

Chairs: Eric Verdon and Sherri Turnipseed

2:00 – 2:30 pm

Progress of the Veterinary Drug Residue Collaborative Study, 2024-2025 (Round 2)

Robin Kämpf, ¹ Maiwenn Le Floch, ² Anton Kaufmann, ¹ Eric Verdon, ²

¹ **KLZH**, Official Food Control Authority of the Canton of Zurich, Zürich; Switzerland;

² **ANSES**, French Agency for Food, Environmental and Occupational Health & Safety, Laboratory of Fougères; Fougères; France;

In 2019, the Working Group started to talk about the organization of an inter-laboratory collaborative study to evaluate the screening practices for veterinary drug residues carried out using various new generation mass spectrometry instruments. Three “rounds” were planned, each of them focusing on two different commodities. Round 1 ended last year with the submission of a final report. This successful round 1 for muscle and milk with 34 participants led to the start end of 2024 with the second round consisting of 2 new commodities: fish and honey. All the data have been collected in winter 2025, and is since being processed. During this meeting will be presented the firsts outcomes of this second round.

2:30 – 3:00 pm

Analytical process to confirm antibiotic residues in cattle carcasses claimed to be raised without antibiotics

Steven J. Lehotay, USDA Agricultural Research Service, Eastern Regional Research Center, Wyndmoor, PA, USA;

At a meeting on Principles and Practices of Method Validation in 1999, William Horwitz stated, “The only reason to know your detection limit is to stay away from it!” His sentiment was shared by regulators who established reporting thresholds at the lowest validation level or minimum required performance level rather than strict, yet non-uniform, interpretations of the limit of quantification (LOQ). Unfortunately, not all purposes for analysis allow the luxury to set reporting levels significantly higher than the measured LOQs. Furthermore, the importance of qualitative identification sometimes supersedes quantification, potentially leading to a conundrum in which analyte identification criteria have been met based on retention times, signal/noise and ion ratios, but calculated concentrations may be zero or less. One such application involves the analysis of antibiotic

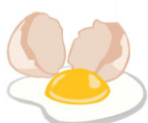
residues in animals claimed to be raised without antibiotics (RWA). Recently, the US Dept. of Agriculture conducted a study in which the kidneys and livers from 189 RWA cattle were monitored for up to 185 veterinary drugs using different methods (screening, LC-MS/MS and LC-Q/Orbitrap). In this presentation, the analytical, identification, quantification, and confirmation protocols will be discussed that found 20% of the animals to contain residues mostly of macrolide, tetracycline, and ionophore antibiotics.

3:00 – 3:30 pm

Low-Data AI for Veterinary Drug Residue Analysis

Dr. Lalin Theverapperuma, Founder and CEO, Expert Intelligence, Santa Clara, CA, USA;

Manual LC-MS/MS review of veterinary drug residues is labor-intensive and error-prone. Expert Intelligence’s EI CoPilot platform uses a Limited Sample Model (LSM), a generative AI trained on just 10–30 expert-labeled datasets, to automate MRM data interpretation. Unlike large language models (LLMs), LSM is designed for low-data, high-accuracy environments. With expert-guided learning, EI CoPilot validates peak shape, ion ratios, and matrix alignment, detects anomalies such as retention time drift, and reduces review time by 5–10x. The platform is vendor-neutral and 21 CFR Part 11 compliant, aligning with FDA and EU-RL standards to enhance traceability, consistency, and audit readiness in regulated laboratory workflows.





Please attend the
Veterinary Drug Residue Working Group Meeting
at the North American Chemical Residue Workshop

Sunday, July 27, 2025

2:00 – 3:30 pm

Charleston, South Carolina

<https://nacrw.org/>

Everyone is invited!

