2023 ANNUAL REPORT

I've been looking forward to writing this note about 2023 for many months and wondering how I would fit what I want to say into my allotted space. My overall message is "thank you"... to all ADDL stakeholders who advocated for the biennial budget request, provided feedback to the strategic plan, and trusted the lab with their diagnostic needs.

I'm thrilled that the ADDL received an unprecedented 35% increase to the recurring state funding plus \$5 million in non-recurring funds to address critical infrastructure needs in the West Lafayette necropsy facility and to update the laboratory's software that manages everything from sample submission to reporting of results. We are in the process of filling newly funded positions, finalizing plans for the necropsy facility update, and evaluating prospective software systems. The changes made possible by these funding increases will improve both the laboratory's operations and the clients' experience.

During all of 2023, we sought feedback from a variety of stakeholders, and this effort has culminated in a strategic plan to guide the transformation of ADDL to become the "go-to lab" for Indiana. I appreciate the time and energy committed to this process. The honest and frank feedback that many of you provided was instrumental to the development of the plan. I can tell you without question that the ADDL's strategic plan is 100% stakeholder-driven. I encourage you to take a moment to review the Strategic Plan Framework on page 2. With any transformation, the implementation could get bumpy, so we will actively assess outcomes, seek your feedback, and adjust the plan as needed.

Other noteworthy happenings of 2023 include joining the Swine Disease Reporting System (page 3), the launch of tests to identify canine genetic diseases (page 4), and recognition of the accomplishments of ADDL team members (page 5) and their contributions to science (pages 7-11).

Looking forward, I anticipate many significant changes in 2024. Clients will notice improvements to their online experience with the lab due to the software upgrades as well as improved customer service as we expand our team. As we implement various elements of the strategic plan, our clients will experience the shift to a "service culture" focus as highlighted as one of seven strategic priorities.

We recognize that you have a choice when seeking diagnostics, and we are committed to continuously improving our services. We look forward to working with you in 2024 as we dedicate ourselves to supporting animal health in Indiana.

Dr. Kenítra Hendríx, ADDL Dírector



ADDL STRATEGIC PLAN FRAMEWORK

JANUARY 2024

Mission

Provide reliable, innovative, and vigilant services to veterinarians, animal producers, and regulatory agencies.

Vision

To be Indiana's "go-to lab" for diagnostics and surveillance testing for all production animal, companion animal, and wildlife species.

Values: Integrity, Trust, and Collaboration

With a skilled and dedicated workforce delivering services that meet all current standards, the ADDL plays an integral role in animal health by coordinating diagnostic strategies and delivering timely test results to partners in multiple sectors of veterinary medicine.

Strategic Deliverables

- Ensure food security for all Indiana citizens by protecting the state's \$4 billion-plus animal-ag sector.
- Engage and support the growing equine and companion animal sectors of Indiana.
- Enhance the retention of current animal agriculture and animal health businesses while attracting new animal-sector employers to Indiana.

Strategic Priorities

- 1. Foster a world-class service culture.
 - Prioritize test quality, speed (responsiveness and turnaround), and value to the client when delivering all ADDL operations and diagnostic processes.
- 2. Deliver species/client-centric service strategies.
 - Develop and provide the full spectrum of diagnostic tests, customized for each primary animal sector: Aquatic, Companion Animal, Equine, Poultry, Ruminant, Swine, and Wildlife.
- 3. Provide accurate and prompt Foreign Animal Disease (FAD) surveillance and response.

 Implement an effective and efficient ADDL FAD plan and collaborate with state and national leadership in FAD response planning.
- 4. Be a trusted animal-health resource.
 - Create a science-based knowledge hub for animal professionals in Indiana, and provide practical training to veterinarians and Purdue Veterinary Medicine students.
- 5. Implement agile and innovative management strategies.
 - Implement a phased transition to in-house management of expenses to an agreed annual budget while optimizing investments, expenses, operations, digital technologies, marketing, and personnel policies to deliver the laboratory's mission and vision.
- 6. Invest in a highly-skilled workforce and provide a stimulating and rewarding work environment. Attract, develop, retain, and create promotion opportunities for the laboratory's skilled and dedicated employees.
- 7. Invest in state-of-the-art equipment and facilities.
 - Formulate capital budget plans to upgrade facilities and operate as a NAHLN Level-1 laboratory (including Biosafety Level 3 confinement areas) and play a prominent role in national programs.

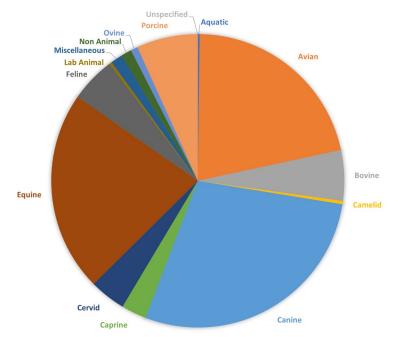
406 South University Street West Lafayette, IN 47907 P 765-494-7440



Animal Disease
Diagnostic Laboratory

11367 E Purdue Farm Rd Dubois, IN 47527 P 812-678-3401

Accessions by Species (West Lafayette & Heeke combined)



Tests by Calendar Year

	2021	2022	2023
WL ADDL	101,006	108,480	112,148
HEEKE	46,776	31,753	41,458
TOTAL	147,782	140,233	153,606

Accessions by Calendar Year

	2021	2022	2023
WL ADDL	23,155	27,607	28,238
HEEKE	2,536	1,871	2,151
TOTAL	25,691	29,478	30,389

ADDL Joins the Swine Disease Reporting System

The ADDL is now one of six veterinary diagnostic laboratories in the country that is messaging data to the <u>Swine Disease Reporting System</u> (<u>SDRS</u>). The SDRS provides monthly reports in multiple formats of media detailing diagnostic data of swine from 11 states. Diagnostic results and trends are available for PRRS, IAV-S, MHP, PCV2, PED, PDCoV, and TGE. Dr. Craig Bowen, ADDL Assistant Director, participated in episode 67 of the SDRS podcast – <u>Purdue ADDL joins the SDRS project</u>. For more information, you may also read <u>Animal Disease Diagnostic Laboratory Joins Swine Disease Reporting System Network as State Funding Increases</u> | <u>Purdue University College of Veterinary Medicine</u>.

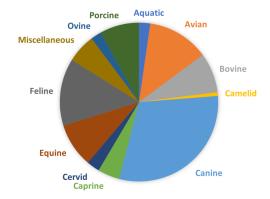




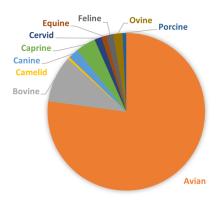


AUTOPSY (NECROPSY) CASE NUMBERS BY SPECIES

WEST LAFAYETTE - 2023



HEEKE - 2023



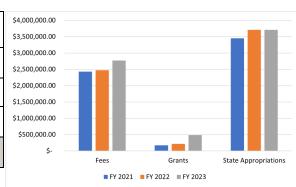
CANINE GENETICS

We had the unique opportunity in 2023 to collaborate with Dr. Kari Ekenstedt, a research geneticist, and fill a need for canine genetics testing based on unpublished data. In just a few months we performed over 1600 tests from samples originating from 4 continents, 21 countries, and 42 states. You can read more about this collaboration at Doctoral student plays key role in new genetic testing for helping dog breeders eliminate specific diseases - Purdue University News.



REVENUE SOURCES

Type of Revenue	FY 2021	FY 2022	FY 2023
Fees	\$2,427,290.91	\$2,473,751.15	\$2,772,162.73
Grants	\$172,034.92	\$216,929.19	\$484,295.51
State Appropriations	\$3,451,751.73	\$3,711,516.00	\$3,711,516.00*
Total	\$6,051,077.56	\$6,402,196.34	\$6,967,974.24



^{*}The 35% increase to recurring funds will be reflected in FY 2024.



BRAVO AWARDS

Congratulations to **Angie**Chan, Amy Smeltzer and
Meggan Stanton on receiving
Bravo Awards in 2023!







Promotions

Clinical Associate Professor of Comparative Pathobiology

Dr. Deepti Pillai





Clinical Professor of Comparative Pathobiology

> Dr. Christina Wilson-Frank



20 YEARSOF SERVICE
Louann Albregts



Board Certifications

Dr. Christina Wilson-Frank, Diplomate, American Board of Toxicology

Dr. Ladislav Novotny, Diplomate, American College of Veterinary Pathologists

Dr. Courtney Sweeney, Diplomate, American College of Veterinary Pathologists

Submission Forms

ADDL Submission forms are routinely updated with current test offerings. Please visit the <u>Submission Form</u> page of the website to ensure you are up-to-date.

Online Results Portal

The online portal for web access to case reports has undergone several back-end changes to allow the IT developers to create new and exciting features for the future. We appreciate your patience and understanding as we navigate any glitches that were not uncovered during beta testing. If you discover an issue while working in the portal, please **email** the lab and let us know.

ADDL Advisory Committee

The **ADDL Advisory Committee** serves the critical role of representing the interests of various sectors to the ADDL leadership. Thank you to the following individuals for their time and dedication to the ADDL.

Dr. Steve Bales IVMA

John Baugh College of Agriculture

Michelle Benavidez Westrich DNR

Paul Brennan Poultry, ISPA

Jenni Browning American Dairy Association

Dr. Ellen Burcham Beef

Mark Guinn Poultry

Dr. Angela Hines USDA/APHIS

Dr. Jake Jensen Equine
Becky Joniskan ISPA

Dr. Bret Marsh Indiana State Veterinarian, BOAH

Dean Willie Reed Purdue College of Veterinary Medicine

Megan Ritter Indiana Farm Bureau

Dr. Sandra San Miguel Associate Dean for Engagement, PVM

Nick Tharp Swine

Josh Trenary Indiana Pork Producers

<u>How You Can Help</u>

Help support our work! By giving to our ADDL programs, you will help us meet the most important and urgent needs affecting animal and human health. Having financial flexibility ensures that the ADDL can remain a front-runner in scientific knowledge and discovery as our world evolves. Make a gift today at connect.purdue.edu/s/addlgifts. For more information, visit vet.purdue.edu/addl/about-us.php. Thank you!





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Publications

*Bold font indicates ADDL affiliation

Burcham GN, Fisher B, Boedeker N. Histopathologic survey of free-living populations of two species of freshwater mussels in Indiana. Vet Pathol. 60(5): 628-639, September 2023

Rush SA, Buckley NJ, Zollner PA, Kuever BM, McWherter B, **Burcham GN**, Ma Z, Wahl M, Naveda-Rodriguez. Science-drive guidelines needed to better manage and conserve black vultures in North America. Wildlife Letters. 1(2): 43-91, June 2023

Waller D, Putnam J, Steiner JN, Fisher B, **Burcham GN**, Smith SB, Remek A, Oliver J, Erickson R, Bodeker N. Targeted metabolomics characterizes metabolite occurrence and variability in stable freshwater mussel populations. Conservation Physiology. 11(1) published online June 10, 2023. DOI: 10.1093/conphys/coad040

Wahl ML, McWherter B, Ma Z, Zollner PA, **Burcham GN**, Humberg LA, Kluever BM. Livestock producer perceptions of the American black vulture conflict in the Midwestern USA. Wildl Soc Bull. 47(2), June 2023

Bonkowski JC, Buckmaster DR, **Burcham GN**, Camberato JJ, Creswell T, Gerber CK, Gruss SM, Johnson KD, Johnson WG, Krupke CH, Lemenager RP, Neary MK, Obermeyer JL, Quinn D, Telenko DEP, and Zimmer M. Forage Field Guide, 4th Edition. Purdue Cooperative Extension Service Publication ID-317. 324 pp. October 2023

Gaudette, C., LaDouceur, E. E., Troan, B. V., Whitehurst, N., Dombrowski, D. S., Lewbart, G. A., ... & Schreeg, M. E. 2023. Retrospective analysis of histologic lesions in captive arachnids. Veterinary Pathology, 03009858231162948

Hastain, S. A., Mumm, L., Ozawa, S., Petritz, O., Gaudette, C., Troan, B. V., Stowe, D. M. 2024. Osteosarcoma of the wing in a sulfur-crested cockatoo. Veterinary Clinical Pathology

Lewbart, G. A., Colosimo, G., **Gaudette**, C., Negrão Watanabe, T. T., Parker, J., Sevilla, C., ... & Gentile, G. 2023. When pink is a question: Comparative gross and microscopic skin structure analyses reveal the histological basis of skin colour in Galápagos pink land iguanas (*Conolophus marthae*). Acta Zoologica

Handberg, E., **Gaudette**, C., Knutson, K., Nelson, N., & Ozawa, S. (2023). MRI findings associated with clinical presentation and histopathology in a Mexican redknee tarantula (*Brachypelma hamorii*). Veterinary Record Case Reports, 11(1), e517

Hendrix K, Couetil L, **Peña D, Joneson J, Kattoor J, Wilkes R**. Tracking the spread of *Salmonella* sp. in a veterinary hospital outbreak using serogrouping and whole genome sequencing. AAVLD annual meeting, National Harbor, MD, October 2023

Derré MG, Steinbach SM, **Hendrix GK, Stanton M**, Adams LG. *Iodinated non-ionic contrast medium does not inhibit Escherichia coli* growth in ex vivo inoculated canine urine. Am J Vet Res. 2023 Jul 1;84(7). doi: 10.2460/ajvr.23.03.0045. Print 2023 Jul 1. PubMed PMID: 37164321

LeCuyer TE, Sellon RK, Byrne BA, Daniels JB, Diaz-Campos DV, **Hendrix GK**, Burbick CR, Besser TE, Davis MA. Multicenter molecular investigation of recurrent Escherichia coli bacteriuria in dogs. Vet Microbiol. 2023 Dec 7;288:109914. doi: 10.1016/j.vetmic.2023.109914. [Epub ahead of print] PubMed PMID: 38113575

Ekakoro JE, Guptill L, **Hendrix K**, Anderson M, Ruple A. Approaches Used to Construct Antibiograms for Dogs in a Veterinary Teaching Hospital in the United States. Antibiotics (Basel). 2023 Jun 9;12(6). doi: 10.3390/antibiotics12061034. PubMed PMID: 37370353; PubMed Central PMCID: PMC10295245

Ekakoro JE, Guptill LF, **Hendrix GK**, Dorsey L, Ruple A. Antimicrobial Susceptibility of Bacteria Isolated from Freshwater Mussels in the Wildcat Creek Watershed, Indiana, United States. Antibiotics (Basel). 2023 Apr 8;12(4). doi: 10.3390/antibiotics12040728. PubMed PMID: 37107090; PubMed Central PMCID: PMC10135199

Goni JI, **Hendrix K**, Kritchevsky J. Recovery of Salmonella bacterial isolates from pooled fecal samples from horses. J Vet Intern Med. 2023 Jan;37(1):323-327. doi: 10.1111/jvim.16586. Epub 2022 Nov 25. PubMed PMID: 36433697; PubMed Central PMCID: PMC9889685

Publications, cont.

*Bold font indicates ADDL affiliation

Brand KJ, Malek S, Ruple A, **Hendrix GK**. Evaluation of Surgical Gown Cuff Contamination During Orthopaedic Surgery in a Veterinary Teaching Hospital. Vet Comp Orthop Traumatol. 2023 Jan;36(1):21-28. doi: 10.1055/s-0042-1756621. Epub 2022 Sep 23. PubMed PMID: 36150696

Hooser SB, Investigative and Diagnostic Toxicology and Feed-Related Outbreaks. Vet Clin North Am Equine Pract. 2023 Dec 26: S0749-0739(23)00076-7. doi: 10.1016/j.cveq.2023.12.001. Online ahead of print.PMID: 38151405

Anis E., **Kattoor J.J.**, Greening S.S., Jones L., **Wilkes R.P.** 2023. Investigation of the pathogens contributing to naturally occurring outbreaks of infectious bovine keratoconjunctivitis (pinkeye) using Next Generation Sequencing. Veterinary Microbiology 282:109752

Hartman EA, **Pena Hernandez D, Hendrix GK**, Risselada M, Weng HY, Papich MG, Kim SY. Effects of storage up to 1 year on the in vitro antimicrobial activity of preformulated antibiotic-impregnated calcium sulfate beads. Vet Surg. 2023 Aug 13;. doi: 10.1111/vsu.14014. [Epub ahead of print] PubMed PMID: 37574868

Pena-Hernandez D.C., Joneson J., Wilkes R.P., Hendrix G.K. 2023. Evaluation of RapidChek® SELECTTM for the detection of Salmonella spp. in environmental samples from a veterinary hospital. Journal of Microbiological Methods 214:106843

Bista PK, Pillai D, Narayanan SK. Outer-Membrane Vesicles of *Fusobacterium necrophorum*: A Proteomic, Lipidomic, and Functional Characterization. Micro organisms 2023 August 14 https://pubmed.ncbi.nlm.nih.gov/37630642/

Bista PK, Pillai D, Narayanan SK. Characterization of Three New Outer Membrane Adhesion Proteins in *Fusobacterium nec*rophorum. Microorganisms 2023 December 12 https://www.mdpi.com/2076-2607/11/12/2968

Pillai VV, Mudd LJ, **Sola MF**. Disseminated *Halicephalobus gingivalis* infection in a horse. J Vet Diagn Invest. 2023 Mar;35 (2):173-177. doi: 10.1177/10406387221141698. Epub 2022 Dec 8.PMID: 36482716 Free PMC article.

Abraham ME, **Wakamatsu N**, **Lossie GA**, Karcher DM, Heng HG, Murakami M. Computed tomographic and magnetic resonance imaging anatomy of the coelomic cavity in market-age commercial Pekin Ducks (*Anas platyrhynchos domesticus*). Anatomia, Histologia, Embryologia, 52(6):843-861, 2023

Emelogu U, Lewin AC, Balasuriya UBR, Liu CC, **Wilkes RP**, Zhang J, Mills EP, Carter RT. Phylogenomic assessment of 23 equid alphaherpesvirus 1 isolates obtained from USA-based equids. Virology Journal 20;278

Wilkes R.P., Kattoor J.J., Weng H-Y., Anis E. 2023. Targeted next-generation sequencing assay to detect 3 *Moraxella* spp. directly from bovine ocular swabs. Journal of Veterinary Diagnostic Investigation Nov 29:10406387231216698 (online ahead of print)

Banovic F., Olivry T., Artlet B., Rothstein E., Beco L., Linek M., Zabel, S., Peters-Kennedy, J., Welle M., Wilkes R., Austel M., Linder K. 2023. Hyperkeratotic erythema multiforme (HKEM) variant in 17 dogs. Veterinary Dermatology 34:125-133. doi: 10.1111/vde.13141

Wilkes R.P. Next-Generation Diagnostics for Pathogens. 2023. Veterinary Clinics of North American Food Animal Practice 39:165-173. doi: 10.1016/j.cvfa.2022.09.003. PMID: 36731996

Tuomisto L., Kant R., Kiviranta A.M., Helkiö K.M., Sironen T., Sukura A., **Wilkes R.P.**, Kegler K. 2023. Adherent-invasive Escherichia coli associated with granulomatous colitis and extraintestinal dissemination in a Sphynx cat. Veterinary Pathology 60:336-340. doi: 10.1177/03009858231162204

Wilson-Frank C, Vet Clin North Am Food Animal Pract. 2023 Mar;39(1):157-164. doi:10.1016/j.cvfa.2022.11.001.PMID: 36731995 Review



Presentations

*Bold font indicates ADDL affiliation

Burcham GN. Black vultures—depradating or scavenging? The Wildlife Society Indiana Chapter Fall Continuing Education Seminar 2023, Jasper, IN, October 2023

Burcham GN. Bovine theileriosis in Indiana. PVM Conference, September 2023

Burcham GN. Toxic threats to ruminants in the late summer and fall pasture. PVM Conference, September 2023

Burcham GN. 911 on toxic plants: toxic plant disorders and symptoms in animals. Toxic plants and pasture walk field day. Training for Purdue extension educators. September 2023

Burcham GN. Forage-induced animal diseases. Indiana Grazing School hosted by Indiana Forage Council. Winchester, IN, June 2023; Dubois (Southern Indiana Purdue Agricultural Center), June 2023

Burcham GN and Humberg L. Black vulture livestock predation. Webinar for Purdue University extension educators. April 13, 2023

Burcham GN. Livestock diseases associated with favorable forages and preserved forages. DeKalb County Forage Forum Webinar, February 2023

Burcham GN. Livestock disorders associated with preserved forages. Heart of America Grazing Conference, Ferdinand, IN. February 2023

Burcham GN. Forage-related diseases of cattle: diseases of stored forages and toxic plants. Orange County Cattleman and Soil and Water Conservation Combined Annual Meeting, Paoli, IN, February 2023

Burcham GN. Forage-related diseases of cattle. Indiana Master Cattleman Seminar/Short course, Seymour, IN. January 2023

Burcham GN, Chan AS, Wilkes RP. Fatal asinine herpesvirus 5-associated encephalitis in two donkeys. Pathology Scientific Session, AAVLD Annual Meeting, National Harbor, MD, October 2023

Burcham GN. Case 14: Perilla mint (*Perilla frutescens*) intoxication in a heifer. AAVLD Diagnostic Pathology Slide Seminar. AAVLD Annual Meeting, National Harbor, MD, October 2023

Burcham GN, Chan AS, Wilkes RP, Fatal asinine herpesvirus 5-associated encephalitis in two donkeys. Pathology Scientific Session, AAVLD Annual Meeting, National Harbor, MD, October 2023

Frankovich A, Kattoor J, Wilkes R, Sola M. Extraintestinal pathogenic *E. coli* associated pneumonia diagnosed by whole genome sequencing and histopathology in six canine and two feline cases. ACVP annual meeting, Chicago, IL, October 2023

Derre M, Steinbach SML, **Hendrix GK**, Adams, LG. Effect of iodinated non-ionic contrast on cultures of canine urine inoculated with *E. coli*. American College of Veterinary Internal Medicine Forum, Poster presentation. June 2023

Hendrix GK. The role of veterinary diagnostic laboratories in national AMR surveillance programs. Purdue Antimicrobial Resistance Seminar Series, November 2023

Hendrix GK. Hospital infection control best practices: ADDL anecdotes, experience, and expertise. PVM Conference, September 2023

Presentations, cont.

*Bold font indicates ADDL affiliation

Hendrix GK, Couetil L, Peña DP, Joneson J, Kattoor J, Wilkes R. Tracking the spread of *Salmonella* sp. in a veterinary hospital outbreak using serogrouping and whole genome sequencing. AAVLD Annual Meeting, National Harbor, MD, October 2023

Hooser SB. Massive hepatic necrosis in dogs. Case study and test development for diagnostics. Ross University School of Veterinary Medicine, Pathology Club 3, August 2023

Hooser SB. Will invasive fungi cause zombification of dogs in Indiana? Will Poison Hemlock and Harmful Algal Blooms cause widespread death and destruction of livestock? These and a host of questions answered via ADDL Toxicology! PVM Conference, September 2023

Daniel IK, Kelly MA, Hakimi H, Ramos RAN, Saleh MM, **Kattoor JJ**, **Wilkes RP**, Verocai GG. Screening of vector-borne pathogens using targeted next generation sequencing in Texas shelter dogs. American Association of Veterinary Parasitologists Annual Meeting, Lexington, KY, June 2023

Kattoor JJ, Pires dos Santos A, **Wilkes R**. Use of targeted NGS for pathogen surveillance in dogs from indigenous communities in Brazil. CRWAD, Chicago, IL, January 2023

Bach Kmetiuk L, **Kattoor JJ**, Doline FR, Farinhas dos Santos JH, **Wilkes RP**, Pires dos Santos A, Biondo AW. Molecular owner-dog screening of multiple zoonotic pathogens in indigenous communities of Brazil. ACVP annual meeting, Chicago, IL, October 2023

Lossie GA. Biosecurity Why do We Care. Invited presentation at Shell Egg Academy, April 2024

Lossie GA. Lin TL, Newsome N. Call the Doctor We have Dead Crows. Case report presented at North Central Avian Disease Conference, April 2023

Lossie GA. Invited Speaker for Coop Camp University (online poultry education space), April 2023

Lossie GA. Invited Faculty Member and speaker for Midwest Poultry Consortium, May 2023

Lossie GA. When Poultry Need Pet Vets. PVM Conference, September 2023

Lossie GA. Common Backyard Poultry Conditions and Diagnostic Sampling. PVM Conference, September 2023

Lossie GA. The Current Highly Pathogenic AI Situation and Special Consideration for Pet Birds. PVM Conference, September 2023

Lossie GA. Turkey Reoviral Encephalitis. Invited Speaker for Ontario Association of Poultry Veterinarians, November 2023

Newsome N, Sellers HS, **Lossie G, Burcham GN.** Detection of avian encephalomyelitis virus in turkey poults. American Association of Avian Pathologists Annual Meeting, Jacksonville, FL, June 2023

Peña D, Hartman E, Risselada M, Weng HY, Papich M, **Hendrix GK**, Kim SY. Efficacy of pre-formulated antibiotic-impregnated calcium sulfate beads against common pathogens in orthopedic surgery. Purdue AMR Conference, Poster presentation. April 2023

Peña D, Joneson J, Hendrix GK. Evaluation of RapidCheck SELECT for the detection of *Salmonella* spp. in environmental samples from a veterinary hospital. Association of Public Health Laboratories ID Lab Con, Poster presentation. March 2023

Sarah Kelley, M. Carlson, A. AbdelKhalek, **D. Pillai**. Does Host Stress Influence Virulence of *Clostridioides difficile*? at the Purdue Veterinary Medicine Summer Research Scholar Symposium, West Lafayette IN, August 2023

Sola MS and **Burcham GN**. Potential pitfalls in the utilization of a large language model as an advanced search engine for diagnostic pathology-related queries. Pathology Scientific Session. AAVLD Annual Meeting. National Harbor, MD, October 2023

Presentations, cont.

*Bold font indicates ADDL affiliation

Sola MS, Histopathologic Patterns of Pneumonia in Swine. PVM Conference, September 2023

Diaz PG, Wilkes RP, Woeste K, Chan A, Richards H, Osborn F, Hooser S. Diagnosis of plant poisonings using PCR. Purdue Veterinary Medicine Summer Research Scholar Symposium, West Lafayette, IN, August 2023

Wilkes, R.P. Next generation sequencing and its use in vector-borne disease panel conception and validation, and syndromic panel development, American College of Veterinary Pathologists/ American Association of Veterinary Clinical Pathologists Annual Meeting, Chicago, IL, October 30, 2023

Wilkes R.P. Difficult to diagnose diseases: FIP and Johne's. PVM Conference, September 2023

Rotstein D, Proia, Guag J, Peloquin S, Jones J, Hodges, Glover, Queen, Hdabe, Palmer, Carey, Payne, Henson, Chastagner S, Van Twuyver S, Bertling L, Miller H, Yee C, Chigurupati S, Swinford G, **Wilkes R**, Sasaki E, Carossino M, Baker RE, Wenzlow N, Del Piero F, Lee J, Aghaian A, Gomez G, Hensley T. Multi-state *Clostridium botulinum* type C outbreak in horses from alfalfa cubes. ACVP Annual Meeting, Chicago, IL, October 2023; AAVLD Annual Meeting, National Harbor, MD, October 2023

Neely D, Mosley Y-Y, Naikare HK, Corsaro S, **Wilkes RP**, Anis E, Sanchez S. Feline respiratory infections: A retrospective analysis of clinical cases submitted to Georgia Veterinary Diagnostic Laboratories (2012-2022). AAVLD Annual Meeting, National Harbor, MD, October 2023

Gonzalez-Jassi H, Fithian J, Doden G, More S, Ramachandran A, Taylor BM, Cino Ozuna G, **Wilkes R**, Brandao J. Presumptive vaccine-induced distemper in 4 domestic ferrets (*Mustela putorius furo*). ExoticsCon, Boston, MA, August 2023



Animal Disease Diagnostic Laboratory

RELIABLE, INNOVATIVE, VIGILANT

THE PERSISTENT PURSUIT OF HEALTHIER ANIMALS AND COMMUNITIES

Purdue University is an equal access/equal opportunity/affirmative action university.