Infectious Diseases Laboratory

College of Veterinary Medicine

UNIVERSITY OF GEORGIA

Fall/Winter 2022-2023

IDL welcomes two pathologists to our team!

Meet IDL's new pathologists, Drs. Caitlin Burrell (left) and Bryce Miller (right).

IDL is pleased to announce that two pathologists joined our laboratory and the UGA Zoo and Exotic Animal Pathology Service (ZEAPS) teams over the summer.

Caitlin Burrell, DVM, MS, DACVP

Dr. Burrell joined IDL in June as a research scientist and faculty pathologist on our UGA Zoo and Exotic Animal Pathology Service team. Since 2020, she has worked as a wildlife pathologist for the Southeastern Cooperative Wildlife Disease Study at UGA where she conducted disease surveillance and diagnostic

She was board-certified by the American College of Veterinary Pathologists in 2021, after completing her residency in anatomic pathology and master's degree at the Zoological Pathology Program at the University of Illinois College of Veterinary Medicine. During her residency, she worked with a number of zoos, aquaria, and wildlife agencies to gain extensive experience in the pathology of a wide range of species, including avian, reptile, amphibian, aquatic, and terrestrial and marine mammals. Her master's research investigated the pathogenesis of canine distemper virus infections in wildlife species. Prior to transitioning to the pathology field, Dr. Burrell practiced clinical medicine of domestic, companion exotic, and zoo and wildlife species as well as conducted international research on the health and reproductive physiology of giant and red pandas. She has experience working in private practice, academia, and zoological institutions.

As a zoo and exotic animal pathologist, Dr. Burrell enjoys delivering information to clients that can be used to provide quality care for non-domestic animals. She has a special interest in zoo and wildlife conservation and appreciates her role in contributing to the further understanding of these fascinating species.

Bryce Miller, DVM, DACVP

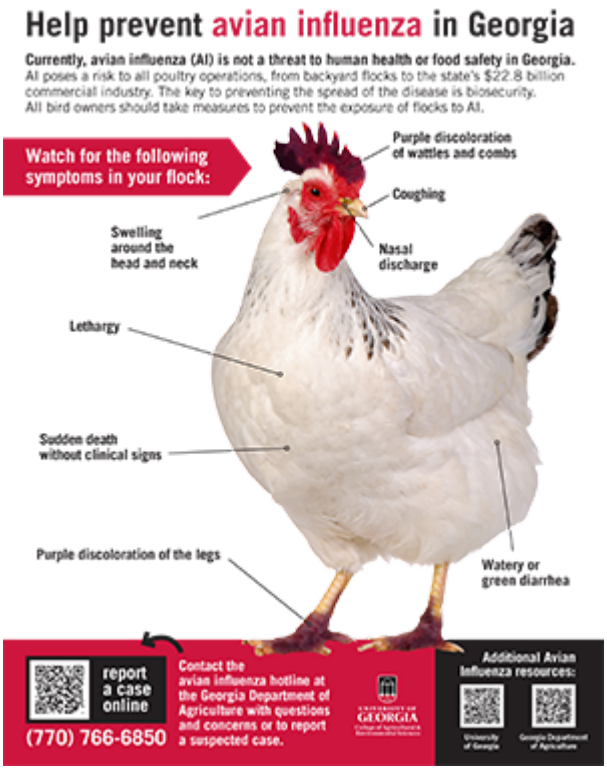
Dr. Miller joined IDL in September as a research scientist and faculty pathologist. She was board certified by the American College of Veterinary Pathologists in 2022, after completing her residency in anatomic pathology at the University of Florida. She graduated cum laude from their veterinary program in 2019 and earned a certificate in Aquatic Animal Medicine during her DVM training.

At the University of Florida, she was fortunate to train under Dr. Robert Ossiboff and Dr. Nicole Stacy where she gained a special appreciation for infectious diseases, particularly of reptiles and amphibians. Dr. Miller's training thus far has included work on a number of exotic species ranging from sea lions to boa constrictors, multiple tortoise and sea turtle species, and other poikilotherms, including marine invertebrates, especially hard clams (*Mercenaria mercenaria*).

As a zoo and exotic animal pathologist, she is most motivated by diagnostic pathology in these incredible species and the comparative histology and pathophysiology she encounters daily. Additionally, she looks forward to being in an academic position that allows for mentorship and didactics, as teaching both veterinary students and veterinary residents cultivates a great deal of joy for her. She feels fortunate to be in this unique position and looks forward to working with our clients and colleagues.

Presentations

Dr. Branson W. Ritchie presented **"A global crisis — plasticosis — research results describing the known and unknown impact and effects to avian species,"** on Monday, August 15, 2022, at the International Ornithological Congress. His presentation was made during Symposia Session 1, number 8, "The opportunities of collaboration between ornithological research and research in avian veterinary medicine." The 28th IO Congress was presented virtually, August 15-19.



(Flyer created by UGA Extension.)

Suspect HPAI in pet chicken or small flock? What to do.

As the U.S. heads toward winter—our second consecutive in this battle—it remains steeped in its fight against the latest outbreak of Highly Pathogenic Avian Influenza (HPAI) that was first detected in the U.S. in early 2022. Per USDA APHIS, as of December 1, HPAI has been detected in 650 flocks (276 commercial, 374 backyard), affecting 52.43 million birds in 46 states. This represents a 30% increase in the total number of commercial or backyard birds affected, a 28% increase in the number of states where the virus has been detected, and a 75% increase in the number of flocks with detections (48% commercial, 101% backyard) since IDL last checked the number

HPAI has been detected in 4,238 wild birds from all but two of the lower 48 states, and Alaska, as of November 29. That is also a steep rise in cases since IDL checked on June 17, when there were 1,558 detections in wild birds from all but 8 states (Hawaii, California, Nevada, New Mexico, Louisiana, Arkansas, Mississippi, West Virginia). West Virginia and New Mexico remain the only states where no detections have occurred, as of December 2, 2022.

H5N1 is a reportable disease

HPAI H5N1 was first detected in wild birds in Europe in fall 2020 and quickly spread through Europe and into Africa, the Middle East and Asia, where it has impacted wild birds, commercial and backyard birds, and wildlife. Globally, it has been the predominant strain of the latest outbreak. And while the risk is low, H5N1 is one of two strains (the other being H7N9), according to the U.S. Centers for Disease Control and Prevention, responsible for most human HPAI infections worldwide. In April 2022 the U.S. reported its first human case of HPAI—a patient infected with H5N1 through contact with diseased birds while involved in culling a flock. In late 2021 in the U.K., a person who raises birds became infected with H5N1 through handling an infected bird. Both patients survived, the CDC reported.

The USDA classifies HPAI as a foreign animal disease, so it's a reportable disease. See the box below for resources to help you, should one of your patients present with suspected HPAI. If you have a suspect case, you should call your state veterinarian and APHIS as quickly as possible. Helping your clients understand biosecurity for HPAI, and to quickly implement better practices, is critical to slowing down the spread of the virus. HPAI can live for weeks on surfaces, especially in cooler temperatures. HPAI can infect mammals that are in close contact with domestic animals and people, including cats and pigs. The incubation period may be as long as 21 days.

It's worth noting to your clients, and we certainly see proof in the numbers above: Owners of small flocks and pet chickens are advised to keep birds indoors during AI season.

Contact IDL if you have questions

Should you encounter HPAI in your practice and need support from IDL, please don't hesitate to call or email us. We cannot currently provide testing services for official diagnosis of HPAI H5N1, but we can answer your general questions about HPAI. **706-542-5812 or idl@uga.edu**

HPAI Resources:

USDA APHIS: Avian Influenza

USDA HPAI Ready Reference Guide—Overview of Etiology and Ecology

AVMA.org-Avian Influenza: Veterinarians

Recent Manuscripts

Brittany J. McHale and Frane Banovic. Topical imiquimod therapy for localized solar dermatitis in a dog. Topics in Companion Animal Medicine. 2022 Sep-Oct; 50:100673. https://doi.org/10.1016/j.tcam.2022.100673

Daniel R. Rissi, Brittany J. McHale, and Andrew D. Miller. Primary nervous system lymphoma in cats. JVDI. 34:4. https://doi.org/10.1177/10406387221090281

Songrui Liu, Yunli Li, Dongsheng Zhang, Xiaoyan Su, Chanjuan Yue, James E. Ayala, Xia Yan, Rong Hou, Lin Li, Yi Xie, Guifu Zhou, Rita McManamon, and Kuixing Yang. Mortality analysis of captive red panda cubs within Chengdu, China. BMC Veterinary Research. 2022; 18:68. https://doi.org/10.1186/s12917-022-03170-2

Mauricio Seguel, Rita McManamon, Drury Reavill, Fern Van Sant, Sayed M. Hassan, Branson W. Ritchie, and Elizabeth Howerth. Neuropathology of feral conures with bromethalin toxicosis. JVP. 2022. https://doi.org/10.1177/03009858221082300

Emerging Diseases

We recommend testing for pan-circovirus, as other PBFD-like lesions have been observed in birds (including psittacines) that are not circovirus 1 or circovirus 2. Call the laboratory if you need assistance with diagnosing or managing outbreaks involving any variants of circovirus. 706-542-5812

The **first case of Rabbit Hemorrhagic Disease in Georgia** was documented in a companion rabbit sent to the Infectious Diseases Laboratory's Zoo and Exotic Animal Pathology Service (ZEAPS).

Updates on policies, tests, etc.

Reminder: Our necropsy/histopathology charges will increase by 5% in fiscal year 2023 for non-stipend clients, as our costs for slides continue to increase 5% annually.

IDL's Holiday Schedule

We thank you for your business and wish you and your colleagues a Happy Holiday Season and successful 2023!

Please remember that during this season shipping of samples via all carriers may be slower than normal and problems with sample delivery or shipper loss increase. Please allow extra time for delivery and please ensure your package is properly addressed:

INFECTIOUS DISEASES LABORATORY
110 Riverbend Rd.
Riverbend North, Rm. 150
University of Georgia
Athens, GA 30602

Our phone numbers:
(706) 542-8092 (office); (706) 583-0843 (Fax); (706) 542-5812 (Lab)

How the holidays impact your shipments and our services:

December and January: The University of Georgia is closed from December 26, 2022, through January 2, 2023. IDL is open during this time, but the UGA closing influences our staffing and all UGA support services. IDL will receive UPS and FedEx packages on December 23, and 26-30. However, we will not receive U.S. mail each day.

Molecular Diagnostic Tests (December 26-January 2): IDL will be short-staffed and phone coverage will be reduced. We will complete diagnostic tests as sample volume dictates. We recommend you ship any elective screening samples to arrive prior to December 21 or after January 2.

Histopathology Services through the UGA Zoo and Exotic Animal Pathology Service (ZEAPS): Support services (histopathology processing, some diagnostic tests) through our UGA partners (Pathology Department and Athens Veterinary

samples, and test reporting will be reduced. Please send histopathology cases to arrive prior to December 19 or after January 2. Pathologist availability (Drs. Brittany McHale and Bryce Miller) will be limited to emergencies only. If you need an emergency necropsy or have other concerns, please contact Dr. Brittany McHale on her cell at 815-575-2954 and she will coordinate your case.

We hope you enjoy your holiday season!

--The Infectious Diseases Laboratory Staff and the ZEAPS Pathologists

Dr. Brittany McHale, Holly Beach, Kara Huff, Dr. Bryce Miller, Dr. Caitlin Burrell, Roger Nilsen, Teri Roloson and Dr. Bran Ritchie

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