



6th Annual Conference of the India Section of the AOAC INTERNATIONAL

Towards Collaborative Leadership to Ensure Food Safety

Date: February 28 - March 1, 2019

Location: Hotel "The Park", New Delhi

Tentative Conference Schedule

Day 1: February 28, 2019 (Thursday)

Registration and Breakfast (0800 – 0900 hrs)

Inaugural Session (0900 – 1100 hrs)

Presidential Addresses:

Dr. Ranjan Mitra, President, India Section of the AOAC INTERNATIONAL

Exchange of MoUs by FSSAI

Keynote Address:

Shri Pawan Kumar Agarwal, Chief Executive Officer, Food Safety and Standards Authority of India

Special Addresses:

Dr. Palmer. A. Orlandi, Jr., Deputy Executive Director and Chief Scientist, AOAC INTERNATIONAL

Dr. Samuel Godefroy, Full Professor, Food Risk Analysis & Regulatory Policy, Université Laval, Québec, QC, Canada

Dr. S. K. Saxena, Director, Export Inspection Council of India

Dr. Paul Young, Member of World Bank led Global Food Safety Partnership (GFSP)

Inauguration of Exhibition

Refreshment Break

Technical Session 1: Method Harmonization (1100 – 1300 hrs)

Food safety is a high priority area and is becoming increasingly important as the global flow of food supply continues to rise. While food-related risks around the world may vary, sharing data and information on methodologies, best practices, and analysis of existing and emerging scientific issues can lead to consistent approaches. The aim is to ensure unambiguous, validated, referenced methods to ensure food quality and safety to consumers, and also allow seamless trade without any disputes. The methods to be harmonized should meet the same performance criteria that are rooted in fit for purpose method validation guidelines. Collaborating and sharing knowledge, contribution to the development of internationally consistent risk assessment, risk management and risk communication approaches, and development of internationally harmonized test methods are therefore necessary. The distinguished panel shall discuss and deliberate the General Methods of Harmonization, Barriers to Harmonization, Global and Local Initiatives.

Session Chair: Dr. N. Bhaskar, Advisor (QA), FSSAI

- SMPR for Non-Standard Methods - **Dr. Samuel Godefroy**, Full Professor, Food Risk Analysis & Regulatory Policy, Université Laval, Québec, QC. Canada
- Fit for Purpose Methods - **Dr. S. K. Saxena**, Director. Export Inspection Council of India
- Developing Fit for Purpose Methods in the Indian Context: Sharing Experience of the National Referral Laboratory - **Dr. Kaushik Banerjee**, ICAR National Fellow & Principal Scientist, ICAR-National Research Centre for Grapes
- Enforcement of the Food Law and Role of Analytical Laboratories: Indian Perspective - **Dr. Lalitha R. Gowda**, Former Chief Scientist, CSIR - Central Food Technological Research Institute, Mysore
- Harmonized Methods for Implementing FSSAI Regulations - **Dr. N. Bhaskar**, Advisor (QA), FSSAI

Lunch Break (1300 – 1400 hrs)

Technical Session 2: Working Group Session (1400 – 1600 hrs)

Working Group 1: Fit for Purpose Tests / Specifications: Connecting the Dots between Botanical Traceability and Integrity!

Traceability of botanical ingredients (documentation from shelf to seed) used in dietary supplements, nutraceuticals and traditional medicine is important to ensure validity of supply chain and processing that occurs during its development to an ingredient that is safe for human consumption. However it alone cannot guarantee botanical integrity. It can only be guaranteed when it aligns with the use of fit for purpose methods for fit for purpose specifications at each stage gate of botanical ingredient development from seed to shelf. If not, we are still vulnerable to economically motivated / accidental adulteration in the commercial marketplace. We can still be traceable per definition, but the botanical quality will be highly compromised (and thus safety, efficacy, potency). In this workshop we will discuss the typical stage gates of botanical product development, the questions that should be asked at each stage gate and the fit for purpose tests to match fit for purpose specifications in an interactive session moderated by industry subject matter experts and stakeholders as a panel. The session will also disclose the progress made by stakeholder and regulatory (FSSAI) driven effort channelized by AOAC and USP to address botanical integrity in commercial domain.

Moderators: **Dr. Amit Chandra**, Manager, Chromatography Sciences Group, Analytical Sciences, AMWAY R&D and **Dr. U. V. Babu**, Head - Phytochemistry R&D at The Himalaya Drug Company

Panelists:

- **Dr. Arun Gupta**, Head - Medical Affairs & Clinical Research, Dabur India Ltd
- **Dr Sayeed Ahmad**, In Charge: Bioactive Natural Product Laboratory, Department of Pharmacognosy & Phytochemistry, School of Pharmaceutical Education & Research, Jamia Hamdard (Hamdard University)
- **Dr. Saurabh Arora**, Executive Director, Arbro Pharmaceuticals Pvt. Ltd.
- **Dr H N Shivaprasad (Dr.Shiv)**, Director - Technical & Marketing, Prakruti Products Pvt Ltd.

Working Group 2: Rapid Microbiology Methods and the Regulatory Environment

A key challenge with the adoption of Rapid Microbiology Methods is the speed with which these technologies are advancing. Technology adoption requires a rapid learning curve for the industry and the regulators. India continues to dwell on the traditional test methods, which are mandated in the standards. This in turn restricts

the adoption of newer technologies. With a population exceeding 1.2 Billion, to provide safe and healthy food the adoption and implementation of these rapid methods are the need of the hour.

In this session, the detailed whitepaper developed by the working group comprising the representatives from various industries, instrument manufacturers and academia will be presented along with the other emerging aspects. Further, the method validation and verification processes will be discussed with special focus on the strategies of choosing the appropriate methods.

Moderator: Ms. Kavitha Kulkarni, Scientific Affairs and Education Manager, Food Safety, 3M India Ltd

Panelists:

- **Ms. Kumud Kushwaha**, Manager - LS Regulatory APAC (F&B, Pharma QC Testing) Advocacy & Surveillance
- **Dr. Sandhya Shrivastava**, Director at Bhavan's Research Center (Microbiology) and Retd Professor of Microbiology at Bhavan's College
- **Ms. Sonam Bansal**, Head - Nestlé Quality Assurance Centre Moga, Nestlé India Limited

Rapid Methods - Where They Come from and How They have Impacted Food Testing - **Dr. Sandhya Shrivastava**, Co-ordinator at Bhavan's Research Center (Microbiology) and Professor of Microbiology at Bhavan's College

Refreshment Break (1600 – 1630 hrs)

Technical Session 3: Standard Reference Materials (1630 – 1800 hrs)

Session Chair: Mr. N. Venkateswaran, Director, NABL

- Reference Material Producers (RMP) Accreditation in India - **Mr. N. Venkateswaran**, Director, NABL.
- Reference Materials - Importance of Traceability, Uncertainty & Certification for their Proper Usage in ISO 17025-2017 Testing - **Dr. Markus Obkircher**, Head of Reference Materials R&D, Merck KGaA.
- The Standardization and Harmonization of Mycotoxin Analysis using Both Offline and Online Immunoaffinity Products Demonstrated Through the Use of Proficiency Materials - **Ms. Elizabeth Manning**, International Sales & Business Development Manager, R-BiopharmRhone Ltd

Poster Session (1800 – 2000 hrs)

Poster Session in Collaboration with “The Royal Society of Chemistry (RSC)”

The Poster Session will display research findings and technological advances in diverse facets of analytical sciences. A poster will include a written and pictorial summary of the author's research. This session will provide an excellent opportunity of exchanging scientific information and findings.

Conference Dinner (2000 – 2200 hrs)

Day 2: March 1, 2018 (Friday)

Technical Session 4: Emerging Food Safety Issues and Key challenges from a Global Perspective on Veterinary Drugs/Antibiotic Residues (0900 – 1045 hrs)

The analytical approaches for these contaminants vary considerably. Screening kits, although popular, have many limitations in terms of their scope, selectivity and sensitivity. On the other hand, an increase in the use of multiresidue approaches with mass spectrometric detection and confirmation has significantly contributed to laboratory output. Official control for Food and Feed promises simplification, harmonization, efficiency and

transparency with the emphasis on risk based monitoring. The residue definition of these compounds often requires simultaneous screening of metabolites, turning the analysis more complicated. This calls for comprehensive multi-class multiresidue methods for regulatory compliance. These methods require an extensive validation (including CC α and CC β).

Session Chair: Dr. S. K. Saxena, Director. Export Inspection Council of India

- Screening (ELISA), Confirmatory banned compounds (Group A) and Multiclass-Multiresidue approaches for 100 plus antibiotics/veterinary drug residues in a single run
 - India Perspective - **Dr. S. K. Saxena**, Director. Export Inspection Council of India
 - Global Perspective - **Dr. Simon Hird**, Principal Scientist, Waters Corporation
- An, Integrated, Comprehensive 'Start-to-Finish' LC-MS/MS Workflow for the Multi-Residue Analysis of Veterinary Medicines in Food Samples of Animal Origin - **Mr. Richard Fussell**, Global Marketing Manager, Food and Beverage, Thermo Fisher Scientific
- **Panel Discussion** - Changing regulations in antibiotic / veterinary drug and challenges to Indian Laboratories

Moderator: Dr. S. K. Saxena, Director. Export Inspection Council of India

Panelists:

- **Dr. Palmer. A. Orlandi, Jr.**, Deputy Executive Director and Chief Scientist, AOAC INTERNATIONAL
- **Dr. Premasis Sukul**, Professor, School of Agriculture, Lovely Professional University, Punjab
- **Dr. Simon Hird**, Principal Scientist, Waters Corporation
- **Mr. Richard Fussell**, Global Marketing Manager, Food and Beverage, Thermo Fisher Scientific

Parallel Session 1 (0900 – 1045 hrs)

Introduction to Food Industry Operations and Role of the Analytical Function

Mr. Rajesh Girdhar, Head - Analytical Research & Services at Abbott Nutrition

This module will provide an overview of various functions in the industries and their interlinkages leading to smooth operation. The objective is that the audience understands the roles and key responsibilities of these functions and also recognize the stakeholders in the food operation. They will understand the importance of quality function's role in the food supply chain and also how an analytical group creates value to generate high quality standards and food safety defense systems. The session will also establish the key deliverables at the commercial laboratories and highlight their importance in meeting the quality and regulatory standards.

Good Laboratory Practices – Key Elements

Mr. Rajesh Girdhar, Head - Analytical Research & Services at Abbott Nutrition

The audience will be enlightened by understanding the key contributors in setting up a good laboratory and associated good practices in day to day operations. It will overlay the concept on Good Laboratory practices, demonstrations will be provided to understand the topic. The session will highlight the benefits the laboratories have by adopting this practical and simple concept. The practical scenarios will be shared with discussions to reach optimum levels of good laboratory practices and how to build and go to the next levels over a period of time.

Refreshment Break (1045 – 1115 hrs)

Technical Session 5: Emerging Challenges in Microbiological Food Safety (1115 – 1245 hrs)

Recognizing the fact that food safety is a fundamental and persistent issue, recognition of foodborne pathogens remains a challenge. According to World Health Organization illness rate due to contaminated food is the most widespread and transmissible health problem today. Several frameworks and methodologies have been created years ago to protect human health, although much advancements are awaited to ensure supply of zero-risk food. With new information and strategies, we can ensure food safety management systems that use science to resolve complexities of food analysis and also provide new insights to food microbiology. This session intends to discuss recent as well as alternative methods as measures to prevention of food-related illness.

Session Chair: Ms. DeAnn L. Benesh, Immediate Past President, The AOAC INTERNATIONAL and Global Regulatory Affairs Manager at 3M Food Safety

- Microbiology Method Validation and Verification – which comes first? - **Ms. DeAnn L. Benesh**, Immediate Past President, The AOAC INTERNATIONAL and Global Regulatory Affairs Manager at 3M Food Safety
- Challenges in Enumeration of Microorganisms in Probiotic Product - **Professor Jashbhai B. Prajapati**, Principal & Dean, SMC College of Dairy Science, Anand Agricultural University, Anand
- Emerging Microbial Concerns in Food Safety- Shiga toxin producing E.coli (STEC), Campylobacter, Toxoplasma and Norovirus - **Mr. D. Peer Mohamed**, Assistant Director (Tech), Export Inspection Agency- Kolkata
- Emerging Challenges: Impact of climate change, food security and evolving consumer aspirations on food safety - **Dr. Nimish Shah**, Director Partnerships and Advocacy, Hindustan Unilever Ltd

Parallel Session 2 (1115 – 1245 hrs)

Management System & Technical Requirements as per ISO/IEC 17025 – Overview and Group Exercise

Mr. Rajesh Girdhar, Head - Analytical Research & Services at Abbott Nutrition

In the context of ISO 17025, key focus of this session will be on how an accredited lab effectively implements quality and technical systems. This session shall impart basic and conceptual understanding on effective implementation of the system and will also guide on continuous improvement measures. This will be a practical hands on workshop where the participants will go through group activities as a team. This is a learn with fun activity.

Laboratory Safety

Mr. Rajesh Girdhar, Head - Analytical Research & Services at Abbott Nutrition

This being the most important element in a laboratory, the key focus will be how to set the safety culture in a laboratory, do's and don'ts, and how to identify the laboratory safety issues. There will be few classroom demonstrations to imbibe the learnings and it will also focus on the practical part in implementing a safety culture targeting zero safety incidents.

Lunch Break (1245 – 1345 hrs)

Technical Session 6: Authenticity, Fraud and Food Safety with Regards to Emerging Contaminants (1345 – 1545 hrs)

Quality, safety and authenticity represent the key pillars of food integrity. Protecting consumer rights and preventing fraudulent or deceptive practices are the challenging issues for the regulatory agencies as well as the food industries. In addition, the food testing laboratories are also facing the challenges regarding the limited choice of reliable analytical tools, methods and instrumentation to meet lower detection levels, false positives/negatives, detect newer and unknown ingredients and verify the composition and nature of food. Scientific expertise and technologies are constantly being evolved and advanced to test the authenticity of foods. The food authenticity is addressed using the latest developments in DNA fingerprinting techniques, and various hyphenated tools. The chromatographic techniques coupled with mass spectrometry and isotope ratio mass spectrometry provide high degree of selectivity and help us achieve very low detection limits even in complex food samples. “Out of the box” thinking is important to battle the creativity of fraudsters. In this session the distinguished speakers will highlight multidisciplinary approaches to detect food fraud and trace their origins.

Session Chair: Dr. Chindi Vasudevappa, Vice Chancellor, NIFTEM

- Global Food Regulatory Policy Perspective on Food Fraud Management - **Dr. Samuel Godefroy**, Full Professor, Food Risk Analysis & Regulatory Policy, Université Laval, Québec, QC. Canada
- Food Analysis To Check Quality and Authenticity by Fully-Automated 1H-NMR by the example of fruit juice and honey - **Mr. Thomas Spengler**, Director Market Management Food Feed Beverages & Head of Lean Customer Development, AIC Division, Bruker BioSpin GmbH
- New Tools for Food Fraud, an Old Problem with Perpetually New Intricacy - **Dr. Dirk Hoegaerts** - Senior Manager, Global Regulations and Standards Strategy, Segment Marketing & Market Intelligence CoE, Agilent Technologies
- Simple techniques but Different Approach for Food Authenticity and Quality Testing - **Dr. Jitendra Kelkar**, GM, Customer Support Center, Shimadzu Analytical India Pvt Ltd
- Simultaneous estimation of complex PGR compounds using QSight LC-MS/MS - **Dr. Yadvinder Singh**, Sr. Application Scientist, PerkinElmer India Pvt. Ltd.

Parallel Session 3 (1345 – 1530 hrs)

Session Chair: Mr. Rajesh Girdhar, Head - Analytical Research & Services at Abbott Nutrition

- Significance of Nitrogen (Protein) determination in Food and advancements in CHNS/O technique to analyze it accurately - **Dr. K.S. Nagabhushana**, Chief Operating Officer, IITB-Monash Research Academy, IITB Campus, Mumbai
- Benefits of Merck’s Vitroid™ / Lenticule® Formats in Handling & Storage of Microbiological Reference Materials - **Dr. Markus Obkircher**, Head of Reference Materials R&D, Merck KGaA.
- Honey-Profiling based on 1H-NMR - A Powerful Solution for Adulteration, Authenticity and Quality Control in Honey - **Mr. Thomas Spengler**, Director Market Management Food Feed Beverages & Head of Lean Customer Development, AIC Division, Bruker BioSpin GmbH

Presentation by “Young Scientist” & “Women in Analytical Science” Awardees (1545 – 1615 hrs)

In our endeavor to provide an opportunity to the budding scientists, this session is dedicated to the “Young Scientist” and “Women in Analytical Science” awardees who will be selected by special jury panels and will be invited to present their work as short oral presentations.

Session Break (1615 – 1630 hrs)

Closing Session (1630 – 1730 hrs)

- India Section of AOAC INTERNATIONAL – Roadmap to Future
- Award Session
- Valedictory Address - **Dr. Chindi Vasudevappa**, Vice Chancellor, NIFTEM

High Tea (1730 – 1800 hrs)

Annual Executive Committee Meeting (1830 – 2030 hrs)