October 27nd, 2021

Dear Colleagues,

If you are reading this letter now, it means that your valued participation is requested in an international collaborative project. The goal is to evaluate identification criteria using LC-MS (triple quadrupole and/or high resolution) for multi-vet drug residues analysis of up to 30 selected veterinary drugs from different classes (antibiotics, anthelmintics, anticoccidials, NSAIDs) at/or below established regulatory limits in final extracts from different commodities.

It is organized by a working group consisting of members coming from reference and academia laboratories (list here-below) working in the regulatory food control sector across the world. This WG started elaborating the project in 2019 during the North American Chemical Residue Workshop held in Naples, Florida. Information about NACRW-VDWG can be found here: https://nacrw.org/vet-drugs-1.

The main goal of this inter-laboratory study is to evaluate and establish general identification criteria for LC-MS methods using empirical data to minimize rates of false positives and negatives. The VDWG members have devised the study to be as easy as possible for participants. In each round, the study coordinator will prepare and ship a tray of autosampler vials consisting of at least 16 final extracts and 10 calibration standards per commodity (2 trays per round with each tray for a specific food commodity). The participating laboratory is expected to cover the cost of shipping, which should be reasonable considering that parcels will be light, final extracts will mostly consist of water and packed ice will be used for temperature control. The trays are to be stored in a standard -20^{o}C freezer until analysis within 30 days from receipt.

The receiving laboratories will analyze the extracts in a prescribed sequence with their own method(s) that should include the 30 targeted drug analytes using LC-MS/MS and/or HRMS instrumentation. Detailed instructions and Excel results spreadsheets will be provided together with the extracts. A high-level mixture of all 30 analytes will be provided with the samples to ensure that they are detectable.
For most laboratories, participation in this study is expected to take one analyst less than 1 week to perform per round.

The compiled information will be used to determine the rates of false positives and false negatives when applying different analyte identification criteria. If possible, quantification, matrix effects, and other aspects in the study may also be evaluated using the results. Any publications from this study will include acknowledgments to the participants listed in the order that their results are returned to the study coordinator. All participants will be given a chance to review reports before finalization and manuscripts prior to submission, and co-authorship will be granted to individuals who contribute intellectually to the final reports. Non-identifying codes will be used in all reports, including if results are shared among participants. Of course, participating labs are free to use their own results as they wish.

The initial phase of this project planned for the very end of 2021 and early 2022 will involve muscle and milk commodities. In 2022-2023, two additional rounds are planned for other food matrices (*e.g.* eggs, liver/kidney, fish, and honey).

We hope you will consider joining this study to better define the critical elements of a successful multi-residue LC-MS analysis of veterinary drugs in foods, which would also be applicable to pesticides, mycotoxins, environmental contaminants, drugs of abuse, and many similar applications. If you are interested in participating, please reply to this email in order to be contacted by one of the members of our working group.

Sincerely,

The NACRW Veterinary Drug Residue Working Group

- Eric Verdon, ANSES-Laboratory of Fougeres, EU-RL/NRL for Vet Drug Residues, Fougères, FRANCE
- Steven Lehotay, USDA Agricultural Research Service, Wyndmoor, PA, USA
- Anton Kaufmann, Official Food Control Authority, Zurich, SWITZERLAND
- Sherri Turnipseed, FDA, Animal Drugs Research Center, Denver, CO, USA
- Jian Wang, CFIA; Calgary, AB, CANADA
- Jon Wong, FDA Center for Food Safety and Applied Nutrition, College Park, MD, USA
- Alejandra Rodriguez-Haralambides, University of the Republic, Montevideo, URUGUAY
- Jo Marie Cook, NACRW, FL, USA