

The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) Histopathology Section provides accurate and timely interpretation of lesions important to the diagnosis of various animal diseases. The agency staffs 10 anatomic pathologists with a broad array of expertise including diseases of horses, cattle, small ruminants, companion animals, deer, poultry, pet birds, amphibians, reptiles and zoo animals. Six of the pathologists are board certified by the American College of Veterinary Pathologists and two by the American College of Poultry Veterinarians. A complete listing of pathology services is available online at tvmdl.tamu.edu.

Requests for routine pathology testing come from two basic sources – surgical specimens and necropsy specimens. Surgical specimens, or biopsies, are submitted by a veterinarian from a live animal and can be incisional or excisional. Examples include masses/tumors, resected portions or whole internal organs, bone, muscle, soft tissues and skin. Samples typically are obtained by the veterinarian and can range from endoscopic biopsies to entire amputated limbs or resected organs such as the spleen or kidney. Necropsy specimens may include pieces or whole organs collected in the interest of determining the cause of death or underlying disease.

For the best results, regardless of origin, tissues should be placed in ample 10% neutral buffered formalin for proper fixation. It is recommended to use a 10:1 ratio of formalin to tissue, as this will ensure the best possible preservation of tissues and, thus, best results for histopathological study.

Tissue samples should be relatively thin with uniform thickness (1/4 inch) to allow adequate penetration and fixation. Samples thicker than this remain raw or unfixed internally and are of poor quality for examination.

Note: *Fresh tissue samples for culture, PCR, toxicology, etc. can be thicker and should be collected and submitted in addition to thinner samples for histopathology. When fresh tissue is submitted with formalin fixed tissue, the formalin container should be securely closed double bagged to ensure that there is no leakage.*

• Immunohistochemistry (IHC)

IHC uses the specificity of an antibody-antigen reaction to identify a wide variety of targets. These include cancer markers and a whole host of infectious agents including bacteria, viruses, fungi, protozoa, parasites and prions. No special fixation is required for IHC testing. It is also done on formalin-fixed tissue samples and typically will be run on the tissue already submitted to the lab for routine histopathology.

Presently, TVMDL offers CD3 (T cell lymphocyte) and CD 20 (B cell lymphocyte), with additional IHCs under development. TVMDL is also approved to perform testing for the Chronic Wasting Disease and Scrapie IHC National Surveillance Program. In addition, our pathologists have access to a nationwide network of laboratories that allows us to source a broad offering of IHC testing to meet the needs of our clients.

Trusted Expertise

Judy Akins, DVM, MS

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Dr. Akins was in mixed & small animal practices for 4 years before completing residencies in anatomic and clinical pathology. She works in the College Station laboratory, and her areas of interest include the emerging field of veterinary forensic pathology & diseases of the equine species.

Andres de la Concha-Bermejillo, DVM, PhD

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Dr. de la Concha provides macroscopic and microscopic pathology diagnostic services for livestock & companion animals at the College Station lab. His special interests include ruminant species (bovine, caprine, cervid, ovine) reproductive systems and infectious diseases. Dr. de la Concha is fluent in both Spanish and English.

Martin D. Ficken, DVM, PhD

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Dr. Ficken is an expert source for poultry (avian) diseases & pathology, with emphasis on highly pathogenic avian influenza. He is a licensed veterinarian & board-certified in both veterinary pathology and avian pathology working out of the Gonzales laboratory. Dr. Ficken has extensive experience in animal vaccine development & manufacturing, this includes protocol development, animal procurement, experiment execution and data collection.

William Gilmore, DVM, PhD

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Dr. Gilmore has more than 30 years' experience as a veterinary pathologist working in the Amarillo laboratory, focusing on ruminant pathology. He has extensive experience with diseases relating to beef and dairy production.

Gabriel Gomez, DVM, PhD

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Dr. Gomez specializes in respiratory and alimentary systems. Dr. Gomez completed his graduate work in Brucella subunit vaccinology using the mouse model. His primary interest lies in intracellular bacterial diseases & host immunobiology. He is interested in zoonotic, emerging & re-emerging infectious diseases of livestock. Dr. Gomez works in the College Station laboratory, is a board-certified veterinary pathologist & is fluent in Spanish.

R. Gayman Helman, DVM, PhD, MA

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Dr. Helman's 35 years' hands-on experience in food animal diagnostics, toxicology, pathology & companion animal diagnostics makes him an expert on a number of veterinary diagnostic topics, especially large animal related. He is the Amarillo laboratory resident director. In addition, he is a board-certified veterinary pathologist.

R. Jay Hoffman, DVM, PhD

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Dr. Hoffman is a board-certified veterinary pathologist, and he performs necropsy & histopathology with specified scrapie & chronic wasting disease experience at the College Station laboratory. Additionally, he has experience & great interest in neurologic and cardiac case study.

Barbara C. Lewis, DVM, MS

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Dr. Lewis is a board-certified veterinary pathologist working in the College Station laboratory. She is available for consultation on mammalian pathology (necropsy and histopathology) including large & small animals, zoo, wildlife and exotic species. She has special interests in surgical pathology, ocular pathology, parasitology & orthopathology of equine catastrophic racetrack injuries.

Randle Moore, DVM, PhD

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Dr. Moore is a board-certified poultry veterinarian performing necropsy and pathology services at the laboratory in Center. He completed his graduate work in poultry physiology, immunology and endocrinology. He also has research experience in poultry bacteriology including salmonellosis and has expertise with poultry physiology diseases.

Eric Snook, DVM, PhD

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Dr. Snook is a board-certified veterinary pathologist working in the College Station laboratory. He previously conducted research in comparative neuropathy. His current diagnostic interests include exotic animals (specifically reptiles and amphibians), & dogs and cats.