

# PATHKINEX UPDATE



## **Go Digital! New PathKinex™ Reporting to Enhance Visualization, Accessibility, and Interactivity**

United Animal Health's PathKinex™ program, launched in 2016, is an advanced surveillance platform that provides diagnostic and analytical solutions for the livestock industry. Used across swine, poultry, and dairy systems, it quantifies enteric pathogen gene profiles using swab samples from rectal, gastrointestinal, or environmental sources. By testing for a wide range of microbial targets and

applying statistical analysis, PathKinex™ reveals associations between microbial gene levels and key production factors. The resulting personalized report helps producers identify challenges, implement disease prevention strategies, and improve overall animal health and productivity.

As part of our continued commitment to innovation and client success, we are excited to share a sneak peek of our next major update to the PathKinex™ platform: the launch of our new **digital interactive report**. This upgrade is designed to modernize the way we communicate complex microbiological and molecular data, offering a more dynamic and accessible experience for our clients and partners.

The redesigned digital interactive report introduces a suite of new features, including interactive figures, streamlined navigation, and mobile-friendly layouts, while preserving our foundational graphs like the AST heatmaps.

Here are a few key feature updates:

- An **interactive table of contents** allows the reader to navigate directly to the sections they're interested in.
- An **executive summary** provides a concise overview of the report by highlighting its main objectives, key findings, and recommendations.
- **Call-out boxes** provide practical, personalized tips and recommendations for the reader.

#### Tips and Recommendations

Pigs in this sampling show multi-species coinfections, including *E. coli* and *Clostridium*, multi-pronged solutions are necessary and recommended in these complex disease scenarios.

- **Updated sample demographic charts** include expandable tables and an interactive pie chart illustrating demographic breakdown.

## ▼ Demographics Breakdown

### Table of contents

[Customer Information](#)

[Executive Summary](#)

[Project Overview](#)

[Background](#)

[Objective](#)

[Sample demographics](#)

[Results](#)

[Appendix](#)

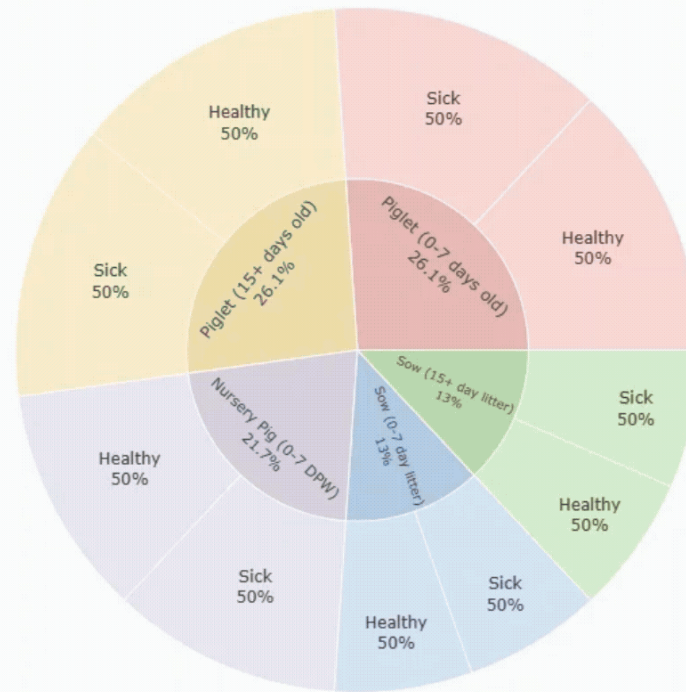
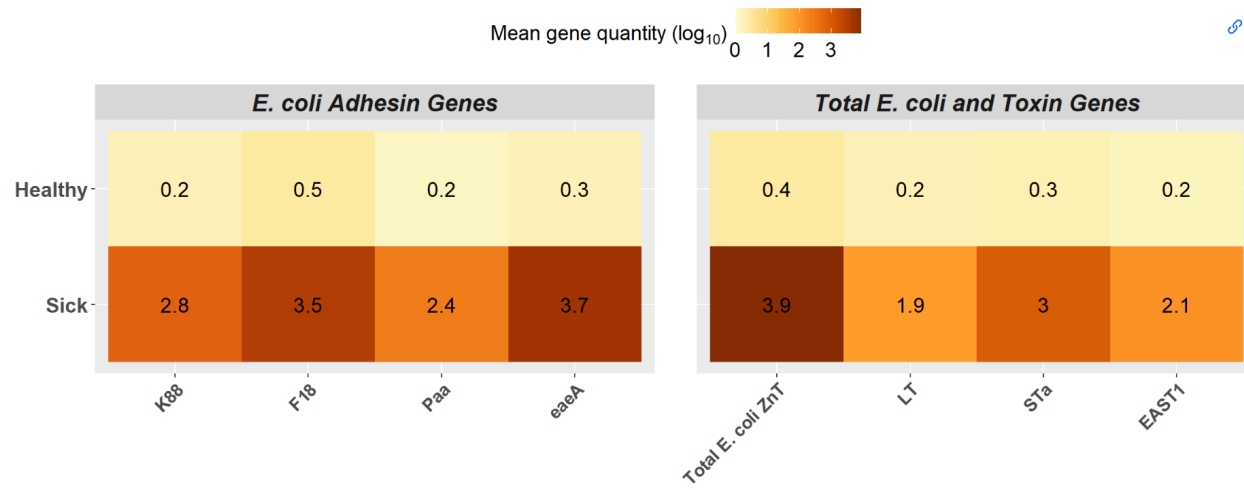


Figure 1: Sample demographics

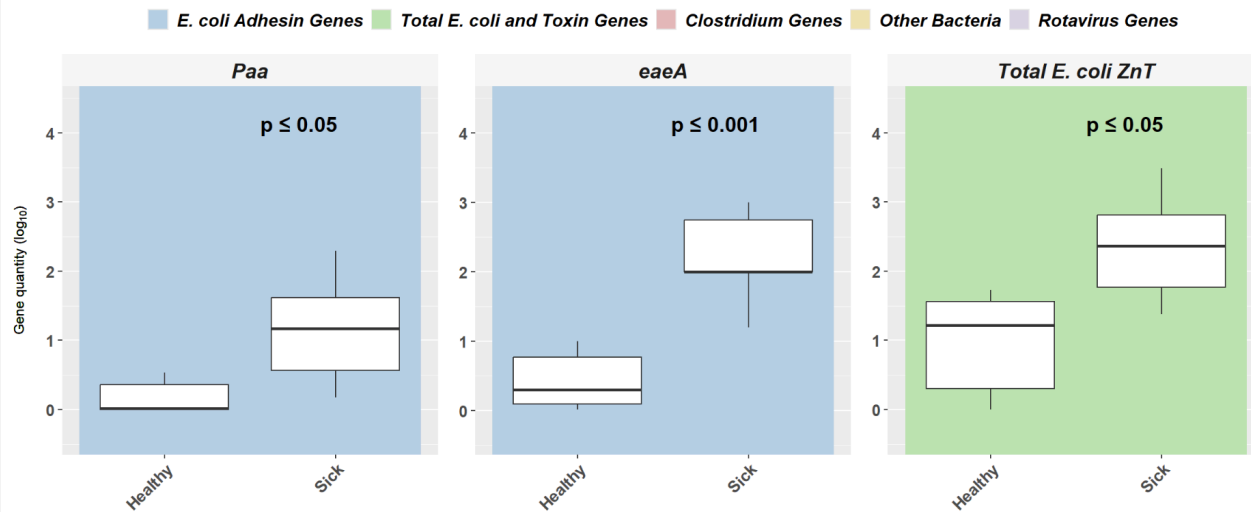
**Figure 1:** Demonstration of interactive sample demographic chart.

- An **updated results section** features new, simplified graphs and visualizations, allowing the reader to easily explore trends, patterns, and comparisons across sample groups.
- A **pathogen gene overview** allows the reader to compare pathogen marker quantities at a glance.



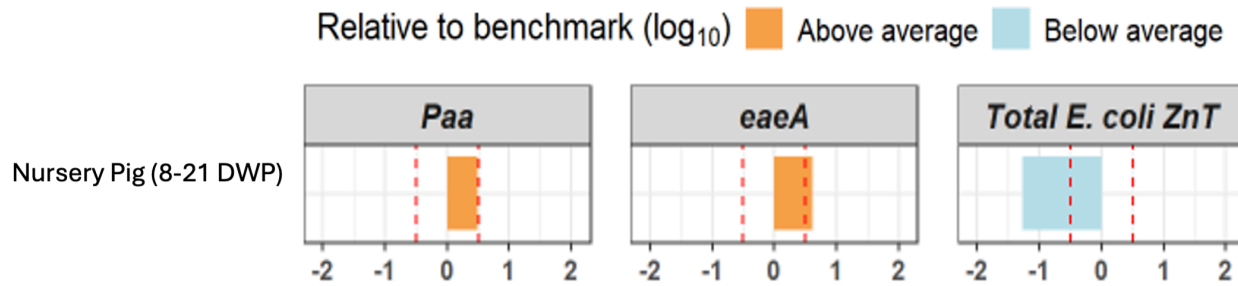
**Figure 2:** Average gene quantity ( $\log_{10}$ ) comparisons across different sample groups. Darker colors represent higher average gene quantities, while lighter colors represent lower average gene quantities.

- **Simple boxplots** provide detailed comparisons of gene quantities across animals of differing health statuses.



**Figure 3:** Gene quantity comparisons by health status.

- **Historical PathKinex™ benchmarking** provides a comparison of current project data to historical datasets to help the reader understand how their results align with past trends.



**Figure 4:** A comparison of gene quantity ( $\log_{10}$ ) in a current study against historical PathKinex™ data. Positive values (orange) indicate that the current study had higher-than-average quantities than the historical benchmark, while negative values (blue) represent lower-than-average quantities.



## Launching Soon

The enhanced features in the new PathKinex™ digital interactive report create a more intuitive and impactful reporting experience. These upgrades are designed to help platform users explore their data more efficiently from anywhere, extract meaningful insights faster, and seamlessly incorporate findings into operational decision-making.

With this update, we're strengthening the ability of PathKinex™ to deliver actionable, customized insights for our customers and the animal health industry overall. Stay tuned for the pilot launch of the digital interactive report in Q4!



## About the Author:



Firmin Delago is a Microbiologist II at Microbial Discovery Group. Holding an MSc in biotechnology from UW-Madison, he specializes in poultry direct-fed microbial research and development.



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