

2021 NACRW Program

as of 7-21-21

All times listed are Eastern Daylight Time (EDT)

Monday, July 26, 2021

9:00-10:10 am **Exhibition hour**

10:15-10:45 am **Restek Technology Presentation**
New Technology Solutions for Pesticides Analysis
Joe Konschnik, RESTEK Corporation, Bellefonte, PA, USA

11:00-12:30 pm **NACRW Reference Materials Working Group - RefMaTrA and Beyond!**

The Working Group will present the 1st Edition of "Reference Material Use in Trace Analysis (RefMaTrA)" followed by an Open Forum discussion of a 2nd Edition, including chapters on inorganics and authenticity.

Reference materials and chemical standards are an integral part of the analytical laboratory. NACRW participants and sponsors recognized there was a gap in the availability of current guidance on the use and handling of reference materials and such information was often minimal or provider-focused. The Reference Materials Working Group formed to better gather, sort and characterize information related to calibration standards and other reference materials for both the NACRW and the wider analytical communities. The first edition was created through a collaborative effort by the working group to compile, organize and present best practices focused on organic trace contaminants. In order to further address the needs of the community for contaminants not addressed in the current edition a subsequent edition is now being developed. The current document is being expanded to include topics such as trace metals, inorganics, botanicals, food authenticity, and cannabis reference materials.

11:00-11:20 am **Introduction to the Reference Material Use in Trace Analysis (RefMaTrA) manual**
Joe Konschnik, Restek

11:25- 11:55 am **Suggestions for additional chapters to be added to the 2nd Edition of the RefMaTrA**
Patricia Atkins, SPEX Scientific

12:00-12:30 pm **Discussion (ZOOM Open Forum format)**
Jo Marie Cook, formerly Florida Department of Agriculture

12:40-1:10 pm **SCIEX Technology Presentation**
Highly sensitive quantification and selective identification of pesticides in food with Zeno MRM^{HR}
Robert A. Di Lorenzo, SCIEX, Canada

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1:15-3:15 pm **NACRW Veterinary Drugs Working Group proposes collaborative study for regulatory laboratories to determine optimal MS-based analyte identification criteria**

The NACRW Veterinary Drugs Working Group (VDWG) proposes to investigate veterinary drug screening methods which utilize mass spectrometry instrumentation to detect the presence of one or more regulated compounds at levels below the food safety relevant defined maximum levels. At this meeting, the VDWG will describe the details of a proposed regulatory laboratories collaborative study to evaluate currently developed mass spectral methods for the identification of multiple classes of veterinary drugs in several different matrices. Presentations and an Open Forum will discuss optimal-based analyte identification criteria. A collaborative study of multiple matrices and analytes is being planned to evaluate analyte identification criteria to minimize the rate of false positives and false negatives. The Working Group invites those interested in methods meeting the needs of government regulators to share their expertise and suggestions.

1:15-1:45 pm **Optimal MS-based analyte identification techniques**
Steven Lehotay, USDA and Anton Kaufmann, Official Control Authority, Switzerland

1:50-2:20 pm **Parameters of proposed collaborative study**
Sherri Turnipseed, FDA and Eric Verdon, ANSES, France

2:25-3:15 pm **Questions and Answers (ZOOM Open Forum format)**
Jian Wang, CFIA, and Jo Marie Cook, formerly Florida Department of Agriculture

Tuesday, July 27, 2021

9:00-10:00 am **Poster Session (odd number posters only) and Exhibition Hour**

10:00-10:10 am **Opening Remarks**
Sherry Garris, Chair, FLAG Works, Inc.

10:10 am-12 noon **SESSION 1: Award Presentations Session** **Sponsored by ThermoFisher Scientific**
Co-Chairs: Mike Filigenzi and Katie Carlos

10:10-10:50 am **Student Poster and Scholarship Awards Presentations**

10:10-10:15 am **Introduction of Scholarship Awards and Student Poster Preview Videos**

10:15-10:22 am **Xinwen Zhang, University of Delaware, Newark, DE, USA**
SP-1 **Developmental toxicity and genotoxicity evaluation of lignin-derivable of six bisguaiacols using in silico, in vitro, and in vivo methods**

10:23-10:30 am **Norma Villagómez-Márquez, University Of Arizona, Tucson, AZ, USA**
SP-2 **Chemicals of emerging concern measured in roof-harvested rainwater to inform environmental justice communities**

10:30-10:37 am **Xin Guo, University of Massachusetts, Amherst, MA, USA**
SP-3 **Mapping microplastics on filter membranes using Raman microscopy: capabilities and limitations in selected food matrices**

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- 10:38- 10:45 am** **Jade Noguera**, University of California-Davis, Davis CA, USA
SP-4 **Taking the fat out: Improved sample preparation techniques for toxicologic testing of postmortem liver tissue by GC/MS in veterinary diagnostics**
- 10:50-10:55 am** **Session Sponsor Recognition – ThermoFisher Scientific**
- 10:55-11:00 am** **NACRW Excellence Award Presentation and Keynote Address**
Alexandria Bush, 2021 NACRW Organizing Committee, President
- 11:00-11:45 am** **Presentation by Excellence Award Winner**
Alexander Makarov, Thermo Fisher Scientific, Bremen, Germany
A-1 **Exploring New Heights on the Orbitrap Journey**
- 11:45-12:00 pm** **Live Q&A for A-1**
- 12:05- 12:35 pm** **Thermo Fisher Scientific Technology Presentation**
PFAS in NC: Analysis by Isotope Dilution Solid Phase Extraction and LC-MS/MS
Allen Martin, North Carolina Department of Environmental Quality, Raleigh, NC, USA
- 12:45-12:55 pm** **Speed Networking with Attendees (groups of 4 for 5 minutes; done twice)**
- 1:00-2:30 pm** **SESSION 2: Sample Preparation**
Co-Chairs: Julie Kowalski and Kelly Dorweiler
- 1:05-1:25 pm** **Steven Lehotay**, USDA ARS, Wyndmoor, PA, USA
O-1 **Update about the QuEChERSER mega-method**
- 1:25-1:45 pm** **Abir Khaled**, University of Waterloo, Waterloo, Ontario, Canada
O-2 **Overcoming matrix effects in multi-class multi-residue analysis of veterinary drugs in animal tissue using solid phase microextraction**
- 1:45-2:05 pm** **Blair Berger**, University Of Texas at Arlington, Arlington, TX, USA
O-3 **Online extraction of microplastics exposed to Polycyclic Aromatic Hydrocarbons (PAHs) using SFE-SFC-MS**
- 2:05-2:30 pm** **Live Q&A for Session 2**
- 2:30-3:30 pm** **Poster Session (even number posters only) and Exhibition hour**

Wednesday, July 28, 2021

- 9:00-10:00 am** **Poster Session (All Posters) and Exhibition Hour**
- 10:00 am-12 noon** **SESSION 3: Advancements in QA/QC**
Co-Chairs: Steve Lehotay and Jens Andersen

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- 10:05-10:25 am** **Jens Enevold Thaulov Andersen**, Botswana International University of Science and Technology, Palapye, Botswana
O-4 **Pooled calibrations with its limitations as an alternative to contemporary methods of QA/QC**
- 10:25-10:45 am** **Susan Genualdi**, FDA, College Park, MD, USA
O-5 **Challenges in method development and implementation for the analysis of per- and polyfluoroalkyl substances in foods from a QA/QC perspective**
- 10:45-11:05 am** **Ivo Leito**, University Of Tartu, Institute Of Chemistry, Tartu, Estonia
O-6 **Redefining method validation – ValChrom online tool**
- 11:05-11:25 am** **Jacolin Murray**, NIST, Gaithersburg, MD, USA
O-7 **Development of a Glyphosate in Oats Reference Material**
- 11:25-12:00 pm** **Panel discussion of presenters/Live Q&A for Session 3**
- 12:15-12:45 pm** **Agilent Technology Presentation**
Automated MRM Method Development for Pesticides Using the Agilent MassHunter Optimizer for GC/TQ
Anastasia A. Andrianova, Agilent Technologies, 2850 Centerville Road, Wilmington, DE, USA
- 1:00-2:00 pm** **SESSION 4: Pesticide Residue Forum** **Sponsored by RESTEK**
Moderators: Simon Hird and Brian Eitzer
(Questions can be submitted at registration and through chat)
Session Sponsor Recognition – Restek
Panel of Experts: Steven Lehotay, USDA ARS, Wyndmoor, PA, USA; **André De Kok**, formerly at Wageningen Food Safety Research, Netherlands; **Katerina Mastovska**, Eurofins, Madison, WI, USA; and **Jian Wang**, Canadian Food Inspection Agency, Calgary, Alberta, Canada
- 2:15-4:15 pm** **SESSION 5: Cannabis** **Sponsored by Agilent**
Co-Chairs: Yoko Johnson and Kevin Armbrust
- 2:15-2:20 pm** **Session Sponsor Recognition - Agilent**
- 2:20-2:40 pm** **Thuy Vu**, Thuy Vu Consulting LLC, Denver, CO, USA
O-8 **Understanding Food Safety Challenges and Navigating Regulatory Requirements in the Production of Hemp and Cannabis-Derived Compounds**
- 2:40-3:00 pm** **Amy Hernandez**, Louisiana Department Of Agriculture & Forestry, Baton Rouge, LA, USA
O-9 **A Government Lab’s Journey into Medical Marijuana and Hemp Analysis**
- 3:00-3:20 pm** **Anthony Macherone**, Agilent & Johns Hopkins SOM, Wilmington, DE, USA
O-10 **Observation of Acid Phytocannabinoid Decarboxylation using Electrospray Ionization in Negative Mode**

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3:20-3:40 pm KC Hyland, SCIEX, Redwood City, CA, USA
O-11 **LC-MS/MS Sensitivity in the Cannabis Landscape: What Can Be Accomplished with the Latest Generation Triple Quadrupole Platform**

3:40-4:15 pm **Live Q&A for Session 5**

4:15-5:30 pm **Exhibition Hour**

Thursday July 29, 2021

9:00-10:10 am **Exhibition Hour**

10:15-11:40 am **SESSION 6: Single and Multiresidue Pesticide Methods** **Sponsored by SCIEX**
Co-Chairs: Ping Wan and Amadeo Fernández-Alba

10:15-10:20 am **Session Sponsor Recognition - SCIEX**

10:20-10:40 am Jian Wang, Canadian Food Inspection Agency, Calgary, Alberta, Canada
O-12 **Applications of nDATA for screening, quantitation and identification of pesticide residues in fruits and vegetables using UHPLC/ESI Q-Orbitrap all ion fragmentation and data independent acquisition**

10:40-11:00 am Jana Hepner, Restek, Bellefonte, PA, USA
O-13 **LPGC - The Fast Way to Speed Up Your Multiresidue Pesticide Analysis for Foods!**

11:00-11:20 am Maria Murcia Morales, University of Almeria, Almeria, AA, Spain
O-14 **APIStrip, a new tool to assess the environmental pesticide load through honey bee colonies**

11:20-11:40 am **Live Q&A with Session 6 Speakers**

11:45-12:15 pm **Waters Corporation Technology Presentation**
Approaches to PFAS Analysis in Food Products
Kari Organtini, Waters Corporation, Milford, MA, USA

12:20-1:00 pm **Poster Session (All Posters)**

1:00-2:50 pm **SESSION 7: Perfluorinated Compounds/Environmental Contaminants**
Co-Chairs: Martha Maier and Susie Genualdi **Sponsored by Phenomenex**

1:00-1:05 pm **Session Sponsor Recognition - Phenomenex**

1:05-1:25 pm Oliver Cawdell, Vista Analytical Laboratory, El Dorado Hills, CA, USA
O-15 **PFAS in food matrices: maximizing analytical recovery from important, yet problematic matrices**

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- 1:25-1:45 pm**
O-16 **Lukas Vaclavik**, Eurofins Food Integrity & Innovation, Madison, WI, USA
Optimization and validation of an LC-MS/MS method for the determination of PFAS in whole milk, infant formula and related ingredients
- 1:45-2:05 pm**
O-17 **Pingping Meng**, North Carolina State University, Raleigh, NC, USA
Measurements of novel perfluoroalkyl ether acids (PFEAs) in homegrown blueberries from a PFAS-impacted community in NC
- 2:05-2:25 pm**
O-18 **Sara Lupton**, USDA-ARS Edward T. Schafer Agricultural Research Center, Fargo, ND, USA
Perfluorooctanoic acid uptake by alfalfa (medicago sativa)
- 2:25-2:50 pm** **Live Q&A with Session 7 Speakers**
- 3:00-4:00 pm** **Exhibition Hour**

Friday July 30, 2021

- 9:00-10:00 am** **Exhibition hour**
- Sponsored by Waters Corp.**
- 10:00-12:20 pm** **SESSION 8: New and Advanced Technology in Residue Analysis**
Co-Chairs: Eric Verdon and Sherri Turnipseed
- 10:00-10:05 am** **Session Sponsor Recognition – Waters Corp.**
- 10:05-10:25 am** **Anton Kaufmann**, Official Food Control Authority Of The Canton Of Zurich, Zürich, Switzerland
O-19 **Participating in residue analysis proficiency tests with HRMS; a bold decision?**
- 10:25-10:45 am**
O-20 **Jeff Archer**, U.S. Food & Drug Administration, Jefferson, AR, USA
APGC-QqQ MS, Is it the new gold standard for dioxin and furan determinations?
- 10:45-11:05 am**
O-21 **Randall Purves**, Canadian Food Inspection Agency, Saskatoon, Saskatchewan, Canada
Using high-field asymmetric waveform ion mobility spectrometry (FAIMS) to improve thyreostatic drug detection in animal tissues using liquid chromatography - selective reaction monitoring (LC-SRM)
- 11:05-11:25 am**
O-22 **Michelangelo Anastasiades**, CVUA Stuttgart - EURL-SRM, Fellbach, Bw, Germany
Fumigation of dry foodstuff with ethylene oxide – residue problems and measures taken by the EU to tackle the crisis
- 11:25-11:45 am**
O-23 **Yelena Sapozhnikova**, Usda, Wyndmoor, PA, USA
Screening of chemicals in plastic food contact materials by GC- and LC-Orbitrap mass spectrometry
- 11:45 –12:20 pm** **Live Q&A for Session 8**

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- 12:30-1:00 pm** **Bruker Technology Presentation**
Higher Sensitivity, Higher Specificity, and Higher Throughput – New Mass Spectrometric Solutions for Chemical Residue Analysis
Artem Filipenko, Ph.D., Bruker Scientific, Billerica, MA, US
- 1:20-3:30 pm** **SESSION 9: General Topics**
Co-Chairs: Brittany Holmes and Jessica Krank
- 1:20-1:40 pm** Yudi Wu, Florida A&M University, Tallahassee, FL, USA
O-24 **Asses the bioavailability of heavy metal As, Pb and Cr and the phytoremediation potential of Eriocaulon decangulare within the Apalachicola National Forest Basin**
- 1:45-2:05 pm** Todd Richards, LECO Corp., Saint Joseph, MI, USA
O-25 **Pesticide detection and quantification in tomato matrix with GCxGC time of flight mass spectrometry**
- 2:05-2:25 pm** Francisco José Díaz-Galiano, European Union Reference Laboratory for Pesticide Residues in Fruits & Vegetables and the University Of Almería, La Cañada de San Urbano, Almería, Spain
O-26 **Cutting-edge approach to overcome sensitivity issues associated with polarity switching employing dual-channel chromatography**
- 2:25-2:45 pm** Ruth Marfil-Vega, Shimadzu Scientific Instruments, Columbia, MD, USA
O-27 **Essential or precaution? Systematic evaluation of measurements to minimize PFAS background in the laboratory**
- 2:45-3:15 pm** **Live Q&A for Session 9**
- 3:15-3:30 pm** **Poster Awards and Closing**
- 3:30-4:30 pm** **Exhibition Hour**