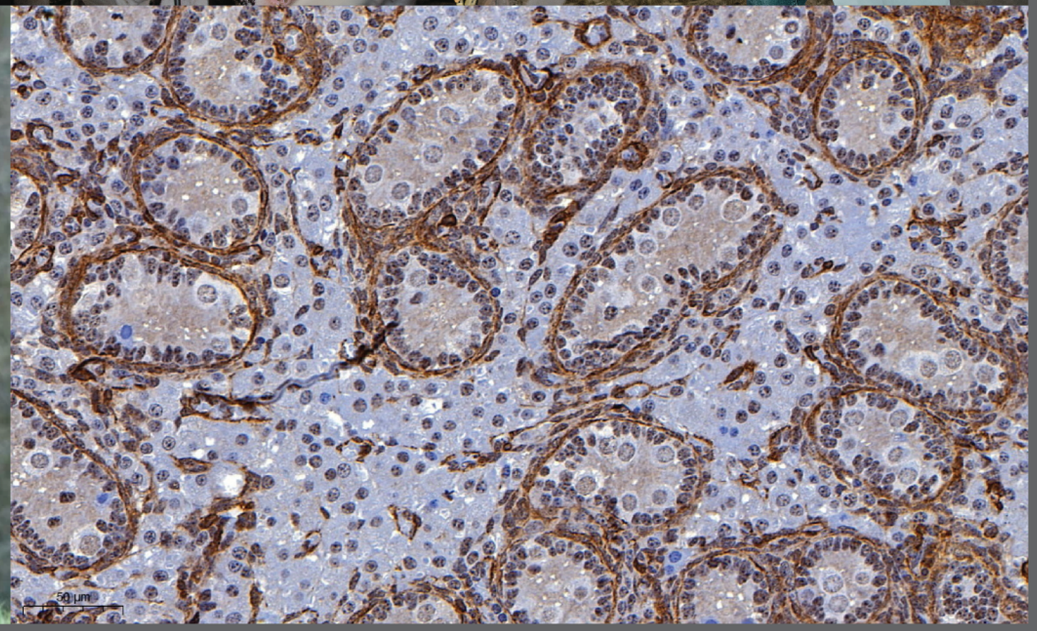
3DHISTECH

# VETERINARY SOLUTIONS



## Veterinary research is pivotal in enhancing the health and well-being of *companion animals, livestock, and wildlife*.

For companion animals, advancements in veterinary research lead to better diagnostics, treatments, and preventive care, ensuring longer and healthier lives for pets.

In the agricultural sector, animal health laboratories strive to improve the quality of both terrestrial and aquatic animal products.

Wildlife conservation efforts also benefit from veterinary research, which helps manage diseases in wild populations and supports rehabilitation and reintroduction programs for endangered species.

## Introduction to the Impact of Whole Slide Imaging on Veterinary Health

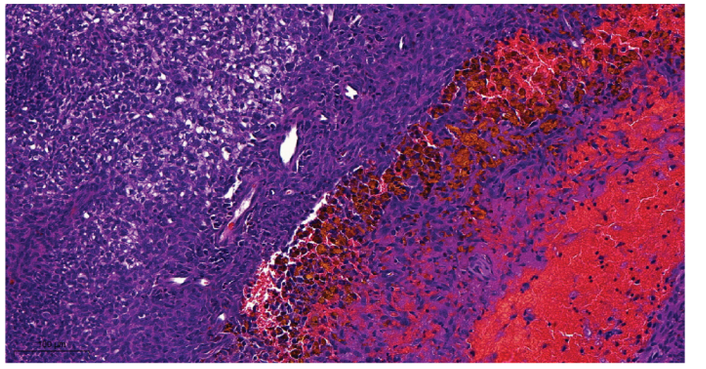
Utilizing whole slide imaging technology in conjunction with routine and special staining techniques, as well as advanced modes like fluorescence scanning, veterinarians and researchers have made remarkable strides in addressing complex issues in veterinary health. This innovative technology allows for comprehensive visualization of entire tissue samples, providing a level of detail and precision unattainable with traditional microscopes, which only offer sectional views. As a result, whole slide imaging has become an invaluable tool in veterinary diagnostics and research, enabling more accurate and efficient analysis of pathological conditions and significantly enhancing the quality of veterinary care.

## Advancements in Veterinary Health: Companion Animals, Livestock, and Wildlife

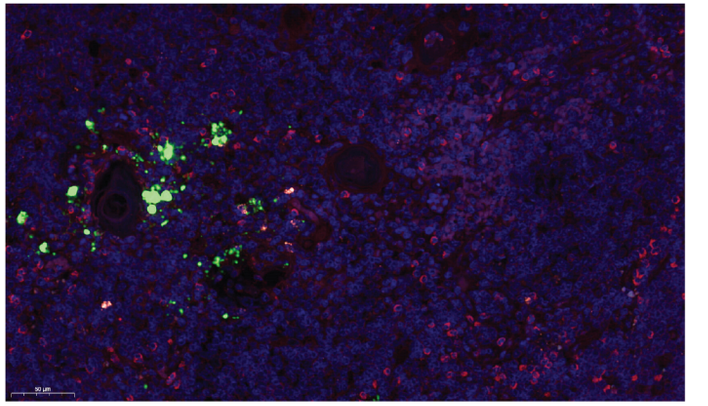
Advanced digital imaging techniques, including whole slide imaging, offer detailed, high-resolution visualization and analysis of tissue samples, making it easier to identify and study specific pathogens, genes, and disease markers. This precision is particularly beneficial for companion animals, allowing veterinarians to develop accurate diagnoses and tailored treatments for conditions such as gastrointestinal diseases, cancers, and infectious diseases.

In the agricultural sector, whole slide imaging facilitates early detection and accurate diagnosis of diseases in livestock by enabling researchers to analyze entire tissue samples at a molecular level. Advanced diagnostic techniques and treatments ensure that diseases are managed effectively, reducing losses and enhancing overall quality of meat, milk, and other animal products. These advancements not only boost the agricultural economy but also contribute to global food security and sustainability by ensuring healthy and productive livestock populations.

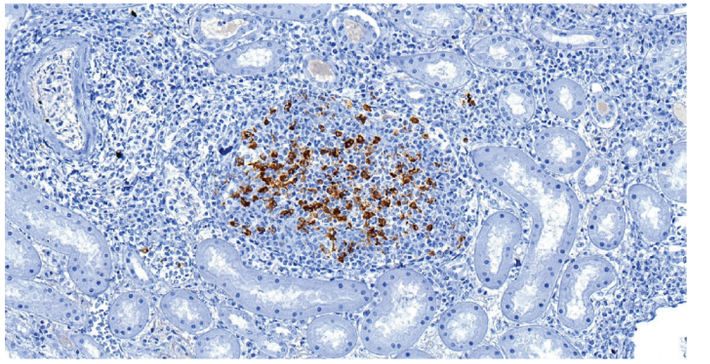
Additionally, in wildlife conservation, these technologies are crucial for understanding health challenges in various species, enabling the development of targeted vaccines and treatments. By providing deep insights into biological processes, whole slide imaging supports the successful rehabilitation and reintroduction of endangered species, playing a key role in preserving biodiversity and maintaining ecological balance.



Feline nasal tissue scan with eosin stain to check for fungal and bacterial infections or neoplastic changes (e.g. tumors)



Pig lung fluorescence scan infected with a virus

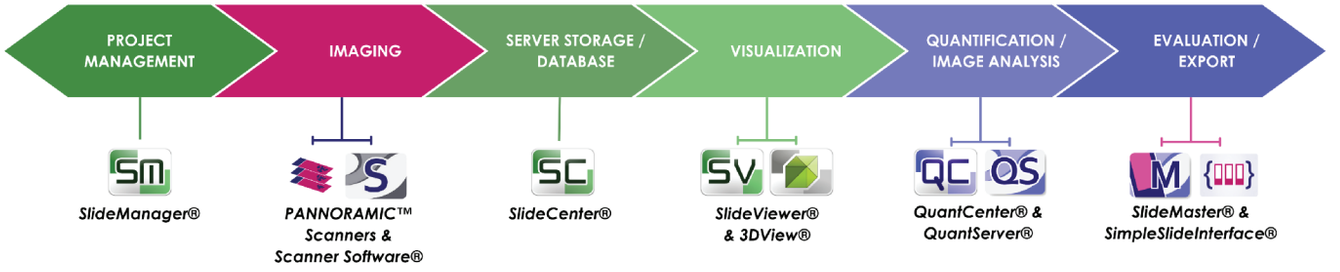


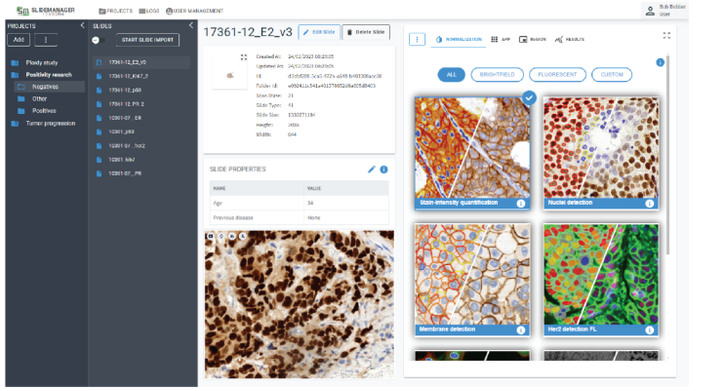
Feline kidney tissue scan with IHC for feline infectious peritonitis

*Images were scanned with the 3DHISTECH MIDI Scanner, managed and viewed with 3DHISTECH SlideManager® and SlideViwer® Software. (Images courtesy of The University of Veterinary Medicine, Budapest by Lilla Denes*

# 3DHISTECH FOR VETERINARY RESEARCH

## *RESEARCH WORKFLOW*



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## AWARDS

- 2020 — GHP Life Sciences Award
- 2019 — Hungarian Innovation Grand Prize (2003)
- 2016 — International Scanner Contest Award (2012, 2010)
- 2013 — Exporter of The Year Award
- 2012 — Ányos Jedlik Award
- 2011 — European Inventor Award
- 2010 — First European Scanner Contest Award
- 2006 — Dénes Gábor Award

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