ndsu.edu)

MISCELLANEOUS ANNOUNCEMENTS



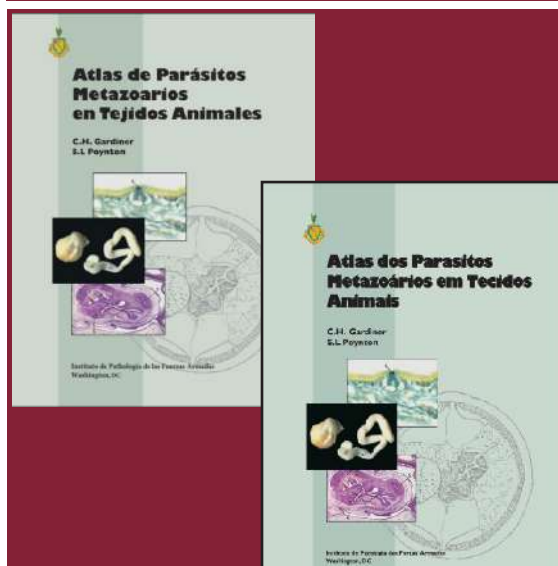
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Have slides left over from your recent slide seminar? Just looking to free up some storage space? The Foundation is looking for additional glass slides, kodachromes and other similar materials for its Correspondence Division and Study Centers. All materials should be well identified with as much accompany history and discussion as possible, as these materials are expressly used for teaching. Moreover, as the Foundation is a publicly donative charity, all donated materials are tax-deductible. For more information, please contact Dr. Bruce Williams at bruce.h.williams.dvm@gmail.com.

Davis-Thompson Foundation Pathology Externship

Since 1980, the Davis-Thompson Foundation lab sites have hosted more than 125 veterinary students at 8 participating diagnostic laboratories. These students usually have a strong interest in pathology itself or zoo or poultry medicine that require a strong pathology background. The Foundation is always interested in having veterinary students apply for an externship and we would like to add more externship sites that do not usually have veterinary students, to help increase their interest and knowledge of pathology with some off-campus experience. For more information, contact Dr. Jim Britt, jobritt@sbcglobal.net; 501-912-1449.



Atlas De Parasitos Metazoarios En Tejidos Animales and Atlas dos parasitos metazoários em tecidos animais - [Click Here](#) to Get a Digital Download!



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OCTOBER 2024