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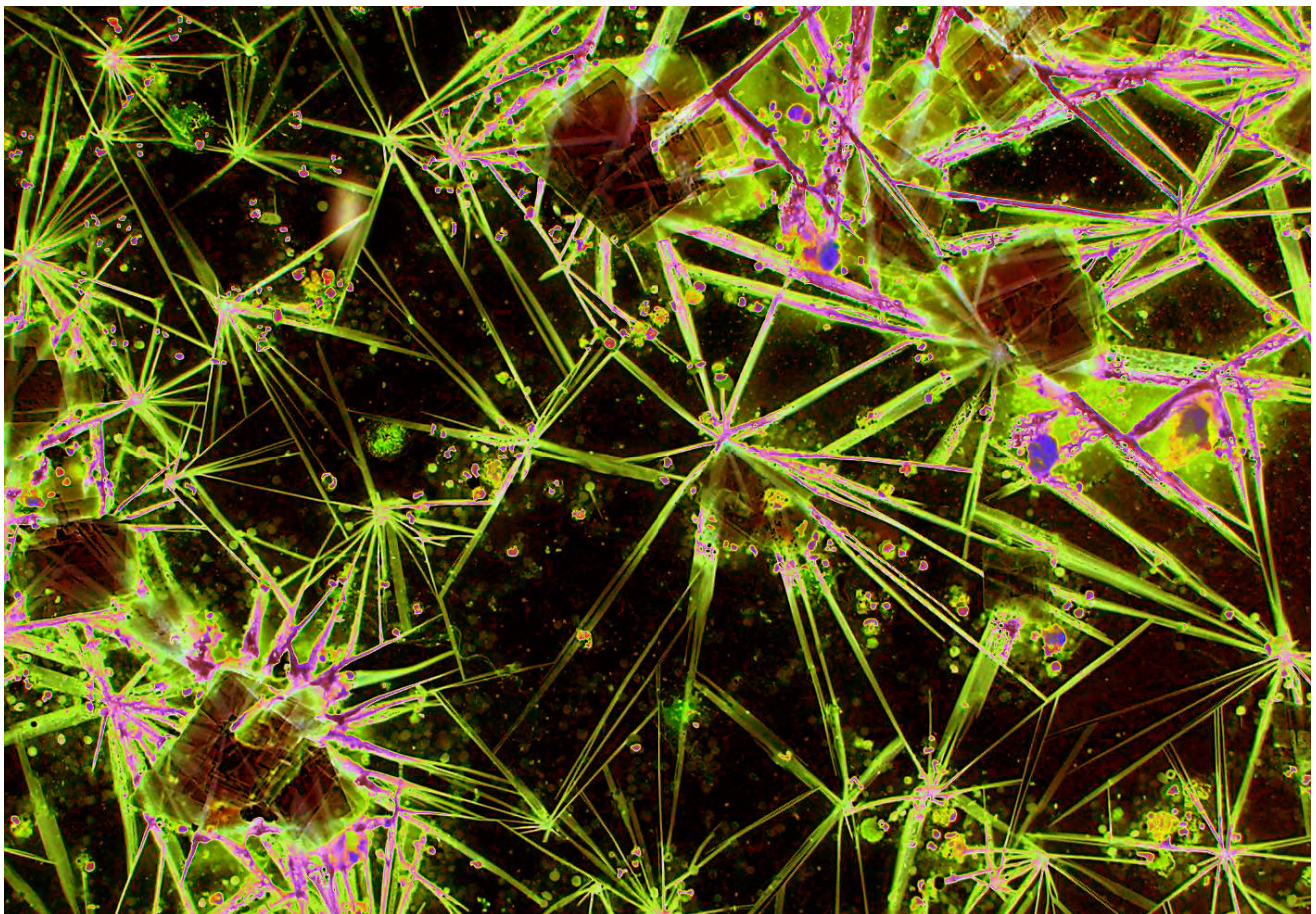
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# THE DAVIS-THOMPSON FOUNDATION NEWSLETTER

December 2021

VOL. 51



# INSIDE THIS ISSUE

## Monthly cover photograph winner: CPT Emily Swan

Affiliated Institution: Joint Pathology Center (JPC)

Slow air drying of a hemodiluted fine needle aspirate from a dog with an inflamed follicular cyst or neoplasm resulting in the formation of hemoglobin crystals and scattered rhomboid cholesterol crystals.

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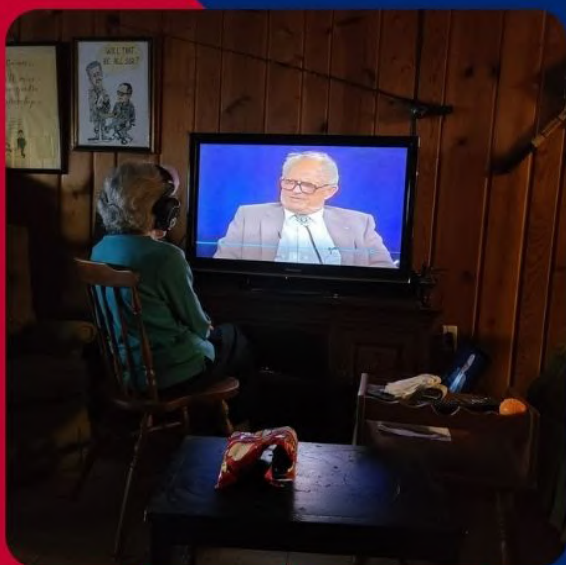
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# FOUNDATION ANNOUNCEMENTS



This Veteran's Day, I want to share a picture that I know will touch the hearts of all of our members, as I myself wipe a few tears.

As you know, recently, we have opened the door to our Foundation archives, and made available everything we recorded from 1985-2007. One of these tapes, in our Legends of Veterinary Pathology, focused on two legends, Dr. John Gorham of Washington State University, and his classmate, colleague and long-time friend, Dr. F.M. Garner. Dr. Garner had many claims to fame - author of the first two-volume set on the pathology of laboratory animals, Chairman of the AFIP's Department of Veterinary, decorated Army veteran who was wounded multiple times on D-Day in France, and also the father of our very own Dr. Mike Garner.

One of the best parts of digitizing all of these wonderful lectures is that it gave his widow Anita, (104 years young) the opportunity to see and hear her husband and his stories once again.

Bruce Williams  
Chief Financial Officer  
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# SEMINAR REVIEWS



## Patologia macroscopica de bovinos by Dr. Mario Bedolla



The lecture was great. Beautiful macroscopic images and wonderful cases. It was a very instructive walk between common and rare cases of cattle diseases.



Un seminario bastante completo, donde el Dr fue muy claro, acompañado de buenas imagenes ilustrativas.



Muy bueno y practico, interesantes casos y fotos!

## SEMINAR REVIEWS



Integrating radiology, cytology and histology in the diagnosis of bone tumours

by Dr. Keren Dittmer



It was a great seminar on a very difficult topic to me. She was clear and explicit in sharing opinions, especially in relation to small biopsies which often taken from bone tumors.

# Davis-Thompson Foundation



Fantastic. The more integrated clinical approach in the recent seminars makes them more interesting and relevant to someone like me, who does in-practice clin path, but always relating it to the outsourced histopath results.



Great presentation with excellent images! Thank you Dr. Dittmer!





## DIAGNOSTIC EXERCISE



Case: **174**; Month: **October**; Year: **2021**

**Contributors:** Emily Hoskins<sup>1</sup>; Lauren W. Stranahan<sup>1</sup>, DVM, DACVP; Alice Blue-McLendon<sup>1,2</sup>, DVM; Raquel Rech<sup>1</sup>, DVM, MS, PhD, DACVP

<sup>1</sup>Department of Veterinary Pathobiology, and <sup>2</sup>Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX, USA ([rrech@cvm.tamu.edu](mailto:rrech@cvm.tamu.edu))

**Clinical History:** A 25-year-old female emu (*Dromaius novaehollandiae*) presented with a 1-week history of lethargy, hyporexia, and recumbency. The bird had lived its entire life at the Winnie Carter Wildlife Center in Texas and had an unremarkable medical history, apart from bilateral congenital blindness.

**Necropsy Findings:** Within the coelomic cavity, the serosal surface of the intestines was coated with a moderate amount of tan to green, mucoid, opaque, foul-smelling fluid (fibrinoheterophilic coelomitis) (Fig. 1).



Figure 1: The colon is markedly distended and covered with multifocal strands of fibrin



## DIAGNOSTIC EXERCISE



The large intestine was diffusely dilated and filled with dark red fluid and strands of yellow, friable material (fibrin). The mucosa of the small intestine, and most severely the colon, was diffusely roughened, thickened, dull, and covered by a thick yellow to green, opaque, friable diphtheritic membrane (Fig. 2). The distal colon was diffusely, markedly distended and focally contained a 50x7x5 cm, semi-firm accumulation of feces coated by a 4-5 mm diameter layer of tan, friable material (fibrin) located 21 cm from the opening of the cloaca. Gross evaluation of the eyes revealed bilateral aphakia.

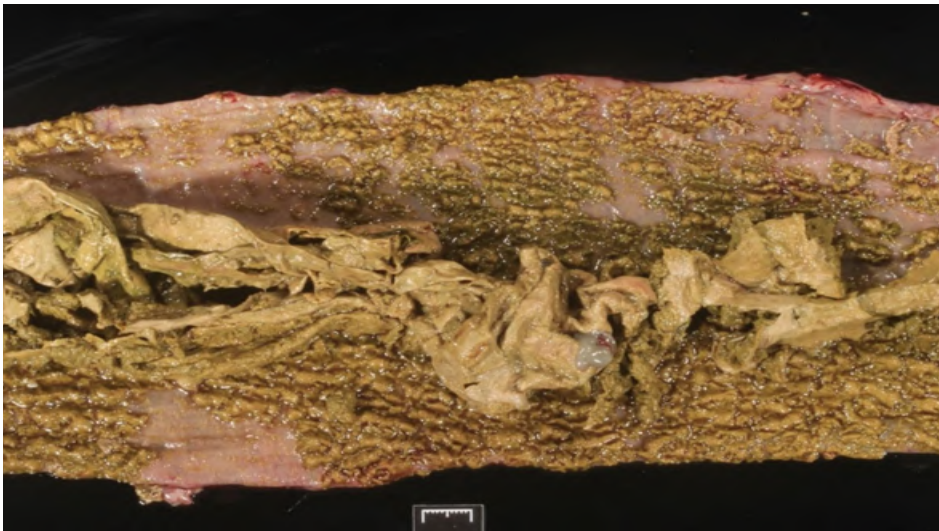


Figure 2: A thick diphtheritic membrane composed of fibrin and necrotic debris coats the small intestinal mucosa.

### Follow up questions:

*Morphologic diagnosis*

*Ancillary tests to determine the etiology*

**[Click here for answers!](#)**

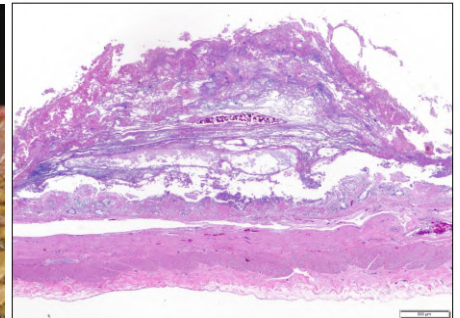


Figure 3: H&E stain.

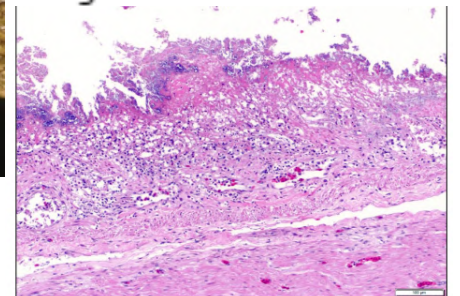


Figure 4: H&E stain.

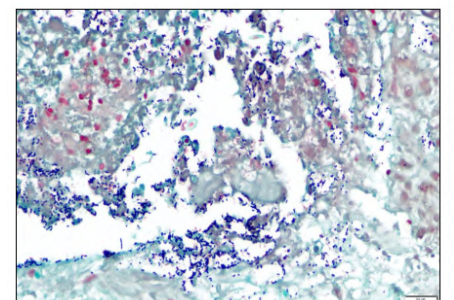


Figure 5: Gram stain.



# SPANISH SEMINAR SERIES

## Spanish Seminar Series



Davis-Thompson Foundation

**8/6/2021** Casos practicos de patologia aviar



Natalia Majó  
(Universitat Autònoma de Barcelona)

**9/3/2021** Enfermedades de conejos



Juan Manuel Corpa Arenas  
(Universidad CEU Cardenal Herrera)

**10/1/2021** Neumonía intersticial en animales: Definiciones, causas y mecanismos



Francisco Carvallo  
(Virginia Tech)

**11/12/2021** Patologia macroscopica de bovinos



Mario Bedolla  
(Universidad Autonoma de Mexico)

**12/3/2021** Enfermedades de cetaceos



Antonio Fernandez  
Universidad de las Palmas de Gran Canaria, Islas Canarias

**12/10/2021** Patologia de lagomorfos con especial énfasis en la enfermedad vírica hemorrágica



Javier Asin  
(UC-Davis)

- All seminars in Spanish

Click here to  
register for individual  
seminars



# STANDARDISATION OF TUMOR PARAMETERS

**International /European Division of  
Davis-Thompson Foundation**



Davis-Thompson  
Foundation

**Standardisation of Tumor Diagnostic and  
Prognostic Parameters in Veterinary Pathology**

**Wednesday, December 8, 2021**

**4 pm - 5 pm (London Time = Greenwich Mean Time (GMT))**

**11 am - noon (US East Coast)**

**5-6 pm (Germany)**

**FREE SEMINAR!**



**Dr. Taryn Donovan**

**Animal Medical Center (New York - US)**

**-This seminar is preapproved by  
the ACVP Maintenance of Certification  
(MOC) Committee for 1 credit**

[https://us02web.zoom.us/webinar/register/WN\\_b\\_-d1MaZS6iAKpe52DJ5A](https://us02web.zoom.us/webinar/register/WN_b_-d1MaZS6iAKpe52DJ5A)

## SEMINAR SERIES IN PORTUGUESE



**Davis-Thompson Foundation**

**Brazilian Webinar Series**

**15 de dezembro 2021 das 17-18:30 BRT**

**in Portuguese**

## Patologia de Felinos



**Silvia França Baêta**

**DVM, MSc, PhD**

**Universidade Federal do  
Piauí**

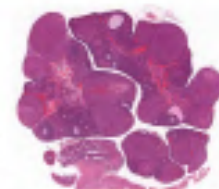
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# BSTP CORNER



Virtual Continuing Education Symposium 5: Female Reproductive System  
Tuesday 8th – Thursday 17th March 2022  
13.00 – 16.30 (GMT+0/UCT+0)



*CES 5 will be held as a virtual event using Zoom on the afternoons of Tuesday 8th, Wednesday 9th, Thursday 10th, Tuesday 15th, Wednesday 16th and Thursday 17th March 2022, from 13.00 – 16.30 (GMT+0/UCT+0) each day.*

**Continuing Professional Development:** Royal Society of Biology CPD credits will be applied for.

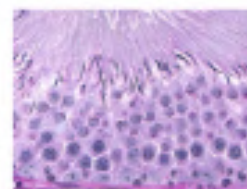
This Continuing Education Symposium will cover an overview of the female reproductive system in preclinical animal species.

Detailed information, including the programme and a registration form will be available in September/October 2021.

If you would like further information, have any queries or would like to reserve a place, please contact the BSTP Secretariat – [bstpoffice@aol.com](mailto:bstpoffice@aol.com)

or visit <http://www.bstp.org.uk/events/ces-5-female-reproductive-system/>

Virtual Continuing Education Symposium 6: Male Reproductive System  
Tuesday 5th – Thursday 14th July 2022  
13.00 – 16.30 (GMT+1/UCT+1)



*CES 6 will be held as a virtual event using Zoom on the afternoons of Tuesday 5th, Wednesday 6th, Thursday 7th, Tuesday 12th, Wednesday 13th and Thursday 14th July 2022, from 13.00 – 16.30 (GMT+1/UCT+1) each day.*

**Continuing Professional Development:** Royal Society of Biology CPD credits will be applied for.

This Continuing Education Symposium will cover an overview of the male reproductive system in preclinical animal species.

Detailed information, including the programme and a registration form will be available in December 2021/January 2022.

If you would like further information, have any queries or would like to reserve a place, please contact the BSTP Secretariat – [bstpoffice@aol.com](mailto:bstpoffice@aol.com)

or visit <http://www.bstp.org.uk/events/ces-6-male-reproductive-system/>



# BSTP CORNER



## DATES FOR FUTURE EVENTS TO BE ORGANISED BY THE BSTP:

Future BSTP events are as follows:

<b>10th, 11th &amp; 12th November 2021</b>	<b>36th Annual Scientific Meeting – Pathology of mice with human immune systems (HIS mice)</b>
<b>26th November 2021</b>	<b>BSTP Annual General Meeting</b>
<b>8th – 17th March 2022</b>	<b>CES 5 - Female Reproductive System</b>
<b>5th – 14th July 2022</b>	<b>CES 6 - Male Reproductive System</b>
November 2022	37th Annual Scientific Meeting & AGM
March 2023	CES 7 - Infectious diseases in laboratory animals
July 2023	CES 8 - Nervous System
November 2023	38th Annual Scientific Meeting & AGM
March 2024	CES 9 - Urinary System
July 2024	CES 10 - Digestive System
November 2024	39th Annual Scientific Meeting & AGM
March 2025	CES 11 - Cardiovascular System
July 2025	CES 12 - Endocrine System
November 2025	40th Annual Scientific Meeting & AGM
March 2026	CES 13 - Urinary System
July 2026	CES 14 - Lymphoid & Haematopoietic Systems
November 2026	41st Annual Scientific Meeting & AGM
March 2027	CES 15 - Musculoskeletal System & Skin

The order of the CES will depend on the availability of high-quality speakers who are world experts in their particular field to present at the relevant meeting.

For details of webinars visit - <http://www.bstp.org.uk/events/bstp-webinars/> or <http://www.bstp.org.uk/non-bstp-events-and-webinars/>

If you would like to receive information on any of these events as soon as the information becomes available, you need to make sure that the BSTP have your contact details on the mailing list.

You can withdraw your consent to receive communications from the BSTP at any time, by means of a written/emailed request for removal from the database.

Although the BSTP is in contact with similar organisations in Europe and the USA it is the policy of the BSTP **NOT** to pass on details of our mailing list.

The BSTP's Data Protection Policy can be found at <http://www.bstp.org.uk/governance/>

For more information on any of these meetings, keep checking the website - <http://www.bstp.org.uk/events> or contact the BSTP Secretariat - [bstpoffice@aol.com](mailto:bstpoffice@aol.com)

**Details of future meetings are correct at the time this information is produced, the BSTP will not be held responsible for any changes to dates, venues and topics of these events.**

If you have any queries, or require further information regarding this symposium, please contact:

BSTP | PO Box 819 | Harrogate HG1 9XF | North Yorkshire | UK

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Email: [bstpoffice@aol.com](mailto:bstpoffice@aol.com)

Website: [www.bstp.org.uk](http://www.bstp.org.uk)



# IDEXX CASECONNEXX CORNER

**Signalment:** 2-month-old, Mourning Dove, unknown sex

**Source/ History:** Young Mourning Dove raised from a nestling in rehabilitation. Dove is weaned and living outside with other doves. When caught for pre-release evaluation, a 1 cm diameter mass was noted on the dorsal right carpus. Wound was debrided and some necrotic, caseous material removed. Wound was treated with chlorhexidine and SSD. An impression smear was taken that was mostly blood but also had some very large, round, basophilic cells in small sheets. Patient started on meloxicam and ceftiofur and moved inside to soft housing. No change in wound over 5 days, remains proliferative and with significant hemorrhage when disturbed.

## Microscopic Description:

Expanding the epidermis, are broad trabeculae and sheets of hyperplastic squamous epithelium. Frequently within keratinocytes, there are eosinophilic inclusion bodies up to 16  $\mu$ m in diameter present in the cytoplasm (Bollinger's inclusion bodies). There is mild spongiosis in the epidermis. Within the dermis, are small numbers of lymphocytes, plasma cells and occasional heterophils/granulocytes. There is mild erosion in the epidermis.

## Microscopic Interpretation:

Moderate to marked, multifocal epidermal hyperplasia with many cytoplasmic, eosinophilic inclusion bodies (Bollinger's inclusion bodies, consistent with poxvirus infection) and mild, multifocal lymphoplasmacytic and heterophilic/granulocytic inflammation

## Comments:

Histologic examination of the skin biopsy from the dorsal carpal region revealed a proliferative/hyperplastic epidermis with mild mixed inflammation in the dermis. In many of the keratinocytes, there are large eosinophilic intracytoplasmic inclusion bodies (Bollinger's inclusion bodies) consistent with an Avian poxvirus infection.

Avian poxvirus infection is a common, slowly spreading viral disease of domestic, pet, and wild birds. Birds of all ages are susceptible; however, young individuals are typically affected. Transmission of the virus most commonly occurs through direct contact with infected birds or through mechanical transfer (biting insects such as mosquitoes) and fomites. In some cases, transmission can occur through inhalation or infection through open skin wounds.

Avipoxvirus infection classically presents as one of two forms (dry/cutaneous or wet/diphtheritic) though both forms can occur within the same bird. The dry form is the cutaneous form typically found on non-feathered skin of the head, feet and legs. The wet form is the diphtheritic form and often causes ulcerative, fibrinonecrotic to plaque-like lesions. The oral cavity, trachea, lungs, and air sac are the sites most commonly affected with this form.

Cutaneous pox lesions are typically self-limiting; however, secondary bacterial and fungal infections can occur and may contribute to increased morbidity and mortalities. Recurrence of cutaneous pox lesions is also possible.

Reference: Pledger A. Avian pox virus infection in a mourning dove. Can Vet J. 2005;46(12):1143-1145; Karen Terio, Denise McAloose & Judy St. Leger, eds. Pathology of Wildlife and Zoo Animals. 1st ed. San Diego, CA: Academic Press, 2018

Case by  
Joseph Malatos, DVM, DACVP

**CaseConnexx**

Visit [CaseConnexx.com](http://CaseConnexx.com) to Register

**IDEXX**

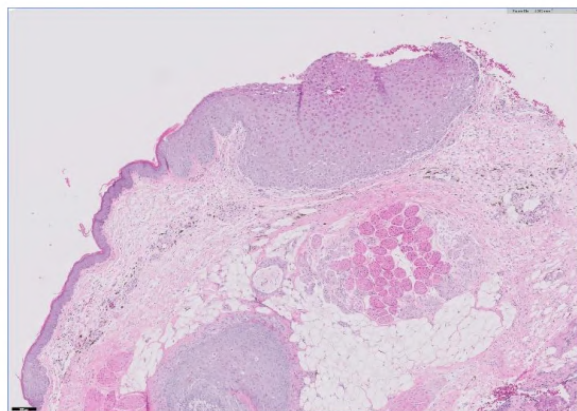


Figure 1. (10X magnification, H&E stain) The epidermis is segmentally expanded by broad trabeculae and sheets of hyperplastic squamous epithelium.

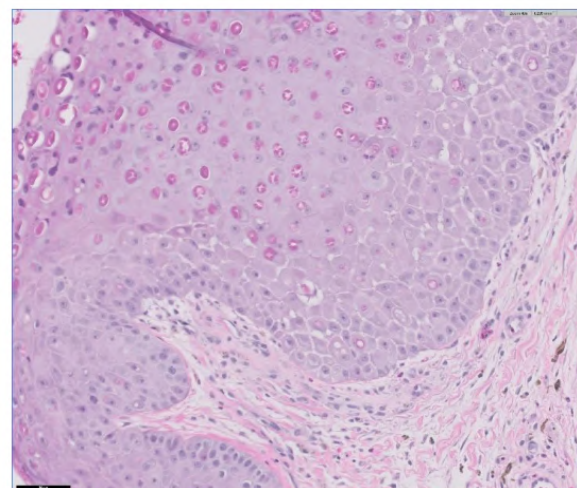


Figure 2. (40X magnification, H&E stain) Frequently within the cytoplasm of keratinocytes, there are eosinophilic inclusion bodies (Bollinger's inclusion bodies). There is mild spongiosis in the epidermis.

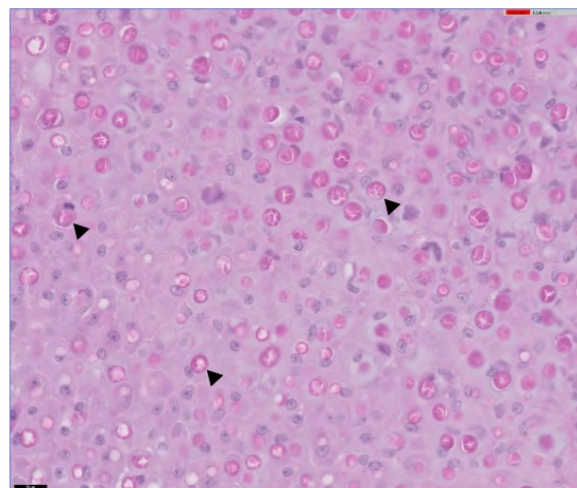


Figure 3. (60X magnification, H&E stain) Many keratinocytes contain cytoplasmic eosinophilic inclusion bodies (black arrowheads) up to 16  $\mu$ m in diameter.



# MISCELLANEOUS ANNOUNCEMENTS



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LCPG is the proud Latin American Division of the Davis Thompson Foundation



## MISCELLANEOUS ANNOUNCEMENTS



[www.vcgp.org](http://www.vcgp.org) is now live!

The goal of the website and the mission of VCGP is to improve care for animals with cancer through standardization of tumor evaluation and reporting. This website provides guidelines for assessing common parameters used in the light microscopic assessment of animal tumors as well as complete protocols recommended for investigators seeking to establish tumor grading systems. VCGP created this website to maintain these guidelines and protocols as centralized resources for veterinary anatomic and clinical pathologists to assist in reporting and gathering relevant information about aggressive tumors. Detailed protocols and guidelines are educational and research resources while the concise versions are user ready checklists for diagnosticians and editors/reviewers of manuscripts. These are living documents that will be updated and are continuations of manuscripts published by our veterinary pathologist colleagues.

Below is the link to a recent publication: International Guidelines for Veterinary Tumor Pathology: A Call to Action - <https://doi.org/10.1177/03009858211013712>

# MISCELLANEOUS ANNOUNCEMENTS

## Surgical Pathology of Tumors of Domestic Animals

Edited by M. Kiupel



### Volume 3: Tumors of Soft Tissue

P. Roccabianca, F. Y. Schulman,  
G. Avallone, R. A. Foster, J. L. Scruggs,  
K. Dittmer, M. Kiupel

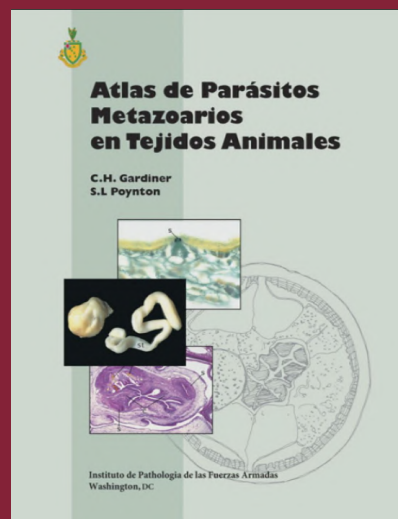
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## RETIRING?

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](mailto: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](mailto:jobritt@sbcglobal.net); 501-912-1449.



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[clDavisdvm@comcast.net](mailto:clDavisdvm@comcast.net)

DECEMBER 2021