

# Chemical Contaminants & Residues in Food Community

BRINGING SCIENTISTS AND INDUSTRY TOGETHER  
TO DEVELOP AND VALIDATE BETTER METHODOLOGIES

## Veterinary Drugs Subgroup

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## Mission

- To provide an infrastructure to meet the needs of scientists involved with global VDR testing
- Establish a forum for stakeholders that are have an interest in foods impacted by these residues
- To help to provide confidence in methods used by food regulators and industry representative
- To guide analytical methods through the AOAC validation process

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## Participation

- **FDA analytical scientists**
- **USDA analytical scientists**
- **State analytical scientists**
- **Private Laboratory Scientists**
- **Scientific Instrument and Consumable Suppliers**
- **Industry stakeholders**

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## Major Drug Residue Topics 2009

- **Commercial Marketplace continues to be impacted by US import detentions**
  - **In The US:**
    - **Seafood - Nitrofurans, Fluoroquinolones, Gentian Violet**
    - **Protein sources - melamine**
- **LC-MSMS continues to be the most productive method for quantitative multiple residue screens**
  - **More large scope multiresidue methods publish in 2008-2009, including honey, milk, meat, eggs**

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## Regulatory Topics

- Congress pressuring FDA to develop a more comprehensive approach to food safety
- Congress also seeking to improve the reliability of the private lab testing program
- How will the regulatory landscape change and how will this affect testing methods and testing laboratories?

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## Activities by Subgroup Members

- Participation in Elanco sponsored stakeholder meeting for Ractopamine, Monensin, Narasin, Tylosin residues in meat
  - (Joe Boisson, John Reuther, Martin Danaher, Valerie Reeves)
  - Developed validation protocol for SLV study

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## Activities by Subgroup Members FPRW 2009 Presentations in St Pete

- **New methods for multiclass VDRs**
  - **Peter Martos – meat (LC-MSMS)**
  - **Sherri Turnipseed – milk (LC-MSMS)**

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### Activities by Subgroup Members EuroResidue VI in the Netherlands

#### Global conference devoted to drug residue topics

- **Mary Carson** – “Development of a method to detect anti-viral drug residues in poultry”
  - Mary also chaired the third session
- **Joe Boison** – A determinative and confirmatory method for residues of the metabolites of carbadox and olaquinox in porcine tissues. Validation in Canada.

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## Activities by Subgroup Members Significant Publications

- **Sherri Turnipseed** – Analysis of aminoglycoside residues in bovine milk by liquid chromatography electrospray ion trap mass spectrometry after derivatization with phenyl isocyanate. *Journal of chromatography. B*, 2009
- **Wendy Andersen/Sherri Turnipseed** - Multiresidue method for the triphenylmethane dyes in fish: Malachite green, crystal (gentian) violet, and brilliant green. *Analytica chimica acta* 2009
- **Rodrigo Granja** - Determination of Erythromycin and Tylosin Residues in Honey by LC/MS/MS, *JAOAC*, 2009
- **Eric Verdon** – Validation of a liquid chromatography-tandem mass spectrometry screening method to monitor 58 antibiotics in milk: a qualitative approach
- **Joe Boison** - Analytical Determination of Virginiamycin Drug Residues in Edible Porcine Tissues by LC-MS with Confirmation by LC-MS/MS , *JAOAC*, 2009

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## Activities by Subgroup Members

- **Governmental activities**
  - **Published Methods:**
  - **Hema deAlwis – FDA LIB 3817 - Determination of multiple antibiotic residues in Dried Distillers Grains**

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## Needs for 2010

- Development of SLV protocol for VDRs
- Validation – defining what should be the role of the group in moving methods through AOAC method process
- Identification of useable methods and technologies for future development
- Communication of new ideas and technologies across the membership

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## SLV Protocol initiative

- Establishing protocol will streamline method validation process and set a harmonized guideline
- Protocol should include guidance for the establishment of LOQ and LOQ statistically in target matrix
- Guidance for the identification of false positives for each matrix, esp in EIA methods
- Guidance for establishing routine acceptability criteria for regulatory data submissions

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## Identifying Priority Methods

Priorities set according to:

- Health risk
- Labs are available for collaborative Validation
- Trade disruption
- Improves lab reliability & efficiency
- Method is ready for validation
- Technology update
- Availability of established target concentration

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## New Methods

- Most multiclass methods being developed currently apply primarily to seafood, meat, eggs, honey
- Submitted by regulatory labs and private labs
- Various stages of validation, so an approved SLV will be needed in many cases

# **Chemical Contaminants & Residues in Food Community**

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