

The Scientilic Association Dedicated to Analytical Excellence®

AOAC INTERNATIONAL

APPROVAL REQUEST DOCUMENTS REVIEW

Thursday, August 17, 2017

AOAC INTERNATIONAL
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The Scientific Association Dedicated to Analytical Excellence®

MEMORANDUM

Date: August 17, 2017

To: AOAC INTERNATIONAL President

From: Delia Boyd, Standards Development, AOAC INTERNATIONAL

Subject: New OMB Members

SUMMARY:

Two members of the OMB will be leaving at the end of September. One member has a second term that expires in September 2017. The other member announced during the June OMB meeting that her new position will not currently support participation on the OMB. Per the OMB's Terms of Reference, the OMB shall consist of up to 13 voting members including a Chair, a Vice Chair, the Chair of Committee on Safety, and the Chair of Committee on Statistics. Therefore, with 12 members currently on the 2016-2017 term of OMB, there is a maximum of **three (3) open seats** for consideration for the 2017-2018 term of OMB.

In selecting potential candidates from which the OMB could consider, Shauna Roman proposed that the list of candidates from 2015-2016 be considered. Additionally, two other candidates were also nominated.

After reviewing the slate of candidates and subsequent voting, the candidates selected are as follows:

- Jon Wong (US FDA)
- Eric Verdon (ANSES)

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Eric VERDON
ANSES - Laboratory of Fougeres
French Agency for Food, Environmental and Occupational
Health Safety

E.U. Reference Laboratory for Antimicrobial and Dye Residues in Food from Animal Origin (EU-RL)

La Haute Marche - Javene - BP90203 F-35302 Fougères

France

Tel: +33 (0)2 99 94 78 91 Fax: +33 (0)2 99 94 78 80 Email: eric.verdon@anses.fr

Doctor Eric VERDON was born on February 6, 1964 in Versailles, France. He graduated from Bordeaux University as a Doctor in Analytical Chemistry (PhD, 1991). As a research scientist, he is the Head of the Department for "Residues of Veterinary Drugs in Food" at the Laboratory of Fougeres, one of the laboratories included in the French Agency for Food, Environment and Occupational Health Safety (ANSES). His expertise lies in the area of Analytical Chemistry dedicated to Veterinary Drug Residue Analysis by Liquid Chromatographic Systems coupled to UV-Visible, Fluorimetric or Mass Spectrometric detectors and also in the area of Validation. Eric VERDON is a technical auditor for EU National Reference Laboratories. He is regularly invited for advices and expertises by ANSES-DERNS (Direction for Assessment of Hazards in Food Nutrition and Food Safety), EU DG-Sanco (Health and Consumer Protection), EU DG-Trade, EU DG-Enlargement and acts as an independent advisor for the United Nations joint FAO/IAEA organisation on the subject of monitoring residues in food products. He is also a member of the scientific community for Chemical Contaminant Residues at the AOAC International.

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Personal information

First name(s) / Surname(s)

VERDON Eric 30 rue du Stade 35133 JAVENÉ France

+33 2 99 94 78 91 (Work)

Telephone(s) +33 2 99 94 55 86 (Home)

+33 2 99 94 78 80 (Work)

e.verdon@fougeres.afssa.fr

Nationality French

Date of birth 06 February 1964

Work experience

Dates Since January 2007

Occupation or position held Head of the Department for Veterinary Drug Residue Control in Food from Animal Origin

AFSSA-LERMVD (Laboratory for Research & Study of Vet Drug and Disinfectants)

Deputy-Head of the EU-Community Reference Laboratory for Antimicrobial Drug and Pharmacological

Mobile

+33 6 08 64 47 76 (Home)

Dye Residue in Food from Animal Origin

Heading a Research and Control Unit of 19 scientists acting as National Reference Laboratory for Main activities and responsibilities

Control of Veterinary Drug Residue in Food from Animal Origin and also as the EU-Community Reference Laboratory for Antimicrobial Drug and Pharmacological Dye Residue in Food from Animal

Name and address of employer AFSSA (French Food Safety Agency) 27-31 Avenue du Général Leclerc 94701 Maisons-Alfort France

> Dates From August 1993 to December 2006

PhD Research Scientist in the Unit for Veterinary Drug Residue Control in Food from Animal Origin at Occupation or position held AFSSA-LERMVD (Laboratory for Research & Study of Vet Drug and Disinfectants)

Coordination of the activities of the EU-Community Reference Laboratory for Antimicrobial Drug and Pharmacological Dye Residue in Food from Animal Origin

And

Development of analytical methods for Veterinary Drug Residue Control in Food from animal origin by Physico-chemical techniques (HPLC/UV, HPLC/FLD, LC/MSMS)

AFSSA (French Food Safety Agency) 27-31 Avenue du Général Leclerc 94701 Maisons-Alfort France

Development of activities in the field of Physico-Chemical Methods for Vet Drug Residue Control in food:

- Coordination of the scientific and technical activities of the "Veterinary Drug Residue Unit" of AFSSA-LERMVD-Fougères,
- Development of analytical methods by Liquid Chromatography (HPLC/UV, HPLC/FLD, LC/MSMS) for the Community Reference Laboratory (CRL) activities and for the National Reference Laboratory (NRL) activities in accordance with the European Commission Directive no 96/23/EC and the European Commission Decision 2002/657/EC,
- Internal Auditor for all the activities conducted under the Quality Assurance System accredited by French Accreditation Body COFRAC since 1992 under the program no99-6 and in agreement with the International Standard ISO17025: version 2005.

Curriculum Vitae

Address(es)

Fax(es)

E-mail

Gender

Male

Main activities and responsibilities

Name and address of employer Type of business or sector

> Page 1/5 - Curriculum vitae of Eric VERDON

Type of business or sector (Continued...)

Development of activities in the field of Physico-Chemical Methods for Vet Drug Residue Control:

- Scientific and Technical Implementation of Training Sessions for EU-NRL experts, for experts from the official Laboratories from Third Countries and for analytical chemists from the LVDs (French District Veterinary Laboratories = Field Laboratories),
- Scientific and Technical Implementation of Proficiency Testing Studies for EU-NRL experts, for experts from the official Laboratories from Third Countries and for analytical chemists from LVDs,
- Preparation of Reference Materials for EU-NRL experts, for experts from the official Laboratories from Third Countries and for analytical chemists from LVDs,
- Teaching for french and foreigner analytical chemists trained for physico-chemical analysis of veterinary drug residues in food from animal origin.
- Teaching of vet drug residue chemistry for students at Technical degree, Master degree or PhD,
- Coordination of the network of analytical experts organized between the CRL and the NRLs of the 27 EU-MS with scientific implementation and follow-up of the CRL WebSite (http://crl.fougeres.afssa.fr) dedicated to the exchange of information toward the NRLs and toward the EC (DG-SANCO).
- CRL activities, implementation and follow-up of the connections with the official laboratories in charge
 of the control of veterinary drug residues in food from animal origin, those inside the European
 Union (within 27 Member States) and those outside too (Candidate Countries to EU-Accession,
 Associate European Countries, Third-Countries ...).
- Official CRL Visits and Technical Audits of EU-NRLs in charge of vet. drug residue control (Portugal, Austria, Cyprus, Italy, Hungary, Poland, Finland, Bulgaria, Estonia, Latvia, Lithuania, Slovenia, Slovakia, ...)
- Advices and expertise for EU-NRL experts, for experts from the Official Laboratories from the Third Countries and for analytical chemists from the LVDs (French Field Laboratories),
- Advices, trainings and expertise mission for AFSSA-DERNS (Department for Evaluation of Hazards in Food Nutrition and Food Safety), for MAP-DGAI (French Ministry of Agriculture Directorate General for Food and Nutrition), for the European Commission: DG-SANCO (Health & Consumer Protection), DG-TRADE and DG-Enlargement (TAIEX: Technical Assistance Information Exchange Office), and for international bodies: FAO/IAEA: examples:
 - Expert mission for training voïvodies veterinary field laboratory analysts through a french-polish cooperation of the Veterinary Services (National Veterinary Research Institute, Pulawy, November 22-25, 2005)
 - Expert mission for the European Commission toward the Veterinary Services of the Bulgarian Acceding State (Central Laboratory for Veterinary Control and Expertise, Sofia-Bulgaria, February 13-17, 2006)
 - Expert mission invited by Taiwanese Government and jointly organized by the Taiwan Tilapia Alliance, the
 National University of Science and Technology of Ping-Tung and the Meiho Institute of Technology for
 training courses toward the Veterinary and Food Control Services of the Ministry of Fisheries (National
 University of Ping-Tung, Kaohsiung, June 12-17, 2006)
 - Expert mission for FAO/IAEA at the National Institute for Veterinary Drug (INMV) in the Central Laboratory of Algiers, Algers, Algera, April 01-04, 2007)
 - Expert mission for FAO/IAEA at the Central Veterinary Laboratory of the Department of Regulatory Service of the Ministry of Agriculture (Asmara, Eritrea, November 13-15, 2007)
 - Expert mission for DG-TRADE at the Bureau of Fisheries and Aquatic Resources of the Department of Agriculture of the Republic of the Philippines (Quezon city, Philippines, October 27-30, 2008)
- Advices and expertise for FAO-IAEA (Department for Evaluation of Hazards in Food Nutrition and Food Safety), for MAP-DGAI (French Ministry of Agriculture – Directorate General for Food and Nutrition) and for the European Commission
- Participation and/or organisation of meetings and workshops at AFSSA-Fougères annually by the CRL-AFSSA-LERMVD Fougères and also those workshops from other scientific institutes (EU-DG-Joint Research Centre-IRMM, DG-Enlargement-TAIEX, ...) for the National Reference Laboratories from the 27 Member States: examples:
 - Co-organizer and lecturer at the Joint DG Enlargement TAIEX / AFSSA-LERMVD Workshop for the Analytical Experts of the 13 Candidate and Acceding Countries, Workshop entitled "Inter-laboratory testing on antimicrobial residues in food" (Fougères-France, April 16/17, 2003)
 - Invited lecturer at the DG Enlargement TAIEX Workshop for the Candidate Countries Chief Veterinary
 Officers Sub-Group on Laboratories, workshop entitled "Experiences at AFSSA-Fougères concerning the
 possibility of including NRLs of the CCs in Ring-testing" (Brussels-Belgium, June 24/25, 2003)
 - Invited lecturer at the Joint DG-JRC-IRMM / CSL-York-UK Workshop for the Analytical Experts of the 13
 Candidate and Acceding Countries, workshop entitled "Chemical and Microbiological Proficiency Testing of
 Food Laboratories" (Geel-Belgium, November 20/21, 2003)
- Member of the Association of Official Analytical Chemists International (AOAC-Int), American association of expert analysts based in Gaithersburg, Maryland, USA
- Member of the AOAC Europe section,
- Participation to Peer-review for several international journals in the field of analysis of veterinary drug residues in food, 'JAOAC International', 'Journal of Chromatography A & B', 'Journal of Antimicrobial Agents & Chemotherapy'. 'Journal of Agricultural and Food Chemistry', 'Analytica Chimica Acta', 'Chromatographia', 'Journal of Analytical and Bioanalytical Chemistry', 'Journal of Analytical chemistry', "Mass Spectrometry Reviews".

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Education and training

Dates

1987 - Master Degree of Analytical Chemistry of the Option : Molecular systems) - Bordeaux

1991 - PhD in Analytical Chemistry - Bordeaux

1997 - University Diploma in Statistics for Biology and Medicine Sciences - Paris

Title of qualification awarded

MSc: "Methods and Techniques in Analytical Physico-chemistry"

PhD: "Elaboration by solvothermal synthesis and Physico-chemical Characterisation of fine particles

of rare earth dioxides"

DU: "Statistics for Biology and Medicine Sciences"

Principal subjects/occupational skills

Food Chemistry / Veterinary Drug Residues in Biological Matrices / Physico-chemistry / Statistics for Biology and Medicine

Name and type of organisation providing education and training

University of Sciences at Bordeaux I (France)

University Pierre et Marie Curie of Paris VI – CESAM: Statistics for medicine and biology(France)

Personal skills and competences

Mother tongue(s) French

Other language(s)

Self-assessment

European level (*)

English German

Understanding				Speaking				Writing
Listening		Reading	Spoken interaction		Spoken production			
	Fluent	Fluent		Fluent		Fluent		Fluent
	Scholar	Scholar		Scholar		Scholar		Scholar

^(*) Common European Framework of Reference for Languages

Social skills and competences

Coordinating activities in scientific networks

Teaching for training experts and students in French and English languages

Organisational skills and competences Leading a team of microbiologists and physico-chemists (Science, Technique, Budget, ...)

Technical skills and competences

Chemistry and physico-chemistry (Liquid Chromatography, Mass spectrometry, Spectroscopy) Biological Statistics (Diploma for statistics in medicine-biology from the University of Paris VI « Centre

d'Etude de la Statistique Appliquée à la Médecine »

Computer skills and competences

Softwares: Microsoft Word, Excel, Powerpoint, Access, and Systat, Chemdraw, specific Softwares for

HPLC and LCMSMS instrumentation

Computer Languages (Fortran, Pascal, Basic, ...)

Artistic skills and competences

Music's: Guitar player

Other skills and competences

Sports: Scuba diving (Instructor CMAS **), and Tennis player;

Scientific hobby: Astronomy (Astrophotography)

Driving licence

Level A (motorcycle), and Level B (car)

Annexes

Recent publications (2000-2009):

- Verdon E., Fuselier R., Hurtaud-Pessel D., Couëdor P., Cadieu N., Laurentie M. (2000),"Stability of penicillin residues in meat during storage - Ampicillin" Journal of Chromatography A, 2000, 882, 135-143
- 2. Verdon E., Couëdor P., Laurentie M., Maris P. (2002)," *LC Determination of Ampicillin in Porcine Muscle Tissue by a Multi-Penicillin Analytical Method: A European Collaborative Study*", *Journal of AOAC International*, 2002, **85**, 4, 889-900
- 3. Valette J.C., Demesmay C., Rocca J.L., Verdon E. (2004), "Separation of Tetracycline Antibiotics by Hydrophilic Interaction Chromatography using an Amino-Propyl Stationary Phase", **Chromatographia**, 2004, **59**, 55.60
- Valette J.C., Bizet A.C., Demesmay C., Rocca J.L., Verdon E. (2004), "Separation of Basic Compounds by Capillary Electrochromatography on an X-Terra RP18^R Stationary Phase", Journal of Chromatography A, 2004, 1049, 171-181
- Verdon E., Couëdor P., Roudaut B., Sanders P. (2004) "A multi-residue method for the simultaneous determination of 10 quinolone antibacterials in multi-matrix/multi-species tissues (muscle, liver, kidney, fish, milk, poultry and egg) by a narrow-bore HPLC with fluorescence detection – Single-laboratory validation study ", *Journal of AOAC International* , 2005, 88, 4, 1179-1192
- 6. Valette JC., Demesmay C., Rocca J.L., Verdon E. (2005),"Potential Use of an Aminopropyl Stationary Phase in Hydrophilic Interaction Capillary Electrochromatography. Application to Tetracycline Antibiotics", *Chromatographia*, 2005, **62**, 7/8, 393-399
- Verdon E., Hurtaud-Pessel D., Sanders P. (2006) "Evaluation of the limit of performance of an analytical method based on a statistical calculation of its critical concentrations according to ISO Standard 11843 – Application to Routine Control of Banned Veterinary Drug Residues in Food According to European Decision 657/2002/EC", Accreditation and Quality Assurance: Journal for Quality, Comparability and Reliability in Chemical Measurement, 2006, 11, 58-62
- 8. Hurtaud-Pessel D., Verdon E., Blot J., Sanders P. (2006), "Proficiency study for the determination of nitrofuran metabolites in shrimps", *Food Additives and Contaminants*, 2006, 23, 6, 569-578
- Verdon E., Couëdor P., Sanders P. (2007) "Multi-residue monitoring for the simultaneous determination of five nitrofurans (furazolidone, furaltadone, nitrofurazone, nitrofurantoine, nifursol) in poultry muscle tissue through the detection of their five major metabolites (AOZ,AMOZ,SEM,AHD,DNSAH) by liquid chromatography coupled to electrospray tandem mass spectrometry - In-house validation in line with Commission Decision 2002/657/EC", Analytica Chimica Acta, 2007, 586, 336-347
- Verdon E. (2008) "Antibiotic Residues in Muscle Tissues of Edible Animal Products", in Handbook of Muscle Foods Analysis, Eds. Leo M.L. Nollet and Fidel Toldra, CRC Press Taylor & Francis Group, Chapter 42, pp 855-947
- V.Gaudin, M.Juhel-Gaugain, J.M. Fabre, J.P. Morétain, P. Sanders, E. Verdon, (2008) Preliminary study for the AFNOR validation of Premi-Test, a microbiological-based screening test for the detection of antimicrobial residues, in muscles from different animal origins. *Food Additives and Contaminants*, 25, 12, 1451-1464
- E. Verdon, P. Couëdor, D. Hurtaud-Pessel, B. Roudaut, P. Sanders (2008) Validation of a LC-MSMS Method for Benzimidazoles and Their Metabolites in Bovine Liver and in Milks from Cows, Ewe, and Goat. Proceedings of Euroresidue VI, Conference on Residues of Veterinary Drug in Food. Eegmond aan Zee. The Netherlands. Vol. 3, 985-996
- D. Hurtaud-Pessel, S. Gautier, M. Juhel-Gaugain, E. Verdon (2008) Screening of veterinary antibacterial residues in muscle using liquid chromatography-tandem mass spectrometry: Method validation. Proceedings of Euroresidue VI, Conference on Residues of Veterinary Drug in Food, Eegmond aan Zee, The Netherlands, Vol. 3, 1317-1322
- V.Gaudin, C. Hedou, A. Rault, P. Sanders & E. Verdon, (2009) Comparative study of 3 screening tests, Explorer test, Premi-Test and a multi-sulphonamide ELISA kit, for the detection of antimicrobial and sulphonamide residues in eggs. Food Additives and Contaminants, accepted after review in January 2009
- 15. E. Dubreil-Chéneau[®], M. Bessiral, B. Roudaut, E. Verdon, P. Sanders, (2009) Validation of a multi-residue LC/MS-MS confirmatory method for 10 anticoccidials in eggs according to Commission Decision 2002/657/EC, *Journal of Chromatography A*, accepted after review in February 2009

Selection of recent lectures/communications (2003-2009):

- 16. Verdon E. (2003), "Experiences at AFSSA-Fougères concerning the possibility of including NRLs of the CCs in Ring-testing", communication presented at 3rd Meeting of the CC-CVO Sub-group on Laboratories, TAIEX Event AGR 0304/7390, IPC Building, 5th floor, Beethoven, Boulevard Charlemagne 1, June 24/25, 2003, Brussels, Belgium
- 17. Verdon E. (2003), "Bridging Methods through Microbiological and Chemical Interlaboratory Testing Studies", communication presented at the Session no2: Method Equivalency of the Symposium on Veterinary Drug Residues at the 117th meeting of the AOAC International, September 14/18, 2003, Westin Peachtree Hotel, Atlanta, Georgia, USA
- 18. Verdon E. (2003), "The Community Reference Laboratory- Roles and Goals", communication presented during the Workshop for Candidate Countries on residues of pharmacological active substances, organized by EC-JRC-IRMM, October 16/17, 2003, Geel, Belgium
- Verdon E. (2003), "Results from Proficiency Testing organised by CRL-AFSSA-Fougères on antibiotic residues", lecture at the Workshop on Chemical and Microbiological Proficiency Testing of Food Laboratories for EU Candidate Countries, JOINT EC-JRC-IRMM/ UK-CSL, at EU-JRC-IRMM, Nov 20/21, 2003, Geel, Belgium
- 20. Verdon E. (2004), "Calculation of day-to-day or batch-to-batch critical concentrations according to ISO11843", lecture at the Workshop for the EU-NRL network on the confirmatory analysis of malachite green residues in fish tissue by LCMSMS, Oct 21/22, 2004, Fougères, France
- 21. Verdon E. (2005), "Analyse de confirmation des résidus de nitrofuranes Préparation des échantillons pour analyse des résidus de nitrofuranes par LCMSMS", French-Polish Training Session for the Voïvodies Food Control Laboratories in charge of the Monitoring of the Antimicrobial Residues and Banned Substances in Food Producing Animals, Nov 4, 2005, Pulawy, Poland
- 22. Verdon E. (2005), "La Validation des méthodes de confirmation, étude de validation, rapport de validation, concentrations critiques CCα et CCß et leur calcul pratique par séries de calibration (norme ISO11843) ", French-Polish Training Session toward the Voïvodies Food Control Laboratories in charge of the Monitoring of the Antimicrobial Residues and Banned Substances in Food Producing Animals (Nov 4 , 2005, Pulawy, Poland)
- 23. Verdon E. (2006), "Analytical Strategies to control the illegal use of certain banned or controlled antimicrobials and dyes in food producing animals in the EU", Seminar co-sponsored by the Fisheries Agency and the Council of Agriculture (FA-COA) (June 13, 2006, Kaohsiung, Taiwan)
- 24. Verdon E. (2006), "Presentation of CRL and NRL Activities regarding Food Control and Veterinary Drug Residue Monitoring according to EU Regulations Regulation 2002/657/EC and the practical validation of the performance of the analytical methods for veterinary drug residue control Screening and Confirmation of banned substances: nitrofuran metabolites, chloramphenicol, malachite green in food producing fish and aquaculture products by LC-MSMS", Taiwanese Training Sessions co-organized by Taiwan Tilapia Alliance, the National University of Science and Technology of Ping-Tung and the Meiho Institute of Technology for the analysts of the Food Control Laboratories under the control of the Fisheries Agency and of the Council of Agriculture (FA-COA) (June 14-15, 2006)
- 25. Verdon E. (2007), "What critical limit for analytical methods to give confidence in unequivocal identification and reliable quantification of residues monitored in biological matrices?", oral communication presented at SaskVal07, 1st International Workshop on Validation of Analytical Methods for Veterinary Drug Residues (Saskatoon, Saskatchewan, Canada, 10-13 June 2007)
- 26. E. Verdon (2008) "CRL-NRL activities for veterinary drug residue control in Food Producing Animals in the European Union" lecture at the "Workshop on European Legislation in the field of the Veterinary medicinal Products and the safety of food" organised by EU-DG-Enlargement in co-operation with Ministry of Agriculture and Fisheries of Morocco, Rabat, 28-29 February 2008
- 27. E. Verdon (2008) "Determination of maximum values for veterinary drugs and for contaminants" lecture at the SARAF international workshop organised by EU-DG-Trade, at the National Veterinary School of Nantes, 3 June 2008, Nantes, France
- 28. Verdon E. (2008), "Presentation of CRL and NRL Activities regarding Food Control and Veterinary Drug Residue Monitoring according to EU Regulations Regulation 2002/657/EC and the practical validation of the performance of the analytical methods for veterinary drug residue control -Screening and Confirmation of banned substances: nitrofuran metabolites, chloramphenical and dyes (malachite green) in food producing animals and aquaculture products by LC-MSMS Screening and Confirmation of authorized antimicrobials in food producing animal tissues by LC-MSMS", Bureau of Fisheries and Aquaculture Resources of the Philippines Ministry of Agriculture, Quezon city (October 27-30, 2008)

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JON W. WONG

Curriculum vitae

Work Address: U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, 5100 Paint Branch Parkway, College Park, MD 20740, Tel: 240-402-2172; Email: jon.wong@fda.hhs.gov

1. Education

Ph.D., Agricultural and Environmental Chemistry, University of California, Davis.

1990 M.S., Chemical Engineering, Purdue University, W. Lafayette, IN.

1988 B.S., Chemistry, University of California, Davis.

B.S., Chemical Engineering, University of California, Davis.

2. Professional Experience

December 2002 - present

Research Chemist, November 2010 - present **Chemist**, December 2002 - November 2010

U. S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Regulatory Science, 5100 Paint Branch Parkway, College Park, MD 20740

Develop, validate and implement multiresidue, efficient and cost-effective procedures for the analysis of pesticides, mycotoxins, veterinary drugs, and other chemical residues and contaminants and industrial chemicals in fresh produce, dairy products, agricultural commodities, and dried botanical dietary supplements using advanced technologies (gas chromatography, liquid chromatography, mass spectrometry) and presenting at scientific meetings and forums, publishing in peer-reviewed publications, mentoring to others, providing scientific guidance and technical support, and serving as a technical expert in the aforementioned chemistry areas.

March 1997 – December 2002

Chemist

Bureau of Alcohol, Tobacco and Firearms, National Laboratory Center, 1401 Research Blvd, Rockville, MD 20850

Main responsibilities involved the regulation, analysis, and research of beverage alcohol and related alcohol-based products at the Alcohol and Tobacco Laboratory of the Bureau of Alcohol, Tobacco and Firearms including developing methods to screen, quantitate and identify pesticides and organic compounds in alcohol beverages; completed laboratory analysis and reports for market approval and market basket survey products with highly efficient turn-around times and consumer complaint and enforcement projects; presented and published research; and served as a mentor and technical expert to others.

3. Additional Training

2015 Pesticide and Veterinary Drug Residues: Method Validation and Routine Quality Control, 52nd North American Chemical Residue Workshop, St Pete Beach FL, July 18-19, **2015**. High Resolution MS for Qualitative and Quantitative Analysis: An Introduction. 62nd 2014 ASMS Conference and Short Course, Baltimore MD, June 14-15, 2015. 2012 ISO 17025 Certification Training. FDA CFSAN Staff College, College Park, MD, December 5-6, 2012. 2010 Quality Assurance for Analytical Laboratories, AOAC, Orlando, FL, September 25-26, 2010. 2009 Office Methods of Analysis Program: Quantitative Collaborative Study of Chemical Methods, AOAC, Philadelphia, PA. 2009 SCIEX 4000 OTrap Training, Applied Biosystems, Framingham, MA 2008 Basic Food and Drug Law Course, U.S. Food and Drug Administration, College Park, MD 2007 1200L GC-Tandem Mass Spectrometry On-site Training, Varian Corp., on-site training, College Park, MD Premier Tandem Mass Spectrometer Training Course, Micromass Corp., Beverly, MA 2006 2005 SCIEX 2000 Training (Applied Systems SCIEX 2000 Triple Quadrupole Mass Spectrometer), IR-4 Trace Analytical Laboratory, Department of Environmental Toxicology, University of California, Davis 2002 1100 Series LC/MSD Techniques and Software Operation Course, Agilent Technologies, Wilmington DE 2001 GC-MSD Troubleshooting and Maintenance Course, Agilent Technologies, Atlanta GA Agilent 6890 GC Retention Time Locking Training Course, Agilent Technologies, XIII 2001 California Pesticide Residue Workshop, Sacramento, CA 1999 Instructor Training, Bureau of Alcohol, Tobacco and Firearms, Langevin Learning Services, Greenbelt, MD 1998 Court Training, Bureau of Alcohol, Tobacco and Firearms, Atlanta GA 1998 HP 6890/ALS GC Chemstation Operation Training (Course H5926A), Hewlett-Packard Co., Atlanta, GA

4. Awards

- 2015 Award of Appreciation, FLAG Works, Inc., sponsor of the North American Chemical Residue Workshop (NACRW) for Co-Chairing the Technical Program of the 2015 NACRW, St Pete Beach FL, July 18-23, 2015. 2012 FDA Leveraging and Collaboration Award for superior contribution to collaborate in the development and delivery of the IFSTL's Methods of Pesticide Residue Analysis training courses in March and September 2012. 2012 Plenary Speaker, Taiwan AOAC 2012 Annual Meeting, Taipei, Taiwan (Republic of China 2012 **Certificate of Appreciation**, Taiwan Food and Drug Administration 2009 AOAC International, Community Volunteer of the Year "for the dedication and excellence on the part of the volunteer who significantly contributes to AOAC INTERNATIONAL's analytical and technical communities, with noted accomplishments relating to their area of expertise." 2009 Quality step increase for Outstanding Performance in FY 2008, US FDA. 2008 Group Recognition Award for Melamine, FDA/CFSAN 2003-15 Cash or Credit Hour Bonus based on Work Performance Appraisal Satisfactory or Better (Exceptional Performance Evaluation for 2014, 2010, 2009, 2008) US FDA 2002 Overall rating of "Outstanding" for Employee Performance Appraisal for 2001-02, ATF. 2000 **Special Act Award**, Bureau of Alcohol, Tobacco and Firearms 1998 Overall rating of "Outstanding" for Employee Performance Appraisal for 1997-98, ATF. 1995-97 National Institute of Health (NIH) Postdoctoral Fellowship, Department of Internal Medicine, University of California School of Medicine, 1995-1997. 1993-94 Jastro Shields Fellowship, University of California, Davis.
- 1991-92 Jastro Shields Fellowship, University of California, Davis.

University of California, Davis.

1991-92 Thomas Archer Fellowship in Analytical Chemistry, Department of Environmental Toxicology, University of California, Davis.

Donald G. Crosby Fellowship in Agricultural and Environmental Chemistry,

1992-93

1990-91 Ecotoxicology Trainee Fellowship, University of California Toxic Substances Research and Teaching Program.

5. Membership in Professional or Honorary Societies

Current membership:

American Association for the Advancement of Science (AAS)

American Chemical Society (ACS)

Association of Official Analytical Chemists (AOAC)

Past membership (no longer active):

American Society for Mass Spectrometry

American Society for Enology and Viticulture (ASEV)

International Society for Horticultural Science (ISHS)

American Institute of Chemical Engineers (AIChE)

Institute of Food Technologists (IFT)

International Society for Free Radical Research

Oxygen Society

Institute for Food Technologists (IFT)

6. Offices, Committee Assignments or Special Assignments Held in Professional Organizations or Honorary Societies:

2015-present	U.S. representative, electronic Working Group (eWG) on "Proposed Draft Guidance on Performance Criteria for Methods of Analysis for the Determination of Pesticide Residues", <i>Codex Committee on Pesticide Residues</i>
2015	Co-Chair, Technical Program Committee , 52 nd North American Chemical Residue Workshop, St Pete Beach, FL, July 18-23, 2015 .
2015	Member , AOAC SPIFAN Expert Review Panel for Pesticide Contaminants-sodium fluoroacetate, <i>AOAC International Mid-Year Meeting</i> , Gaithersburg, MD, March 16-18, 2015 .
2015-present	Editorial Advisory Board Member , Journal of Agricultural and Food Chemistry
2014	Session Chair , 51 st North American Chemical Residue Workshop, St Pete Beach, FL, July 20-23, 2014 .
2014-2015	Member , Intelligence for Emerging Technologies – Recommendations for the Scientific Equipment Acquisition Committee, <i>Canadian Food Inspection</i>

2013-current	Co-Chair , New Blood Session: Developing Methods for the Detection of Chemical Analytes and Contaminants, 127 th , 128 th , and 129 th AOAC Annual Meeting and Exposition, 2013 – 2015 .
2013-current	Organizing Committee Member , 50 th , 51 st , and 52 nd North America Chemical Contaminants Workshop, St Pete Beach, FL.
2012-current	Technical Expert on Pesticides , Pesticide Task Group for Dietary Supplements, NSF/ANSI 173, NSF International.
2010-current	Technical Programming Council Member , AOAC International
2009	Organizing Committee Member and Session Chair , 46 th Florida Pesticide Residue Workshop, St Pete Beach, FL, July 19-22, 2009 .
	2008-2012 Organizing Committee Member , 45 th , 46 th , 47 th , 48 th , and 49 th Florida Pesticide Residue Workshop, St Pete Beach, FL.
2008-2015	Subgroup Chair in Pesticides, Chemical Contaminants & Residues in Food Community, <i>AOAC International</i>
2007	Roster Participant , AOAC Task Force on Pesticide Detection Methods for Soft Drinks (PSD), AOAC International, 121 st Annual Meeting Anaheim, CA, September 19, 2007.
2006	FDA Roster Participant , AOAC Task Force on Pesticide Detection Methods for Soft Drinks (PSD), New Delhi, India, November 28 – December 2, 2006.
2006	FDA Roster Participant , AOAC Task Force on Pesticide Detection Methods for Soft Drinks (PSD), AOAC International, 120 th Annual Meeting, Minneapolis, MN, September 21-22, 2006.
2006-2008	General Referee on Pesticides and Other Contaminants for the Methods Committee on Residues and Related Topics, AOAC International

Co-editor, American Journal of Enology and Viticulture

7. Outside Professional Advisory and Consulting Activities

Invited reviewer for the following journals:

Analytica Chimica Acta Analytical Chemistry Analytical and Bioanalytical Chemistry Food and Chemical Toxicology Journal of Agricultural and Food Chemistry

2003-current

Journal of Chemical Education
Journal of Chromatography A
Journal of the Association of Official Analytical Chemists International
Journal of Chromatographic Science
Pest Management Science
Rapid Communications in Mass Spectrometry

8. FDA Special Assignments and Advisory Activities

2014-current Member, Veterinary Drugs and Animal Feeds Technical Advisory Group

2013-current Member, Exact Mass Measurement Working Group

2013-current Member, Electronic Laboratory Notebook Working Group

2010 Chair, Pesticide Steering Committee, Office of Regulatory Affairs/Center for

Food Safety and Applied Nutrition

2008-current Member, Pesticide Steering Committee, Office of Regulatory Affairs/Center for

Food Safety and Applied Nutrition

9. Other Significant Information

Post-doctoral or Visiting Scientists Supervised or Collaborated With:

- 1. Dr. Kelli Simon, ORISE Fellow, 2014-present.
- 2. Dr. James Wittenberg. ORISE Fellow, 2014-present.
- 3. Zhengwei Jia, Visiting Scientist, Shanghai Institute for Food and Drug Control, Shanghai, People's Republic of China, November 2012-May 2013. Present affiliation: Senior Application Chemist, Waters Corp., Shanghai, People's Republic of China.
- 4. Jiwei Liu, Visiting Scientist, Shanghai Institute for Food and Drug Control, Shanghai, People's Republic of China, September 2011-March 2012. Present affiliation: Senior Scientist, Shanghai Institute for Food and Drug Control, Shanghai, People's Republic of China.
- 5. Dr. Chia-Ding Liao, ORISE Fellow, May 2011-May 2012. Present affiliation: Branch Chief, Division of Research and Analysis, Taiwan Food and Drug Administration, Taipei, Taiwan, Republic of China. Present affiliation:
- 6. Dr. Feng Shi, ORISE Fellow, January 2010-November 2010. Present affiliation: Research Manager, Givaudan, Cincinnati, OH.

Undergraduate Students Supervised:

- 1. Hoon Yong Park, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, June 2013 May 2015.

 Present affiliation: Chemist, Becton, Dickinson and Company (BD), Glencoe, MD
- 2. Nathaniel S. Lee, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, June 2010 May 2013. Present affiliation: Application Developer, J. P. Morgan, Newark, DE
- 3. Alex L. DiBenedetto, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, August 2009 May 2010.

 Present affiliation: Senior Manufacturing Associate, Genzyme, Boston MA
- 4. Katherine Tech, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, May 2008 August 2009. Present affiliation: Ph.D. student, University of North Carolina/North Carolina State University Graduate Program in Biomedical Engineering
- 5. Sara Alizai, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, November 2007 March 2008. Present affiliation: Pharmacst, Walgreens
- 6. Piyush Sheladia, Student Intern, Joint Institute for Food Safety and Applied Nutrition, University of Maryland, College Park, September 2006 July 2007. Present affiliation: Manager, Clinical Project & CRA Management, Accelovance, Inc., Rockville, MD

10. Publications

Peer-reviewed journals

- 61. Rering, C.; **Wong**, **J. W.***; Williams, K.; Hengel, M. J.* Design and applications of QuEChERS for teaching pesticide analysis to undergraduates in an environmental chemistry laboratory course. Manuscript in preparation, *J. Chem. Educ.* **2016**. *corresponding author, co-first author
- 60. Simon, K*.; Wong, J.W.;*, K. Zhang*; D. G. Hayward; Yang, P.*; Schreiber, A.; Su-Hsiang T.; Liao, C.-D.; Lissemore, L.*; Banerjee, K.*; Oulkar, D. Validation Study of 204 Pesticides in Fruits and Vegetables by QuEChERS and LC-MS/MS. Manuscript in preparation, *J. Agric. Food Chem.* 2016. *corresponding authors
- 59. Jia, Z.; Wong, J.W.*; Yang, P.; Zhang, K.; Hayward, D. G.; Park, H. Y.; Chang, J. S.; Wang, J. Multiresidue Pesticide Analysis of Teas using Ultrahigh Performance Liquid Chromatography coupled with Quadrupole-Orbital trap Mass Spectrometry. Manuscript in preparation, *J. Agric. Food Chem.* 2016. *corresponding author, co-first author.
- 58. Zhang, K.; Schaab, M. R.; Tor, E. R.; Aston, L.; Song, W.; Eitzer, B.; Majumdar, S; Lapainis, T.; Mai, H.; Trent, K.; El-Demerdash, A.; Vega, V.; Cai, Y.; Wong, J. W.;

- Krynitsky, A. J.; Begley, T. H. A Collaborative Study: Determination of Mycotoxins in Corn, Peanut Butter and Wheat Flour using Stable Isotope Dilution Assay (SIDA) and Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS). J. *Agric. Food Chem.* **2016**, submitted.
- 57. Zhang, K.; Wong, J.W.; Krynitsky, A. J.; Trucksess, M. W. Perspective on advancing FDA regulatory monitoring for mycotoxins in foods using liquid chromatography and mass spectrometry (invited review). *J. AOAC Int.* to be submitted, **2016**.
- 56. **Wong, J.W.**; Wang, J.; Kowalski. The 52nd North American Chemical Workshop. *J. Agric. Food Chem.* **2016**, submitted.
- 55. Chen, Y.*; Lopez, S.; Hayward, D.G*.; Park, H. Y.; Kim, S. S.; Wong, J. W.*; Wan, J.; Reddy, R. M.; Quinn, D. J.; Steiniger, D. Determination of multiresidue pesticides in botanical dietary supplements using gas chromatography-triple quadrupole mass spectrometry (GC-MS/MS). Manuscript in preparation, *J. Agric. Food Chem.* 2016. DOI: 10.1021/acs.jafc.6b00746, * corresponding authors
- 54. Wang, J.; Leung, D.; Chow, W.; Chang, J. S.; **Wong, J. W.** The development and validation of a multi-class method for analysis of veterinary drug residues in milk using ultra-high performance liquid chromatography electrospray ionization quadrupole orbitrap mass spectrometry. *J. Agric. Food Chem.* **2015**, *63*(41), 9175-9187. **DOI:** 10.1021/acs.jafc.5b04096.
- 53. Hayward, D.G.; **Wong, J. W*.**; Park. H. Y. Determinations for pesticides on black, green, Oolong and white teas by gas chromatography triple quadrupole mass spectrometry. Manuscript accepted. *J. Agric. Food Chem.* **2015**, *63* (37), 8116-8124. **DOI:** 10.1021/acs.jafc.5b02860. *corresponding authors.
- 52. Yang, P.; Chang, J.S.; **Wong, J. W.***; Zhang, K.; Krynitsky, A. J.; Brominiski, M.; Wang, J. Effect of sample dilution on matrix effects in pesticide analysis of several matrices by liquid chromatrography-high resolution mass spectrometry. *J. Agric. Food Chem.* **2015**. *63* (21), 5169-4177. DOI: 10.1021/jf505168v. *corresponding authors.
- 51. Liao, C.D.; **Wong, J. W.***; Zhang, K.; Yang, P.; Wittenberg, J.B.; Trucksess, M. W.; Hayward, D. G.; Lee, N.S., Chang, J. S. Multi-mycotoxin analysis of finished grain and nut products using ultrahigh-performance liquid chromatography and positive electrospray ionization-quadrupole orbital ion trap high resolution mass spectrometry. *J. Agric. Food Chem.* **2015**, *63* (37), 8314-8332. DOI: 10.1021/jf505049a. *corresponding authors.
- 50. Wang, J.; Chow, W.; Chang, J.; **Wong, J. W.** Ultrahigh-performance liquid chromatography electrospray ionization Q-Orbitrap mass spectrometry for the analysis of 451 pesticide residues in fruits and vegetables: method development and validation. *J. Agric. Food Chem.* **2014**, *62*(42), 10375-10391. DOI: 10.1021/jf503778c.
- 49. Zhang, K.; **Wong, J. W.**; Krynitsky, A. J.; Trucksess, M. W. Determining mycotoxins in baby foods and animal feeds using stable isotope dilution and liquid chromatography tandem

- mass spectrometry. *J. Agric. Food Chem.* **2014**, 62(36), 8935-8943. DOI: 10.1021/jf503943r.
- 48. Zhang, K.; Wong, J. W.; Jia, Z.; Vaclavikova, M.; Trucksess, M. W.; Begley, T.H. Screening multi-mycotoxins in food-grade gums by stable isotope dilution and liquid chromatography tandem mass spectrometry. *J. AOAC Int.*, **2013**, 97(3), 889-895.
- 47. Zhang, K.; **Wong, J. W.**; Mai, H.; Trucksess, M. W. Dopant-assisted atmospheric pressure photoionization of patulin in apple juice and apple-based food with liquid chromatographytandem mass spectrometry. *J. Agric. Food Chem.* **2014**, 62(18), 4112-4118. DOI: 10.1021/jf5006726.
- 46. Zhang, K.; **Wong**, **J**.; Hayward, D.; Vaclavikova, M.; Liao, C.-D.; Trucksess, M. Determination of mycotoxins in milk based products and infant formula using stable isotope dilution assay and liquid chromatography tandem mass spectrometry. *J. Agric. Food Chem.* **2013**, 61 (26), 6265-6273. DOI: 10.1021/jf4018838
- 45. Kwegyir-Afful, E. E.; DeJager, L. S.; Handy, S. M.; **Wong, J.**; Begley, T. H.; Luccioli, S. An investigational report into the incidence and causes of pine mouth syndrome events in US consumers. *Food Chem. Toxic.*, **2013**, 60, 181-187. DOI: 10.1016/j.fct.2013.07.038.
- 44. Liao, C.-D.*; **Wong, J. W**.*; Zhang, K.; Hayward, D. G.; Lee, N. S.; Trucksess, M. W. Multi-Mycotoxin Analysis of Finished Grain and Nut Products Using High-Performance Liquid Chromatography-Triple Quadrupole Mass Spectrometry. *J. Agric. Food Chem.* **2013**, *61*(20), 4771-4782. DOI: 10.1021/jf4000677. *corresponding authors.
- 43. Hayward, D. G.*; **Wong, J. W.***; Shi, F.; Zhang, K.; Lee, N. S.; DiBenedetto, A. L.; Hengel, M. J. Multi-residue Pesticide Analysis of Botanical Dietary Supplements using Salt-out Acetonitrile Extraction, Solid-phase extraction cleanup column and Gas Chromatography-Triple Quadrupole Mass Spectrometry. *Anal. Chem.* **2013**, *89*(*5*), 4686-4693. DOI: 10.1021/ac400481w. *corresponding authors.
- 42. Croley, T. R.; White, K. D.; **Wong, J.**; Callahan, J. H.; Musser, S. M.; Antler, M.; Lashin, V.; McGibbon, G. A. Combining targeted and nontargeted data analysis for liquid chromatography/high-resolution mass spectrometric analysis. *J. Sep. Sci.*, **2013**, *36*(*5*), 971-979. DOI: 10.1002/jssc.201200348.
- 41. Kaewsuya, P.; Brewer, W. E.; **Wong, J. W.**; Morgan, S. L. Automated QuEChERS tips for GC/MS analysis of fruits and vegetables. *J. Agric. Food Chem.*, **2013**, *61* (*10*), 2299-2314. DOI: 10.1021/jf304648h.
- 40. Zhang, K*.; Wong, J. W.*; Yang, P.*; Hayward, D. G.*; Sakuma, T.; Zou, Y.; Schreiber, A.; Borton, C.; Nguyen, T.-V.; Banerjee, K.; Oulkar, D. Protocol for an Electrospray Ionization Tandem Mass Spectral Product Ion Library Development and Application for Identification of 240 Pesticides in Foods. *Anal. Chem.* 2012, 84(13), 5677-5684. DOI: 10.1021/ac300844d. *corresponding authors.

- 39. Zhang, K.; Wong, J. W.; Begley, T. H.; Hayward, D. G.; Limm, W. Determination of siloxanes in silicone products and potential migration to milk, formula and liquid simulants. Food Additives and Contaminants, Part A: Chemistry, Analysis, Control, Exposure & Risk Assessment, 2012, 29(8), 1311-1321. DOI: 10.1080/19440049.2012.684891.
- 38. Chen, Y.; Al-Taher, F.; Juskelis, R.; **Wong, J. W.**; Zhang, K.; Hayward, D. G.; Zweigenbaum, J.; Stevens, J.; Cappozzo, J. Multiresidue pesticide analysis of dried botanical dietary supplements using an automated dispersive SPE cleanup for QuEChERS and high-performance liquid chromatography-tandem mass spectrometry. *J. Agric. Food Chem.* **2012**, *60*(*40*), 9991-9999. DOI: 10.1021/jf301723g.
- 37. Hayward, D. G.; **Wong, J. W.**; Zhang, K.; Chang, J.; Shi, F.; Banerjee, K.; Yang, P. Multiresidue pesticide analysis in ginseng and spinach by nontargetd and targeted screening procedures. *J. AOAC Int.* **2011**, *94*(6), 1741-1751.
- 36. Zhang, K.; Wong, J. W.; Wang, P. A perspective on high throughput analysis of pesticide residues in foods. *Chinese J. Chromatogr.* **2011**, *29*(7), 587-593.
- 35. Zhang, K*.; Wong, J. W.*; Yang, P.*; Tech, K.; DiBenedetto, A. L.; Lee, N. S.; Hayward, D. G.; Makovi, C. M.; Krynitsky, A. J.; Banerjee, K.; Jao, L.; Dasgupta, S.; Smoker, M. S.; Simonds, R.; Schreiber, A. Multiresidue pesticide analysis of agricultural commodities using acetonitrile salt-out extraction, dispersive solid-phase sample clean-up and high-performance liquid chromatography-tandem mass spectrometry. *J. Agric. Food Chem.* 2011, 59(14), 7636-7646. DOI: 10.1021/jf2010723. *corresponding authors.
- 34. Sack, C.; Smoker, M.; Chamkasem, N.; Thompson, R.; Satterfield, G.; Massey, C.; Mercer, G.; Nihau's, B.; Cassias, I.; Chang, E.; Lin, Y.; Macmahon, S.; **Wong, J. W.;** Zhang, K.; Smith, R. E. Collaborative validation of the QuEChERS procedure for the determination of pesticides in food by LC-MS/MS. *J. Agric. Food Chem.* **2011**, *59*(12), 6383-6411. DOI: 10.1021/jf201618q.
- 33. Edison, S. E.; Lin, L. A.; Gamble, B. M.; **Wong, J. W.**, Zhang, K. Surface swabbing technique for the rapid screening for pesticides using ambient pressure desorption ionization with high-resolution mass spectrometry. *Rapid Comm. Mass Spectrom.* **2011**, 25(1), 127-139. DOI: 10.1002/rcm.4831.
- 32. Lu, C.; Schenck, F. J.; Pearson, M. A.; **Wong, J. W.** Assessing children's dietary pesticide exposure: direct measurement of pesticide residues in the 24-hour duplicate food samples. *Environ. Health Perspect.*, **2010**, *118*(11), 1625-1630. DOI: 10.1289/ehp.1002044.
- 31. **Wong, J.**; Hao, C.; Zhang, K.; Yang, P.; Banerjee, K.; Hayward, D.; Iftakhar, I.; Schreiber, A.; Tech, K.; Sack, C.; Smoker, M.; Utture, S. C.; Oulkar, D. P. Development and interlaboratory validation of a QuEChERS-based liquid chromatography/tandem mass spectrometry method for multi-residue pesticides analysis. *J. Agric. Food Chem.* **2010**, 58(10), 5897-5903. DOI: 10.1021/jf903849n.

- 30. **Wong, J. W.**; Zhang, K.; Tech, K.; Hayward, D. G.; Krynitsky, A. J.; Cassias, I.; Schenck, F. J.; Banerjee, K.; Dasgupta, S.; Brown, D. Multiresidue pesticide analysis of ginseng powders using acetonitrile- or acetone-based extraction, solid-phase extraction cleanup, and gas chromatography-mass spectrometry/selective ion monitoring (GC-MS/SIM) or –tandem mass spectrometry (GC-MS/MS). *J. Agric. Food Chem.* **2010**, *58*(10), *5884-5896*. DOI: 10.1021/jf903851h.
- 29. **Wong, J. W.**; Zhang, K.; Tech, K.; Hayward, D. G.; Makovi, C. M.; Krynitsky, A. J.; Schenck, F. J.; Banerjee, K.; Dasgupta, S.; Brown, D. Multiresidue pesticide analysis in fresh produce by capillary gas chromatography-mass spectrometry/selected ion monitoring (GC-MS/SIM) and –tandem mass spectrometry (GC-MS/MS). *J. Agric. Food Chem.* **2010**, 58(10), 5868-5883. DOI: 10.1021/jf903854n.
- 28. Fitshencko, Y.; Krynitsky, A. J.; **Wong, J. W.** Emerging pesticide residue issues and analytical approaches. *J. Agric. Food Chem.* **2010**, *58*(10), 5859-5861. DOI: 10.1021/jf904599w.
- 27. Hayward, D. G.; Pisano, T. S.; **Wong, J. W.**; Scudder, R. J. Multi-residue method for pesticides and POPs in milk and cream using comprehensive two dimensional capillary gas chromatography time-of-flight mass spectrometry. *J. Agric. Food Chem.* **2010**, *58*(9), 5248-5256. DOI: 10.1021/jf100021p.
- 26. Hayward, D. G.; **Wong, J. W.** Organohalogen and organophosphorous pesticide method for ginseng root—a comparison of gas chromatography-single quadrupole mass spectrometry with high resolution time-of-flight mass spectrometry. *Anal. Chem.* **2009**, *81*(14), 5716-5723. DOI: 10.1021/ac900494a.
- Zhang, K.*; Wong, J. W.*; Hayward, D. G.; Sheladia, P.; Krynitsky, A.J.; Schenck, F. J.; Webster, M. G.; Ammann, J. A.; Ebeler, S. E. Multiresidue pesticide analysis of wines by dispersive solid-phase extraction and ultra-performance liquid chromatography-tandem mass spectrometry. *J. Agric. Food Chem.* 2009, 57(10), 4019-4029. DOI: 10.1021/jf9000023. *co-first authors
- 24. Hayward, D. G., **Wong, J.**, Schenck, F. J., Zhang, K., Krynitsky, A. J., Begley, T. Multiresidue analysis of pesticides and POPs in fruits, vegetables and dried ginseng powders. *Organohalogen Compounds.* **2009**, *70*, 29-33.
- 23. Schenck, F.; **Wong**, **J.**; Lu, C.; Li, J.; Holcolmb, J. R.; Mitchell, L. M. Multiresidue analysis of 102 organophosphorus pesticides in produce at parts-per-billion levels using a modified QuEChERS method and gas chromatography with pulsed flame photometric detection. *J. AOAC Int.* **2009**, *92*(2), 561-573.
- 22. **Wong, J. W.** General Referee Reports: Committee on Residues and Related Topics. Pesticides and Other Chemical Contaminants. *J. AOAC Int.* **2008**, *91* (1), 17B-22B.
- 21. Elias, R. J.; Laurie, V. F.; Ebeler, S. E.; **Wong, J.W.**; Waterhouse, A. L. Analysis of selected carbonyl oxidation products in wine by liquid chromatography with diode array

- detection. *Analytica Chimica Acta*, **2008**, *626*(1), 104-110. DOI: 10.1016/j.aca.2008.07.048.
- 20. Schenck, F. J., Brown, A. N.; Podhorniak, L. V.; Parker, A.; Reliford, M.; **Wong, J. W.** A rapid multiresidue method for the analysis of pesticides in fruits and vegetables using an acetonitrile extraction/partitioning and solid phase extraction column cleanup. *J. AOAC Int.*, **2008**, *91*(2), 422-438.
- 19. **Wong, J. W.**; Hennessy M. K.; Hayward, D. G.; Krynitsky, A. J.; Cassias, I.; and Schenck, F. J. Analysis of organophosphorus pesticides in dried ground ginseng by capillary gas chromatography with mass spectrometry and -flame photometric detection. *J. Agric. Food Chem.*, **2007**, *55*, 1117-1128. DOI: 10.1021/jf062774q.
- 18. Hayward, D. G.; **Wong, J.**; Krynitsky, A. J. Polybrominated diphenyl ethers and polychlorinated biphenyls in commercially wild caught and farm-raised fish fillets in the United States. *Environ. Res.* **2007**, 101, 46-54. DOI: 10.1016/j.envres.2006.05.002.
- 17. **Wong, J.W**.; Wirtz, M. S.; Hennessy, M. K.; Krynitsky, A. J.; Schenck, F. J.; Capar, S. G. Pesticides in dietary supplements. *Acta Horticulturae*. **2006**, 720, 113-128.
- 16. Hayward, D.; **Wong, J.**; Krynitsky, A. J. PBDE and PCB levels correlated in wild caught and farm-raised fish fillets in the USA. *Organohalogen Compounds*. **2004**, *66*, 3944-3948.
- 15. **Wong, J. W.**; Webster, M. G.; Bezabeh, D.; Hengel, M. J.; Ngim, K. K.; Krynitsky, A. J.; Ebeler, S. E. Multiresidue determination of pesticides in malt beverages by capillary gas chromatography with mass spectrometry and selected ion monitoring. *J. Agric. Food Chem.* **2004**, *52*, 6361-6372. DOI: 10.1021/jf040109g.
- 14. **Wong, J. W.**; Webster, M. G.; Halverson, C. A.; Hengel, M. J.; Ngim, K. K.; Ebeler, S. E. Multiresidue pesticide analysis in wines by solid-phase extraction and capillary gas chromatography-mass spectrometric detection with selective ion monitoring. *J. Agric. Food Chem.* **2003**, *51*, 1148-1161. DOI: 10.1021/jf0209995.
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- 10. Haas, A. F.; **Wong, J. W.**; Iwahashi, C. K..; Halliwell, B.; Cross, C. E.; Davis, P. A. Redox regulation of normal healing? NF-κB activation in cultured human keratinocytes upon wounding and the effect of low energy HeNe irradiation. Manuscript accepted, *Free Radicals in Biology and Medicine*, **1998**, 25(9), 998-1005.
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- 3. **Wong, J. W.**; Ebeler, S. E.; Isseroff, R.-R.; Shibamoto, T. Analysis of malondialdehyde in biological samples by capillary gas chromatography. *Analytical Biochemistry*, **1994**, 220(1), 73-84.
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- 1. **Wong, J. W.**; Albright, R. L; Wang, N.-H. L. Immobilized metal ion affinity chromatography (IMAC): Chemistry and bioseparation applications. *Separation and Purification Methods*, **1991**, *20*(*1*), 49-106.

Book Chapters

- 10. Wong, J. W.; Hayward, D. G.; Zhang, K. Gas Chromatography-Mass Spectrometry Techniques for Multiresidue Pesticide Analysis in Agricultural Commodities. In: Advanced Techniques in Gas Chromatography-Mass Spectrometry (GC-MS-MS and GC-TOF-MS) for Environmental Chemistry. I. Ferrer and E. M. Thurman, Eds. Elsevier, Academic Press, Oxford, U. K., 2013, pp 3-22. ISBN: 9 8-0-444-62623-3.
- 3. Zhang, K.; Wong, J. W.; Hayward, D. G.; Yang, P. Determination of Pesticide Residues in Environmental and Food Samples using Gas Chromatography-Triple Quadrupole Mass Spectrometry. In: *Advanced Techniques in Gas Chromatography-Mass Spectrometry* (*GC-MS-MS and GC-TOF-MS*) for Environmental Chemistry. I. Ferrer and E. M. Thurman, Eds. Elsevier, Academic Press, Oxford, U. K., 2013, pp 55-95. ISBN: 9 8-0-444-62623-3.
- 4. Zhang, K.; Wong, J. W. Solvent-based extraction techniques for the determination of pesticides in food. In: *Comprehensive Sampling and Sample Preparation*. Volume 4 Extraction techniques and applications: Food and Beverage. L. Mondello and P. Dugo, Section editors; J. Pawliszyn, Ed-in-Chief, Elsevier, Academic Press, Oxford, U.K., 2012, pp. 245-261. ISBN: 9780123813732.
- 7. Krynitsky, A. J.; Smoker, M. S.; **Wong, J. W.**; Barrientos, S.; Roach, J. A. G. Evaluation of an FDA method for the determination of melamine and cyanuric acid in food by liquid chromatography-tandem mass spectrometry. In: *Progress in Authentication of Food and Wine*. S.E. Ebeler, G. Takeoka, and P. Winterhalter, Eds., American Chemical Society Symposium Series, **2011**, *1081*, 234-246.
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- 1. Wong, J. W.; Shibamoto, T. Genotoxicity of Maillard Reaction Products. In: *Maillard Reaction: Consequences for the Clinical and Life Sciences*. R. Ikan, Ed., John Wiley & Sons, Ltd., New York, **1996**, 129-159.

Presentations (*invited)

- 135. Zhang, K.; Wong, J. W.; Krynitsky, A. J.; Begley, T. H. Single/multi-laboratory evaluation of mycotoxin analysis in foods by liquid chromatography-mass spectrometry. Joint Meeting of the 9th Conference of The World Mycotoxin Forum and the XIVth IUPAC International Symposium on Mycotoxins. Winnipeg, Canada, June 6-9, 2016.
- 134. *Wong, J. W.; Zhang, K.; Liao, C.-D.; Chu, S.-C.; Conway, M.; Prakash, S.; Krynitsky, A. J. Development of LC-MS based multi-mycotoxin methods for U.S. FDA Compliance Testing and Surveillance. 129th AOAC Annual Meeting and Exposition, Los Angeles, CA, September 27-30, 2015.
- 133. Jayasuriya, H.; Kijak, P. J.; Turnipseed, S.; Croley, T.; **Wong, J.**; Gamble, B.; Li, H. Acceptance criteria for confirmation of identity for chemical residues using exact mass data within OFVM. *FDA OFVM Symposium*, Silver Spring MD, **2015**.
- 132. Chow, W.; Wang, J.; Chang, J.; **Wong, J. W.** The use of high resolution hybrid mass spectrometry and liquid chromatography for the screening, quantification and identification of 451 pesticides in fruits and vegetables. 52nd North American Chemical Residue Workshop, St Pete Beach FL, July 19-22, **2015**.
- 131. Hayward, D. G.; **Wong, J. W**.; Park, H. Y. Pesticides and persistent organic pollutants in *Camellia sinensis*. 52nd North American Chemical Residue Workshop, St Pete Beach FL, July 19-22, **2015**.
- 130. Jia, Z.; **Wong, J. W**.; Hayward, D. G.; Zhang, K.; Yang, P.; Wang, J.; Chang, J. S. Multiresidue pesticide analysis of teas using ultrahigh performance liquid chromatography coupled with quadrupole-orbitrap mass spectrometry. *52nd North American Chemical Residue Workshop*, St Pete Beach FL, July 19-22, **2015**.
- 129. Simon, K.; Wittenberg, J.; **Wong, J.**; Krynitsky, A.; Noonan, G. Evaluation of an automated QuEChERS (Quick, Easy, Cheap, Effective, Rugged, Safe) sample preparation workflow for determination of pesticides in fresh produce using LC-MS/MS. 52nd North American Chemical Residue Workshop, St Pete Beach FL, July 19-22, **2015**.
- 128. Simon, K.; **Wong, J. W**.; Zhang, K.; Yang, P. Validation study of 204 pesticides in fruits and vegetables by QuEChERS and LC-MS/MS. 52nd North American Chemical Residue Workshop, St Pete Beach FL, July 19-22, **2015**.

- 127. Zhang, K.; **Wong, J. W**.; Liao, C.; Krynitsky, A. J. Development of LC-MS based multimycotoxin methods for U.S. FDA Compliance Testing and Surveillance. *52nd North American Chemical Residue Workshop*, St Pete Beach FL, July 19-22, **2015**.
- 126. Chow, W.; Wang, J.; Chang, J.; **Wong, J. W.** The use of high resolution hybrid mass spectrometry and liquid chromatography for the screening, quantification and identification of 451 pesticides in fruits and vegetables. *SaskVal International Workshop*, Calgary AL Canada, June 16-19, **2015**.
- 125. Zhang, K.; **Wong, J. W**.; Liao, C.; Krynitsky, A. J. Development of LC-MS based multimycotoxin methods for U.S. FDA Compliance Testing and Surveillance. *SaskVal International Workshop*, Calgary AL Canada, June 16-19, **2015**.
- 124. Sikorski, K.; **Wong J.W**.; Jia, Z.; Zhang, K.; Hayward, D. G.; Krynitsky, A. J.; Liao, C.-D.; Yang, P.; Wang, J.; Chang, J. S. Sensitive and unambiguous identification of chemical analytes and contaminants in foods using the Q Exactive orbitrap LCMS. *Thermo Scientific Users Meeting*, 63rd ASMS Conference on Mass Spectrometry and Allied Topics. St Louis MO, May 31 June 4, **2015**.
- 123. *Wong, J. W.; Zhang, K.; Wittenberg, J. B.; Hayward, D. G.; Krynitsky, A. J.; Liao, C.-D.; Jia, Z.; Yang, P.; Wang, J.; Chang, J. S. Applications of UHPLC-quadrupole orbital trap mass spectrometry for the analysis of chemical contaminants in foods. *LCGC Webinar Series* September 23, 2014.

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- 122. Eitzer, B., Zhang, K., **Wong, J. W.** Analysis of Aflatoxins M1, B1, B2, G1, and G2 in milk using LC-MS/MS and stable isotope dilution. *128th AOAC Annual Meeting & Exposition*, Boca Raton, FL, September 7-10, **2014.**
- 121. Hayward, D. G.; *Wong, J. W.; Park, H. Y.; Krynitsky, A.J.; Yettella, R.; Chen, Y.; Lopez, S.; Reddy, R. Analysis of botanical dietary supplement ingredients for pesticides using QuEChERS combined with capillary gas chromatography-triple quadrupole mass spectrometry. 128th AOAC International Annual Meeting and Exposition, Boca Raton, FL, September 9, 2014.
- 120. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Wittenberg, J. B.; Krynitsky, A. J.; Yang, P.; Wang, J.; Liao, C.-D.; Jia, Z.; Banerjee, K.; Kern, S. Emerging approaches for pesticide and chemical contaminant residues analysis. *128th AOAC International Annual Meeting & Exposition*, Boca Raton, FL, September 8, **2014**.
- 119. Zhang, K.; **Wong, J. W.**; Mai, H.; Trucksess, M. W. Dopant-assisted atmospheric pressure photoionization of patulin in apple juice and apple-based food with liquid chromatographytandem mass spectrometry. *North American Chemical Residue Workshop*, St. Pete Beach, FL, July 20-23, **2014**.

- 118. Chow, W.; Wang, J.; Chang, J.; **Wong, J. W.** The determination of 451 pesticide residues in fruits and vegetables using ultra-high performance liquid chromatography and high resolution quadrupole orbitrap mass spectrometry. *North American Chemical Residue Workshop*, St. Pete Beach, FL, July 20-23, **2014**.
- *Wang, J.; Chow, W.; Chang, J.; **Wong, J. W.** Ultra-high performance liquid chromatography electrospray ionization Q-Orbitrap mass spectrometry for analysis of ~450 pesticide residues in fruits and vegetables: Method development and validation. 10th European Pesticide Residue Workshop, Dublin, Ireland, June 30- July 3, **2014**.
- 116. Zhang, K.; **Wong J. W**.; Hayward, D. G.; Vaclavikova, M.; Liao, C. D.; Trucksess, M.W. Determination of mycotoxins in milk-based products and infant formula using stable isotope dilution assay and liquid chromatography mass spectrometry. Webinar Sponsored by AB Sciex. College Park, MD, February 18, **2014**.
- 115. *Zhang, K.; Wong, J. W.; Trucksess, M. W. Advancing FDA Regulatory Screening for Mycotoxins in Foods and Animal Feed using Liquid Chromatography and Mass Spectrometry (LC-MS/MS and LC-HRMS). *International Mycotoxin Conference*, Beijing, China, May 17-24, 2014.
- 114. *Krynitsky, A. J.; **Wong, J. W.**; Zhang, K.; Hayward, D. G.; Makovi, C. M.; Lee, N. S. Multiresidue pesticide analysis of agricultural commodities by GC-MS and LC-MS. *Pesticide Analysis Day, Joint Institute for Food Safety and Applied Nutrition/International Food Safety and Training Laboratory*, College Park, MD, June 20, **2013**.
- 113. *Wong, J. W. QuEChERS and its role in multiresidue pesticide analysis. *Chromatography Forum of the Delaware Valley*, Ft. Washington, PA, April 18, **2013**.
- 112. *Wong, J. W. Utility of QuEChERS at the FDA Laboratories. *Pittcon Conference and Expo 2013*, Philadelphia, PA, March 19, **2013**.
- 111. **Wong, J. W.** Multiresidue pesticide analysis of agricultural commodities by GC-MS and LC-MS. *Presented to the Delegation from Ecuador*, CFSAN, College Park, MD, March 12, **2013**.
- 110. *Wong, J. W.; Jia, Z.; Hayward, D. G.; Zhang, K.; Liao, C.-D.; Yang, P. Non-targeted analysis of pesticides by LC-MS. 2013 FSIS-ARS Annual Food Safety Meeting, Washington, D.C., February 6, 2013.
- 109. *Wong, J. W.; Hayward, D. G.; Zhang, K.; Makovi, C. M.; Krynitsky, A. J.; Lu, J.; Liao, C.-D.; Lee, N. S.; Yang, P. Multiresidue analysis of pesticides in botanical dietary supplements by modifications of the QuEChERS procedure and gas and liquid chromatography-tandem mass spectrometry (GC-MS/MS and LC-MS/MS). *AOAC Taiwan Section Annual Meeting*, National Taiwan University, Taipei City, Taiwan, October 23, 2012.

- 108. *Wong, J. W.; Zhang, K; Hayward, DG; Makovi, CM; Lee, NS; Krynitsky, AJ; Hennessey, M; Schenck, F. Multiresidue pesticide analysis of agricultural commodities by GC-MS and LC-MS. 2012 International Food Examination Technology Symposium, October 24, 2012, International Conference Hall, Taipei City, Taiwan, October 24, 2012.
- 107. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Makovi, C. M.; Krynitsky, A. J. FDA Method Validation Guidelines and its Application to Multiresidue Pesticide Analysis. 2012 International Food Examination Technology Symposium, October 24, 2012, International Conference Hall, Taipei City, Taiwan, October 24, 2012
- 106. Hayward, D. G.; **Wong, J. W**.; Zhang, K., Hengel, M.; Alzono, D.; Binkley, J. Multiresidue pesticide analysis in botanical dietary supplements using Gas Chromatography Tandem mass spectrometry and High resolution time-of-flight mass spectrometry. *49*th *Florida Pesticide Residue Workshop*, St Pete Beach Florida, July **2012**.
- 105. *Zhang, K.; Wong, J. W.; Yang, P.; Hayward, D. G.; Krynitsky, A. J. The Issues with Multi-residue Methods for Pesticide Analysis in Food. 49th *Florida Pesticide Residue Workshop*. St. Pete Beach, Florida, July 2012. (Invited talk)
- 104. **Wong, J. W.**; Zhang, K.; Hayward, D.; Liao, C.-D.; Yang, P. Monitoring and quantitation of pesticides and chemical contaminants by ultra-high resolution orbital trap mass spectrometry. *9*th *European Pesticide Residue Workshop*, Vienna, Austria, June 25-28, **2012**.
- 103. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Makovi, C. M..; Lu, J.; Liao, C.-D. Multiresidue analysis of 412 pesticides in botanical dietary supplements by modifications of the QuEChERS procedure and by liquid chromatography-tandem mass spectrometry (LC-MS/MS). 9th European Pesticide Residue Workshop, Vienna, Austria, June 25-28, 2012 (invited talk).
- 102. *Wong, J. Pesticide Residue Analysis by QuEChERS, LC-MS and GC-MS. IFPAC Annual Meeting, Baltimore, MD, January 24, 2012.
- 101. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Yang, P. Recent Innovations in QuEChERS in Food Safety Sample Preparation and Analysis. *LCGC North America Web Seminar*, October 27, 2011.
- 100. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Yang, P. Advances and Challenges in Multiresidue Pesticide Analysis in Foods and Agricultural Commodities. *AOAC China Section Meeting 2011*, Qingdao, People's Republic of China. October 21, **2011**.
- 99. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Yang, P. Advances and Challenges in Multiresidue Pesticide Analysis in Foods. *The Fourteenth Beijing Conference and Exhibition on Instrumental Analysis*, Beijing, People's Republic of China. October 16, **2011**.
- 98. *Liao, C. D.; **Wong, J.W.**; Zhang, K.; Hayward D. G.; Lee, N. S.; Begley, T. H. Multiresidue mycotoxin analysis of grains using high-performance liquid chromatography-

- tandem mass spectrometry. 125th AOAC Annual Meeting & Exposition, New Orleans, LA, September 18-21, **2011**.
- 97. **Wong, J. W.**; Zhang, K.; Hayward, D. G.; Yang, P.; Chang, J. S. Applications of UHPLC-single stage Orbitrap mass spectrometry for targeted and non-targeted screening of pesticides in agricultural commodities. *125th AOAC Annual Meeting & Exposition*, New Orleans, LA, September 18-21, **2011**.
- 96. *Wong J.W.; Zhang, K.; Hayward, D. G.; Chang, J.; Yang, P. Optimization and application of ultrahigh performance liquid chromatography-single stage Orbitrap mass spectrometry for screening pesticides in foods. 48th Florida Pesticide Residue Workshop, St. Pete Beach, FL, July 17-20, 2011.
- 95. Zhang, K.; **Wong, J. W.**; Yang, P.; Zhou, Y.; Banerjee, K.; Oulkar, O. Protocols for the collection of an electro-spray ionization mass spectral library- Development, intra- and interlaboratory validation and identification of unknown in food and environmental samples. 48th Florida Pesticide Residue Workshop, St. Pete Beach, FL, July 17-20, **2011**.
- 94. Edison S. E.; Lin, L. A.; Parrales, L.; Thompson, R. L.; **Wong, J. W.** Practical considerations for rapid screening for pesticides using ambient pressure desorption ionization with high-resolution mass spectrometry. *48th Florida Pesticide Residue Workshop*, St. Pete Beach, FL, July 17-20, **2011**.
- 93. Lu, C.; Schenck, F. J.; **Wong, J. W.** Longitudinal food consumption frequency determination and its implication for dietary pesticide exposure and risk assessment. *48*th *Florida Pesticide Residue Workshop*, St. Pete Beach, FL, July 17-20, **2011**.
- 92. Sack, C.; Eide, D.; Smoker, M.; **Wong, J.**; Zhang, K.; Mercer, G.; Lin, L.; Edison, S. Fast screening of pesticides and toxins using multiple analytical techniques at the Food and Drug Administration. *48th Florida Pesticide Residue Workshop*, St. Pete Beach, FL, July 17-20, **2011.**
- 91. Chamkasem, N.; Harmon, T.; Mitchell, L.; Stromgren, S.; **Wong, J. W.** A rapid LC/MS method for determination of teflubenzuron in salmon tissue. *I*st Annual Foods Program Science and Research Conference, White Oak Building, Silver Spring, MD, June 21-22, **2011** and 48th Florida Pesticide Residue Workshop, St. Pete Beach, FL, July 17-20, 2011.
- 90. Zhang, K., **Wong, J. W**.; Begley, T. H.; Hayward, D. G. Determination of Siloxanes in Silicone Nipples and Potential Migration to Milk/Formula Products. The *1*st Annual FDA Foods and program science and research conference, White Oak, MD, June 21-22, **2011**.
- 89. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Chang, J.; Yang, P. Optimization and application of ultrahigh performance liquid chromatography-single stage orbitrap mass spectrometry for screening pesticides in foods. 2011 Institute of Food Technologists Annual Meeting and Food Expo, New Orleans, LA, June 14, 2011.

- 88. Chang, J.; Wang, J.; Sutton, J.; **Wong, J.**; Zhang, K.; Athanas, M. A turn-key system for automated detection of organic contaminants in food matrices and economic adulteration. 59th ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 5-9, **2011**.
- 87. Lin, Y.; **Wong, J.**; Schreiber, A. Statistical approach to non-targeted analysis using LC-MS QTrap for suspected milk-based products. *59th ASMS Conference on Mass Spectrometry and Allied Topics*, Denver, CO, June 5-9, **2011**.
- 86. Schreiber, A.; Zou, Y., Zhang, K.; **Wong, J.** Targeted and non-targeted screening for food residues using high resolution accurate mass LC-MS/MS. 59th ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 5-9, **2011**.
- 85. Zhang K.; **Wong, J. W.**; Begley. T. H. Determination of Siloxanes in Silicone Nipples and Potential Migration to Milk/Formula Products. 42nd Middle Atlantic Regional Meeting of the American Chemical Society, University of Maryland, College Park, MD. May 21-24, **2011.**
- 84. Sack, C.; Eide, D.; Smoker, M.; **Wong, J.;** Zhang, K.; Mercer, G.; Lin, L.; Edison, S. Fast screening of over 1000 pesticides and toxins using multiple techniques at the U.S. Food and Drug Administration. *3rd Latin American Pesticide Residue Workshop*, Montevideo, Uruguay, May 8-11, **2011**.
- 83. Zhang, K.; **Wong, J. W.**; Yang, P. Determination of 200 pesticides in 24 food matrices by liquid chromatography-tandem mass spectrometry. *AB SCIEX Webinar series*, April 21, **2011**.
- 82. Zhang, K.; **Wong, J. W.**; Begley, T. H. Determination of siloxanes in silicone nipples and potential migration to milk/formula products. *42*nd *ACS Middle Atlantic Regional Meeting (MARM 2011)*, College Park, MD, May 21, **2011**.
- 81. Krynitsky, A. J.; **Wong, J. W.**; Zhang, K. Discussion of sample preparation techniques for the determination of chemical contaminants in foods. *PITTCON 2011 Conference and EXPO*, Atlanta, GA, March 13-18, **2011**.
- 80. *Wong, J. W. Advances and challenges in multiresidue pesticide analysis of foods and agricultural commodities. *Targeted and Non-Targeted Analysis of Food Contaminants by Mass Spectrometry*. National Center for Food Safety and Technology, Summit-Argo, IL, March 2, 2011.
- 79. Zhang, K.; **Wong, J.W.**, Yang, P.; Banerjee, K. One instrument two approaches: LC-MS/MS and mass spectral libraries for pesticide analysis using liquid chromatography/quadrupole linear ion trap hybrid mass spectrometry. *Advances in LC/MS/MS for Food Safety and Environmental Testing*, Linthicum Heights MD, February 16, **2011**.
- 78. Zhang, K.; Wong, J. W.; Krynitsky, A. J.; Yang, P. Determination of pesticides using liquid chromatography-tandem mass spectrometry (LC-MS/MS), information dependent

- acquisition triggered enhanced product ion (IDA-EPI) spectrum and full library search. 124th AOAC Annual Meeting & Exposition, Orlando, FL, September 29, **2010**.
- 77. Edison, S.; Lin, L. A.; Gamble, B. M.; **Wong, J. W.** Rapid screening for pesticides using ambient pressure desorption ionization (with) high resolution mass spectrometry. 124th AOAC Annual Meeting & Exposition, Orlando, FL, September 29, **2010**.
- 76. *Wong, J. W.; Shi, F.; Zhang, K.; Hayward, D. G.; Chang, J.; Yang, P. Pushing the limits of pesticide analysis. 124th AOAC Annual Meeting & Exposition, Orlando, FL, September 28, 2010.
- 75. Shi, F.; **Wong, J. W.**; Hayward, D. G.; Zhang, K.; Krynitsky, A. J.; Lee, N. S. Multiresidue pesticide analysis of botanical dietary supplements by GC-MS/MS. *124th AOAC Annual Meeting & Exposition*, Orlando, FL, September 26-29, **2010**.
- 74. Shi, F.; **Wong, J. W.**; Trucksess, M. W.; Tournas, V. Determination of ochratoxin A in fruit juices using HPLC with fluorescence detection. *124th AOAC Annual Meeting & Exposition*, Orlando, FL, September 26-29, **2010**.
- 73. Hayward, D. G.; Pisano, T.S.; **Wong, J. W.**; Scudder R. J. Multi-residue method for pesticides and POPs in milk and cream using comprehensive two dimensional gas chromatography time-of-flight mass spectrometry. *Dioxin 2010, 30th International Symposium on Halogenated Persistent Organic Pollutants (POPs)*, San Antonio, TX, September 12-17, **2010**.
- 72. Shi, F.; **Wong, J. W.**; Zhang, K.; Hayward, D. G. Multiresidue pesticide analysis of botanical dietary supplements by GC-MS/MS and LC-MS/MS. 240th American Chemical Society National Meeting and Exposition, Boston, MA, August 22-26, **2010**.
- 71. **Wong, J. W.**; Shi, F.; Zhang, K.; Hayward, D. G.; Krynitsky, A. J. Multiresidue analysis of pesticides in botanical dietary supplements, herbals and dried botanicals by GC-MS and LC-MS techniques. *47*th *Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 18-21, **2010**.
- 70. Zhang, K.; **Wong, J. W**.; Yang, P.; Smoker, M. Determination of 200 pesticides in 24 food matrices by liquid chromatography-tandem mass spectrometry. *47th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 18-21, **2010**.
- 69. Settle, V.; Roberts, P.; Stone, P.; Stevens, J.; **Wong, J.**; Zhang, K.; Foster, F. Automated QuEChERS extraction for the confirmation of pesticide residues in foods using LC/MS/MS. 47th Annual Florida Pesticide Residue Workshop, St. Petersburg Beach, FL, July 18-21, **2010**.
- 68. Lin, Y.; Chamkasem, N.; Thompson, R.; Zhang, K.; **Wong, J.** Inter-laboratory validation of a modified QuEChERS and LC-MS/MS method for analysis of >250 pesticide residues in six fatty food products. *47th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 18-21, **2010**.

- *Wong, J. W.; Hayward, D. G.; Shi, F.; Zhang, K.; Chang, J. S.; Yang, P. Evaluation and applicability of UHPLC-Exactive high resolution MS for the multiresidue screening of pesticides in agricultural commodities. 8th European Pesticide Residue Workshop, Strasbourg, France, June 20-24, **2010**.
- 66. **Wong, J. W.**; Zhang, K.; Shi, F.; Hayward, D. G.; Krynitsky, A. J. Multiresidue pesticide analysis of ginseng and other botanical dietary supplements. 8th European Pesticide Residue Workshop, Strasbourg, France, June 20-24, **2010**.
- 65. **Wong, J. W.**; Zhang, K.; Banerjee, K.; Brown, D.; Hayward, D. G.; Krynitsky, A. J.; Smoker, M.; Yang, P. Multiresidue analysis of 360 pesticides in agricultural commodities by modifications of the QuEChERS procedure and analysis by gas chromatography-tandem mass spectrometry (GC-MS/MS) and liquid chromatograpy-tandem mass spectrometry (LC-MS/MS). 8th European Pesticide Residue Workshop, Strasbourg, France, June 20-24, **2010**.
- 64. Yang, P.; **Wong**, **J.**; Zhang, K. Liquid chromatography/tandem mass spectrometry analysis of QuEChERS samples- Development and inter-laboratory validation of a multi-residue pesticides methods. *HPLC 2010: 35th International Symposium on High Performance Liquid Phase Separations and Related Techniques*, Boston, MA, June 19-24, **2010.**
- 63. **Wong, J. W.**, Chang, J. Applications of UHPLC Orbitrap-MS for the multiresidue screening of pesticides in agricultural commodities. *11th Annual FERA/JIFSAN Symposium*, Sand Hutton, York, North Yorkshire, United Kingdom, June 16-18, **2010**.
- 62. Lin, Y.; Chamkasem, N.; Zhang, K.; **Wong, J.** Inter-laboratory Validation of a Modified QuEChERS and LC-MS/MS Method for Analysis of >200 Pesticide Residues in Six Fatty Food Products. *58th ASMS Conference on Mass Spectrometry*, Salt Lake City, UT, May 23-27, **2010**.
- 61. Croley, T. R.; White, K. D.; **Wong, J.**; Callahan, J. H.; Musser, S.; Antler, M.; Lashin, V.; Mcgibbon, G. A. Screening Foods for Unknown Chemical Contaminants by Non-Targeted LC/MSⁿ Analysis. 58th ASMS Conference on Mass Spectrometry, Salt Lake City, UT, May 23-27, **2010**.
- 60. Chang, J.; **Wong, J.** Applications of UHPLC Orbitrap-MS for the multiresidue screening of pesticides in agricultural commodities. 58th ASMS Conference on Mass Spectrometry, Salt Lake City, UT, May 23-27, **2010.**
- 59. *Hayward, D.; Roy, R.; **Wong, J.** FDA Pesticide Program. Update 2010. *U.S. Department of Agriculture Pesticide Data Program Quality Assurance/Technical Meeting*, Arlington, VA, March 24, **2010**.
- 58. Zhang, K.; **Wong, J.**; Smoker, M.; Yang, P.; Hayward, D.; Krynitsky, A. Multiresidue analysis of pesticides in food matrices by gas chromatography-tandem mass spectrometry (GC-MS/MS) and liquid chromatography-tandem mass spectrometry (LC-MS/MS). 239th American Chemical Society National Meeting and Exposition, San Francisco, CA, March 21-25, **2010**.

- 57. *Krynitsky, A. J.; Brewer, W. E.; **Wong, J. W.;** Roach, J. A. Evaluation of disposable pipette extraction (DPX) for the rapid determination of melamine and cyanuric acid in food. 239th American Chemical Society National Meeting and Exposition, San Francisco, CA, March 22, **2010**.
- 56. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Shi, F.; Tech, K.; DiBenedetto, A. L.; Krynitsky, A. J. Multiresidue analysis of pesticides in botanical dietary supplements. 239th American Chemical Society National Meeting and Exposition, San Francisco, CA, March 22, 2010.
- 55. **Wong, J. W.**; Zhang, K.; Hayward, D.; Makovi, C. Pesticide Regulatory Science at FDA/CFSAN. *CFSAN-BARC Meeting*, FDA-CFSAN, College Park, MD, March 18, **2010**.
- 54. **Wong, J. W.;** Zhang, K.; Chang, J. S.; Yang, P.; Hayward, D. G.; Krynitsky, A. J. Orbitrap/Exactive Results. Pesticide Regulatory Science at FDA/CFSAN. Presented at *FDA Forensic Chemistry Center*, Cincinnati, OH, January 21, **2010**.
- 53. *Wong, J. W.; Zhang, K.; Hayward, D. G.; Tech, K.; Krynitsky, A. J. Multiresidue pesticide analysis of botanical dietary supplements. *Dietary Supplements: General Chapters* (2005-2010) Expert Committee, U.S. Pharmacopeia, Rockville, MD, December 16, 2009.
- 52. **Wong, J.**; Zhang, K.; Hayward, D. G.; Tech, K.; Chang, J. S. Development and validation of a liquid chromatography/orbitrap mass spectrometry procedure for multiresidue pesticide analysis. *123rd AOAC Annual Meeting and Exposition*, Philadelphia, PA, September 13-16, **2009**.
- 51. **Wong, J. W.** Chemical contaminants & residues in food community. Pesticide subgroup report. 123rd AOAC Annual Meeting and Exposition, Philadelphia, PA, September 13-16, **2009**.
- 50. *Hayward, D. G.; **Wong, J.**; Meng, K. Target and non-targeted screening of pesticides in foods. *123rd AOAC Annual Meeting and Exposition*, Philadelphia, PA, September 13-16, **2009**.
- 49. **Wong, J. W.**; Zhang, K.; Tech, K.; Hayward, D.; Krynitsky, A.; Schenck, F.; Brown, D. Multiresidue pesticide analysis of ginseng powders using acetonitrile or acetone-based extraction, solid-phase extraction cleanup, and GC-MS/SIM or GC-MS/MS. *46th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 19-22, **2009**.
- 48. Yang, P.; **Wong, J.**; Zhang, K.; Hayward, D.; Hao, C.; Tech, K.; Sack, C.; Smoker, M.; Ifakhar, I. Development and inter-laboratory validation of a liquid chromatography/tandem mass spectrometry method for multi-residue pesticide analysis. *46th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 19-22, **2009**.
- 47. Hayward D. G.; **Wong, J.**; Scudder R. Multi-Residue method for pesticide and POPs in milk and cream using comprehensive two dimensional gas chromatography time-of-flight mass

- spectrometry. 46th Florida Pesticide Residue Workshop, St Pete's Beach Florida, July 19-22, **2009**.
- 46. *Zhang, K.; **Wong, J. W.**; Brown, D.; Hayward, D. G.; Krynitsky, A. J.; Tech, K.; Schenck, F. J. Multiresidue analysis of 168 pesticides in fruits and vegetables by dispersive SPE and GC-MS/MS. 46th *Florida Pesticide Residue Workshop*, St Pete's Beach Florida, July 19-22, **2009**.
- 45. *Wong, J. W.; Schenck, F. J.; Hayward, D. G.; Zhang, K.; Tech, K.; Krynitsky, A. J. Pesticide regulatory science at FDA/CFSAN. U.S. Department of Agriculture Pesticide Data Program Quality Assurance/Technical Meeting, Arlington, VA, March 18, 2009.
- 44. *Wong, J. W.; Tech, K.; Zhang, K.; Hayward, D. G.; Krynitsky, A. J. Multiresidue pesticide analysis of botanical dietary supplements. *Pittcon Conference and Expo 2009*, Chicago, IL, March 11, **2009**.
- 43. **Wong, J.W.** Overview of pesticide analytical work at FDA. *CFSAN International Visitors: Jamaica*. College Park, MD, February 26, **2009**.
- 42. **Wong, J. W.** Pesticide regulatory science at FDA/CFSAN. *California Department of Food and Agriculture, Center for Analytical Chemistry*, Sacramento, CA, December 31, **2008**.
- 41. **Wong, J. W.** Challenges in the analysis of pesticide residues in foods and botanical dietary supplements. Presented to the Ginseng Board of Wisconsin, *U.S. Department of Agriculture, Agriculture Research Service*, Beltsville, MD, November 18, **2008**.
- 40. **Wong, J. W.**, Tech, K.; Zhang, K.; Hayward, D. G.; Krynitsky, A. J. Multiresidue pesticide analysis of botanical dietary supplements. *CFSAN Science Day*, FDA/CFSAN, College Park, MD, **2008**.
- 39. Zhang, K.; **Wong, J. W.**; Hayward, D. G.; Sheladia, P.; Krynitsky, A. J.; Schenck, F. J.; Webster, M. G.; Ammann, J. A.; Ebeler, S. E. Multiresidue pesticide analysis of wines by dispersive solid-phase extraxtion and ultra-high performance liquid chromatography-tandem mass spectrometry. *CFSAN Science Day*, FDA/CFSAN, College Park, MD, **2008**.
- 38. *Wong, J. W. Challenges in the analysis of pesticide residues in foods and botanical dietary supplements. 122nd AOAC Annual Meeting and Exposition, Dallas, TX, September 24, 2008.
- 37. **Wong, J. W.** Chemical contaminants & residues in food community. Update on the subgroup on pesticides. 122nd AOAC Annual Meeting and Exposition, Dallas, TX, September 22, **2008**.
- 36. **Wong, J.W.** Pesticide regulatory science at FDA/CFSAN. *FDA/CFSAN ORS Seminar Series*, College Park, MD, August 19, **2008**.

- 35. **Wong, J. W.**, Zhang, K., Hayward, D. G., Krynitsky, A. J., Begley, T. H., Schenck F. J. Multiresidue pesticide analysis of fresh produce using QuEChERS and uPLC-MS/MS analysis. *45th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach, FL, July 20-23, **2008**.
- 34. Hayward, D. G., **Wong**, J., Schenck, F., Zhang, K., Krynitsky, A.J., Begley, T. H. Multiresidue analysis of pesticides and POPs in fruits, vegetables and dried ginseng powders. *Dioxin 2008*, *28th International Symposium on Halogenated Persistent Organic Pollutants* (*POPs*), Birmingham, United Kingdom, August 17-22, **2008**.
- 33. Schenck, F. J., **Wong**, **J. W.**, Li, J., Lu, C. Multiresidue Analysis for Organophosphorus Pesticides in Fruits and Vegetables at Parts-Per Billion Levels by Gas Chromatography with Pulsed Flame Photometric Detection. 7th European Pesticide Residue Workshop, Berlin, Germany, June 1-5, **2008**.
- 32. Hayward, D. G., **Wong, J. W.** Gas chromatography high resolution time-of –flight mass spectrometry determination of pesticides in fruits and vegetables. 7th European Pesticide Residue Workshop, Berlin, Germany, June 1-5, **2008**.
- 31. **Wong, J.**, Hayward, D., Zhang, K., Schenck, F., Krynitsky, A., Begley, T. Multiresidue analysis of pesticides in dried ginseng powders. 7th European Pesticide Residue Workshop, Berlin, Germany, June 1-5, **2008**.
- 30. **Wong, J. W.** Recent developments in the analysis of pesticides in fresh produce and dried botanical dietary supplements. *121*st *AOAC Annual Meeting and Exposition*, Anaheim, CA, September 18, **2007**.
- 29. *Wong, J. W. Recent developments in multiresidue pesticide analysis in fruit beverages, fresh produce, and dried botanical dietary supplements. California Animal Health and Food Safety Laboratory, University of California, Davis, September 11, 2007.
- 28. *Wong, J. W. and Krynitsky, A. J. Some applications of GC-MS/MS and LC-MS/MS to analyze pesticides and chemical contaminants in foods. 234th American Chemical Society National Meeting and Exposition, Boston, MA, August 19-23, 2007.
- 27. **Wong, J. W.** and Schenck, F. J. Multiresidue Analysis of Pesticides in Fresh Produce using QuEChERS Concepts, GC, and GC-MS/SIM. *44th Annual Florida Pesticide Residue Workshop*, St. Petersburg Beach FL, July 22-25, **2007**.
- 26. **Wong, J. W.** Pesticide analysis in fresh produce and dried botanical dietary supplements. *Annual Meeting of the Mid-Atlantic Section of AOAC International*, FDA/CFSAN, College Park, MD, May 10, **2007**.
- 25. **Wong, J. W.**, Hennessy, M. K., Hayward, D. G., Makovi, C., Krynitsky, A. J., and Schenck, F. J. Analysis of pesticides by capillary gas chromatography-mass spectrometry and element selective detection. *43rd Annual Florida Pesticide Residue Workshop/8th Annual Foodborne Pathogen Analysis Conference*, Orlando FL, July 16-19, **2006**.

- 24. Schenck, F. J. and **Wong, J. W**. Optimizing sample clean-up for the determination of pesticide residues in food. 43rd Annual Florida Pesticide Residue Workshop/8th Annual Foodborne Pathogen Analysis Conference, Orlando, FL, July 16-19, **2006**.
- 23. Krynitsky, A. J., Heller, D. N., Turnipseed, S. B., **Wong, J. W.**, Hayward, D. G., and Barry, T. Criteria for Identification and Confirmation of Chemical Compounds Using Mass Spectrometry. *Basic Mass Spectrometry Workshop*, FDA Forensic Chemistry Center, Cincinnati, OH, June 5-9, **2006**.
- 22. Schenck, F. J., **Wong, J. W.**, Hennessy, M. K. A comparison of solid phase extraction cleanups for use with the QuEChERS Method. 119th AOAC Annual Meeting and Exposition, Orlando, FL, September 11-14, **2005**.
- 21. *Wong, J. W., Wirtz, M. S., Hennessy, M. K., Krynitsky, A. J., Capar, S. G. Pesticides in Dietary Supplements. *International Conference of Horticultural Society*, Oxford, MS, August 15-19, 2005.
- 20. Schenck, F. J., **Wong, J. W.**, Hennessy, M. K. A comparison of solid phase extraction cleanups for use with the QuEChERS Method S. 42nd Annual Florida Pesticide Residue Workshop/7th Annual Foodborne Pathogen Analysis Conference. St. Petersburg Beach, FL, July 17-20, **2005**.
- 19. **Wong, J. W.**, Hennessy, M. K., Krynitsky, A. J., Parker, A. N., Schenck, F. J. Multiresidue analysis of organohalogen pesticides in produce by the QuEChERS method and GC-MS/SIM. *15th California Pesticide Residue Workshop*, Sacramento, CA, April 25-29, **2005**.
- 18. Krynitsky, A. J., Niemann, R. A., **Wong, J. W**. Rapid determination of perchlorate anion in foods by ion chromatography-tandem mass spectrometry. *15th California Pesticide Residue Workshop*, Sacramento, CA, April 25-29. **2005**.
- 17. Schenck, F. J., Parker, A., **Wong, J.**, Hennessy, M. K., Krynitsky, A. J., Brown, A., Reliford, M., Podhorniak, L. V. Multi-laboratory evaluation of the QuEChERS approach to pesticide residue analysis. *2005 FDA Science Forum*, Washington DC, April 25, **2005**.
- 16. Hayward, D., **Wong, J.**, Krynitsky, A. J. PBDE and PCB levels correlated in wild caught and farm-raised fish fillets in the USA. *Dioxin 2004: 24th International Symposium on Halogenated Environmental Organic Pollutants and POPS*, Berlin, Germany, September 6-10, **2004**.
- 15. **Wong, J. W.**, Webster, M. G., Halverson, C. A., Hengel, M. J., McChesney, M., Ngim, K. K., Ebeler, S. E. Multiresidue pesticide analysis in wines by solid-phase extraction and capillary gas chromatography-mass spectrometry with selective ion monitoring. 224th

 American Chemical Society National Meeting, Boston, MA, August 18-22, **2002**.

- 14. *Wong, J. W., Webster, M. G., Halverson, C. A. Multiresidue pesticide analysis in wines by solid-phase extraction, GC-MS and LC-MS. 18th Annual Water Testing and Quality Assurance Symposium, Arlington, VA, August 11-15, 2002.
- 13. Halverson, C. A., **Wong, J. W.**, Krynitsky, A. J. HPLC analysis of carbamates in wine using post-column derivatization/fluorescence detection and mass spectrometry. 115th Annual Meeting and Exposition of the AOAC International, Kansas City, MO, September 9-13, **2001**.
- 12. Krynitsky, A. J., **Wong, J. W.**, Halverson, C. A., Schenck, F. J, Podhorniak, L. V., Stafford, C. K. LC/MS as a practical tool for developing residue enforcement methods. *221*st *American Chemical Society National Meeting*, San Diego, CA, April 1-5, **2001**.
- 11. Ngim, K. K., Liu, M., Ebeler, S. E., **Wong, J. W**. Optimized procedures for analyzing primary alkyl amines in wines by pentafluorobenzaldehyde derivatization and GC-MS. 219th American Chemical Society National Meeting, San Francisco, CA, March, **2000**.
- 10. Haas, A. F., Iwahashi, C. K., **Wong, J. W.**, Cross, C. E., Davis, P. A. Induction of NF-κB by wound and HeNe laser treatment in normal human keratinocytes. *6th International Congress on Cell Biology & the 36th American Society for Cell Biology Annual Meeting*, San Francisco, CA, December **1996**.
- 9. Spencer, J. P. E., **Wong, J.**, Jenner, A., Auroma, O. I., Cross, C. E., Halliwell, B. Peroxynitrite- and SIN-1-induced DNA base modification and strand breakage. A mechanistic study. *VIII Biennial Meeting, International Society for Free Radical Research*, Barcelona, Spain, October **1996**.
- 7. **Wong, J. W.**, Iwahashi, C. K., Davis, P. A., Haas, A. F., Cross, C. E. TNF-α and PMA induce translocation of NF-κB in normal human keratinocytes. *VIII Biennial Meeting, International Society for Free Radical Research*, Barcelona, Spain, October **1996**.
- 7. **Wong, J. W.**, Cross, C. E., Isseroff, R.-R. Effects of UVB radiation and oxidants on heat shock protein 27 in cultured normal human keratinocytes. *2nd Annual Meeting of the Oxygen Society*, Pasadena, CA, November **1995**.
- 6. **Wong, J. W.**, Shibamoto, T. Use of volatile aldehydes for measurement of oxidation of foods. 208th National Meeting of the American Chemical Society, Washington DC, August 1995.
- 5. **Wong, J. W.**, Shi, B., McClaren, M., Isseroff, R.-R., Shibamoto, T. Oxidative stress induces relocation and synthesis of the 27-kD heat shock protein in cultured human keratinocytes. *American Society of Cell Biology Meeting*, San Francisco, CA, December **1994**.
- 4. **Wong. J. W.**, Eiserich, J. P., Shibamoto, T. Method for malondialdehyde analysis for food and biological systems. *206th National Meeting of the American Chemical Society*, Chicago, IL, and August **1994**.

- 2. McClaren, M., **Wong, J. W.**, Isseroff, R.-R. UVB light induces relocation and expression of a new isoform of the 27-kD heat shock protein in cultured human keratinocytes. *Clinical Research Meeting*, Baltimore, MD, April-May **1994**.
- 2. Yeo, H. C. H., **Wong, J. W.**, Shibamoto, T. Toxic aldehydes produced from squalene during UV exposure. *4th Annual Research Symposium of the Toxic Substances Research and Teaching Program*, Santa Barbara, CA, November **1990**.
- 1. Whitley, R. D., **Wong, J. W.**, Lee, C. Y., Wang, N.-H. L. Fundamental studies of protein adsorption in immobilized metal affinity chromatography. *National Meeting of the American Institute of Chemical Engineers*, Chicago, IL, November **1990**.



The Scientific Association Dedicated to Analytical Excellence®

MEMORANDUM

Date: August 10, 2017

To: AOAC Official Methods Board

From: Deborah McKenzie, Standards Development, AOAC INTERNATIONAL

Subject: Proposal for ERP for SPIFAN MCPD Methods

AOAC is planning to convene an Expert Review Panel for SPIFAN MCPD Methods on Tuesday, September 26, 2017 during the AOAC Annual Meeting and Exposition in Atlanta, Georgia. The purpose of this meeting is to review submitted candidate methods received based on an issued Call for Methods. To date, no methods have been received. The deadline for submissions date is later this month.

In the meantime, there are eight candidates who were invited or have responded to an issued Call for Experts to serve on this expert review panel. In alphabetical order of last name, the candidates are as follows:

- 1. Stefan Ehling (Abbott Nutrition)
- 2. Jessica Leigh (US FDA)
- 3. Katerina (Kate) Mastovska (Covance Laboratories)
- 4. Salvatore Parisi (Industry Consultant)
- 5. Joe Romano (Waters Corporation)
- 6. Cheryl Stephenson (Eurofins)
- 7. Sudhakar Yadlapalli (First Source Laboratory Solutions)
- 8. Zhang Jie (Mead Johnson Nutrition)

Kate Mastovska is being recommended as chair of this ERP based on her subject matter expertise and as a member of the AOAC OMB and several AOAC ERPs, she knows the process. Dr. Mastovska is a member of AOAC INTERNATIONAL in good standing.

RECOMMENDATION:

To consider the candidates in this proposal for the AOAC ERP for SPIFAN MCPD Methods with Kate Mastovska as chair of the ERP.

In the following pages are the CSO assessment and recommendation to OMB for each candidate; summaries of expertise for each candidate; balance of the candidate as a panel; and candidate CVs.

Name	Organization	CSO Comments	Recommendation
Stefan Ehling	Abbott Nutrition	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest.	Appoint to ERP.
Jessica Leigh	FDA	A well-qualified analytical chemist with direct experience with the analyte of interest.	Appoint to ERP.
Katerina (Kate) Mastovska	Covance Laboratories	A well-qualified analytical chemist with direct experience with the analyte of interest.	Appoint to ERP.
Salvatore Parisi	Independent (Industry Consultant)	A well-experienced analytical chemist. I did not see direct experience with the analyte of interest (in CV or statement of expertise), but he has participated in the MCPD working conference calls.	Appoint to ERP.
Joe Romano	Waters Corporation	A well-experienced analytical chemist. I did not see direct experience with the analyte of interest.	Appoint to ERP.
Cheryl Stephenson	Eurofins Central Analytical Laboratories	A well-qualified analytical chemist with direct experience with the analyte of interest.	Appoint to ERP.
Sudhakar Yadlapalli	First Source Laboratory Solutions	A well-experienced analytical chemist. I did not see direct experience with the analyte of interest, but well acquainted with AOAC processes.	Appoint to ERP.
Zhang Jie	Mead Johnson Nutrition	A well-qualified analytical chemist with direct experience with the analyte of interest.	Appoint to ERP.

Table 1. CSO Assessment and Recommendation of Candidates for ERP

SUMMARIES OF CANDIDATES' EXPERTISE

KATERINA MASTOVSKA (Covance Laboratories)

Dr. Katerina (Kate) Mastovska is an Associate Scientific Director at Covance Food Solutions, where she leads the Chemistry Solutions Global Research, Development and Innovation group. Prior to joining Covance Laboratories in 2009, she worked at the US Department of Agriculture (USDA) and served as an expert in the United Nations Food and Agricultural Organization (FAO) panel of the Joint FAO/WHO Meeting on Pesticide Residues (JMPR).

Dr. Mastovska is a Fellow of AOAC INTERNATIONAL. Other activities include serving as a member of the AOAC Official Methods Board and a former co-chair of the AOAC Chemical Contaminant and Residues Community. She has also served as stakeholder panel working group chair for PDE5 Inhibitors and has served on numerous AOAC expert review panels. As an expert in MCPD and GE, she launched the SPIFAN working group for MCPD and GE during the AOAC Mid-Year meeting in 2017.

Dr. Mastovska has authored/co-authored more than 60 scientific publications (journal articles, book chapters, and monographs). She received her Ph.D. in Food Chemistry and Analysis from the Institute of Chemical Technology in Prague, Czech Republic.

STEFAN EHLING (Abbott Nutrition)

Expert on development and validation of GC/MS and LC/MS-based analytical methods for food contaminants.

JESSICA LEIGH (US Food and Drug Administration)

Over the last several years I have developed a method for the extraction and direct analysis (LC-MS/MS) of MCPD and glycidyl esters in infant formula and processed foods. In addition, I have participated in the EC collaborative study for the analysis of MCPD and glycidyl esters in oils and processed foods using pressurized liquid extraction and indirect (GC-MS) analysis. I have also worked with a number of researchers (in Canada and Europe) comparing extraction and analytical methods for the detection of these compounds. I have hands-on experience with a number of extraction techniques and both direct and indirect analysis of these contaminants.

SALVATORE PARISI (Independent – Industry Consultant)

My expertise and competencies include:

Analytical chemistry: metals, fertilizers (at present: AOAC ERP member for fertilizers), foods and beverages (in particular: preserved and fresh fish products, meat preparations, milk and dairy products, cheeses), food packaging materials and objects

Organic chemistry: polymers for industrial applications (in particular: plastic matters, packaging films, coatings, inks); metals for food and non-food packaging applications (metal cans)

Food Microbiology: Enterobacteriaceae, Coliforms, E. coli, Salmonella, L. monocytogenes, Yeasts, Moulds, Total Viable Count, S. aureus

Environmental Microbiology: Legionella spp

HACCP & Food-related matters: quality systems, HACCP, HARCP, food law (including the U.S. FSMA and PCQI qualification); food defects and critical failures, food packaging failures with HACCP implications Food and environmental hygiene

Instrumental drug analyses (illegal drugs; drug abuse)

Editorial skills: at present, I am the Series Editor for SpringerBriefs in Chemistry of Foods (http://www.springer.com/series/11853). I have published more than 120 papers and books on different arguments.

JOE ROMANO (Waters Corporation)

LC/MS/MS

CHERYL STEPHENSON (Eurofins Central Analytical Laboratories)

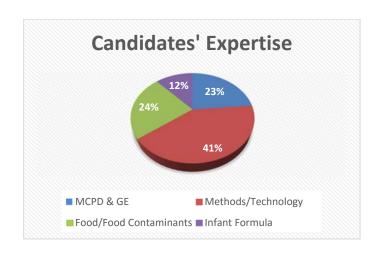
Method has been established in our laboratory and we are routinely testing oils as well as infant nutritionals using AOCS protocol as well as ASE extraction followed by AOCS protocol. Have extensive experience as a result regarding pitfalls and method issues. Our method has been validated and is currently within our ISO 17025

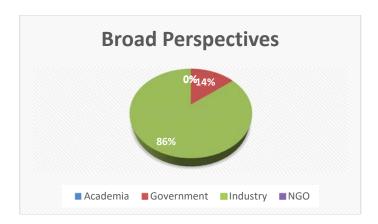
SUDHAKAR YADLAPALLI (First Source Laboratory Solutions)

Contributed in various AOAC SPIFAN collaborative studies. Hands on experience on high end mass spectrometers and also sample preparative technology. Expertise in technology used to separate bound and unbound analytes in various food matrices. Working as a member of AOAC SPSFAM Allergens ERP

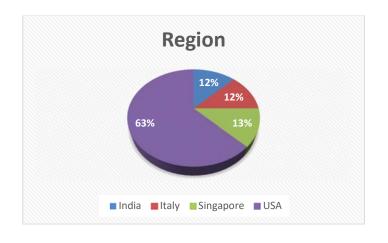
ZHANG JIE (Mead Johnson Nutrition)

- Work in the area of food safety and analytical science in infant formula industry;
- Ph.D. in Analytical Chemistry;
- Good knowledge of different sample preparation and analytical techniques;
- Proven experience in Infant formula analytical method development and validation (both nutrient and contaminant);
- Experienced in risk assessment of 3-MCPD and GE in infant formula products, and mitigation of 3-MCPD and GE from supply chain;
- Familiar with AOAC SPIFAN program;











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MEMORANDUM

Date: August 10, 2017

To: AOAC Official Methods Board

From: Deborah McKenzie, Standards Development, AOAC INTERNATIONAL

Subject: Proposal to Revise Roster of ERP for SPSFAM Ethanol in Kombucha Methods

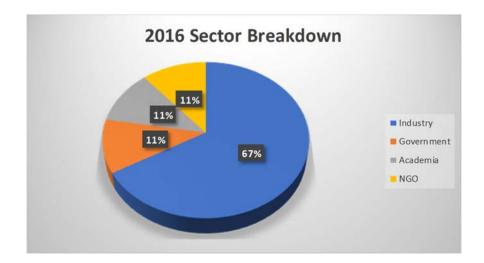
AOAC is planning to convene the Expert Review Panel for SPSFAM Ethanol in Kombucha Methods on Sunday, September 24, 2017 during the AOAC Annual Meeting and Exposition in Atlanta, Georgia. The purpose of this meeting is to review submitted candidate methods received based on an issued Call for Methods. To date, the following methods have been received.

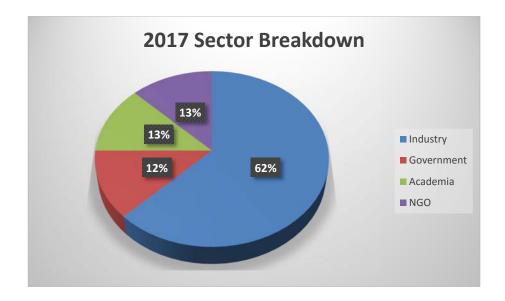
- Determination of ethanol in Kombucha by Gas Chromatography-Flame Ionization Detector: Intra-Laboratory Validation
 - o Author(s): Xin Du and Yonglin Ren
 - o Submitted by: Xin Du, Murdoch University
- Determination of Alcohol Content in Kombucha Tea by Headspace Solid Phase Microextraction and Gas Chromatography-Mass Spectrometry
 - o Author(s): Katherine K. Stenerson
 - o Submitted by: Katherine Stenerson, Millipore Sigma
- Enzymic method for measurement of Ethanol in Kombucha
 - o Author(s): R. Ivory, E. Delaney, J. Larkin, V. McKie and B.V. McCleary
 - o Submitted by: Ruth Ivory, Megazyme
- Enzytec™ Liquid Ethanol
 - o Author(s): Markus Lacorn and Thomas Hektor
 - o Submitted by: Patricia Meinhardt, R-Biopharm

The OMB approved this ERP in summer 2016. There are nine (9) ERP members. In alphabetical order of last name, the ERP roster is as follows:

- 1. Sneh Bhandari (Mérieux NutriSciences) Chair
- 2. Hannah Crum (Kombucha Brewers International)
- 3. Blake Ebersole (NaturPro Scientific)
- 4. Rasu Jayabalan (National Institute of Technology of Rourkela)
- 5. George Joseph (AsureQuality New Zealand)
- 6. Armen Mirzoian (US Tax and Trade Bureau)
- 7. Katherine Stenerson (Millipore Sigma)
- 8. Rachel Stryffeler (The Coca-Cola Company)
- 9. Michael Valley (Promega Corporation)

AOAC has received notification from both Michael Valley of Promega Corporation and Rachel Stryffeler, formerly of The Coca-Cola Company, that they will need to withdraw their membership from the ERP.





RECOMMENDATION:

To remove Stryffeler and Valley from the ERP and revise the ERP roster as follows:

- 1. Sneh Bhandari (Mérieux NutriSciences) Chair
- 2. Hannah Crum (Kombucha Brewers International)
- 3. Blake Ebersole (NaturPro Scientific)
- 4. Rasu Jayabalan (National Institute of Technology of Rourkela)
- 5. George Joseph (AsureQuality New Zealand)
- 6. Armen Mirzoian (US Tax and Trade Bureau)
- 7. Katherine Stenerson (Millipore Sigma)



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MEMORANDUM

Date: August 10, 2017

To: AOAC Official Methods Board

From: Deborah McKenzie, Standards Development, AOAC INTERNATIONAL

Subject: Proposal for ERP for SPSFAM BPA Methods

AOAC is planning to convene an Expert Review Panel for SPSFAM BPA Methods on Tuesday, September 26, 2017 during the AOAC Annual Meeting and Exposition in Atlanta, Georgia. The purpose of this meeting is to review submitted candidate methods received based on an issued Call for Methods. To date, the following methods have been received.

- BPA-01: 216_005_05 Bisphenol A in Water: HPLC with Electrochemical Detection
 - o Author(s): Nico Reinhound
 - o Submitted by: Nico Reinhound
- BPA-02: Determination of free Bisphenol A in commercially packaged ready to consume carbonated/non-carbonated water and beverages by immunoaffinity purification and HPLC fluorescent detection
 - o Author(s): J. Liu, Z. Wu, H. Zhang, C. Xi, X. Wang, L. Chen, D. Toth
 - o Submitted by: Darney Toth
- BPA-03: Use of AFFINIMIP®SPE Bisphenols as clean up method for the determination of Bisphenol A from COLA drinks by Fluorescence detection
 - o Author(s): Kaynoush Naraghi, Sami Bayoudh, Michel Arotçaréna
 - o Submitted by: Michel AROTCARENA
- BPA-04: Determination of Bisphenol A (BPA) in Commercially Packaged Ready to Consume Carbonated and Non-Carbonated Water and Non-Alcoholic Beverages using LC-MS/MS
 - o Author(s): Siheng Li, Jeffrey Shippar, and Katerina Mastovska
 - o Submitted by: Katerina Mastovska

In the meantime, there are twelve (12) candidates who were invited or have responded to an issued Call for Experts to serve on this expert review panel. In alphabetical order of last name, the candidates are as follows:

- 1. Luke Ackerman (US FDA CFSAN)
- 2. Xu-Liang Cao (Health Canada)
- 3. Mehmet Gumustas (Ankara University-Faculty of Pharmacy)
- 4. Siheng Li (Covance Laboratories)
- 5. Katerina Mastovska (Covance Laboratories)
- 6. Melissa Phillips (US NIST)
- 7. Tom Seipelt (Abbott Nutrition)
- 8. Kasi Somayajula (The Coca-Cola Company)
- 9. Darryl Sullivan (Covance Laboratories)
- 10. TAN Jing (Abbott Nutrition)
- 11. Tomasz Tuzimski (Medical University of Lublin)
- 12. Sudhakar Yadlapalli (First Source Laboratory Solutions)

A chair has not been recommended and any recommendation of the OMB is welcomed. The CSO has reviewed the submitted credentials of each candidate and his recommendations are included.

RECOMMENDATION:

To consider the candidates in this proposal for the AOAC ERP for SPSFAM BPA Methods. To recommend a chair from the slate of approved ERP members

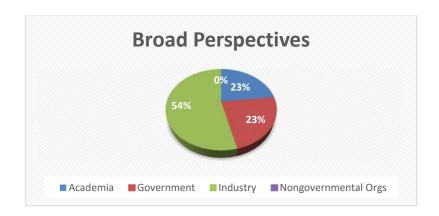
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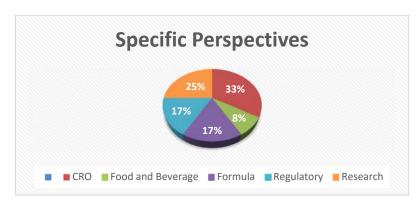
In the following pages are the assessment of the applicants by the CSO; perspectives of the overall ERP based on the applicants; and the summaries of expertise for each candidate with CVs thereafter.

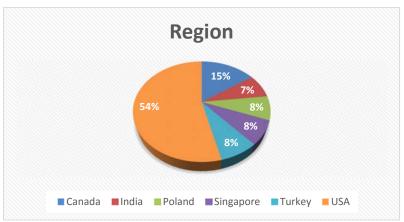
Table 1. CSO Assessment of Candidates for ERP

Name	Organization	CSO Comments
Luke Ackerman	US FDA CFSAN	A well-qualified analytical chemist with direct experience with the analyte of interest.
Xu-Liang Cao	Health Canada	A well-qualified analytical chemist with direct experience with the analyte of interest.
Mehmet Gumustas	Ankara University Faculty of Pharmacy	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest.
Siheng Li	Covance Laboratories	BPA and Technology (NOT INCLUDED IN CSO REVIEW)
Katerina Mastovska	Covance Laboratories	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest, but well-known to AOAC as a contributor to many method reviews.
Melissa Phillips	US NIST	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest, but well-known to AOAC as a contributor to many method reviews, and as a connection to NIST.
Tom Seipelt	Abbott Nutrition	A well-qualified analytical chemist with direct experience with the analyte of interest.
Kasi Somayajula	The Coca-Cola Company	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest.
Darryl Sullivan	Covance Laboratories	Food and Beverage; food contaminants; methods and technology (NOT INCLUDED IN CSO REVIEW)
TAN Jing	Abbott Nutrition	A well-qualified analytical chemist with direct experience with the analyte of interest.
Tomasz Tuzimski	Medical University of Lublin	A well-qualified analytical chemist with direct experience with the analyte of interest.
Sudhakar Yadlapalli	First Source Laboratory Solutions	A well-qualified analytical chemist. I did not see direct experience with the analyte of interest.









SUMMARIES OF CANDIDATES' EXPERTISE

ACKERMAN, LUKE - FDA

I have developed and validated BPA methods for foods and beverages. I have used BPA methods to generate measurements of exposure and product specific data to support regulatory decision making and risk assessments for the US Food & Drug Administration. I have conducted reviews and commentary of the food-BPA literature. I have reviewed and selected methods for validation work, participated in method validation standard setting, and participated in, and developed reference materials for inter-laboratory proficiency testing. I have participated in multiple aspects of collaborative methods and standards setting.

CAO, XU LIANG - HEALTH CANADA

I have been working on method development for determination of BPA and other bisphenol analogues in foods since 2007, and applied the methods to investigate occurrence of the bisphenols in various foods and exposure assessment, which have been summarized in numerous publications. I am also one of the experts at the 2010 WHO/FAO meeting on BPA.

GUMUSTAS, MEHMET - ANKARA UNIVERSITY FACULTY OF PHARMACY

HPLC, Capillary electrophoresis, validation, chiral, electroanalytical.

LI, SIHENG - COVANCE

I'm the BPA analysis method developer in Covance Laboratories Inc. I have been working on this topic since January 2017. I developed a LC-MS/MS based method to determine BPA concentration in various food matrices. I have validated the method in commercially packaged non-alcoholic beverages, infant formula products and food simulating solvents with satisfactory accuracy and precision.

MASTOVSKA, KATERINA - COVANCE

Advance knowledge and experience in the analysis of chemical residues and contaminants and various chromatographic and mass spectrometric techniques.

PHILLIPS, MELISSA - NIST

While not an expert in these particular areas (cannabis, BPA), I have extensive experience with method development and also with evaluation of analytical methods with respect to SMPRs for infant formula, foods, and dietary supplements.

SEIPELT, TOM – ABBOTT NUTRITION

Lab manager responsible for method development and routine testing of infant formula and adult nutritionals in support of BPA packaging mitigation. Managed packaging projects to eliminate the use of BPA in infant formula packaging. Participated in FAO/WHO stakeholder panel on BPA in 2010.

SOMAYAJULA, KASI - THE COCA-COLA CO.

I have been working in the area of trace level quantification in various matrices using LC/MS/MS and GC/MS/MS methods during my career.

SULLIVAN, DARRYL – COVANCE

Darryl Sullivan is a Fellow of AOAC and has been an active member since 1980. He has served terms as secretary, president-elect, president, past president, and director of the Board of Directors, and previously served a three-year term as chair of the Official Methods Board, and is currently serving as Chair of the AOAC Stakeholder Panel on Infant Formula and Adult Nutritionals. In 2012 Darryl lead a very successful AOAC engagement with government and industry thought leaders in India and China on behalf of SPIFAN. He is also active with the Stakeholder Panel for Strategic Food Analytical Methods and the Stakeholder Panel for Agent Detection Assays. Sullivan also served a three-year term as a director on the AOAC Research Institute Board of Directors. He was a founding member and chair of the Presidential Task Force on Dietary Supplements and a member of the Task Force on Bacillus anthracis, as well as the AOAC Task Force on Nutrition Labeling and the AOAC Task Force on Sulfites. Prior to chairing the OMB, he served as a member and chair of the Methods Committee on Commodity Foods and Commodity Products. Sullivan was a founding member of the AOAC Technical Division on Reference Materials and served three terms on the Division's Executive Board. He has also presented a significant number

TAN, JING - ABBOTT NUTRITION

I have acquired strong knowledge and skill set on food contaminants analysis from my 13+ year of academic and industrial working experience. During my tenure in Abbott Nutrition, I have done various contaminants analyses including bisphenol A and I am well-versed in sample preparation and instrument analysis.

TUZIMSKI, TOMASZ – MEDICAL UNIVERSITY IN LUBLIN

My scientific interest includes the theory and application of liquid chromatography, taking into considerations optimisation of chromatographic systems for separation and quantitative analysis of analytes in multicomponent mixtures of xenobiotics and unknown compounds residue in food, environmental and biological samples. The main of research interest during last four years (2013-2017) was to develop analytical methods for xenobiotics analysis in food products of plant and animal origin by high performance liquid chromatography (HPLC-DAD, HPLC-MS and/or HPLC-MS/MS). In order to accomplish this goal, optimization experiments were conducted for, both, the chromatographic conditions of separation and quantitative analysis, as well as sample preparation approach for efficient isolation of the analytes (eg., pesticides, 5-nitroimidazoles (NDZs), sulfonated azo dyes, drugs, bisphenol A and its metabolites) form different food samples and subsequent extract clean-up. Sample preparation procedures for the analysis of various commodities, including sunflower seeds, edible oils, milk, soya milk, wines, different beverages, candies and caviar/fish roe, were developed by the optimization of the conditions of analytes isolation from complex matrices and extracts clean-up. For that purpose, different extraction and clean-up techniques were used, mainly QuEChERS (quick, easy, cheap, effective, rugged and safe), ultrasound assisted extraction (UAE), solid-phase extraction (SPE), dispersive-SPE (d-SPE) and matrix solid-phase dispersion (MSPD).

SUDHAKAR YADLAPALLI - FIRST SOURCE LABORATORY SOLUTIONS

Having knowledge and analytical experience in analysis of Bisphenol in water samples as per EPA. Contributed in collaborative study toward method to detect agricultural residues at sub –parts–per-billon levels in Soft drinks published as AOAC Official method 2007.08, First Action.

CURRICULUM VITAE

LUKE K. ACKERMAN, PhD

1. <u>Educational Background</u>:

- 1997-2001 <u>Gonzaga University</u>, Spokane, WA: BS Chemistry (ACS Certified) SPME/SFC method for detecting labile pesticides Advis: Dr. Joanne Smieja
- 2001-2007 Oregon State University, Corvallis, OR: Ph.D. Analytical Chemistry
 Analysis of Semi-Volatile Contaminants and Their Accumulation in Remote
 Aquatic Ecosystems of the Western U.S. Advis: Dr. Staci Massey-Simonich

2. <u>Professional Experience</u>:

2002-2007	Doctoral Researcher, Oregon State University, Department's of Chemistry and Environmental & Molecular Toxicology, Corvallis, OR
2007-2008	Post-Doctoral Fellow, FDA, Center for Food Safety and Applied Nutrition, College Park, MD
2008-2016	Chemist, FDA, Center for Food Safety & Applied Nutrition, College Park, MD
2016-present	Research Analytical Chemist, FDA, Center for Food Safety & Applied Nutrition, College Park, MD

3. <u>Publications</u>:

A. Refereed Research Publications

- 1. H.Dion, **LK. Ackerman**, H.Hill. (2001) Initial study of electrospray ionization-ion mobility spectrometry for the detection of metal cations. *International Journal of Ion Mobility Spectrometry* 4(1): 31-33.
- 2. H.Dion, **LK. Ackerman**, H.Hill. (2002) Detection of inorganic ions from water by electrospray ionization-ion mobility spectrometry. *Talanta* 57(6):1161-'71.
- 3. **LK. Ackerman**, G.Wilson, S. Simonich. (2005) Quantitative Analysis of 39 PBDEs by Isotope Dilution GC/Low-Resolution MS. *Analytical Chemistry* 77(7):1979-1987.
- 4. **LK. Ackerman**, A.Schwindt, C.Schreck, M.Kent, D.Koch, S.Massey-Simonich, D.Landers. (2008) Atmospherically deposited PBDEs, pesticides, PCBs, and PAHs in Western US National Park fish: Concentrations and consumption guidelines. *Environmental Science & Technology* 42(7): 2334-2341.
- 5. A.Schwindt, **LK. Ackerman**, S.Simonich, T.Blett, C.Schreck, M.Kent, D.Landers.

- (2009) Reproductive Abnormalities in Fish from Western U.S. National Parks. Global *Transactions of the American Fisheries Society* 138:522-531.
- 6. D.Landers, S.Massey-Simonich, D.Jaffe, L.Geiser, D.Campbell, A.Schwindt, C.Schreck, M.Kent, W.Hafner, H.Taylor, K.Hageman, S.Usenko, LK. Ackerman, J.Schrlau, N.Rose, T.Blett, M.Erway (2010) The Western Airborne Contaminant Assessment Project (WACAP): An Interdisciplinary Evaluation of the Impacts of Airborne Contaminants in Western U.S. National Parks. Environmental Science & Technology 44(3):855-859.
- 7. S.Genualdi, K.Hageman, **LK. Ackerman,** S.Usenko, S.M.Simonich. (2011) Sources and fate of chiral pesticides in western U.S. National Park ecosystems. *Environmental Toxicology and Chemistry* 30(7):1533-1538.
- 8. **LK. Ackerman**, G. Noonan, T.Begley. (2009) Assessing direct analysis in real-time-mass spectrometry (DART-MS) for the rapid identification of additives in food packaging. *Food Additives & Contaminants: A* 26(12):1611 1618.
- 9. **LK. Ackerman**, G. Noonan, W.Heiserman; J.Roach, W.Limm, T.Begley. (2010) Determination of Bisphenol A in U.S. Infant Formulas: Updated Methods and Concentrations. *Journal of Agricultural and Food Chemistry* 58(4):2307–2313.
- 10. **LK. Ackerman**, G. Noonan, T.Begley, E.Mazzola. (2011) Accurate mass and nuclear magnetic resonance identification of bisphenolic can coating migrants and their interference with liquid chromatography/tandem mass spectrometric analysis of bisphenol A. *Rapid Communications in Mass Spectrometry* 25(9):1336–1342.
- 11. G. Noonan, **LK. Ackerman**, T.Begley. (2011) Concentration of Bisphenol A in Highly Consumed Canned Foods on the U.S. Market. *Journal of Agricultural and Food Chemistry* 59 (13):7178–7185.
- 12. **LK. Ackerman**, G. Noonan. (2011) Comment on "Bisphenol A (BPA) in U.S. Food. *Environmental Science & Technology* 45(8):3812–3813.
- 13. K.Bentayeb, **LK. Ackerman**, T.Begley. (2012) Ambient Ionization–Accurate Mass Spectrometry (AMI-AMS) for the Identification of Nonvisible Set-off in Food-Contact Materials. *Journal of Agricultural and Food Chemistry* 60(8):1914–1920
- 14. K.Bentayeb, **LK. Ackerman**, T.Lord, T.Begley. (2013) Non-visible print set-off of photoinitiators in food packaging: detection by ambient ionization mass spectrometry. *Food Additives & Contaminants: A* 30(4):750–759.
- 15. GA. Newsome, **LK. Ackerman**, K.Johnson. (2014) Humidity Affects Relative Ion Abundance in DART Mass Spectrometry of Hexamethylene Triperoxide

- Diamine. Analytical Chemistry 86 (24):11977-11980.
- 16. GA. Newsome, **LK. Ackerman**, K.Johnson. (2015) Humidity Effects on Fragmentation in Plasma-Based Ambient Ionization Sources. *Journal of American Society for Mass Spectrometry* 27 (1):135-143.
- 17. MA. Lago, **LK. Ackerman**. (2016) Identification of print related contaminants in food packaging. *Food Additives & Contaminants: A* 33 (3): 518–529.
- 18. B. Yakes, M. Bergana, P. Scholl, M. Mossoba, S. Karunathilaka, **LK. Ackerman**, J. Holton, B. Gao & J. Moore. (2017) Effects of Wet-Blending on Detection of Melamine in Spray-Dried Lactose. *Journal of Agricultural and Food Chemistry* (In Print).

B. <u>Book Chapters, Reviews, Theses</u>

1. Analysis of semi-volatile organic contaminants and their accumulation in remote aquatic ecosystems of the western US by **Ackerman, Luke K**. Ph.D., Oregon State University. (2007) 153 pages (Dissertation); http://hdl.handle.net/1957/4592

C. Other Publications

1. D.Landers, S.Simonich, D.Jaffe, L.Geiser, D.Campbell, A.Schwindt, C.Schreck, M.Kent, W.Hafner, H.Taylor, K.Hageman, S.Usenko, **LK. Ackerman**, J.Schrlau, N.Rose, T.Blett, M. Erway. (2008) The Fate, Transport and Ecological Impacts of Airborne Contaminants in Western National Parks. EPA/600/R-07/138. www.nature.nps.gov/air/Studies/air_toxics/wacap.cfm

D. Presentations

- 1. **LK. Ackerman**, J.Smieja. Bis-arylimido Ruthenium Porphyrin Complexes; Synthesis and NMR Characterization, 9th M. J. Murdock Conference on Undergraduate Research; November 1999. McMinnville, OR.
- 2. **LK. Ackerman**, S.Simonich. Optimized Benchtop GC-MS Parameters for the Measurement of PBDEs. 24th Annual SETAC-NA, Nov 2003. San Antonio, TX.
- 3. **LK. Ackerman**, G.Wilson, S.Simonich. Polybrominated Diphenyl Ether Residue Analysis Method for Fish Tissues from Remote, High Elevation Ecosystems. 3rd International Workshop on Brominated Flame Retardants; June 2004. Toronto, ON.
- 4. A.Schwindt, C.Schreck, D.Landers, **LK. Ackerman**, J.Ramsay, S.Simonich, M.Kent. Do Airborne Contaminants Affect Fish in the Lakes of Western U.S. National Parks? 5th International Symposium on Fish Endocrinology, September 2004. Castellon, Spain.

- 5. **LK. Ackerman**, A.Schwindt, S.Simonich. Profiles of Semi-Volatile Pollutants in North American Alpine Fish. 4th World Congress of the Society of Environmental Toxicology & Chemistry, Nov 2004. Portland, OR.
- 6. A.Schwindt, **LK. Ackerman**, C.Schreck, D.Landers, S.Simonich, M.Kent. Evidence of Xenoestrogen Exposure in Fish from Rocky Mountain National Park, USA. 4th World Congress of the Society of Environmental Toxicology & Chemistry, Nov 2004. Portland, OR.
- 7. **LK. Ackerman**, G.Wilson, S.Simonich. Optimized GC/ Low Resolution Isotope Dilution MS for PBDE Analysis: Interferants, & Limitations. 7th Annual Workshop on Brominated Flame Retardants, June 2005. National Institute of Standards and Technology, Gaithersburg, MD.
- 8. **LK. Ackerman**, D.Koch, S.Simonich. Profiles and Levels of POPs and SOCs in Fish from Alpine Lakes of US National Parks. 25th International Symposium on Halogenated Environmental Organic Pollutants DIOXIN, Aug 2005. Toronto, ON.
- 9. **LK. Ackerman**, D.Koch, S.Simonich. Benchtop GC-ECNI-IDMS Analysis of PBDEs in Fish from Remote Mountain Lakes: Effects of Ion Source Parameters and Br Substitution Patterns. 54th American Society for Mass Spectrometry Conference; May, 2006. Seattle, WA.
- 10. A.Schwindt, **LK. Ackerman**, C.Schreck, D.Landers, S.Simonich, M.Kent. Evidence of Xenoestrogen Exposure in Fish from Rocky Mountain National Park, USA. 4th World Congress of the Society of Environmental Toxicology & Chemistry, Nov 2004. Portland, OR.
- 11. D.Landers, T.Blett, D.Campbell, S.Simonich, **LK. Ackerman**, M.Erway, L.Geiser, K.Hageman, B.Rice, A.Schwindt, S.Usenko. Impacts of Historic and Current-Use Chemicals in Western National Parks. US National Park Service Science Symposium, Sep 2006. Denali NP, AK.
- 12. **LK. Ackerman**, S.Usenko, K.Hageman, D.Campbell, D.Landers, S.Simonich. PBTs in high places: Modeling Fate of PBTs in Western US National Parks. Persistent Bioaccumulative & Toxics Symposia, ACS Fall Conference, Sep 2006. San Francisco, CA.
- 13. S.Simonich, **LK. Ackerman**, H.Taylor, K.Hageman, S.Usenko, J.Schrlau, D.Campbell, L.Geiser, A.Schwindt, M.Kent, C.Schreck, D.Jaffe, M.Erway, D.Landers, T.Blett. Contaminants Present in Western National Parks. George Wright Symposium, April 2007. St. Paul, MN.
- 14. D.Jaffe, W.Hafner, **LK. Ackerman**, K.Hageman, S.Usenko, D.Campbell, L.Geiser, A.Schwindt, M.Kent, C.Schreck, M.Erway, S.Simonich, D.Landers. Spatial and

- temporal distribution of contaminants in Western National Parks. George Wright Symposium, April 2007. St. Paul, MN.
- 15. **LK. Ackerman**, G. Noonan, T.Begley. Optimizing DART-MS Sampling for Quadrupole MS Analysis: Food Contaminants. 56th American Society for Mass Spectrometry Conference; June, 2008. Denver, CO.
- 16. G. Noonan, **LK. Ackerman**, T.Begley. Identification of fluorochemical paper coatings and characterization of packaging by LC-MS/MS and DART-MS. 56th American Society for Mass Spectrometry Conference; June, 2008. Denver, CO.
- 17. **LK. Ackerman**. Contaminants in Fish: Human and wildlife health thresholds and ecosystem linkages in California Sierra Nevadas. Sierra Nevada Southern Cascades Contaminants (SNSCC) Workshop, June, 2008. Sequoia Nat.Park, CA.
- 18. **LK. Ackerman**, G. Noonan, T.Begley. Rapid identification of additives in food contact materials using DART-MS. 4th International Life Sciences Institute Symposium on Food Packaging, Nov 2008. Prague, Czech Republic.
- 19. **LK. Ackerman**, G. Noonan, T.Begley, C.Simoneau; M.Suman. DART-MS/MS Analysis of Foamed PVC Jar Lids. 57th American Society for Mass Spectrometry Conference, May, 2009. Philadelphia, PA.
- 20. **LK. Ackerman**, G.Noonan, J.Roach, P.Delamonte, E.Mazzola T.Begley. Mass Spectrometric Investigations of Bisphenol A and Other Migrants in Canned Food. 58th American Society for Mass Spectrometry Conference, May, 2010. Salt Lake, UT.
- 21. K.Bentayeb **LK. Ackerman**, T.Begley, J.Callahan. Ambient Ionization High Resolution Mass Spectrometry to determine non-visible set-off in food contact materials. 59th American Society for Mass Spectrometry Conference, June, 2011. Denver, CO.
- 22. **LK. Ackerman**, G.Noonan, T.Begley. Bisphenolic can coating migrants interfering with BPA: Accurate mass/NMR identification and levels in canned food. 59th American Society for Mass Spectrometry Conference, June, 2011. Denver, CO.
- 23. **LK. Ackerman**, K.Bentayeb, T.Begley. Identifying Contaminants/Components on Food Contact Materials. National Print Ink Research Institute Technical Conference, October, 2011. Itasca, IL.
- 24. **LK. Ackerman**. Assessing DART-MS for the Rapid Screening of Phthalates in Food Contact Polymers. US Consumer Product Safety Commission Phthalate Testing Symposium, March, 2012. Gaithersburg, MD.
- 25. **LK. Ackerman**. DART-MS off Food Contact Polymers. 60th American Society for Mass Spectrometry Polymer Workshop, May, 2012. Vancouver, BC.

- 26. **LK. Ackerman**, K.Bentayeb, T.Begley. Ambient Ionization Mass Spectrometry to Identify Unknowns and Contaminated Polymeric Packages. 60th American Society for Mass Spectrometry, May, 2012. Vancouver, BC.
- 27. **LK. Ackerman**, K.Bentayeb, T.Begley. Detecting print contamination of food contact surfaces by ambient ionization- mass spectrometry. 4th International Life Sciences Institute Symposium on Food Packaging, Nov 2012. Berlin, DEU.
- 28. **LK. Ackerman**, K.Bentayeb, T.Begley. Screening a Large Food Safety Sample Set for Contaminants by DART-MS; Limitations & Advantages. 61st American Society for Mass Spectrometry, June, 2013. Minneapolis, MN.
- 29. **LK. Ackerman**, K.Bentayeb, T.Begley. False or not: Direct mass spectrometric screening for food contaminants. ACS & IUPAC Food & Agricultural Chemistry Conference, August, 2014. San Francisco, CA.
- 30. R.Shah, **LK. Ackerman**. Direct-Mass Spectrometry to Rapidly Screen Foods for Sweeteners. Pittsburgh Conference on Applied Analytical Chemistry, March, 2015. New Orleans, LA.
- 31. **LK. Ackerman**. Direct Mass Spectrometry Screening for Food Contaminants. Pittsburgh Conference on Applied Analytical Chemistry, March, 2015. New Orleans, LA.
- 32. **LK. Ackerman**, R.Shah. Screening Beverages for Added Sweeteners: DART-HRMS and LC-MS/MS. 64th American Society for Mass Spectrometry Conference, June 2016, SanAntonio, TX.
- 33. **LK. Ackerman**, M.Lago. Identification of Novel Print-Related Substances on Flexible Packaging. 5th International Life Sciences Institute Symposium on Food Packaging, Nov 2016. Barcelona, Spain.
- 34. **LK. Ackerman**. LC-MS/MS and DART-HRMS Screening of Beverages for Sweeteners. 65th American Society for Mass Spectrometry Conf., June 2017, Indianapolis, IN.
- 35. **LK. Ackerman**, M.Lago. Novel Printing Substances on Polymeric Packaging. 65th American Society for Mass Spectrometry Conf., June 2017, Indianapolis, IN.

4. <u>Honors and Awards</u>:

- 1997-1999 Gonzaga University Honors Program, Merit Scholarship
- 2000 Undergraduate Research Fellowship -National Science Foundation Integrative Graduate Environmental Research Training (NSF-IGERT)
- 2002,03,04 Student Travel Award Society for Environmental Toxicology And Chemistry (SETAC)

2005	Best Student Presentation - SETAC
2006	Environmental Chemistry Certificate of Merit – ACS
2006	Student Conference Award - American Society for Mass Spectrometry (ASMS)
2008	Commissioner's Special Citation: Rapid Melamine-Protein Adulteration Method & Response
2010	FDA Excellence in Analytical Science Award - BPA Method Development and Research
2010	CFSAN Exceptional Achievement Award - BPA Research in Response to Science Review Board Concerns
2011	USEPA Scientific & Technological Achievement Award – Research Publication
2009-14	FDA Performance Award
2016	FDA Peer review promotion to Research Analytical Chemist

5. <u>Special Invitations</u>:

- (1) Invited speaker, 7th Annual Workshop on Brominated Flame Retardants, National Institute of Standards and Technology, Gaithersburg, MD, June
- (2) Invited speaker, 25th International Symposium on Halogenated Environmental Organic Pollutants DIOXIN, Toronto, ON, 8/2005
- (3) Invited speaker, Persistent Bioaccumulative & Toxics Symposia, ACS Fall Conference, San Francisco, CA, 9/2006
- (4) Invited speaker, Sierra Nevada Southern Cascades Contaminants (SNSCC) Workshop, Sequoia National Park, CA, 4/2008
- (5) Invited speaker, 4th International Symposium on Food Packaging; International Life Sciences Institute (ILSI), Prague, Czech Republic; 11/2008
- (6) Invited to speak, National Printing Ink Research Institute Technical Conference, Itasca, IL, 10/2011.
- (7) Invited speaker, US Consumer Product Safety Committee Symposium on Phthalate Testing, Rockville, MD, 3/2012
- (8) Invited speaker, American Society for Mass Spectrometry Polymer MS Workshop, Vancouver, BC, 5/2012
- (9) Invited grant reviewer, Technology Foundation STW, Netherlands Organization for Scientific Research (NWO), Utrecht, NL; 2/2013
- (10) Invited grant reviewer, EU Horizon-2020 Future & Emerging Technologies Grant Program (EC-REA), 2015-present
- (11) Invited speaker, American Society for Mass Spectrometry Polymer MS Workshop San Antonio TX, 6/2016

6. <u>Licenses and Certifications</u>:

2013-present Federal Acquisitions, Contract Officer's Representative –I

7. <u>Membership in Professional or Honorary Societies</u>:

1999-present American Chemical Society (ACS)

2001-2008 National Chemistry Honor Society, Gamma Sigma Epsilon

2002-2008 Society for Environmental Toxicology And Chemistry (SETAC)

2002-present Analytical Chemistry Division, ACS

2002-2008 Environmental Chemistry Division, ACS

2006-present Agricultural & Food Chemistry Division, ACS

2006-present American Society for Mass Spectrometry (ASMS)

8. <u>Offices, Committee Assignments or Special Assignments Held in Professional and Honorary Societies</u>:

- 2012 Chaired the session "Food Safety: Advances in MS for Characterization of Additives and Contaminants" at the American Society for Mass Spectrometry 61st Annual Conference, May 24th, Vancouver, BC.
- 2013 Chaired the session "Polymer- and Packaging-Related Contaminants and Degradants in Food, Drugs, and Consumer Products" at the American Society for Mass Spectrometry 61st Annual Conference, June 13th, Minneapolis, MN.

9. <u>Participation in National/International Scientific Meetings, Technical Conferences, Workshops, Seminars etc.</u>:

- 2003 Poster, at 24th Annual SETAC-North America Meeting; Austin, TX
- 2004 Poster, at 3rd International Workshop on Brominated Flame Retardants. Toronto, ON, June.
- 2004 Poster, at 4th World Congress, Society of Environmental Toxicology and Chemistry (SETAC), Portland, OR, November.
- 2005 Talk, at 7th Annual Workshop on Brominated Flame Retardants, National Institute of Standards and Technology, Gaithersburg, MD, June.
- 2005 Talk, at 25th International Symposium on Halogenated Organic Pollutants DIOXIN, Toronto, ON, August.
- 2006 Talk, at the 54th American Society for Mass Spectrometry Conference; Seattle, WA, May.

- 2006 Talk, at the Persistent Bioaccumulative & Toxics Symposia, American Chemical Society Fall Conference, San Francisco, CA, September.
- 2008 Poster, at the 56th American Society for Mass Spectrometry Conference, Denver, CO, June.
- 2008 Talk, at the Sierra Nevada/Southern Cascades Contaminants (SNSCC) Workshop, Sequoia National Park, CA, April.
- 2008 Talk, at the 4th International Symposium on Food Packaging, (ILSI), Prague, Czech Republic, November.
- 2009 Poster, at the 57th American Society for Mass Spectrometry Conference, Philadelphia, PA, June.
- 2010 Poster, 58th American Society for Mass Spectrometry Conf., SLC, UT, May.
- 2010-present Poster, at the FDA Foods and Veterinary Medicine Science and Research Conference, White Oak, MD, July/August.
- 2011 Presented two posters at the 59th American Society for Mass Spectrometry Conference, Salt Lake City, UT, June.
- 2012 Talk, at the US Consumer Product Safety Committee Phthalate Testing Symposium. Rockville, MD, March.
- 2012 Chaired a session, Talk, and poster at the 60th American Society for Mass Spectrometry Conference, Vancouver, BC, May.
- 2013 Chaired a session, Talk, at the 61st American Society for Mass Spectrometry Conference, Minneapolis, MN, June.
- 2014 Attended the American Society for Testing of Materials (ASTM) F02 Flexible & Barrier Packaging Committee meeting, East Lansing, MI, April.
- 2014 Attended the 62nd American Society for Mass Spectrometry Conference, Baltimore, MD, June.
- 2014 Talk, at the American Chemical Society & International Union of Pure and Applied Chemists' Food & Agricultural Chemistry Conference, San Francisco, CA, August.
- 2015 Talk, at the Pittsburgh Conference of Applied Analytical Chemistry, New Orleans, LA, March.
- 2016 Poster 64th American Society for Mass Spectrometry Conference, San Antonio, June.
- 2016 Attended the American Society for Testing of Materials (ASTM) Conference on Detection Limits, Raleigh, NC, September.
- 2016 Poster, 6th International Symposium on Food Packaging, (ILSI), Barcelona, Spain, November.
- 2017 3 Posters, 65th American Society for Mass Spectrometry Conference, Indianapolis, June.

10. <u>Outside Professional Advisory and Consulting Activities</u>:

2006-present	Invited Reviewer for following journals: Analytical & Bioanalytical Chemistry(ABC); Analytical Chimica Acta(ACA); Analytical Methods; Central European Journal of Chemistry; Dyes & Pigments; Environmental Science & Technology(ES&T); ES&T Letters; Environmental Science and Pollution Research (ESPR), Environmental Toxicology and Chemistry(ET&C); Food Additives & Contaminants; Journals of: Agricultural and Food Chemistry (JAFC), AOAC, American Society for Mass Spectrometry (JASMS), American Water Resources Association(JAWRA), Food Science, Polymer Degradation and Stability, Packaging Technology and Science, Rapid Communications in Mass Spectrometry(RCMS); and Science of the Total Environment.
2008	Invited to address state, local & federal agencies/parties regarding implications of Western US fish contaminants/pollutants.
2009	Invited to participate in FAPAS BPA infant formula RM validation.
2010	Asked to review Maryland state Department of Health Laboratory methods for BPA measurements.
2011	Invited to provide DART-MS Analysis of experimental food packaging samples for UK-FSA/PIRA research project.
2012	Invited to speak with multiple CPSC stakeholders regarding Ambient Ionization MS methods for phthalate analysis.
2013	Invited to review grant proposals on ambient mass spectrometry technology transfer (STL) for Netherlands Organization for Scientific Research (NWO).
2013	Review BPA exposure pathways, methods for foods, and food contact materials for Maine Centers for Disease Control.
2013	Invited to review Ambient Ionization methods for food contact polymer analysis at ASMS Polymer MS workgroup.
2014	Asked to comment on proposed ASTM phthalate identification method standard.
2015-present	Invited & reviewed EU Horizon 2020 Future & Emerging Technology Grant program proposals.

11. FDA Special Assignments and Advisory Activities:

2008-2013 Conducted research to develop and validate BPA methods, fill knowledge gaps of BPA diet and exposure sources in support of quantitative risk assessment and answer Science Board questions.

2010	Consulted on Gulf Oil Spill seafood contaminant methods, specifically PAH methods; identified NOAA validated methods, co-ordinated method transfer to ORA. Reviewed analytical packages.
2010-2011	Supervised, trained, collaborated and published with Post-Doctoral candidate Karim Bentayeb from Univ. Zaragoza, Spain.
2011-2012	Conducted investigation into packaging sources and identity of phthalates in food/packaging during economic adulteration//import-alert incident. Avoided unsupported regulatory action.
2011-2012	Conducted research to establish that DART-MS is not the best analytical tool for regulatory enforcement of phthalate residues.
2013-present	Invited to help teach ORA laboratory course on Advanced Mass Spectrometry
2013-2014	Advised/draft Method Validation Requirement guidelines, consulted & advised High Resolution Accurate Mass Identification Criteria Guidelines.
2013	Consulted with ORA-PHL and KAN on developing direct-MS screening methods for pharmaceutical and supplements
2013	Assisted review of analytical phthalate method for ASTM standards committee vote.
2013	Assisted OFAS in reviewing BPA diet literature for quality/completeness to support updated exposure assessment.
2014	Requested to, trained for, and was granted Contracting Officers Representative (COR) Level-1 certification (Fed. Acquis. Inst.).
2014	Proposed research for, supervised, trained, conducted traineeship and published with graduate student Miguel Lago from the University Santiago De Compostella, Spain.
2014	Assisted review of diagnostic phthalate method for ASTM standards committee vote.
2014	Assisted review of literature for CFSAN BPA Working Group.
2014-present	Requested and conducted In-depth promotion and cyclic reviews.
2016	Assisted review of Honey authenticity analytical packages, literature.
2016-present	Co-development of honey authenticity reference materials and multi-lab/multi-method proficiency testing experiment.

Curriculum Vitae : Xu-Liang Cao, Ph.D.

ADDRESS

Food Research Division Bureau of Chemical Safety, 2203C 251 Sir Frederick Banting Driveway Health Canada Ottawa, Ontario, Canada K1A 0K9

Phone: (613) 941-7562

Email: Xu-Liang.Cao@hc-sc.gc.ca

EDUCATION

1990 – 1993	Ph.D. in Environmental Analytical Organic Chemistry; Lancaster University,
1989 – 1990	M.Phil. in Environmental Analytical Organic Chemistry; Brunel University,
	U.K.
1986 – 1988	Postgraduate program in Environmental Science, Harbin Institute of
	Technology, P.R. China.
1980 – 1984	B.Sc. in Analytical Chemistry; Shandong Institute of Building Material
	Industry, P.R. China.

EMPLOYMENT EXPERIENCE

2006 – present	Research Scientist, Food Research Division, Health Canada,
2000 prosont	Ottawa
2001 – 2006	Chemist, Food Research Division, Health Canada, Ottawa
1995 – 2001	Analytical Chemist/NSERC Visiting Research Fellow, Health
1000 2001	Canada, Ottawa
1994 – 1995	Postdoctoral Research Associate, Lancaster University, Lancaster,
1994 – 1995	U.K
1984 – 1986	Analytical Chemist, Heilongjiang Fishery Research Institute,
1904 - 1900	Harbin, P.R. China

PROFESSIONAL ACTIVITIES

- Member of AOAC International, 2002 –
- Member of Health Canada Laboratory Task Group for the JEPC sub-Committee on Chemical Emergencies, 2005 – 2010
- Member of CFIA (Canadian Food Inspection Agency) Chemical Hazards Working Group, 2009 –
- Reviewer for proposals on Health Canada CMP (chemical management plan) research on bisphenol A, 2008
- Reviewer for the Natural Science and Engineering Research Council (NSERC) visiting fellowship applications, 2008 –
- Expert invited by FAO/WHO to attend the Expert Meeting on Bisphenol A held in Ottawa, Canada, on 1 – 5 November 2010

Reviewer of manuscripts for various journals:

Analytica Chimica Acta Journal of Chromatography A

Analytical Sciences Journal of Agricultural and Food Chemistry

Journal of Food Science Food Additives and Contaminants

International Journal of Archives of Environmental Contamination

Environmental Analytical Toxicology

Food Chemistry Journal of AOAC International

Journal of Food Processing & Journal of Liquid Chromatography and

Technology Related Techniques

Talanta Science of the Total Environment

Methods Journal of Toxicological Science

Marine Pollution Bulletin Environment International

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Food and Chemical Toxicology Trends in Analytical Chemistry

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Technology

Analytical Methods

AREAS OF RESEARCH INTEREST

Research focuses on identification and determination of food packaging organic chemicals (e.g., phthalates, bisphenol A) and other volatile organic chemical contaminants occurring in the Canadian food supply in order to determine human exposure to these chemicals. Major activities are the development of methods of analysis for such chemicals in various food samples, conduct of targeted surveys (e.g., benzene in soft drinks, bisphenol A in canned liquid infant formula, canned soft drinks and other canned foods) and analysis of samples from the national surveys (e.g., the Total Diet Study, human milk survey) to determine the levels of these chemicals in foods, and migration studies of organic chemicals (e.g., phthalates, bisphenol A) from food packaging materials into foods. Gas chromatograph-mass spectrometer (GC-MS) and high performance liquid chromatography (HPLC) are used for analysis following sample extractions with various techniques (e.g., solvent extraction, solid phase extraction, solid-phase microextraction (SPME), headspace).

LIST OF PUBLICATIONS

Refereed Journals and Book Chapters 1991

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- 47. Tittlemier, S.T.; Lau, B.; Ménard, C.; Corrigan, C.; Sparling, M.; Gaertner, D.; Cao, X.-L.; Dabeka, B. (2010) Baseline levels of melamine in food items sold in Canada. I. Dairy products and soy-based dairy replacement products. *Food Additives and Contaminants: Part B*, **3**(3), 135-9. **[2]**
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4. Publications

4.1. International peer reviewed papers (SCI ve SCI Expanded)

- 1) Gumustas, M., Ozkan, S.A., Electrochemical evaluation and determination of antiretroviral drug fosamprenavir using boron-doped diamond and glassy carbon electrodes. Analytical and Bioanalytical Chemistry, 397(1), 189-203, 2010.
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- **4)** Gumustas, M., Şanli, S., Şanli, N., Ozkan, S.A., Determination of pKa values of some antihypertensive drugs by liquid chromatography and simultaneous assay of lercanidipine and enalapril in their binary mixtures. Talanta, 82(4), 1528-1537, 2010.
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- **14**) Ashrafi, A.M., Gumustas, M., Vytřas, K., Nematollahi D., Uslu, B., Mikysek, T., Jirasko, R., Ozkan, S.A., Determination and detailed mechanism study of antiviral drug fosamprenavir using carbon paste electrode in the presence of Triton X-100. Electrochimica Acta, 109, 381-388, 2013.
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- **26**) Kiymaci, M.E., Gumustas, A., Gumustas, M., Akin, A., Ozkan, S.A., Comparative Study For The Determination Of Gemifloxacin By HPLC And Microbiological Methods From Pharmaceutical Preparations And Biological Samples. Current Pharmaceutical Analysis, 11, 193-200, 2015.
- 27) Karadas, N, Gumustas, M., Uslu, B., Ozkan, S.A., Simultaneous Determination of Amlodipine Besylate and Rosuvastatin Calcium in Binary Mixtures by Voltammetric and Chromatographic Techniques, Ionics. 22, 277-288, 2016.
- 28) Gumustas, M., Coskun, G., Ozkan, S.A., Selective and sensitive determination of repaglinide In pharmaceuticals by voltammetric and LC methods, Revue Roumanie de Chimie, 60 (5-6), 477-490, 2015.
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- **30**) Kurbanoglu, S., Bozal-Palabiyik, B., Gumustas, M., Uslu, B., Ozkan S.A., Investigation of voltammetric behavior and electroanalytic determination of anticancer epirubicin via glassy carbon electrode using differential pulse and square wave voltammetry techniques, Revue Roumanie de Chimie, 60(5-6), 491, 2015.

- **31**) Gumustas, M., Çiçek Polat, D., Kılıç, C.S., Akalın, K., Ozkan, S.A., Coşkun, M., Comparison of Seeds of Colchicum speciosum Steven and Gloriosa superba Linn. in respect to Colchicine and Colchicoside Contents via RP-LC, Nat. Prod. Commun. 11, 397-400, 2016.
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- 37) Canan Hascicek, Ceyda T. Sengel-Turk, Mehmet Gumustas, Sibel A. Ozkan, Filiz Bakar, Net Das-Evcimen, Ayhan Savaser and Yalcin Ozkan, Fulvestrant-loaded polymer-based nanoparticles for local drug delivery: Preparation and in vitro characterization, Journal of Drug Delivery Science and Technology, Baskida, 2017

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4.2. International peer reviewed papers (Others)

- 1) Gumustas, M., Özkan, S.A., The role of and the place of method validation in drug analysis using electroanalytical techniques. The Open Analytical Chemistry Journal, 5, 1-21, 2011.
- 2) Gumustas, M., Ozkan, S.A., Development and validation of an RP-LC method for the determination of granisetron in dosage forms. Asian Chemistry Letters, 16(1), 23-30, 2011.
- 3) Gumustas, M., Özkan, S.A., Simple, sensitive and reliable LC-DAD method of gemifloxacin determination in pharmaceutical dosage forms. Turkish Journal of Pharmaceutical Sciences, 9(2), 161-170, 2012.

4) Demiralay, C.E, Gumustas, M., Canbay H., Validation of method for simultaneous determination of paracetamol and phenylephrine in pharmaceutical formulation by reversed phase liquid chromatography, Pharmacie Globale (IJCP), 2(6), 9, 2011.

4.3. International poster presentations

- 1) Mehmet GUMUSTAS, Senem ŞANLI, Nurullah ŞANLI, S.A. OZKAN 'Sımultaneous Determination of Enalaprıl and Lercanidipine by HPLC-DAD Technique in Pharmaceutical Dosage Forms' (ISC 2010), 12-16 Eylül 2010, Valensiya, İSPANYA.Abstract P-270, 2010
- 2) Mehmet GUMUSTAS, Burcin Bozal, Burcu Dogan-Topal, Sibel A. OZKAN, Bengi Uslu 'Optimization of LC Methods for the Simultaneous Determination of Bisoprolol and Hydrochlorothiazide in Their Pharmaceutical Dosage Forms' (ISC 2010), 12-16 Eylül 2010, Valensiya, İSPANYA.Abstract P-288, 2010
- 3) Mehmet GUMUSTAS, Sibel A. OZKAN 'Development of a Validated LC Method For The Simultaneous Determination Of Amlodipine and Perindopril in Their Commercial Dosage Forms' (ISC 2010), 12-16 Eylül 2010, Valensiya, İSPANYA. Abstract P-304, 2010.
- 4) Mehmet GUMUSTAS, Sibel A. OZKAN 'Electrochemical Evaluation and Determination of Antiretroviral Drug Fosamprenavir in Pharmaceutical Dosage Forms and Biological Samples' (Euro Analysis 2009), 06-10 Eylül 2010, Innsbruck, AVUSTURYA.Abstract P-123, 2009
- 5) Mehmet GUMUSTAS, Sibel A. ÖZKAN Electrochemical Oxidation of Antiretroviral Drug Fosamprenavir at Glassy Carbon Electrode and Its Direct determination in Pharmaceutical Dosage Forms by Square Wave and Differential Pulse Voltammetry (5 th Blacksea Basin Conference on Analytical Chemistry), Fatsa/ORDU)
- 6) Mehmet GUMUSTAS, Sibel A. ÖZKAN Anodic voltammetry of antiretroviral drug fosamprenavir at boron-doped diamond and glassy carbon electrodes and its determination (8 th International Electrochemistry Meeting), Çolaklı/ANTALYA)
- 7) Hanif SHIRINZADEH, Mehmet GÜMÜŞTAŞ, Seçkin ÖZDEN, Sibel SÜZEN, Sibel A. ÖZKAN, Synthesis and investigation of electrochemical behaviour of n-methylindole-3-carboxaldehyde izonicotinoyl hydrazone(9th International Symposium on Pharmaceutical Sciences (ISOPS-9), AnkaraUniversity/ANKARA,23-26 Haziran 2009)
- **8)** Senem ŞANLI, Mehmet GÜMÜŞTAŞ, Meltem SAVAŞ, Nurullah ŞANLI, Güleren ALSANCAK, The UV-spectroscopy method for determination of dissociation constants of several cephalosporins in water (International Symposium on Drug Research and Development, Hacettepe University/ANKARA, 4-7 Mayıs 2009)
- 9) Mehmet GUMUSTAS, Sibel A. OZKAN A Novel Sensor for Antibiotic Drug Ertapenem Based on Electrochemical Oxidation Using Boron Doped Diamond Electrode (ISE 2011), 8-11 Mayıs 2011, Turku, Finlandiya, Abstract P-20,2011.
- 10) Bengi Uslu, Burcin Bozal, Mehmet Gumustas, Burcu Dogan Topal, Sibel A. Ozkan Analytical Applications Of Voltammetric Methods For The Simultaneous Determination Of Bisoprolol

- Fumarate And Hydrochlorothiazide In Their Dosage Forms, (ISE 2011), 8-11 Mayıs 2011, Turku, Finlandiya, Abstract P-114,2011.
- 11) Mehmet GUMUSTAS, Sibel A. OZKAN Development Of Validated Rp-Hplc Method For The Estimation Of Gemifloxacin From Tablet Dosage Form (DRD 2011), 27-29 Mayıs 2011, Antalya, Türkiye, Abstract P-043,2011.
-) Mehmet GUMUSTAS, Sibel A. OZKAN Determination Of Granisetron By HPLC-DAD Technique In Pharmaceutical Dosage Forms (DRD 2011), 27-29 Mayis 2011, Antalya, Türkiye, Abstract P-044,2011.
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-) Sevinç Tunçağıl, Mehmet Gumustas, Burçin Bozal, Bengi Uslu, Sibel A. Özkan, Determination of anticancer drug epirubicine in pharmaceutical preparations via glassy carbon electrode, (14. International Conference on Electrochemistry), 3-7 Haziran 2012, Portoroz, Slovenya, Abstract P2-9, 214, 2012.
-) Gokce Coskun, Mehmet Gumustas, Sibel A. Özkan, Electrochemical behavior and determination of antidiabetic drug repaglinide at glassy carbon electrode (14. International Conference on Electrochemistry), 3-7 Haziran 2012, Portoroz, Slovenya, Abstract P2-10, 215, 2012.
- 18) Hanif Shırınzadeh, Çiğdem Karaaslan, Betül Tekiner-Gulbas, Ayse Didem Yılmaz, Mehmet Gumustas, Sibel A. Özkan, Sibel Suzen, Investigation on electrochemical behavior of indole-hydrazones. (10th International Symposium on Pharmaceutical Sciences (ISOPS-10), AnkaraUniversity/ANKARA,26-29 Haziran 2012), Abstract P125, 200, 2012.
- 19) Mehmet Gumustas, Senem Şanlı, Nurullah Şanlı, Sibel A. Özkan, Simulatenous determination of trandolapril and verapamil in pharmaceutical formulations. 10th International Symposium on Pharmaceutical Sciences (ISOPS-10), AnkaraUniversity/ANKARA,26-29 Haziran 2012), Abstract P196, 272, 2012.
-) Ceyda Sibel Kılıç, Abdullah Kaya, Halil Solak, Mustafa Işıloğlu, Fahrettin Gücin, Mehmet Gumustas, Maksut Coşkun, Psilocin and psilocibin content of some Psathyrella spp. Growing in Turkey, 10th International Symposium on Pharmaceutical Sciences (ISOPS-10), AnkaraUniversity/ANKARA,26-29 Haziran 2012), Abstract P298, 375, 2012.
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- Turkey, 13th International Congress of the Society of Ethnopharmacology, September 2-6, 2012 in Graz, Austria
- **22**) M. Kılıçarslan, M. Gumustas, T. Baykara, Effect of drug/polymer ratio on the characteristics of clindamycın phosphate loaded spray dried chitosan Microspheres prepared for periodontal administration. 16th IPTS on September 10 12, 2012 in Antalya, Turkey. Abstract P31, 170-172.
- 23) Sevinc Tuncagil, Mehmet Gumustas, Sibel A. Ozkan, Simultaneous estimation and validation of some binary mixtures of antihypertensive drugs by RP-LC method. 1 st International Conference on Analytical Chemistry RO-ICAC 2012, September 18-21, 2012 in Targoviste, Romania.
- **24**) Lali Chankvetadze, Mehmet Gumustas, Sibel A.Ozkan, Salvatore Fanali, Bezhan Chankvetadze, Application of Novel Core-shell Type Polysaccharide-based Chiral Stationary Phases for Separation of Enantiomers in Nano Liquid Chromatography and Capillary Electrochromatography, 29th International Symposium on Micro Scale Bioseparations (MSB 2013), 10-14 March, 2013, Charlottesville, VA, ABD.
- **25**) A. M. Ashrafi, M. Gumustas, K. Vytras, D. Nematollahi, B. Uslu, T. Mikysek, R. Jirasko, S. A. Ozkan, Determination and mechanism study of antiviral drug fosamprenavir using carbon paste electrode in the presence of Triton X- 100, 24 th International Symposium on Pharmaceutical and Biomedical Analysis, PBA 2013, Bologna, Italy.
- 26) Lali Chankvetadze, Mehmet Gumustas, Sibel A.Ozkan, Salvatore Fanali, Bezhan Chankvetadze, Application of Novel Core-shell Type Polysaccharide-based Chiral Stationary Phases for Separation of Enantiomers in Nano Liquid Chromatography and Capillary Electrochromatography, 6th Black Sea Basin Conference on Analytical Chemistry (6BBCAC), 10-14 Eylul, 2013, Trabzon, Turkiye, P160.
- 27) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, HPLC separation of enantiomers of chiral β-agonist derivatives using polysaccharide based chiral columns, ITP 2013, 6-9 October 2013, Tenerife, Spain. PS1-23, 145.
- 28) Merve Eylul Bozkurt, Aysen Gumustas, Mehmet Gumustas, Ahmet Akin, Sibel A. Ozkan, microbiological and HPLC method for the determination of gemifloxacin in pharmaceutical preparations and biological samples, ITP 2013, 6-9 October 2013, Tenerife, Spain, PS1-26, 148.
- **29**) Sevinc Kurbanoglu, Mehmet Gumustas, Bengi Uslu, Sibel A. Ozkan, A novel sensitive and selective RP-LC method for the simultaneous determination of the antihypertensive dugs, enalapril-lercanidipine, ITP 2013, 6-9 October 2013, Tenerife, Spain, PS2-16, 213.
- 30) Mehmet Gumustas, Sibel A.Ozkan, Lali Chankvetadze, Bezhan Chankvetadze, Application of Novel Core-shell Type Polysaccharide-based Chiral Stationary Phases for Separation of Enantiomers in Nano Liquid Chromatography, 30th International Symposium on Micro Scale Bioseparations (MSB 2014), 27 April-1 May, 2014, Pecs, Hungary. P-24, 95.
- **31**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Enantiomeric separation of chiral β-agonist derivatives with using normal phase eluents by HPLC, PBA 2014, 23-25 June 2014, Liege, Belgium. CS-13.

- **32**) Nurgul Karadas, Mehmet Gumustas, Bengi Uslu, Sibel A.Ozkan,, Sımultaneous determination of amlodipine and rosuvastatın in pharmaceuticals by LC and voltammetric techniques, PBA 2014, 23-25 June 2014, Liege, Belgium. PQ-21.
- **33**) Gokce Coskun Abbasoglu, Mehmet Gumustas, Sibel A. Ozkan, A comperative determination study of repaglinide by HPLC, UPLC and electrochemical methods. 2 nd International Conference on Analytical Chemistry RO-ICAC 2014, September 17-21, 2014, Targoviste, Romania.
- **34**) Aysen Gumustas, Merve Eylul Bozkurt, Mehmet Gumustas, Ahmet Akın, Sibel A. Ozkan, Comperative study fort he determination of gemifloxacin by HPLC and microbiological methods from pharmaceutical preparations and biological samples. 2 nd International Conference on Analytical Chemistry RO-ICAC 2014, September 17-21, 2014, Targoviste, Romania. S4-P02.
- **35**) Canan Hascicek, Ceyda Tugba Sengel Turk, Mehmet Gumustas, Sibel. A Ozkan, Ayhan Savaser, Yalcin Ozkan, Fabrication of Fulvestrant loaded modified released nanoparticles: comparison of copolymer molecular weight, 13 th European symposium on controlled drug delivery, April 16-18, 2014, Egmond aan Zee, Netherlands. 121-122.
- **36)** Canan Hascicek, Ceyda Tugba Sengel Turk, Filiz Bakar, Net Das-Evcimen, Mehmet Gumustas, Sibel. A Ozkan, Ayhan Savaser, Yalcin Ozkan, Fulvestrant loaded PLGA nanoparticles: influence of polymer copolymer composition on in-vitro properties and anti-proliferative potencies against MCF-7 breast cancer cells, 17 th International Pharmaceutical Technology symposium, September 8-10, 2014, Antalya, 203.
- 37) Canan Hascicek, Ceyda Tugba Sengel Turk, Filiz Bakar, Net Das-Evcimen, Mehmet Gumustas, Sibel. A Ozkan, Ayhan Savaser, Yalcin Ozkan, Fabrication of Fulvestrant loaded modified released nanoparticles: effect of copolymer molecular weight on particle characteristics, 4 th International Meeting on Pharmacy Pharmaceutical Sciences (IMPPS-4), September 18-21, 2014, Istanbul, PP 138.
- **38**) B. Kaskatepe, S. Yildiz, M. Gumustas, S.A. Ozkan, rhamnolipid production by pseudomonas spp. In pulps, 11th International Symposium on Pharmaceutical Sciences (ISOPS 2015), June 9-12, 2015, Ankara, Turkey, OP-32, 60.
- **39**) M. Gumustas, M.G. Caglayan, F. Onur, S.A. Ozkan, Development of a capillary electrophoresis method for the determination of emtricitabine, rilpivirine and tenofovir from biological samples, 11th International Symposium on Pharmaceutical Sciences (ISOPS 2015), June 9-12, 2015, Ankara, Turkey, P-31, 95.
- **40**) Mehmet Gumustas, Bengi Uslu, Sibel A. Ozkan, Optimization and validation of a RP-LC method for the sensitive determination of antazoline and tetrahydrozoline, 26th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2015), July 5-8, 2015, P23.
- **41**) Mehmet Gumustas, M. Gokhan Caglayan, Feyyaz Onur, Sibel A. Ozkan, Determination of emtricitabine, rilpivirine and tenofovir from biological samples with using LC and CE methods, 26-th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2015), July 5-8, 2015, P24.
- **42**) Gulin Amasya, Mehmet Gumustas, Ceyda Tuba Sengel-Turk, Ulya Badilli, Sibel A. Ozkan, Nilufer Tarimci, Optimization of sensitive and selective RP-LC method for the determination

- of etofenamate from rat skin, The European Conference on Analytical Chemistry 18, Euroanalysis 2015, September 6-10, Bordoeux, France, 2015, P272.
- **43**) Aysen Gumustas, Mehmet Gumustas, B. Bugra Barut, Sibel A. Ozkan and Bengi Uslu, the effect of core-shell particles on chromatographic determination and optimization of dutasteride and tamsulosin, 43rd Symposium of HPLC and related techniques (HPLC 2015), September 21-25, Beijing, China, 2015, pp. 165, P12.
- **44**) Mehmet Gumustas, M. Gokhan Caglayan, Sibel A. Ozkan, chromatographic investigation and simultaneous determination of some antiviral pharmaceuticals from biological samples, International multidisciplinary symposium on Drug Research & Development 15 (DRD 2015), October 15-17, Eskisehir, Turkey,pp. 96, P26.
- **45**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Separation of Enantiomers of Butoxamine Using Polysaccharide Based Chiral Columns with Emphasis on Enantiomer Elution Order, International Conference: 10th Aegean Analytical Chemistry Days, AACD 2016, 29 Eylül-2 Ekim 2016, Çanakkale, Türkiye
- **46**) Mehmet Gumustas, Derya Ozgur, Sibel A. Ozkan, Simultaneous Estimation of Irbesartan, and Hydrochlorothiazide in Their Binary Mixture by HPLC and UPLC, International Conference: 10th Aegean Analytical Chemistry Days, AACD 2016, 29 Eylül-2 Ekim 2016, Çanakkale, Türkiye
- **47**) Canan Hascicek, Ceyda Tugba Sengel Turk, Filiz Bakar, Net Das-Evcimen, Mehmet Gumustas, Sibel. A Ozkan, Ayhan Savaser, Yalcin Ozkan, Antiproliferative Potential of Nanoparticle-Based Delivery System of Fulvestrant on MCF-7 Human Breast Cancer Cells, AAPS 2016, 13-17 Kasım, Denver, Amerika
- **48**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Enantiomeric separation of beta-adrenergic agonists by HPLC with polysaccharide-based chiral columns using various mobile phases, 27-th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2016), 13-16 Kasım 2016. Guangzhou/Çin
- **49**) Cem Erkmen, Mehmet Gumustas, Sibel A. Ozkan, Bengi Uslu, The role of HILIC separation for the simultaneous determination of some antivirals, 27-th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2016), 13-16 Kasım 2016. Guangzhou/Çin

7.4. National poster presentations

- 1) Mehmet GUMUSTAS, Senem ŞANLI, Nurullah ŞANLI, Sibel A. ÖZKAN, Fosamprenavir'in farmasötik dozaj formlarından RP-HPLC yöntemiyle miktar tayini, Kromatografi Sempozyumu 2009 Trabzon.
- 2) Mehmet GUMUSTAS, Sibel A. OZKAN Oseltamivir' in Farmasötik Dozaj formlarından Ters Faz YPSK Yöntemiyle Miktar Tayini (Kromatografi 2011), 7-10 Eylül 2011, Diyarbakır, Türkiye,

- 3) Sevinç Tunçağıl, Mehmet Gumustas, Sibel A. Özkan, Yeni nesil kolonlarla antihipertansif ilaç etken maddeler için eş zamanlı tayin yöntemleri ve validasyonu, 6. Ulusal Analitik Kimya Kongresi (3-7 Eylül Antakya) Abstract P254, 296, 2012.
- 4) Mehmet Gumustas, Ceyda Sibel Kılıç, Abdullah Kaya, Halil Solak, Mustafa Işıloğlu, Fahrettin Gücin, Maksut Coşkun, Türkiye'de yetişen bazi inocybe (inocybaceae) türlerinin psilosin ve psilosibin içeriği, BIHAT 2012, 10-13 Ekim, Antalya, Turkiye.
- 5) Mehmet Gumustas, Derya Cicek Polat, Arabaci Anul S., Ceyda Sibel Kılıç, Akalin K., Maksut Coşkun, Colchicum speciosum Steven ve Gloriosa superba Linn. Türleri Tohumlarının YBSK Yöntemi ile Kolşisin ve Kolşikozit İçerikleri Açısından Karşılaştırılması, BIHAT 2012, 10-13 Ekim, Antalya, Turkiye
- 6) Mehmet Gumustas, Ceyda Tugba Sengel Turk, Canan Hascicek, Sibel. A Ozkan, Kanser tedavisinde kullanılan Fulvestrant'ın ters faz sıvı kromatografik yöntemle analizi, Kromatografi 2013, 19-22 Haziran 2013, Bursa, Turkiye.
- 7) Mehmet Gumustas, Sibel A. Özkan, Bezhan Chankvetadze, Separation of chiral β-agonist derivative enentiomers using High Performance Liquid Chromatography, 7. Ulusal Analitik Kimya Kongresi (1-5 Eylül, Kahraman Maraş), 142, 2014.
- 8) Banu Kaşkatepe, Sulhiye Yıldız, Mehmet Gümüştaş, Sibel Ayşıl Özkan. Hastane enfeksiyonu etkeni Pseudomonas aeruginosa suşlarında biyosürfaktan üretimi. 36. Türk Mikrobiyoloji Kongresi. 12-16 Kasım 2014, Antalya
- 9) Mehmet Gumustas, Ceyda Tugba Sengel Turk, Canan Hascicek, Sibel. A Ozkan, Filiz Bakar, Net Das-Evcimen, Ayhan Savaser, Yalcin Ozkan, Fulvetrantin Ters Faz Sivi Kromatografik Yontemle Biyolojik Sivilar ve Polimerik Bazli Nanopartikullerden Analizi, 15. Ulusal Kromatografi Kongresi (Kromatografi 2015), 40, 8-10 Nisan 2015, Usak, Turkiye
- 10) Sevinc Kurbanoglu, Mehmet Gumustas, Sibel. A Ozkan, Antihipertansif Enalapril, Lerkanidipin, Nitrendipin in TF-SK ile es zamanli Tayin Yontemleri ve Validasyonu, 15. Ulusal Kromatografi Kongresi (Kromatografi 2015), 138, 8-10 Nisan 2015, Usak, Turkiye
- 11) Memis, H., Gumustas, M., Uslu, B., Ozkan, S. A., Entakapon'un Farmasötik Dozaj Formundan UV Spektrofotometrik Tayini, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.
- **12**) İsbilir, İ, Gumustas, M., Uslu, B., Ozkan, S. A., Tenofovirin Farmasötik Dozaj Şeklinden Analizi için UV Spektrofotometrik Yöntem Geliştirilmesi, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.
- **13**) Konuralp, H., Memis, H., Gumustas, M., Uslu, B., Ozkan, S. A., Valgansiklovir'in UV Spektrofotometrik Yöntemle Analizi ve Validasyonu, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.
- **14**) Gumustas, M., Ozgur, D., Ozkan, S. A., İrbesartan ve Hidroklorotiyazidin Ypsk ve Upsk ile Eş Zamanlı Analizi, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, İsparta, Türkiye.

- **15**) Gumustas, M., Ozkan, S. A., Chankvetadze, B., Ritodrin Enantiyomerlerinin Ayrımı için YPSK Yöntemi Geliştirilmesi, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.
- **16**) Erkmen, C., Gumustas, M., Uslu, B., Ozkan, S. A, oseltamivir'in farmasötik dozaj şekillerinden tayınınde core-shell parçacıkların etkisi, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.
- 17) Barut, B.B., Gumustas, A., Gumustas, M., Ozkan, S.A., Uslu, B., Dutasterit ve Tamsulosin'in Eş Zamanlı Kromatografik Analizi, 8. Ulusal Analitik Kimya Kongresi 30 Mayıs-3 Haziran 2016, Isparta, Türkiye.

4.6. Oral Presentations in International and National Conferences

4.6.1. International Conferences

- 18) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Separation of enantiomers of chiral beta-agonists in capillary electrophoresis and high performance liquid chromatography4 th Annual Symposium on Physical and Analytical Chemistry, December 29 and 30, 2014 Tbilisi, Georgia
- **19**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Comparative capillary electrophoresis and HPLC separation of enantiomers of selected chiral β-Agonists ,31 st International Symposium on Micro Scale Bioseparations (MSB 2015), April 26-29, 2015, Pudong, Shanghai, China.
- **20**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Separation the enantiomers of selected chiral β-agonists derivatives from the view point of high performance liquid chromatography and capillary electrophoresis, 26-th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2015), July 5-8, 2015. Tbilisi, Georgia.
- **21**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Enantiomeric separation of beta-adrenergic agonists by HPLC with polysaccharide-based chiral columns using various mobile phases, 27-th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2016), 13-16 Kasım 2016. Guangzhou/Çin
- **22**) Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, HPLC separation of enantiomers of some beta-agonists by using polysaccharide-based chiral columns, 7 th Annual Symposium on Physical and Analytical Chemistry, 28-29 Kasım 2016, Tiflis, Gürcistan

4.6.2. National Conferences

- 1) Mehmet Gumustas, Bengi Uslu, Sibel A. Özkan, Antiparkinson etkili maddelerin farmasötik dozaj formundan HPLC yöntemiyle eş zamanlı miktar tayini, . Ulusal Analitik Kimya Kongresi (3-7 Eylül Antakya) Sözlü sunum. 18, 27, 2012.
- 2) Mehmet Gumustas, Ceyda Tugba Sengel Turk, Canan Hascicek, Sibel. A Ozkan, Filiz Bakar, Net Das-Evcimen, Ayhan Savaser, Yalcin Ozkan, Fulvetrantin Ters Faz Sivi Kromatografik Yontemle Biyolojik Sivilar ve Polimerik Bazli Nanopartiküllerden Analizi, 15. Ulusal Kromatografi Kongresi (Kromatografi 2015), 8-10 Nisan 2015, Usak, Turkiye

7.7. Book chapters and dictionaries

- 1) Gümüştaş, M., Özkan, S.A., Genç, L.(Ed.), *Elektrokimyasal Dedektörlü Yüksek Performanslı Sıvı Kromatografisi*, Kromatografik Sistemler, Anadolu Üniversitesi BİBAM yayınları, 2011. ISBN:9789750608865
- 2) Uslu, B., Gümüştaş, M., Savaşer, A., Özkan, Y., Özkan, S. A., Sözlük Dergisi, 3 (2), Analiz terimleri sözlüğü, 2012. ISSN:1308-1500
- 3) Özkan, S.A., Gümüştaş, M., Tunçağıl, S., Gökçel, İ.(Ed.), 2. Uygulamalı Elektrokimya Lisansüstü Yaz Okulu Kitabında Bölüm: Elektrokimyasal analizlerde analitik yöntem optimizasyonu ve validasyonu, 95-118, 2012.
- **4**) Tunçağıl, S., Gümüştaş, M., Özkan, S.A., Gökçel, İ.(Ed.), 2. Uygulamalı Elektrokimya Lisansüstü Yaz Okulu Kitabında Bölüm: Anti Parkinson ilaç etken maddesi L-Dopa'nın elektrokimyasal analizi ve validasyonu, 263-275, 2012.
- 5) Uslu, B., Gümüştaş, M., Bozal- Palabiyik B. Savaşer, A., Özkan, Y., Özkan, S. A., Sözlük Dergisi, 6 (2), Eczacılık Terimleri Sözlüğü, İlaç Analizleri Terimleri, 2015 (Kabul tarihi: Haziran, 2016; Basım tarihi: Aralık, 2016). ISSN:1308-1500
- 6) Sengel-Turk C. T., Gumustas M., Uslu B., Ozkan S. A. 2017. 10 Nano-Sized Drug Carriers for Oral Delivery of Anti-Cancer Compounds and The Place of The Chromatographic Techniques Grumezescu, A. M. (Ed.). Nano- and Microscale Drug Delivery Systems 1st Edition Design and Fabrication. Elsevier, Netherlands.
- 7) Gumustas M., Sengel-Turk C. T., Gumustas A., Ozkan S. A., Uslu B. 2017. 5 Effect of Polymer-Based Nanoparticles on the Assay of Antimicrobial Drug Delivery Systems Grumezescu, A. M. (Ed.). Multifunctional Systems for Combined Delivery, Biosensing and Diagnostics. Elsevier, Netherlands.

8)

5. Projects

Project Name	Supporter	Budget	Date	Position	Type
Melatonin Analoğu Yeni Antioksidan İlaç Etken Maddeleri Geliştirilmesi: Biyolojik Aktivite, Sitotoksisite ve Olası Metabolitlerinin İn-vitro Elektrokimyasal Değerlendirilmeleri (109S099)		90000	15.11.2009- 15.11.2011	Bursary	National
Akdeniz Bölgesi' nde Yetişen Psilosin ve Psilosibin Taşıyan Şapkalı Mantar Türleri Üzerinde Araştırmalar (109T149)		75012	01.05.2009- 01.07.2011	Bursary	National

Meme Kanseri Tedavisinde Kullanılmak Üzere Fulvestrant Yüklü Polimerik Nanopartiküler Sistemlerin Geliştirilmesi (112S290)	TUBITAK	82836	15.11.2012- 15.11.2014	Bursary	National
Yeni nesil kolonlar kullanılarak bazı antiviral ilaçların sıvı kromatografik yöntemlerle eş zamanlı analizi ve optimizasyonu (12L336003)	Ankara Üniversitesi BAP	29996	01.01.2013- 01.01.2014	Researcher	National
Dutasterit ve tamsulosin HCl`nin yeni nesil kolonlar kullanarak bazı sıvı kromatografik yöntemlerle es zamanlı analizi ve optimizasyonu (15L0237004)	Ankara Üniversitesi BAP	19000	03.06.2015- 03.06.2016	Researcher	National
Yeni nesil HILIC kolon kullanılarak bazı antiviral ilaçların farmasötik dozaj şekillerinden sıvı kromatografisi ile analizi (16L0237001)	Ankara Üniversitesi BAP	16000	08.06.2016- 08.11.2016	Researcher	National
Terazosin hidroklorür dihidrat ve Tamsulosin HCl`nin kapiler elektroforez ile analizi ve validasyonu (16H0237011)	Ankara Üniversitesi BAP	19886	08.06.2016 08.01.2017	Researcher	National

6.Organizations

- 1) Kimyagerler Derneği
- 2) International Society of Electrochemistry 2010-
- 3) The Electrochemical Society 2012-2014
- 4) The Chromatographic Society 2012-
- 5) International Separation Science Society (CASSS) 2012-

7.Prizes

- 1) PCCP and Turkish Chemical Society Ord. Prof. Dr. İlhami Civaoglu Award for Poster Presentation in 9th International Electrochemistry in Turkey (Poster Award). Sevinç Tunçağıl, Mehmet GUMUSTAS, Burçin Bozal, Bengi Uslu, Sibel A. Özkan, Electrochemical Behavior of Epirubicin at Boron-Doped Diamond Electrode and Its Determination in the Presence of Surfactants. 25-29 September 2011
- 2) Amerikan Kimya Derneği (American Chemical Society) Best poster award, Mehmet Gumustas, Gokce Coşgun Abbasoglu, Sibel A. Ozkan "A comparative determination study of repaglinide by HPLC, UPLC and electrochemical methods" 2nd International Conference on Analytical Chemistry. Analytical Chemistry for a Better Life. Targoviste, September 17-21, 2014.

- 3) Best poster award, Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Ritodrin Enantiyomerlerinin Ayrımı İçin YPSK Yöntemi Geliştirilmesi, 8. Ulusal Analitik Kimya Kongresi, Isparta, Türkiye (30 Mayıs 3 Haziran 2016)
- 4) Best poster presentation award, Mehmet Gumustas, Sibel A. Ozkan, Bezhan Chankvetadze, Separation of Enantiomers of Butoxamine Using Polysaccharide Based Chiral Columns with Emphasis on Enantiomer Elution Order. 10th Aegean Analytical Chemistry Days (AACD2016) International Conference, Canakkale, Turkey. (29 September 2 October 2016)

8. Other activities

8.1. Organization of Conferences

- 1) 2.Uygulamalı Elektrokimya Yaz Okulu (Çanakkale), Teknik Kurul Üyesi
- 2) ISOPS 10 (10th International Symposium on Pharmaceutical Sciences, Ankara) Sosyal Komite üyesi. 26-29 Haziran 2012.
- 3) 19 th EAFP Annual Conference 2013, Ankara, Sosyal Komite Uyesi. 16-18 Mayıs 2013.
- **4)** ISOPS 11 (11th International Symposium on Pharmaceutical Sciences, Ankara) Sosyal Komite üyesi. 9-12 Haziran 2015.
- 5) 8. Ulusal Analitik Kimya Kongresi, Isparta, Türkiye, Organizasyon komitesi üyesi 30 Mayıs 3 Haziran 2016

8.2. Working experience in abroad

- 1) Prof. Dr. Bezhan Chankvetadze (Tiflis/Gürcistan), Kiral bileşenlerin kromatografik (HPLC, nano-LC) ve kapiler elektroforetik analizleri üzerine araştırma. 19 Ocak 2 Şubat 2013.
- 2) Prof. Dr. Bezhan Chankvetadze (Tiflis/Gürcistan), Kiral bileşenlerin kromatografik (HPLC, nano-LC) ve kapiler elektroforetik analizleri üzerine araştırma. 21 Şubat 1 Eylül 2014.
- 3) Prof. Dr. Bezhan Chankvetadze (Tiflis/Gürcistan), Kiral bileşenlerin kromatografik (HPLC, nano-LC) ve kapiler elektroforetik analizleri üzerine araştırma. 17 Haziran 17 Temmuz 2015.

8.3. National Working experience

1) Prof. Dr. Sibel A. Ozkan (Ankara Üniversitesi/Türkiye), Kiral bileşenlerin kromatografik ve kapiler elektroforetik analizleri üzerine çeşitli araştırmalar. 30 Eylül 2016- 30 Mart 2017.

8.4. Editorial Board Membership

- 1) American Journal of PharmTech Research
- 2) UK Journal of Pharmaceutical and Biosciences

8.5. Reviewer Position in International Journals

- 1) Journal of Pharmaceutical and Biomedical Analysis,
- 2) Electrophoresis,
- 3) Talanta,
- 4) Instrumentation Science and technology,
- 5) International Journal of Electrochemistry,
- 6) Journal of Liquid Chromatography and Related Technologies,
- 7) Journal of Analytical Methods in Chemistry,
- 8) Spectroscopy Letters,
- 9) Journal of AOAC International,
- 10) Chromatography Research International,
- 11) Journal of Electrochemical Society,
- 12) Current Analytical Chemistry,
- 13) Current Chromatography,
- 14) Current Drug Theraphy,
- 15) Natural Product and Research,
- 16) The Open Analytical Chemistry Journal,
- 17) Science Journal of Analytical Chemistry,
- 18) The Scientific World Journal.
- 19) Current Pharmaceutical Analysis.
- 20) Drug Development and Industrial Pharmacy
- 21) Arabian Journal of Chemistry
- 22) Electrochimica Acta
- 23) Eurasian Journal of Analytical Chemistry
- 24) Chemistry Central Journal
- 25) International Journal of Pharmaceutical sciences and Developmental Research
- 26) Journal of Materials and Environmental Science

Siheng Li, Ph.D.

Email: Siheng.Li@covance.com Phone: +1-608-310-2763 Covance Laboratories Inc., 3301 Kinsman Blvd., Madison, WI-53704

LinkedIn: http://www.linkedin.com/in/siheng-li-56457b46

WORK EXPERIENCE

Jan. 2017 – present Staff Scientist, Covance Laboratories Inc. (Madison, WI)

Covance Food Solutions

Method development and validation for food contaminants analysis (BPA,

Nonylphenol, Veterinary drugs).

Jun. 2012 – Jan. 2017 Manager, Mass Spectrometry Laboratory, University of Houston

(Houston, TX)

Manage the operation of the Mass Spectrometry Laboratory; Train researchers in mass spectrometry/chromatography instrumentation; Develop methods for diverse types of samples for MS-based analysis. Collaborate on complex research projects using advanced mass spectrometry and chromatography instrumentation. Perform maintenance and troubleshooting mass spectrometry/chromatography instrumentation.

EDUCATION

2015 University of Houston (Houston, TX)

Ph.D., Chemistry

Research Advisor: Professor Chengzhi Cai

Thesis: Bioconjugation using copper-catalyzed azide-alkyne cycloaddition reaction.

2010 South China University of Technology (Guangzhou, China)

B.S., Material Science and Engineering

RESEARCH PROJECTS

Method development and validation – Determination of bisphenol-A (BPA) in commercially packaged beverages and infant formulas

Developed a novel LC-MS/MS based method to determine BPA concentration in various food matrices. Validated the method in ten types of on ten most-widely consumed commercially packaged non-alcoholic beverages, infant formula products and food simulating solvents with satisfactory accuracy and precision.

Method development and validation – Determination of nonylphenol in infant formula ingredients and products

Developed a simple and robust sample extraction approach applicable for nonylphenol isomers quantitative analysis in various food matrices. Validated the method in infant formula products, milk powders, food oils and sugars with satisfactory accuracy and precision.

Method development and validation – Determination of trimethylamine *N*-oxide (TMAO) in krill oil feeds and products

Established a high through-put infusion nano-ESI-MS analysis method to determine the concentration of TMAO in krill oil feeds and products. The validation meet the method performance requirements.

Bioconjugation using copper-catalyzed azide-alkyne cycloaddition reaction

Investigated peptide/protein oxidative side-reaction in CuAAC reaction by combinatorial peptide synthesis and MS-based protein modification analysis. Discovered a new type of copper-binding ligand to significantly reduce peptide/protein oxidative degradation and accelerate CuAAC reaction. Developed a new catalyst for CuAAC bioconjugation reaction inside living mammalian cells. Studied the intracellular reaction by MS-based quantitative analysis, immunofluorescence and immunoblotting assays. Identified a key inhibitor for intracellular CuAAC reaction.

AWARDS & MEMBERSHIPS

2010-2015 DSTF Fellowship, UH

2010 Outstanding Senior Student, SCUT

2009-2010 Undergraduate Research Fellowship, SCUT

American Society for Mass Spectrometry (ASMS)
Association of Official Analytical Chemists (AOAC)

OTHER ACTIVITIES

Scientific reviewer for Molecules, International Journal of Molecular Sciences, Chemistry & Biodiversity, Materials Chemistry and Physics, Chemical Biology & Drug Design.

PUBLICATIONS

- 1. **Li, S.**, Wang, L., Yu, F., Zhu, Z., Shobaki, D., Chen, H., Wang, M., Wang, J., Qin, G., Erasquin, U., Ren, L., Wang, Y. and Cai, C. Copper-catalyzed click reaction on/in live cells. *Chem. Sci.*, **2017**, 8, 2107–2114.
- 2. Zhu, Z., Chen, H., **Li, S.**, Yang, X., Bittner, E. and Cai, C. Tripodal amine ligands for accelerating Cu-catalyzed azide-alkyne cycloaddition: efficiency and stability against oxidation and dissociation. *Catal. Sci. Technol.*, **2017**, 7, 2474–2485.
- 3. Chen, H., Cai, C., **Li, S.**, Ma, Y., Luozhong, S. and Zhu, Z. Intermediates stabilized by tris(triazolylmethyl)amine in CuAAC reaction. *Eur. J. Chem.*, **2017**, 23, 4730–4735.
- 4. Chen, Q., Zhu, Z., Wang, J., Lopez, A., **Li, S.**, Kumar, A., Yu, F., Chen, H., Cai, C. and Zhang, L. Probiotic E.Coli Nissle 1917 biofilms on silicone substrates for bacterial interference against pathogen colonization. *Acta Biomater.*, **2017**, 50, 353–360.
- 5. Qin, G., Zhu, Z., **Li, S.**, McDermott, A. and Cai, C. Development of ciprofloxacin-loaded contact lenses using fluorous chemistry. *Biomaterials*, **2017**, 124, 55–64.
- 6. **Li, S.**, Cai, H., He, J., Chen, H., Lam, S., Cai, T., Bark, S. and Cai, C. Extent of the oxidative side-reactions to peptides and proteins during CuAAC reaction. *Bioconjugate Chem.*, **2016**, 27, 2315–2322.
- 7. Qin, G., Zhu, Z., **Li, S.**, Cai, C. and McDermott, A. Contact lens surface modification utilizing fluorous chemistry. *Invest. Ophthalmol. Vis. Sci.*, **2016**, 57, 1458–1458.
- 8. Contreras-Caceres, R., Santos, C., **Li, S.**, Kumar, A., Zhu, Z., Kolar, S., Casado-Rodriguez, M., Huang, Y., McDermott, A., Lopez-Romero, J. and Cai, C. Modification of fluorous substrates with oligo(ethylene glycol) via "click" chemistry for long-term resistance of cell adhesion. *J. Colloid Interface Sci.*, **2015**, 458, 112–118.
- 9. Zhu, Z., Wang, J., Lopez, A., Yu, F., Huang, Y., Kumar, A., **Li, S.**, Zhang, L. and Cai, C. Surfaces presenting α-phenyl mannoside derivatives enable formation of stable, high coverage, non-pathogenic Escherichia coli biofilms against pathogen colonization. *Biomater. Sci.*, **2015**, 3, 842–851.
- 10. Wang, L., Zhao, M., **Li, S.**, Erasquin, U., Wang, H., Chen, C. and Cai, C. "Click" immobilization of a VEGF-mimetic peptide on decellularized endothelial extracellular matrix to enhance angiogenesis. *ACS Appl. Mater. Interfaces*, **2014**, 6, 8401–8406.

Revised: 27 Oct 10



CURRICULUM VITAE: KATERINA MASTOVSKA

CURRENT POSITION

Title: Associate Director - Research, Development and Innovation

Department: Covance Food Solutions (CFS)

Madison, WI

EDUCATION

PhD Food Chemistry and Analysis, Institute of Chemical Technology (ICT), Faculty of Food and Biochemical Technology, Prague, Czech Republic, January 2002

MS Food Chemistry and Analysis (summa cum laude), Institute of Chemical Technology (ICT), Faculty of Food and Biochemical Technology, Prague, Czech Republic, June 1998

PROFESSIONAL EXPERIENCE

2016-present: Associate Director - Research, Development and Innovation, CFS, Madison, WI

Dr. Mastovska leads the global chemistry R&D and Innovation group at Covance Food Solutions (CFS). She directs the internal development of new analytical methods, and research and adoption of new technologies to support strategic business growth objectives. Dr. Mastovska serves as a scientific leader in the community and represents CFS at scientific meetings and organizations.

2013-2016: Associate Scientific Director, NCFS, Covance Laboratories Inc., Madison, WI 2011-2013: Lead Staff Scientist, NCFS, Covance Laboratories Inc., Madison, WI 2009-2011: Senior Technical Manager, NCFS, Covance Laboratories Inc., Greenfield, IN

Dr. Mastovska was responsible for development of new analytical methods and strategies for testing of chemical residues, contaminants, and adulterants in food and dietary supplements. She served as a scientific and technical resource for the Nutritional Chemistry and Food Safety (NCFS) department in this field. In addition to leading new analytical method development, she also took a lead role in identifying and solving analytical problems, and in interfacing with clients in terms of technical expertise, problem solving, and business development activities.

2002-2009: Research Chemist, USDA, Agricultural Research Service, Wyndmoor, PA

Dr. Mastovska developed efficient methods for pesticide and veterinary drug residues and other chemical contaminants in food, such as acrylamide or dioxins, mainly based on advanced gas and liquid chromatographic techniques coupled with (tandem) mass spectrometry. She investigated and evaluated new analytical techniques and tools to be implemented in chemical residue analysis, and conducted successful method transfer to routine testing laboratories.

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CURRICULUM VITAE: KATERINA MASTOVSKA

1995-2002: Researcher, Laboratory of Food Contaminants & Toxicants, ICT, Prague, Czech Republic

Dr. Mastovska worked during her undergraduate, graduate and post-graduate studies as a researcher developing and running methods for analysis of pesticide residues and other food and environmental contaminants, primarily based on gas chromatographic separations with mass spectrometric or element-selective detection. She participated in numerous international projects, mainly focused on method harmonization within the EU. She spent three short-term stays as a visiting scientist in Pesticide Residue Group at the Central Science Laboratory (CSL – now FERA) in York, UK in 1997, 1998, and 1999 and one two-month stay at the USDA Agricultural Research Service in Wyndmoor, PA in 2000, conducting successful method development for the analysis of pesticide residues.

EXPERT AND ADVISORY ACTIVITIES

AOAC International

Official Methods Board member (2015 – present)

Co-chair of the AOAC Int. Community on Chemical Contaminants and Residues in Food (2011 – 2016)

Dietary Supplement Expert Review Panel on PDE5 inhibitors, member (2015 – present)

Chair of the PDE5i Working Group for the Stakeholder Panel on Dietary Supplements (2014)

Study Director for the AOAC Int. study on polycyclic aromatic hydrocarbons (PAHs) in seafood as a response to the oil spill in the Gulf of Mexico (2010 – 2013)

AOAC Int. Topic Advisor for the Veterinary Drug Residue Methods (2009 – present)

Veterinary Drug Expert Review Panels, member (2009 – present)

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Joint FAO/WHO Meeting on Pesticide Residues (JMPR)

Dr. Mastovska served (2006-2009) as an expert in the UN Food and Agricultural Organization (FAO) panel of the JMPR (Joint FAO/WHO Meeting on Pesticide Residues) evaluating pesticide submissions and recommending world-wide pesticide maximum residue levels in foods and feeds to the Codex Alimentarius Commission.

Other activities:

European Commission, Research Executive Agency (REA) – independent expert evaluating research proposals (2010-present)

North American Chemical Residue Workshop (NACRW) – program committee and organizing committee member (2010-present)

International Symposium on Recent Advances in Food Analysis (RAFA) – instructor of interactive seminars (2011, 2013, 2015)

Interagency Residue Control Group (IRCG) – member (2006-2009)

USDA FSIS Surveillance Advisory Team (SAT) – member (2006-2009)

General Mills, Medallion Laboratories, Minneapolis, MN – consultant (2006-2009)

International Atomic Energy Agency (IAEA) – invited advisor (invitation declined in 2009)

Georgian National Science Foundation – invited grant reviewer (2006-present)

Residue Analytical Workshop at ICT, Prague – invited lecturer (2006, 2009)

USDA/EPA Pesticide Workshop for FIFRA laboratories – co-organizer and instructor (2004)

Peer-reviewer for: J. AOAC Int., J. Chromatogr. A, Anal. Chim. Acta, Anal. Chem., J. Agric. Food.

Chem, J. Anal. Bioanal. Chem., Food Chem., Talanta, Metabolomics, etc.

Revised: 27 Oct 10



CURRICULUM VITAE: KATERINA MASTOVSKA

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

American Chemical Society, Divisions of Agrochemicals and Analytical Chemistry American Society for Mass Spectrometry AOAC International

HONORS AND AWARDS

AOAC Int. Method of the Year award, 2016 (AOAC 2015.12 method)

AOAC Int. Award for Achievement in Technical and Scientific Excellence, 2016

AOAC Int. Method of the Year award, 2015 (AOAC 2014.08 method)

AOAC Int. Fellow award, 2014

Finalist of Covance inaugural Science and Technology award, 2014

AOAC Int. Study Director of the Year award, 2013

AOAC Int. Expert Review Panel of the Year award, 2013

Scientific Program Chair of the 50th Florida Pesticide Residue Workshop/North American Chemical Residue Workshop (FPRW/NACRW), 2013

ARS Technology Transfer Award for "Partners in QuEChERS", Outstanding Effort, 2009

Federal Laboratory Consortium (FLC) Mid-Atlantic Regional Excellence in Technology Transfer Award, 2009

Excellence in Government Award for private sector involvement, Silver Medalist, Federal Executive Board, 2008

U.S. Department of Agriculture Certificate of Merit for outstanding research contributions, 2006, 2007, 2008, and 2009

U.S. Department of Agriculture Extra Effort Award, 2005

Granted U.S. Permanent Residency in the Extraordinary Ability category, 2005 (Naturalized U.S. Citizen since August 2011)

U.S. Environmental Protection Agency Certificate of Appreciation, 2004

Josef Hlavka Award for the best young researchers in the Czech Republic who demonstrated exceptional abilities and creative thinking in their field, 1998

ICT Rector Award, 1998

PUBLICATIONS

Peer-Reviewed Articles:

- H. Zhao, J. Zulkoski, <u>K. Mastovska</u>: Development and validation of a multi-class, multi-residue method for veterinary drug analysis in infant formula and related ingredients using UHPLC-MS/MS. *J. Agric. Food Chem.*, in press (DOI: 10.1021/acs.jafc.7b00271).
- L. Vaclavik, J.R. Schmitz, J.-F. Halbardier, <u>K. Mastovska</u>: Single-laboratory validation study of a method for screening and identification of phosphodiesterase type 5 inhibitors in dietary ingredients and supplements using liquid chromatography/quadrupole–orbital ion trap mass spectrometry: First Action 2015.12. *J. AOAC Int.* **99** (2016) 55–72.

Revised: 27 Oct 10



CURRICULUM VITAE: KATERINA MASTOVSKA

- <u>K. Mastovska</u>, W.J. Sorenson, J. Hajslova: Determination of polycyclic aromatic hydrocarbons (PAHs) in seafood using gas chromatography-mass spectrometry: Collaborative study, *J. AOAC Int.* **98** (2015) 477-505.
- Z. Veprikova, M. Zachariasova, Z. Dzuman, A. Zachariasova, M. Fenclova, P. Slavikova, M. Vaclavikova, <u>K. Mastovska</u>, D. Hengst, J. Hajslova: Mycotoxins in plant-based dietary supplements: Hidden health risk for consumers, *J. Agric. Food Chem.* **63** (2015) 6633-6643.
- <u>K. Mastovska</u>: 50th Anniversary of the Florida Pesticide Residue Workshop and the birth of the North American Chemical Residue Workshop, *J. Agric. Food Chem.* **62** (2014) 3649-3650.
- S.J. Lehotay, <u>K. Mastovska</u>, A.R. Lightfield, A. Nunez, T. Dutko, C. Ng, L. Bluhm: Rapid analysis of aminoglycoside antibiotics in bovine tissues using disposable pipette extraction and ultrahigh performance liquid chromatography tandem mass spectrometry. *J. Chromatogr. A* **1313** (2013) 103-112.
- <u>K. Mastovska</u>, P.L. Wylie: Evaluation of a new column backflushing set-up in gas chromatographic-tandem mass spectrometric analysis of pesticide residues in dietary supplements, *J. Chromatogr. A* **1265** (2012) 155-164.
- S.J. Lehotay, A.R. Lightfield, L. Geis-Asteggiante, M.J. Schneider, T. Dutko, C. Ng, L. Bluhm, <u>K. Mastovska</u>: Development and validation of a streamlined method designed to detect residues of 62 veterinary drugs in bovine kidney using ultrahigh performance liquid chromatography tandem mass spectrometry. *Drug Testing and Analysis* 4 (2012) 75-90.
- M.J. Schneider, <u>K. Mastovska</u>, M.B. Solomon: Distribution of penicillin G residues in culled dairy cow muscle. *J. Agric. Food Chem.* **58** (2010) 5408-5413.
- <u>K. Mastovska</u>, K. Dorweiler, S.J. Lehotay, J. Wegscheid, K. Szpylka: Pesticide multiresidue analysis in cereal grains using modified QuEChERS method combined with automated direct sample introduction GC-TOFMS and UPLC-MS/MS techniques, *J. Agric. Food Chem.* **58** (2010) 5959-5972.
- U. Koesukwiwat, S.J. Lehotay, <u>K. Mastovska</u>, K. Dorweiler, N. Leepipatpiboon: Evaluation of a modified QuEChERS method for pesticide residues in flaxseeds, peanuts, and doughs, *J. Agric. Food Chem.* **58** (2010) 5950-5958.
- S.J. Lehotay, <u>K. Mastovska</u>, A.R. Lightfield, R.A. Gates: Multi-analyst, multi-matrix performance of the QuEChERS approach for pesticide residues in foods and feeds using LC-MS/MS analysis with different calibration techniques. *J. AOAC Int.* **93** (2010) 355-367.
- E. Hoh, S.J. Lehotay, K.C. Pangallo, <u>K. Mastovska</u>, H. Ngo, C.M. Reddy, W. Vetter: Simultaneous quantitation of multiple classes of organohalogen compounds in fish oils with direct sample introduction-comprehensive two-dimensional gas chromatography and time of flight mass spectrometry. *J. Agric. Food Chem.* **57** (2009) 2653-2660.
- E. Hoh, S.J. Lehotay, <u>K. Mastovska</u>, H. Ngo, W. Vetter, K.C. Pangallo, C.M. Reddy: Capabilities of direct sample introduction comprehensive two-dimensional gas chromatography time-of-flight mass spectrometry to analyze organic chemicals of interest in fish oils. *Environ. Sci. Technol.* **43** (2009) 3240-3247.

Revised: 27 Oct 10



CURRICULUM VITAE: KATERINA MASTOVSKA

- M.J. Schneider, <u>K. Mastovska</u>, S.J. Lehotay, A.R. Lightfield, B. Kinsella, C. Shultz: Comparison of screening methods for antibiotics in beef kidney juice and serum. *Anal. Chim. Acta* **637** (2009) 290-297.
- B. Kinsella, S.J. Lehotay, <u>K. Mastovska</u>, A.R. Lightfield, M. Danaher, A. Furey: New method for the analysis of flukicides and other anthelmintics in bovine milk and liver using liquid chromatography-tandem mass spectrometry. *Anal. Chim. Acta* **637** (2009) 196-207.
- S.J. Lehotay, <u>K. Mastovska</u>, A. Amirav, A.B. Fialkov, T. Alon, P. Martos, A. de Kok, A.R. Fernandez-Alba: Identification and confirmation of chemical residues by chromatography-mass spectrometry and other techniques. *Trends in Anal. Chem.* **27** (2008) 1070-1090.
- E. Hoh, S.J. Lehotay, <u>K. Mastovska</u>, J.K. Huwe: Evaluation of automated direct sample introduction with comprehensive two-dimensional gas chromatography/time-of-flight mass spectrometry for the screening analysis of dioxins in fish oil. *J. Chromatogr. A.* **1201** (2008) 69-77.
- <u>K. Mastovska</u>, A.R. Lightfield: Streamlining methodology for the multiresidue analysis of beta-lactam antibiotics in bovine kidney using liquid chromatography-tandem mass spectrometry. *J. Chromatogr. A* **1202** (2008) 118-123.
- E. Hoh, <u>K. Mastovska</u>: Large volume injection techniques in capillary gas chromatography. *J. Chromatogr. A*, **1186** (2008) 2-15 (a review in a special volume on Recent Trends and Developments in Gas Chromatography).
- T. Cajka, O. Lacina, J. Hajslova, <u>K. Mastovska</u>, S.J. Lehotay: Rapid analysis of multiple pesticide residues in fruit-based baby food using programmed temperature vaporiser–low-pressure gas chromatography–high-resolution time-of-flight mass spectrometry. *J. Chromatogr. A*, **1186** (2008) 281-294.
- E. Hoh, <u>K. Mastovska</u>, S.J. Lehotay: Optimization of separation and detection conditions for comprehensive two-dimensional gas chromatography time of flight mass spectrometry (GC×GC-TOF MS) analysis of dibenzo-p-dioxins and dibenzo-furans. *J. Chromatogr. A* **1145** (2007) 210-221.
- S.C. Cunha, S.J. Lehotay, <u>K. Mastovska</u>, J.O. Fernandes, M.B.P.P. Oliveira: Evaluation of the QuEChERS sample preparation approach for the analysis of pesticide residues in olives and olive oil. *J. Sep. Sci.* **30** (2007) 620-632.
- X. Fan, <u>K. Mastovska</u>: Effectiveness of ionizing radiation in reducing furan and acrylamide levels in foods. *J. Agric. Food Chem.* **54** (2006) 8266-8270.
- <u>K. Mastovska</u>, S.J. Lehotay: Rapid sample preparation method for LC-MS/MS or GC-MS analysis of acrylamide in various food matrices. *J. Agric. Food Chem.* **54** (2006) 7001-7008.
- M. Janska, S.J. Lehotay, <u>K. Mastovska</u>, J. Hajslova, T. Talon, A. Amirav: A simple and inexpensive "solvent in silicone tube extraction" approach and its evaluation in the gas chromatographic analysis of pesticides in fruits and vegetables. *J. Sep. Sci.* **29** (2006) 66-88.
- <u>K. Mastovska</u>, S.J. Lehotay, M. Anastassiades: Combination of analyte protectants to overcome matrix effects in routine GC analysis of pesticide residues in food matrices. *Anal. Chem.* **77** (2005) 8129-8137.

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- T. Cajka, <u>K. Mastovska</u>, S.J. Lehotay, J. Hajslova: Use of automated direct sample introduction with analyte protectants in the gas chromatographic-mass spectrometric analysis of pesticide residues. *J. Sep. Sci.* **28** (2005) 1048-1060.
- S.J. Lehotay, <u>K. Mastovska</u>, A.R. Lightfield: Use of buffering and other means to improve results of problematic pesticides in a fast and easy method for residue analysis of fruits and vegetables. *J. AOAC Int.* **88** (2005) 615-629.
- S.J. Lehotay, <u>K. Mastovska</u>, S.J. Yun: Evaluation of two fast and easy methods for pesticide residue analysis in fatty food matrices. *J. AOAC Int.* **88** (2005) 630-638.
- <u>K. Mastovska</u>, J. Hajslova, S.J. Lehotay: Ruggedness and other performance characteristics of low-pressure gas chromatography-mass spectrometry for the fast analysis of multiple pesticide residues in food crops. *J. Chromatogr. A* **1054** (2004) 335-349.
- <u>K. Mastovska</u>, S.J. Lehotay: Evaluation of common organic solvents for gas chromatographic analysis and stability of multiclass pesticide residues. *J. Chromatogr. A* **1040** (2004) 159-172.
- M. Anastassiades, <u>K. Mastovska</u>, S.J. Lehotay: Evaluation of analyte protectants to improve gas chromatographic analysis of pesticides. *J. Chromatogr. A* **1015** (2003) 163-184.
- K. Mastovska, S.J. Lehotay: Practical approaches to fast gas chromatography-mass spectrometry. *J. Chromatogr. A* **1000** (2003) 153-180 (a review in a special volume celebrating "A Century of Chromatography and Volume 1000 of the Journal of Chromatography").
- D. Titera, V. Vesely, J. Hajslova, <u>K. Mastovska</u>: Intoxications of bees by pesticides. *Veterinarstvi (Veterinary Medicine)* **53** (2003) 152-154.
- J. Zrostlikova, J. Hajslova, M. Godula, <u>K. Mastovska</u>: Performance of programmed temperature vaporizer, pulsed splitless and on-column injection techniques in analysis of pesticide residues in plant matrices. *J. Chromatogr. A* **937** (2001) 73-86.
- <u>K. Mastovska</u>, S.J. Lehotay, J. Hajslova: Optimization and evaluation of low-pressure gas chromatography-mass spectrometry for the fast analysis of multiple pesticide residues in a food commodity. *J. Chromatogr. A* **926** (2001) 291-308.
- M. Godula, J. Hajslova, <u>K. Mastovska</u>, J. Krivankova: Optimization and application of the PTV injector for the analysis of pesticide residues. *J. Sep. Sci.* **24** (2001) 355-366.
- <u>K. Mastovska</u>, J. Hajslova, M. Godula, J. Krivankova, V. Kocourek: Fast temperature programming in routine analysis of multiple pesticide residues in food matrices. *J. Chromatogr. A* **907** (2001) 235-245.
- M. Godula, J. Hajslova, <u>K. Alterova</u>: Pulsed splitless injection and the extent of matrix effects in the analysis of pesticides. *J. High Resolut. Chromatogr.* **22** (1999) 395-402.
- J. Hajslova, P. Gregor, V. Chladkova, <u>K. Alterova</u>: Musk compounds in fish from Elbe River. *Organohalogen Compd.* **39** (1998) 253-256.

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CURRICULUM VITAE: KATERINA MASTOVSKA

Book Chapters and Monographs:

- <u>K. Mastovska</u>: Pesticide Analysis Reference Guide: GC-MS/MS Pesticide residue analysis. Publication number 5991-2389EN, Agilent Technologies, 2013.
- <u>K. Mastovska</u>: Multiresidue analysis of antibiotics in food of animal origin using liquid chromatography-mass spectrometry, In: *Mass Spectrometry in Food Safety: Methods and Protocols*. J. Zweigenbaum (editor), ISBN 978-1-61779-135-2, Humana Press, Totowa, NJ, USA, 2011, pp. 267-307.
- S.C. Cunha, S.J. Lehotay, <u>K. Mastovska</u>, J.O. Fernandes, M.B.P.P. Oliveira: Sample preparation approaches for the analysis of pesticide residues in olives and olive oil, In: *Olives and Olive Oil in Health and Disease Prevention*. V.R. Preedy and R.R. Watson (editors), ISBN 978-0-12-374420-3 Elsevier, San Diego, CA, USA, 2010, pp. 653-666.
- <u>K. Mastovska</u>: Recent developments in chromatographic techniques, In: *Comprehensive Analytical Chemistry*. Volume 51: Food Contaminants and Residue Analysis, Y. Pico (editor), ISBN 978-0-444-53019-6 (0-444-53019-3), Elsevier, Oxford, UK, 2008, pp. 175-200.
- T. Cajka, J. Hajslova, <u>K. Mastovska</u>: Mass spectrometry and hyphenated instruments in food analysis. In: *Handbook of Food Analysis Instruments*. S. Otles (editor), ISBN 978-1-4200-4566-6 (1-420-04566-0), CRC Press, 2008, pp. 197-228.
- <u>K. Mastovska</u>: State of the art mass spectrometric and chromatographic techniques for drug analysis, In: *New Delivery Systems for Controlled Drug Release from Naturally Occurring Materials*, N. Parris, L. Liu, C. Song, and V.P. Shastri (editors), ISBN: 978-0-8412-7424-2, ACS Symposium Book Series 992, American Chemical Society, Washington, D.C., USA, 2008, pp. 283-298.
- <u>K. Mastovska</u>: Instrumental aspects and application of (ultra)fast gas chromatography-mass spectrometry, In: *Encyclopedia of Mass Spectrometry*, Volume 8: Hyphenated Methods, W. Niessen (editor), ISBN 978-0-080-43847-4 (0-080-43847-4), Elsevier, Oxford, UK, 2006, pp. 73-83.
- S.J. Lehotay, <u>K. Mastovska</u>, N. Thiex: Detecting veterinary drug residues in feed and cattle. In: *Raw Material Safety: Meat.* J. Sofos (editor), ISBN 978-1-85573-955-0 (1-85573-955-0), Woodhead Publishing Ltd, Cambridge, UK, 2005, pp. 102-131.
- <u>K. Mastovska</u>: Role of pesticides in produce production, protection, quality and safety, In: *Produce Degradation: Reaction Pathways and Their Prevention*, O. Lamikanra, S.H. Imam and D.O. Ukuku (editors), ISBN 978-0-8493-1902-0 (0-8493-1902-1), CRC Press, Taylor & Francis Group, 2005, pp. 341-378.
- S.J. Lehotay, <u>K. Mastovska</u>: Determination of pesticide residues. In: *Methods of Analysis of Food Components and Additives*. S. Otles (editor), ISBN 978-0-849-31647-0 (0-849-31647-2), CRC Press, 2005, pp. 329-359.
- <u>K. Mastovska</u>: Food & Nutritional Analysis: (q) Pesticide residues, In: *Encyclopedia of Analytical Science*, 2nd Edition, P. Worsfold, A. Townshend and C. Poole (editors), ISBN 978-0-12-764100-3 (0-12-764100-9), Elsevier, Oxford, UK, 2005, Vol. 3, pp. 251-260.

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CURRICULUM VITAE: KATERINA MASTOVSKA

Application Notes and Trade Journal Articles:

- <u>K. Mastovska</u>, J. Zulkoski, E. Deal, L. Vaclavik, U. Koesukwiwat, J.-F. Halbardier, J. Zweigenbaum, and T. Glauner: Improved LC-MS/MS pesticide residue analysis using triggered MRM and on-line dilution. Application Note 5991-7193EN, Agilent Technologies, 2017.
- <u>K. Mastovska</u>, J. Zulkoski, E. Deal, L. Vaclavik, U. Koesukwiwat, J.-F. Halbardier, J. Zweigenbaum, and T. Glauner: Validation results for LC-MS/MS pesticide residue analysis using triggered MRM and on-line dilution. Application Note 5991-7194EN, Agilent Technologies, 2017.
- <u>K. Mastovska</u>, J. Zulkoski, and J. Zweigenbaum: Triggered MRM LC-MS/MS method development Practical considerations for MRM optimizations using Agilent MassHunter Optimizer software. Application Note 5991-7195EN, Agilent Technologies, 2017.
- S. Coates, <u>K. Mastovska</u>: Standard Method Performance Requirements (SMPRs) approved for high-priority dietary supplements: Phosphodiesterase type 5 inhibitors. *Inside Lab. Management* **19** (1-2) (2015) 19-26.
- K. Mastovska: Modern analysis of chemical contaminants in food, Food Safety Magazine, Feb/Mar 2013.
- <u>K. Mastovska</u>: Rugged GC-MS/MS pesticide residue analysis fulfilling the USDA Pesticide Data Program (PDP) requirements, Application Note 5990-1054EN, Agilent Technologies, 2012.
- <u>K. Mastovska</u>: Book review of Analyses of Hormonal Substances in Food Producing Animals by J.F. Kay. *Inside Lab. Management* **13** (7-8) (2010) 12 (*invited book review for an AOAC Int. publication*).
- K. Mastovska, A.R. Lightfield: Reversed phase and aqueous normal phase retention in multiclass LC-MS analysis of antibiotics. *Am. Lab.* (on-line edition) June/July (2008) 37-40.
- <u>K. Mastovska</u>: Book review of Chromatography: Concepts and Contrasts by J.M. Miller. *Inside Lab. Management* **9** (5-6) (2005) 9 (*invited book review for an AOAC Int. publication*).

Pesticide Monographs:

- <u>K. Mastovska</u>: Indoxacarb (a special evaluation). In: *Pesticide Residues in Food 2009*, Evaluations, Part I Residues, FAO Plant Production and Protection Paper 198, ISBN 978-92-5-106503-7, FAO and WHO, Rome, Italy, 2010, pp. 647-674.
- <u>K. Mastovska</u>: Azoxystrobin (a new evaluation). In: *Pesticide Residues in Food 2008*, Evaluations, Part I Residues, FAO Plant Production and Protection Paper 194, ISBN 978-92-5-106218-0, FAO and WHO, Rome, Italy, 2009, pp. 1-202.
- <u>K. Mastovska</u>: Flusilazole (a periodic review). In: *Pesticide Residues in Food 2007*, Evaluations, Part I Residues, FAO Plant Production and Protection Paper 192, ISBN 978-92-5-105967-8, FAO and WHO, Rome, Italy, 2008, pp. 619-772.
- <u>K. Mastovska</u>: Fludioxonil (a special evaluation). In: *Pesticide Residues in Food 2006*, Evaluations, Part I Residues, Volume 2, FAO Plant Production and Protection Paper 189/2, ISBN 978-92-5-105723-0, FAO and WHO, Rome, Italy, 2007, pp. 535-546.

MELISSA MEANEY PHILLIPS

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HIGHLIGHTS OF QUALIFICATIONS

- Extensive method development for the extraction, separation, and characterization of organic molecules using many forms of chromatography, spectroscopy, and spectrometry.
- Experience developing analytical methods for the sample preparation and analysis of active ingredients in food and dietary supplement matrices.
- Coordinator of the program for food Standard Reference Materials (SRMs) and research.
- Co-lead scientist on an ongoing international interlaboratory comparison program with more than 150 participants.
- Excellent organizational and record keeping skills.
- Expert in Dionex Chromeleon and Agilent Chemstation chromatography software, as well as Microsoft Office Suite. Proficient in Pegasus, Labview, CorelDraw, Adobe Acrobat, and OriginLab.
- Member of the AOAC INTERNATIONAL Official Methods Board.
- 15 years of experience teaching and mentoring young scientists in both the classroom and laboratory.
- Strong written and oral presentation skills.

EDUCATION

Ph.D., Chemistry, Michigan State University, East Lansing, MI, December 2007 **M.S., Forensic Chemistry,** Michigan State University, East Lansing, MI, October 2007 **B.S., Chemistry,** Michigan State University, East Lansing, MI, May 2002

EXPERIENCE

2016 - 2017

National Institute of Standards & Technology, Gaithersburg, Maryland

Office of Reference Materials

Research Chemist (Detailed)

- Reviewed Certificates of Analysis for NIST Standard Reference Materials (SRMs) prior to release.
- Contributed to an effort to archive official records of NIST SRMs.
- Developed a white paper for design and administration of Quality Assurance Programs (QAPs).
- Designed a combined reference material and quality assurance program for the infant formula and adult nutritional communities.
- Assisted with update of marketing materials and attended a scientific conference to experience the sales and marketing of NIST SRMs.
- Gathered information from laboratory personnel to assist sales and program management staff with new developments.

2008 - present

National Institute of Standards & Technology, Gaithersburg, Maryland

Organic Chemical Measurement Science Group, Chemical Sciences Division

- Research Chemist
- Develop analytical methods for the determination of active compounds in food and dietary supplements (extraction, LC, LC/MS, GC/MS, ion chromatography).
- Co-coordinate an interlaboratory comparison program for foods and dietary supplements with over 150
 participants worldwide. Duties include distributing NIST SRMs for round robin studies, collecting and
 processing data, writing and distributing final reports, and assisting participants to improve measurement
 quality.
- Maintain, troubleshoot, and repair laboratory equipment and data systems.
- Keep detailed records and appropriate government-mandated paperwork for all research conducted.
- Assist numerous undergraduates, post doctoral scientists, and guest researchers to demonstrate quality research practices.
- Previously co-maintained a chemical inventory using CISPro Global for group of 30-35 scientists, including over 9,000 chemicals. Co-developed a procurement form and protocol to ensure accuracy.
- Evaluated and cataloged over 300 LC columns to establish an inventory for group users.

2002 - 2007 Michigan State University, East Lansing, Michigan

Department of Chemistry

Research Assistant

- Investigated fluorescence quenching methods for detection of nitrated explosives by screening fluorophores based on sensitivity and incorporating them into potential field-ready devices for explosives detection.
- Utilized the pH-dependent fluorescence of fluorescein for determination of acids in solution and applied this method to analysis of foods and beverages (juices, wines, and vinegars) and drugs of abuse (γ-hydroxybutyric acid or GHB) by HPLC.

Teaching Assistant

- 16 semesters of experience instructing physical chemistry, analytical chemistry, and quantitative analysis, both in lecture and laboratory formats.
- Helped develop undergraduate laboratory course in advanced analytical chemistry including numerous independent projects.

Undergraduate Research Mentor

- Mentored three undergraduate researchers at various stages in their undergraduate programs over a four year period.
- Instructed on proper laboratory technique, data analysis, and independent critical thinking skills.

MEMBERSHIPS AND ASSOCIATIONS

- Member, General Chapters Chemical Analysis Expert Committee, United States Pharmacopeia, 2010-2015.
- *Member*, Subdivision on Chromatography and Separations Chemistry, Analytical Chemistry Division, American Chemical Society, 2009-present.
- *Member*, AOAC INTERNATIONAL, 2008-present.
- Stakeholder, Working Group Member, Expert Review Panelist, and Task Force Co-Chair, AOAC INTERNATIONAL Stakeholder Panel on Infant Formula and Adult Nutritionals (SPIFAN), 2010-present.
- Editorial Board Member, J. AOAC Int., 2014-present.
- Technical Division on Reference Materials Executive Committee Member, AOAC INTERNATIONAL, 2013-present.
- Secretary, Washington Chromatography Discussion Group, 2009-2015.
- Member, Analytical and Bioanalytical Chemistry, International Advisory Board, 2017-present.
- Member, AOAC INTERNATIONAL, Official Methods Board, 2016-present.
- Member, AOAC INTERNATIONAL, Technical Programming Council, 2016-present.
- Co-Chair, International Vitamin Conference (IVC), 2014.

PUBLICATIONS, ABSTRACTS, AND PRESENTATIONS

Please see attached list.

SELECTED HONORS AND AWARDS

- Fellow, AOAC INTERNATIONAL, 2016.
- Achievement in Technical and Scientific Excellence, Stakeholder Panel on Strategic Food Analytical Methods (SPSFAM) Food Allergen Working Group, AOAC INTERNATIONAL, 2016.
- William P. Slichter Award, National Institute of Standards & Technology, 2015.
- Expert Review Panel of the Year Member, AOAC INTERNATIONAL, 2015.
- Outstanding Graduate Student Woman, Faculty-Professional Women's Association, Michigan State University, 2006.
- Excellence-in-Teaching Citation, College of Natural Science, Michigan State University, 2006.
- Tracy Hammer Outstanding Graduate Student Award, College of Natural Science, Michigan State University, 2005.

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PUBLICATIONS, ABSTRACTS, AND PRESENTATIONS

INVITED PUBLICATIONS

- Melissa M. Phillips. "Choline: Properties and Determination." In: Caballero, B., Finglas, P., and Toldrá, F. (eds.) *The Encyclopedia of Food and Health* vol. 2, Oxford: Academic Press (2016) pp. 73-78.
- Catherine A. Rimmer, Melissa M. Phillips. "Solution to Certified Reference Material Recipe Challenge." *Anal. Bioanal. Chem.* 405 (2013) 6899-6900.
- Catherine A. Rimmer, Melissa M. Phillips. "Certified Reference Material Recipe Challenge." *Anal. Bioanal. Chem.* 405 (2013) 4321-4322.
- Melissa M. Phillips, Catherine A. Rimmer. "Functional Foods and Dietary Supplements." *Anal. Bioanal. Chem.* 405 (2013) 4323-4324.
- Melissa M. Phillips. "Analytical Approaches to Determination of Total Choline in Foods and Dietary Supplements." *Anal. Bioanal. Chem.* 403 (2012) 2103-2112.
- Hendrik Emons, Jane Weitzel, John Budin, Melissa Phillips, Catherine Rimmer, Donna Zink. "TDRM/TDLM Workshop on Reference Materials and Laboratory Accreditation at the AOAC Annual Meeting 2011." *Inside Laboratory Management* (Nov/Dec 2011) 6-7.
- Melissa M. Phillips. "André M. Striegel, Wallace W. Yau, Joseph J. Kirkland, and Donald D. Bly (Eds.): Modern size-exclusion liquid chromatography. Practice of gel permeation and gel filtration chromatography, 2nd ed." *Anal. Bioanal. Chem.* 399 (2011) 1571-2.
- Catherine A. Rimmer, Melissa M. Phillips. "Analytical Tools for the Dietary Supplement and Food Laboratory." *Natural Products Insider* (March 7, 2011).
- Paula Brown, Melissa Phillips, Catherine Rimmer, Laura Wood. "Quality Focus: GMPs: The Other Pieces of the Puzzle." *Nutraceuticals World.* (Jan/Feb 2011) 28-29.
- Paula Brown, Catherine Rimmer, Melissa Phillips, Laura Wood. "Quality Focus: The GMP Puzzle: What's in Your Box?" *Nutraceuticals World.* (Nov 2010) 28-29.

PEER-REVIEWED SCIENTIFIC PUBLICATIONS

- Melissa M. Phillips, Mary Bedner, Manuela Reitz, Carolyn Q. Burdette, Michael A. Nelson, James H. Yen, Lane C. Sander, Catherine A. Rimmer. "Liquid Chromatography with Absorbance Detection and with Isotope-Dilution Mass Spectrometry for Determination of Isoflavones in Soy Standard Reference Materials." *Anal. Bioanal. Chem.* 409 (2017) 949-960.
- Janet Maxwell Roseland, Kristine Y. Patterson, Karen W. Andrews, Katherine M. Phillips, Melissa M. Phillips, Pamela R. Pehrsson, Guy L. Dufresne, Jette Jakobsen, Pavel A. Gusev, Sushma Savarala, Quynhanh V. Nguyen, Andrew J. Makowski, Chad R. Scheuerell, Guillaume P. Larouche, Stephen A. Wise, James M. Harnly, Juhi R. Williams, Joseph M. Betz, and Christine L. Taylor. "Interlaboratory Trial for Measurement of Vitamin D and 25-Hydroxyvitamin D [25(OH)D] in Foods and a Dietary Supplement Using Liquid Chromatography–Mass Spectrometry." J. Agric. Food Chem. 64 (2016) 3167-3175.
- Lynn X. Zhang, Carolyn Q. Burdette, Melissa M. Phillips, Catherine A. Rimmer, R. Kenneth Marcus. "Determination of Isoflavone Content in SRM 3238 Using Liquid Chromatography-Particle Beam/Electron Ionization Mass Spectrometry." J. AOAC Int. 98 (2015) 1483-1490.
- Melissa M. Phillips. "Liquid Chromatography with Isotope-Dilution Mass Spectrometry for Determination of Water-Soluble Vitamins in Foods." Anal. Bioanal. Chem. 407 (2015) 2965-2974.
- Benjamin J. Place, Mallory J. Morris, Melissa M. Phillips, Lane C. Sander, Catherine A. Rimmer. "Evaluation of the Impact of Peak Description on the Quantitative Capabilities of Comprehensive Two-Dimensional Liquid Chromatography." J. Chromatogr. A 1368 (2014) 107-115. Laura J. Wood, Katrice A. Lippa, Melissa M. Phillips, Catherine A. Rimmer, N. Alan Heckert, Stefan D. Leigh, Amanda J. Moors, Rebecca S. Pugh, and Lauren B. Rust. "Breakfast Cereal Sampling Study for Nutritional Elements." *Anal. Bioanal. Chem.* 405 (2013) 4569-4578.

- Mark S. Lowenthal, Melissa M. Phillips, Catherine A. Rimmer, Paul A. Rudnick, Yamil Simón-Manso, Stephen E. Stein, Dmitrii Tchekhovskoi, Karen W. Phinney. "Developing Qualitative LC-MS Methods for Characterization of Vaccinium Berry Standard Reference Materials." *Anal. Bioanal. Chem.* 405 (2013) 4451-4465.
- Lane C. Sander, Mary Bedner, David L. Duewer, Katrice A. Lippa, Melissa M. Phillips, Karen W. Phinney, Catherine A. Rimmer, Michelle M. Schantz, Katherine E. Sharpless, Susan Tai, Jeanice B. Thomas, Stephen A. Wise, Laura J. Wood. "The Development and Implementation of Quality Assurance Programs to Support Nutrient Measurements." *Anal. Bioanal. Chem.* 405 (2013) 4437-4441.
- Melissa M. Phillips, Katherine E. Sharpless, Stephen A. Wise. "Standard Reference Materials for Foods: A Program Update." *Anal. Bioanal. Chem.* 405 (2013) 4325-4335.
- Hendrik Emons, Jane Weitzel, John Budin, Melissa Phillips, Catherine Rimmer, Donna Zink. "TDRM/TDLM Workshop on Reference Materials and Laboratory Accreditation at the AOAC Annual Meeting 2011." *Accred. Qual. Assur.* 17 (2012) 101-105.
- Melissa M. Phillips, Lane C. Sander. "Microwave-Assisted Extraction and Quantitative LC/IDMS Measurement of Total Choline and Free Carnitine in Foods." *J. AOAC Int.* 95 (2012) 1479-1486.
- Melissa M. Phillips, Catherine A. Rimmer, Laura J. Wood, Katrice A. Lippa, Katherine E. Sharpless, David L. Duewer, Lane C. Sander, Joseph M. Betz. "NIST/NIH Dietary Supplement Laboratory Quality Assurance Program: The First Five Exercises." *J. AOAC Int.* 94 (2011) 803-814.
- Ryan G. Brennan, Melissa M. Phillips, Liang Y.O. Yang, Thomas P. Moffat. "Characterization and Purification of Commercial SPS and MPS by Ion Chromatography and Mass Spectrometry." *J. Electrochem. Soc.* 158 (2011) D178-86.
- Melissa M. Phillips, Ryan J. Case, Catherine A. Rimmer, Katherine E. Sharpless, Stephen A. Wise, Lane C. Sander. "Determination of Organic Acids in Vaccinium Berry Standard Reference Materials." *Anal. Bioanal. Chem.* 398 (2010) 425-434.
- Melissa S. Meaney, Victoria L. McGuffin. "Investigation of Common Fluorophores for the Detection of Nitrated Explosives by Fluorescence Quenching." *Anal. Chim. Acta* 610 (2008) 57-67.
- Melissa S. Meaney, Victoria L. McGuffin. "Luminescence-Based Methods for Sensing and Detection of Explosives." *Anal. Bioanal. Chem.* 391 (2008) 2557-2576.

PUBLISHED ABSTRACTS

Melissa M. Phillips (2011) "NIST Tools for Quality Assurance in Botanical Dietary Supplement Measurements," *Planta Med.*,77.

PRESENTATIONS

- 13th Annual Natural Supplements: An Evidence-Based Update, San Diego, CA, January 2016. "NIST Tools for Dietary Supplements Testing: Ensuring Quality in Commercial Products." (poster)
- 13th Annual Natural Supplements: An Evidence-Based Update, San Diego, CA, January 2016. "Marine Reference Materials for Dietary Supplement Analysis." (poster)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Food Reference Materials for Nutritional Assessment." (invited keynote)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Characterization of Polyphenols in Vaccinium Berry Dietary Supplement Standard Reference Materials." (poster)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Characterization of a New Total Nutrient Standard Reference Material: Protein Drink Mix." (poster)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Characterization of St. John's Wort Standard Reference Materials (SRMs)." (poster)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Soy Standard Reference Materials (SRMs) for Quality Assurance in Nutrition Measurements." (poster)
- 14th Biological and Environmental Reference Material (BERM) Symposium, Washington, DC, October 11-15, 2015. "Using Isotope Dilution with LC/MS and LC/MS/MS to Measure Water-Soluble Vitamins in NIST Unfortified and Fortified Food-Matrix SRMs." (poster)

- 129th AOAC INTERNATIONAL Annual Meeting and Exposition, Los Angeles, CA, September 27-30, 2015. "Interlaboratory Studies for Dietary Supplements: Fundamentals for Understanding Supplement Composition." (poster)
- 129th AOAC INTERNATIONAL Annual Meeting and Exposition, Los Angeles, CA, September 27-30, 2015. "Value Assignment of Curcuminoids in Turmeric Standard Reference Materials." (poster)
- 129th AOAC INTERNATIONAL Annual Meeting and Exposition, Los Angeles, CA, September 27-30, 2015. "Characterization of a New Total Nutrient Standard Reference Material: Protein Drink Mix." (poster)
- 129th AOAC INTERNATIONAL Annual Meeting and Exposition, Los Angeles, CA, September 27-30, 2015. "Characterization of St. John's Wort Standard Reference Materials (SRMs)." (poster)
- 12th Annual Natural Supplements: An Evidence-Based Update, San Diego, CA, January 16-18, 2015. "Interlaboratory Studies for Dietary Supplements: Fundamentals for Understanding Supplement Composition." (poster)
- 128th AOAC INTERNATIONAL Annual Meeting and Exposition, Boca Raton, FL, September 7-10, 2014. "The Role of Standard Reference Materials in Method Performance Verification Studies." (invited talk)
- Penn State Erie, The Behrend College, Erie, PA, December 10, 2013. "Metrology 101: No Umbrella Required." (invited talk)
- 127th AOAC Annual Meeting and Exposition, Chicago, IL, August 25-28, 2013. "LC-MS and LC-MS/MS for Determination of Water-Soluble Vitamins in Foods." (poster)
- HPLC Symposium on High Performance Liquid Phase Separations, June 16-20, 2013, Amsterdam, The Netherlands. "Comparison of Commercial Software Approaches for Quantitation in Two-Dimensional Liquid Chromatography." (poster)
- HPLC Symposium on High Performance Liquid Phase Separations, June 16-20, 2013, Amsterdam, The Netherlands. "LC-MS and LC-MS-MS for Determination of Water-Soluble Vitamins in Foods." (poster)
- The Pittsburgh Conference, March 17-21, 2013, Philadelphia, PA. "Eggs, Milk, Cereal, and Meat: SRMs for Breakfast." (invited talk)
- 126th AOAC Annual Meeting and Exposition, September 30-October 3, 2012, Las Vegas, NV. "Using LC/MS/MS to Measure Water-Soluble Vitamins in NIST Unfortified Food-Matrix SRMs." (poster)
- The Second International Vitamin Conference, May 23-25, 2012, Copenhagen, Denmark. "Microwave-Assisted Extraction and LC-MS Analysis of Total Choline and Free Carnitine in Foods." (poster)
- The Second International Vitamin Conference, May 23-25, 2012, Copenhagen, Denmark. "Standard Reference Materials for the Determination of Vitamins in Food, Supplement, and Clinical Samples." (poster)
- The Pittsburgh Conference, March 11-13, 2012, Orlando, FL. "Challenges in the Certification of Dietary Supplement Standard Reference Materials." (invited talk)
- 125th AOAC Annual Meeting and Exposition, September 18-21, 2011, New Orleans, LA. "Microwave-Assisted Extraction and LC-MS Analysis of Total Choline in Foods." (poster)
- HPLC Symposium on High Performance Liquid Phase Separations, June 19-23, 2011, Budapest, Hungary. "Determination of B-Vitamins, Choline, and Carnitine in NIST Food-Matrix SRMs." (poster)
- SupplySide East, May 2-4, 2011, Secaucus, NJ. "NIST Tools for the Analysis of Dietary Supplements and Foods." (talk)
- 10th Annual International Conference on the Science of Botanicals, April 11-14, Oxford, MS. "NIST Tools for Quality Assurance in Botanical Dietary Supplement Measurements." (invited talk)
- Pittsburgh Conference, March 13-17, 2011, Atlanta, GA. "Determination of Water-Soluble Vitamins in NIST Food Matrix SRMs." (talk)
- Pittsburgh Conference, March 13-17, 2011, Atlanta, GA. "Analytical Characterization of Commercial SPS and MPS by Ion Chromatography and Mass Spectrometry." (poster)
- 124th AOAC Annual Meeting and Exposition, September 24-28, 2010, Orlando, FL. "Determination of Water-Soluble Vitamins in NIST Food-Matrix SRMs." (poster)
- 124th AOAC Annual Meeting and Exposition, September 24-28, 2010, Orlando, FL. "Method Development for the Determination of Yohimbine in Dietary Supplements." (poster)
- Invited Speaker, June 25, 2010, College of the Holy Cross, Worcester, MA. "The Journey of a Standard Reference Material." (talk)

- CASSS HPLC Symposium on High Performance Liquid Phase Separations, June 20-24, 2010, Boston, MA. "Characterization of *Vaccinium* Berry Standard Reference Materials (SRMs)." (poster)
- The First International Vitamin Conference, May 19-21, 2010, Copenhagen, Denmark. "Determination of Water-Soluble Vitamins in NIST Food-Matrix SRMs." (poster)
- The First International Vitamin Conference, May 19-21, 2010, Copenhagen, Denmark. "Standard Reference Materials for the Determination of Vitamins in Foods and Dietary Supplements." (poster)
- Pittsburgh Conference, February 28-March 4, 2010, Orlando, FL. "Determination of Vitamins in NIST Food Matrix SRMs." (talk)
- 123rd AOAC Annual Meeting and Exposition, September 13-17, 2009, Philadelphia, PA. "Development of Cranberry Juice Cocktail and Other Related Reference Materials." (invited talk)
- 238th American Chemical Society National Meeting and Exposition, August 16-20, 2009, Washington, DC. "Certification of Organic Acid and Flavonol Concentrations in *Vaccinium* Berry Standard Reference Materials (SRMs)." (talk)
- Pittsburgh Conference, March 8-12, 2009, Chicago, IL. "Characterization of Organic Acid and Flavonoid Profiles in *Vaccinium* Berry Dietary Supplement Standard Reference Materials (SRMs)." (poster)
- Chromatography Forum of the Delaware Valley Spring Symposium, April 16, 2009, Fort Washington, PA, "Characterization of NIST Dietary Supplement SRMs." (invited talk)
- CASSS HPLC Symposium on High Performance Liquid Phase Separations, May 11-14, 2008, Baltimore, MD. "Characterization of *Vaccinium* Berry Standard Reference Materials (SRMs)." (poster)
- Pittsburgh Conference, February 25-March 2, 2007, Chicago, IL. "Fluorescence Quenching of Fluorescein for the Detection of Acids in Forensic Samples." (talk)
- Pittsburgh Conference, March 12-17, 2006, Orlando, FL. "Fluorescence Quenching of Fluorescein for the Detection of Carboxylic Acids." (talk)
- Pittsburgh Conference, February 27-March 4, 2005, Orlando, FL. "Investigation of Common Fluorophores for the Detection of Nitrated Explosives by Fluorescence Quenching." (talk)
- Pittsburgh Conference, March 7-12, 2004, Chicago, IL. "Fluorescence Quenching Detection of Nitrated Explosives." (poster)

Charles Thomas (Tom) Seipelt

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SUMMARY

Data driven problem solver with proven ability to identify and deliver creative and timely solutions to complex technical problems. Results oriented manager experienced in working with cross-functional teams and global projects with annual budgets over \$1M. Technical expert and consultant to senior management for risk management providing routine interaction with R&D, Regulatory, Quality Assurance, Public Affairs and Government Affairs.

ACCOMPLISHMENTS

- Directed cross-functional team in development of risk-based strategy for global food safety and chemical contaminants program to assure ingredient quality and product safety. Integrated program into overall quality system to address global regulatory compliance and respond to food safety concerns in the marketplace.
- ➤ Successfully managed \$30M global packaging project to identify and implement alternative materials to eliminate the use of Bisphenol A in infant formula packaging to meet changing regulatory and marketplace requirements. Provided technical interface with US FDA and Health Canada to facilitate regulatory approval of materials.
- ➤ Led accelerated development and implementation of routine LC-MS/MS methodology for rapid testing of infant formulas and raw materials for the presence of melamine and cyanuric acid. Served on U.S. Delegation to Codex Committee on Contaminants in Food in 2010-12. Member of AOAC International Method Centric Committee on Melamine.
- Led the development and implementation of routine LC-MS/MS methodology for fortified nutrient testing generating cost savings over \$200K/year. Internal methods include carnitine, vitamin D, and simultaneous determination of seven water-soluble vitamins. Vitamin D and carnitine methods adopted by AOAC as Official First Action Methods for infant formula.
- Recognized leader and problem-solver, awarded the Abbott Chairman's Award (1994 and 2012), the Abbott Nutrition President's Award (2008, 2010, 2011 and 2012), the Abbott Quality Assurance 'Q Award' (2009), and the Engineering Excellence Award (2010).

EMPLOYMENT HISTORY

Abbott Laboratories – Abbott Nutrition Columbus, Ohio 1999 to present Product Stewardship & Global Food Safety - Senior Manager Current Position

Lead multi-disciplinary team in implementation of global food safety program to address chemical contaminants using a risk based approach. Program scope includes ingredients, packaging, processing chemicals and spans all phases of product life cycle from vendor qualification, material acceptance, surveillance, and finished product testing. Responsible for Division Restricted Substance Management program including REACH and RoHS compliance.

ANSC Engineering Technical Operations - Senior Manager

2011-2013

Program manager responsible for \$30M project encompassing implementation of packaging changes across eight packaging forms and eleven production facilities. Coordinated multi-disciplinary effort to develop and implement a global food safety program to address chemical contaminants.

Global Research Services - Section Manager

2005 to 2011

Responsible for research efforts of sixteen senior and mid-level scientists with over \$5M in capital equipment and annual discretionary budget of \$400K. Coordinated global efforts to develop, validate, and implement methods for the routine testing of fortified nutrients. Provided technical leadership for ingredient and packaging quality and purity assessment and address potential contamination issues.

Global Research Services - Research Scientist / Sr. Research Scientist 1999 to 2005 Led method development efforts for advanced nutrient testing using LC-MS/MS platform. Supervised development of nutritional systems biology research program with collaborative research in proteomics (LC-MS/MS) and metabolomics (LC-MS/MS and NMR).

Procter & Gamble Pharmaceuticals Structural Biology Section – Scientist

Mason, Ohio 1998 to 1999

Characterized proteins and synthetic peptides in drug discovery research. Performed protein identification using automated LC-MS/MS and MALDI-TOF in proteomics research effort. Configured and maintained three fully automated mass spectrometers in an open access environment with over 65 active users.

Abbott Laboratories - Ross Products Division Molecular Spectroscopy Laboratory

Columbus, Ohio 1984 to 1998

Multiple promotions from Technician IV to Senior Chemist with increasing responsibility from the bench to supervisory roles. Supported Foreign Substance Surveillance Program by developing and validating methods for the analysis of organic contaminants in water and infant formula. Supported R&D strategic research by characterizing glycoproteins, phosphoproteins, lipids, carbohydrates, and vitamins using mass spectrometry, chromatography, chemical and enzymatic treatments.

Great Lakes Forensic Laboratories, Inc.

Hobart, Indiana 1983 - 1984

Forensic Toxicologist

Performed investigative and routine analysis of tablets, powders, bodily fluids and tissues for the presence of controlled substances and/or their metabolites.

EDUCATION

1983, B.S., Forensic Chemistry, Ohio University, Athens, Ohio1985 - 1987, Graduate Coursework, Analytical Chemistry, The Ohio State University, Columbus, Ohio

PROFESSIONAL ASSOCIATIONS

American Society for Mass Spectrometry (member since 1990) AOAC International (member since 2008)

PUBLICATIONS

- D. Gilliland, C. Black, J. Denison, C. Seipelt, S. Baugh; "Simultaneous Determination of Vitamins D2 and D3 by Electrospray Ionization LC/MS/MS in Infant Formula and Adult Nutritonals: First Action 2012.11"; Journal of AOAC International **96**(6), 1387-95 (2013)
- D. Starkey, J. Denison, C. Seipelt, W. Jacobs; "Free and Total Carnitine in Infant Formula and Adult/Pediatric Nutritional Formulas by Liquid Chromatography/Tandem Mass Spectrometry: First Action 2012.17"; Journal of AOAC International **96**(5), 1082-1085 (2013).
- N. Cellar, J. Denison, C. Seipelt, M. Twohig, J. Burgess; "Dramatic Improvements in Assay Reproducibility for Water-Soluble Vitamins Using ACQUITY UPLC and the Ultra-Sensitive Xevo TQ-S Mass Spectrometer", Waters Application Note, 2013 (not peer-reviewed).
- D. Gilliland, C. Black, J. Denison, C. Seipelt, D. Dowell; "Simultaneous Determination of Vitamins D₂ and D₃ by LC-MS/MS in Infant Formula and Adult Nutritionals: First Action 2011.13"; <u>Journal of AOAC International</u> **95**(3), 583-587 (2012).
- D. Starkey, J. Denison, C. Seipelt, W. Jacobs; "Single-Laboratory Validation of a Liquid Chromatography/Tandem Mass Spectrometry Method for Determination of Free and Total Carnitine in Infant Formula and Raw Ingredient"; <u>Journal of AOAC International</u> **91**(1), 130-142 (2008).
- J. M. Thurmond, R. G. Hards, C. T. Seipelt, A. E. Leonard, L. Hansson, M. Stromqvist, M. Bystrom, K. Enquist, B. C. Xu, J. J. Kopchick, and P. Mukerji; "Expression and Characterization of Phosphorylated Recombinant Human β-Casein in *Escherichia coli*"; <u>Protein Expression and Purification"</u>; 10, 202-208 (1997).
- J. A. Giust, C. T. Seipelt, B. K. Anderson, D. A. Deis, J. D. Hinders; "Determination of Bis(2-ethylhexyl) Phthalate in Cow's Milk and Infant Formula by High-Performance Liquid Chromatography"; <u>Journal of Agricultural and Food Chemistry</u> **38**(2), 415-418 (1990).

PRESENTATIONS (* Presenting author)

- T. Seipelt; "Food Contact Materials: Considerations for Infant Formula Packaging"; Oral Presentation, Genetic Toxicology Association, Invited Talk, Newark, DE, October, 2012.
- T. Seipelt, J. Denison; "Food Safety and Ingredient Quality in the Post-Melamine Era"; Oral Presentation, Waters Users' Meeting, Invited Talk, Vancouver, BC, Canada, May, 2012.
- T. Seipelt*, D. Gilliland, J. Denison; "The Role of Mass Spectrometry in Routine Nutrient Analysis"; Oral Presentation, Waters Users' Meeting, Invited Talk, Philadelphia, PA, May, 2009.
- D. Gilliland*, C. Black, J. Denison, T. Seipelt; "Simultaneous Determination of Vitamins D₂ and D₃ in Infant Formula and Adult Nutritional Products by UPLC-MS/MS"; Poster Presentation, AOAC International Meeting, Dallas, TX, September, 2008.
- L. Salvati*, J. Denison, D. Gilliland, T. Seipelt; "Determination of Total B₆ in Milk-Based Infant Formulas A Comparison of HPLC and UPLC-MS/MS"; Poster Presentation, AOAC International Meeting, Dallas, TX, September, 2008.
- J. Denison*, D. Gilliland, T. Seipelt; "Transfer of Validated Multi-Component Water Soluble Vitamin LC-MS/MS from Waters Quattro Premier XE to Waters Acquity TQD MS/MS"; Poster Presentation, AOAC International Meeting, Dallas, TX, September, 2008.
- D. Gilliland*, J. Denison, T. Seipelt, "Determination of B Vitamins in Infant Formula and Adult Nutritional Products using HPLC-MS/MS"; Oral Presentation, AOAC International Meeting, Dallas, TX, September, 2008.

- D. Gilliland*, J. Denison, T. Seipelt; "Determination of B Vitamins in Infant Formula and Adult Nutritional Products using HPLC-MS/MS"; Oral Presentation, AOAC Midwest Regional Meeting, Bozeman, MT, June, 2008.
- J. Denison, D. Gilliland, T. Seipelt*; "Optimized Conditions for the Determination of Vitamin D2 and D3 by UPLC-MS/MS"; Proceedings of the 52nd ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June, 2008.
- D. Gilliland*, J. Denison, T. Seipelt; "Water Soluble Vitamin Analysis in Pediatric Products by LC-MS/MS", Poster Presentation, AOAC International Meeting, Minneapolis, MN, September, 2006.
- D. Starkey*, J. Denison, T. Seipelt, W. Jacobs; "Validation of an LC-MS/MS Method for the Determination of Carnitine in Liquid Nutritional Products", Oral Presentation, AOAC Meeting, Minneapolis, MN, September, 2006.
- D. Gilliland*, J. Denison, T. Seipelt; "Feasibility of Determining Water Soluble Vitamins in Infant Formula and Medical Nutritional Products and Vitamin Premixes by LC-MS/MS"; Oral Presentation, AOAC International Meeting, Minneapolis, MN, September, 2006.
- T. Seipelt*, V. Pound, D. Gilliland, M. Lynch, T. Nadler; "Automated Characterization of β-Casein from Human Milk using Multi-Dimensional HPLC-ESI-MS/MS"; Proceedings of the 45th ASMS Conference on Mass Spectrometry and Allied Topics, Palm Springs, CA, June, 1997.
- B. Caldwell, T. Seipelt*, D. Gilliland; "Determination of Vitamin D in Infant Formula by LC-APCI-MS"; Proceedings of the 45th ASMS Conference on Mass Spectrometry and Allied Topics, Palm Springs, CA, June, 1997.
- J. Thurmond, R. Hards, T. Seipelt, A. Leonard, J. Baxter, I. Reyzer, L. Hansson, M. Stromqvist, M. Bystrom, K. Enquist, P. Mukerji*; "Engineered Phosphorylation of Recombinant Human Milk Protein in *Escherichia coli* and Analysis of the Anti-Infective Activity"; Poster Presentation, 10th International Biotechnology Symposium, Sydney, Australia, August, 1996.
- T. Seipelt*, B. Caldwell, V. Pound; "Detection of Glycosylated and Phosphorylated Peptides by LC-MS using API-CID and In-Source CID"; Proceedings of the 44th Annual Conference on Mass Spectrometry and Allied Topics, Portland, OR, May, 1996.
- R. Ragan, T. Seipelt, T. Lukacs, S. Behr*; "Canola Oil: An Unsuspected Source of Vitamin K", Poster Presentation, 83rd American Oil Chemists' Society Annual Meeting, Toronto, Canada, May, 1992.
- W. Eisenhardt*, J. Cooper, P. Davis, T. Seipelt; "Pesticides and Food Safety", Oral Presentation, 2nd International Conference on Agriculture and the Environment, Columbus, OH, November, 1991.
- T. Seipelt*; "Extraction of Chlorinated Pesticides and Related Compounds from Potable Water by Solid-Phase Extraction"; Oral Presentation, 19th ACS Central Regional Meeting, Columbus, OH, June, 1987.

Kasi V. Somayajula Kasi.somayajula@gmail.com

Education	Ph.D. in Organic Chemistry, 1982, Indian Institute of Technology, Madras, India "Rearrangements and ortho effects in organic compounds on Electron -Impact"				
	M. S. in Computer Science, 1997, University of Pittsburgh, Pittsburgh, PA				
	"Implementation of Query by Icon (QBI), a visual based query generation using object model" M. S. in Organic Chemistry, 1977, Andhra University, Waltair, India				
	B. S. in Chemistry, 1975 , Hindu College, Machilipatnam, India				
Professional	Jun '05 – Present: Senior Scientist, Global research and Innovation, The Coca-Cola Company				
Experience	Aug '99 – Jun '05: Research Associate Professor & Director of Mass Spectrometry Facility,				
	University of Pittsburgh				
	Aug.'88 – Jul '99: Research Assistant Professor & Director of Mass Spectrometry Facility, University				
	of Pittsburgh,				
	 Responsible for the campus wide mass spectrometry facility serving the needs of the department graduate researchers totaling more than 150 students working on a variety of research projects; providing the technical know how, data and interpretation. 				
	ds on experience in analysis, troubleshooting and maintaining all aspects of the facility instrumentation,				
	sociated computer hardware & software and vacuum systems.				
	ethod development for the characterization of trace level contaminants and metabolites.				
	Trained and supervised more than 40 teaching assistants and graduate researchers in mass spectrometry.				
	 Proposal writing for securing grants for research and instrumentation. Evaluate, select and decide mass spectrometry/HPLC/GC equipment for the facility. 				
	Designed the new mass spectrometry facility housing 5 mass spectrometers.				
	 Conduct independent research, publish and give presentations at the technical meetings. 				
	April '82 – July '88: Research Associate, University of Pittsburgh: Department of Chemistry,				
	• Studies in the area of desorption mass spectrometry for non volatile compounds including peptides, and polymers.				
	Fundamental studies in the laser induced ion-molecule reactions using LD-TOF and FT-MS mass spectrometers.				
	 Designed Fast Atom Bombardment Source for Kratos 50 mass spectrometer and Cf-252 ionization source for FT- MS analyzer. 				
	Supervised graduate research students in their research.				
	Sep '77 – Mar '82: Research Fellow, Indian Institute of Technology,				
	Mass spectral mechanistic study of ortho interaction and rearrangements in organic compounds using high				
	resolution and meta-stable (MIKES and linked scans) methods.				
	 Synthesis and characterization of sulfur organic compounds using spectroscopic techniques UV-Vis, IR, NMR, GC and Mass Spectrometry. 				
Instrumentation	Magnetic sector MS on Autospec, VG-70, Kratos 50, Varian CH-5 and Varian CH-7.				
	FTICR mass spectrometry on Nicolet FTMS using laser desorption ionization.				
	Time of Flight on Waters LC–MS with QTOF API US, equipped with ESI and APCI sources, LAMMA-1000 with				
	laser ionization, and GC-TOF with EI and CI sources. • Quadrupole EI -MS on HP 5970B (GC-MS) and 5971A (GC-MS); HP1100 LC-MS with ESI and APCI.				
Teaching	Courses taught at graduate and undergraduate level at University of Pittsburgh, Pittsburgh, PA				
Todoming	 Introduction and advanced techniques in mass spectrometry with emphasis on principles of ionization, analyzers and spectral interpretation for structural elucidation. 				
	 Training courses for graduate students in the operation of GC-MS and LC-MS instrumentation with emphasis on 				
	principles and method development.				
	Programming languages of C/C++ and Java; Introduction to Operating systems with emphasis on Unix and				
	Windows 2000 operating systems for seniors majoring in Computer science. University of Puerto Rico, Puerto Rico, 1997				
	Training course conducted in the operation of Fast Atom Bombardment ionization mass spectrometry.				
Professional	Member, Pittsburgh Conference Technical Program Committee, 1992 – 2006;				
activities	Chairman, Science Week Committee of Pittcon, 1999-2001				
	Chairman, Mass spectrometry discussion group Pittsburgh, 1989-94 and 97-98				
	 Treasurer, Spectroscopy Society of Pittsburgh 2003-2004 Member of executive body of Indian Society for Mass Spectrometry 1997- 2000 				
Professional	 Member of executive body of Indian Society for Mass Spectrometry 1997- 2000 American Society for Mass Spectrometry Indian Society for Mass Spectrometry 				
associations	American Chemical Society American Chemical Society Society for Analytical Spectroscopy				
	 Spectroscopy Society of Pittsburgh Society for Analytical Chemists of Pittsburgh 				
	AOAC International				
Publications	"Gas-phase intramolecular elimination reaction studies of steviol glycosides in positive				
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- electrospray and tandem mass spectrometry", Upreti, Mani; Clos, John F.; **Somayajula, Kasi V.**; Milanowski, Dennis J.; Mocek, Ulla; DuBois, Grant E.; Prakash, Indra,, European Journal of Mass Spectrometry (2009), 15(1), 11-21.
- 2. "A Quadrupole/Time-of-Flight Mass Spectrometry Study of Trp-Cage's Conformation.", Lin, Mingxiang; Ahmed, Zeeshan; Taormina, Christopher R.; **Somayajula, Kasi V.** Journal of the American Society for Mass Spectrometry (2007), 18(2), 195-200.
- 3. "Two New 5-Deoxyflavonoids from *Calliandra inermis*", M. Maheswara, Y. Koteswara Rao, V. Siddaiah, C. Venkata rao, **Kasi V. Somayajula**, and Fu Tyan Lin, *Chem. Pharm. Bull.* **52**(8) 974—975 (2004).
- 4. "Interactions of perfluorocarbon liquids and silicone oil as characterized by mass spectrometry." Friberg Thomas R; Siska Peter E; **Somayajula Kasi**; Williams John; Eller Andrew W, Graefe's archive for clinical and experimental ophthalmology (2003 Oct), 241(10), 809-15
- 5. "¹H NMR and electrospray mass spectrum (ESI-MS) of the mono-iodized Bis(2,2¹-bis(4,5-dimethylimidazole)chloronitrosylruthinium(II), ([Ru(NO)Cl(LH₂(LH)]⁺), complex, LH2= 2,2¹-bis(4,5-dimethylimidazole), T. W. Stringfield, Kasi V. Somayajula, D. C. Muddiman, J. W. Flora, and R. E. Shepherd, Inorg. Chim. Acta, 343 (2003), 317-328.
- 6. "Electrospray Mass Spectrometry of [Ru(NO)(Cl)(bpy)₂]²⁺, (bpy= 2, 2' bipyridine): fragmentation from desolvated [[Ru(NO)(Cl)(H₂O)₂], Cl⁻]: ion pairs by electron transfer and internal Lewis base pathways", J. M. Slocik, **Kasi V. Somayajula** and R. E. Shepherd, Inorganica Chimica Acta (2004), 357(4), 965-979
- 7. "Coordination of RuCl₃(NO)(H₂O) ₂ by imidazole, histidine, and iminodoacetate ligands: a study of complexation of "caged NO" by a simple bio-cellular donors", J. M. Slocik, M. S. Ward, **Kasi V. Somayajula** and R. E. Shepherd, Trasnsition Met. Chem. (London), 26, 351-364, (2001).
- "Electrospray mass spectrometry of trans-[Ru(NO)Cl(dpaH)2]2+ (dpaH=2,2'-dipyridylamine) and 'caged NO', [RuCl3(NO)(H2O)2]: loss of HCl and NO from positive ions versus NO and Cl from negative ion", Slocik, J. M.; Somayajula, Kasi V.; Shepherd, R. E., Inorganica Chimica Acta (2001), 320(1,2), 148-158.
- "Tris (Perfluoroalkylethyl)silyl Alkyl Amines as Calibration Standards for Electron Ionization Mass Spectrometry in the Mass Range of 100-3000 Da", Vyacheslav N. Fishman, Bruno Linclau, Dennis P. Curran, and Kasi V. Somayajula, Journal of the American Society for Mass Spectrometry (2001), 12(9), 1050-1054.
- "Intramolecular hydrogen transfer reactions of o- (Bromophenyl) dialkylsilyl ethers. Preparation of Rapamycin-d1" Dennis P. Curran, Kasi V. Somayajula and Hosung Yu, Tetrahedron Lett. 33,2295, 1992.
- 11. "A novel method for matrix assisted laser mass spectrometry of proteins", Zhao Shankai, **Kasi V. Somayajula**, A. G. Sharkey, and D. M. Hercules, Anal. Chem., 1991, 63, 450.
- 12. "Use of nitrocellulose matrix in laser mass spectrometry," Zhao Shankai, **Kasi V. Somayajula**, A. G. Sharkey and D. M. Hercules, Fresnius J. Anal. Chem., 1990, 338, 588.
- 13. "Effect of 3-phenyl substituent on the acidity of bicyclo [3.2.1] octa-2,6-diene," G. Trimitsis, J. Rimoldi, M. Trimitsis, J. Balog, F. T. Lin, A. Marcus, **Kasi V. Somayajula**, S. Jones, T. Hendrickson, and S. Kincaid, Chem. Comm. 190, 237,3.
- 14. "In situ analysis of compounds separated by thin layer chromatography", A. J. Kubis, **Kasi V. Somayajula**, A. G. Sharkey, D. M. Hercules, Microbeam Anal., 1989, 24, 364.
- 15. "Observation of carbon clusters from polycyclic aromatic hydrocarbons," D.N. Lineman, **Kasi V. Somayajula**, A. G. Sharkey and D. M. Hercules, Microbeam Anal., 1989 24, 297.
- 16. "Solid state chemical ionization for characterization of organic compounds by laser mass spectrometry", K. Balasanmugam, **Kasi V. Somayajula**, D. M. Hercules, Talanta, 1989, 36, 117.
- 17. "High Mass Carbon clusters from aromatic hydrocarbons observed by laser mass spectrometry", D. N. Lineman, **Kasi. V. Somayajula**, A. G. Sharkey and D. M. Hercules, J. Phys. Chem, 1989, 93, 5025.
- 18. "Laser mass spectrometry of compounds separated by thin layer chromatography", A. J. Kubis, **Kasi V. Somayajula**, A. G. Sharkey and D. M. Hercules, Anal. Chem. 1989, 61, 2516.
- 19. "Determination of water loss mechanism in amine terminus amino acids using laser mass spectrometry," K. J. Rosnack, **Kasi V. Somayajula**, A. G. Sharkey, N. J. Jensen and D. M. Hercules, Appl. Spectroscopy, 1989, 43, 1087.

Note: The name of **Kasi V. Somayajula appears as S. K. Viswanadham** in the following publications. 20. "Ion molecule reactions in the negative ion laser mass spectrometry of nitro aromatic

- compounds," S. K. Viswanadham and D. M. Hercules, Anal. Chem., 1988,60,2346.
- 21. "Two parallel ortho effects on 5-(o-tolylidene) barbituric acid and related compounds on elctron impact", D. V. Ramana and S. K. Viswanadham, Indian J. Chem., 1988, 27B, 613.
- 22. "Comparison of laser (LMS), ²⁵²Cf-PDMS, FAB, SIMS and Field Desorption mass spectra of a series of internal salts", K. Balasanmugam, **S. K. Viswanadham**, D. M. Hercules, Appl. Spec. 1987,41,821.
- 23. "Application of laser microprobe mass spectrometry in Organic analysis", D. M. Hercules, F. P. Novak, **S. K. Viswanadham** and Z. A. Wilk, Anal. Chim. Acta, 1987, 195, 61.
- 24. "Laser mass spectrometry of organo phosphorous pesticides and related compounds", J. J. Morelli, **S. K. Viswanadham**, A. G. Sharkey and D. M. Hercules, Int. J. Environ. Anal. Chem, 1987, 31, 195.
- 25. "Californium-252 plasma desorption ion cyclotron resonance mass spectrometry", **S. K. Viswanadham**, D. M. Hercules, R. R. Weller and C. S. Giam, Biomed. Env. Mass Spectrom., 1987, 14, 43.
- 26. "Characterization of polycyclic aromatic compounds by laser mass spectrometry", K. Balasanmugam, **S. K. Viswanadham** and D. M. Hercules, Anal. Chem, 1986, 58, 1102.
- 27. "Negative ion laser mass spectrometry of aromatic nitro compounds and their use as solid state chemical ionization reagents", K. Balasanmugam, **S. K. Viswanadham** and D. M. Hercules, Anal. Chem., 1983, 55, 2424.
- 28. "Laser induced mass spectrometry: Ion formation processes and developments", F. P. Novak, K. Balasanmugam, **S. K. Viswanadham**, C. D. Parker, Z. A. Wilk, D. E. Matter and D. M. Hercules, Int. J. Mass Spectrom. and Ion Phys., 1983, 53, 135.
- 29. "Laser mass spectrometry of organic compounds", D. M. Hercules, C. D. Parker, K. Balasanmugam and **S. K. Viswanadham** in "ion formation from organic solids", Springer Verlag series in chemical physics, 1983, 25, 222.
- 30. "Interesting ortho effects of the methoxy group in o-Methoxy aromatic thioamides", D. V. Ramana and **S. K. Viswanadham**, Org. Mass Spectrom. 1983, 18, 418.
- 31. "Competing oxygen migrations in ortho nitro aromatic thioamides on electron impact", D. V. Ramana and **S. K. Viswanadham**, Org. Mass Spectrom. 1983, 18, 162.
- 32. "Unexpected mass spectral skeletal rearrangements in aromatic thioamides", D. V. Ramana and S. K. Viswanadham, Org. Mass Spectrom. 1982, 17, 409.
- 33. "Intramolecular aromatic substitution in (aryledene) barbituric acids on electron impact", D. V. Ramana and **S. K. Viswanadham**, Bull. Chem. Soc. Jpn., 198, 53, 3004.



CURRICULUM VITAE: DARRYL M. SULLIVAN

CURRENT POSITION

Title: Associate Scientific Director
Department: Food and Drug Analysis
Covance Laboratories Inc.

Madison, Wisconsin

EDUCATION

BS Biological Conservation with a minor in Biochemistry, University of Wisconsin-

Madison, Madison, Wisconsin, 1975

Additional Training

Six Sigma Green Belt Training. Covance Laboratories, Madison Wisconsin, 2003 GMP Compliance and Regulatory Update, Covance Laboratories, Madison, Wisconsin, 2001 Good Laboratory Practices (GLP) Covance Laboratories, Madison, WI, 2000, 2001, 2002, 2003, 2004 Building Loyalty Through Customer Service, Covance Laboratories, Madison, Wisconsin, 2000 Violence in the Workplace, Covance Laboratories Inc., Madison, Wisconsin, 2000 Total Quality Management System, sponsored by Covance Laboratories Inc., Madison, Wisconsin 1988, 1989, 1990, 1991

Supervisory Management Certificate Program, Management Institute, University of Wisconsin Extension, Madison, Wisconsin, 1985-1986

High Performance Liquid Chromatography Training School, Waters Associates, St. Louis, Missouri, 1979

Additional Course Work

Graduate studies in biochemistry and limnology, University of Wisconsin-Madison, Madison, Wisconsin, 1976

PROFESSIONAL EXPERIENCE

2008 - Present: Associate Scientific Director, Food and Drug Analysis

As the associate scientific director in the Food and Drug Analysis Department, Mr Sullivan is responsible for the overall scientific rigor of all testing programs. Mr. Sullivan brings new test methods, new technologies, and new innovations into the laboratory. He is then responsible for implementing and validating these methods and technologies.

Mr. Sullivan is the primary Covance liason to AOAC International, and other scientific assoaciations.

2000 – 2008: Manager of Business Development, Food and Drug Analysis

As a senior manager in the Food and Dietary Supplement Groups, Mr. Sullivan is responsible for the department's major food and nutraceutical testing programs. His responsibilities include design and



implementation of the testing programs, assuring the quality of the data, and communicating directly with the clients. Mr. Sullivan manages laboratory supervisors, scientists, technicians, and administrative personnel in carrying out these duties.

Mr. Sullivan is held accountable for the total performance of these testing programs. He is responsible for the quality of the data, the timeliness of the testing and the financial performance of the teams. Mr. Sullivan is expected to direct method development programs, problem solving projects, and new testing ventures.

In addition, Ms. Sorenson continues to assist scientific leaders with AOAC Single Laboratory Validation and Collaborative Studies and has led AOAC projects in the past.

CURRICULUM VITAE: DARRYL M. SULLIVAN

PROFESSIONAL EXPERIENCE (Continued)

1990 - 2000: Senior Client Manager, Food Chemistry

As a senior client manager in the Food Sciences Group, Mr. Sullivan provided a wide variety of services to both clients and the laboratory staff as an expert in nutritional, inorganic, and lipid chemistry. He consulted with and advised clients on regulatory issues, proper selection of assays, and understanding analytical results. He utilized his extensive experience in designing programs for a variety of projects, including major nutritional surveys, nutrition labeling programs, stability studies, and major research and development projects, and he assisted clients and laboratory staff with all aspects of these studies. Mr. Sullivan acted as a liaison between the laboratory and the client by providing technical direction and advice; he discussed results and methodology with the scientists and helped clients in their interpretation and understanding of the data. He also assisted the client service representatives by providing technical direction to individuals working directly with accounts.

Mr. Sullivan is very active in AOAC International; he served as a member of the Official Methods

Board and chair of one of the Food Methods committees.

1987 - 1990: Technical Manager, Inorganic Analysis

Mr. Sullivan had the same supervisory duties as described under the Staff Scientist/Supervisor position. He also had the additional responsibilities of budget preparation, department cost analysis, and productivity analysis. Mr. Sullivan researched new analytical technologies and often published or presented his findings.

1981 - 1987: Staff Scientist/Supervisor, Inorganic Analysis

Mr. Sullivan managed the Inorganic Department, including supervision of the ICAP and Nonmetals, Atomic Absorption, and Proximate/Lipid Chemistry sections. This involved organizing and evaluating data, and performing or advising others on research of new methods or modifications of existing methods. These sections conducted a wide range of food and feed analyses for trace elements, heavy metals, organic and inorganic salts, proximate composition, and lipids. Much of the work was done as part of quality control or nutritional labeling compliance testing. Mr. Sullivan also supervised the Formulation Quality Control section which performed analytical testing for the Toxicology Department. Mr. Sullivan was instrumental in managing the startup of ion chromatography techniques at Hazleton, as well as in developing applications ofion chromatography to food analyses. He also managed other method development projects including gravimetric methods for total dietary fiber and a heavy metals screen by inductively coupled argon plasma atomic emission spectrophotometry.



1980 - 1981: Scientist II/Section Leader, Nutritional Adjuncts

As a section leader in the proximate and lipid chemistry area, Mr. Sullivan supervised scientists and technicians in the analysis of protein, moisture, ash, fat, fiber, carbohydrates, and calories in foods and feeds. Mr. Sullivan also worked on the analysis of fatty acids, cholesterol, plant sterols, and antioxidants.

CURRICULUM VITAE: DARRYL M. SULLIVAN

PROFESSIONAL EXPERIENCE (Continued)

1979 - 1980: Scientist, Nutritional Adjuncts

Mr. Sullivan worked in the Micro vitamin section where he regularly identified and quantified vitamins and amino acids in proteins, foods, and animal feeds using wet chemical techniques, high performance liquid chromatography, and an amino acid autoanalyzer.

1977 - 1978: Scientist, Pesticide Evaluation

Mr. Sullivan's primary responsibilities were the management and operation of the Drosophila mutagenesis laboratory. This involved leading long-term projects as well as method development and data analysis.

1975 - 1977: Development Engineer, Research Projects Corporation, Madison, Wisconsin

Mr. Sullivan researched and developed air movement and filtration systems for integration with a solar heating program.

PUBLICATIONS

Paske, N., Berry, B., Schmitz, J., Sullivan, D., "Determination of Low-Level Agricultural Residues in Soft Drinks and Sports Drinks by Liquid Chromatography/Tandem Mass Spectrometry: Single-Laboratory Validation" <u>Journal of the AOAC INTERNATIONAL</u>, 90 (2):521-533 (2007)

Paske, N., Berry, B., Schmitz, J., Sullivan, D., "Determination of Low-Level Agricultural Residues in Soft Drinks and Sports Drinks by Gas Chromatography with Mass-Selective Detection: Single-Laboratory Validation" Journal of the AOAC INTERNATIONAL, 90 (2):534-543 (2007)

Sullivan, D. M., Wehrmann, J., Schmitz, J., Crowley, R., and Eberhard, J., "Determination of Ephedra Alkaloids by Liquid Chromatography/Tandem Mass Spectrometry," <u>Journal of the AOAC INTERNATIONAL</u>, 86(3):471-475 (2003).

Lee S.C., Prosky L., Sullivan D.M. and Vincent R., "Evaluating an Analytical Method for Complex Carbohydrate Determinations," *American Association for Cereal Chemists, Inc., 41*:64-70 (1996).

Sullivan, D.M., "Cholesterol" Analyzing Food for Nutrition Labeling and Hazardous



Contaminants, (eds.) I. Jeon, W. Ikins, Ch. 4, pp. 77-86, Marcel Dekker Inc., New York, Basel, Hong Kong (1995).

DeVries J.W., Sullivan D.M. and Sungsoo L.C., "Carbohydrate/Dietary Fiber Analysis," *Methods of Analysis for Nutrition Labeling*, (eds.) D. Sullivan and D. Carpenter, Ch. 4, pp. 69-83 (1993).

CURRICULUM VITAE: DARRYL M. SULLIVAN

PUBLICATIONS (Continued)

Sullivan D.M., "Proximate and Mineral Analysis," *Methods of Analysis for Nutrition Labeling*, (eds.) D. Sullivan and D. Carpenter, Ch. 6, pp.105-109 (1993).

Sullivan, D. M., and Walton J.C., "The Needs of the Contract Laboratory in Regard to Reference Material," *Fresenius' Journal of Analytical Chemistry 338*: 580-581 (1990).

Kehoe, D. F. and Sullivan, D. M., "Determination of Gold in Tissue by Graphite Furnace Atomic Absorption Spectrophotometry," <u>Journal of the Association of Official Analytical Chemists</u>, <u>70</u>(6):1, 153-1, 155 (1988).

Sullivan, D. M., Kehoe, D. F., and Smith, R. L., "Measurement of Trace Levels of Total Aluminum in Foods by Atomic Absorption Spectrophotometry," <u>Journal of the Association of Official Analytical Chemists</u>, 70(1):118-120 (1987).

Smith, R. L. and Sullivan, D. M., "Quantitation of Vegetable Sterols in Dairy Products Using Capillary Gas Chromatography," <u>Journal of the Association of Official Analytical Chemists</u>, <u>70</u>(5):912-915 (1987).

Adams, M. L., Sullivan, D. M., Smith, R. L., and Richter, E. F., "Evaluation of Direct Saponification Method for Determination of Cholesterol in Meats," <u>Journal of the Association of Official Analytical Chemists</u>, <u>69</u>(5):844-846 (1986).

Sullivan, D.M., "Methods for Low Level Sodium Analysis: An Overview," <u>Arkansas Processing Crops Review</u>, <u>Vol. XXII</u> (Issue 2), University of Arkansas (April 1985).

Sullivan, D. M. and Smith R. L., "Determination of Sulfites in Foods by Ion Chromatography," <u>Food</u> Technology, 39(7):45-48 (July 1985).

Greger, J. L., Sullivan, D. M., Goetz, W., and Daun, R. J., "Aluminum Levels in Foods Cooked and Stored in Aluminum Pans, Trays, and Foil," <u>Journal of Food Protection</u>, <u>48</u>(9):772-777 (September 1985).

Sullivan, D. M., "Sulfate by Ion Chromatography," in <u>Sulfur and Sulfur Amino Acids</u>, O. Griffith and W. Jakoby (eds.), Methods in Enzymology, Academic Press, Orlando, Florida (in press).



PRESENTATIONS

Sullivan, D.M., "GLP Compositional Analysis of Biotech-Derived Foods/Crops," IFT Annual Meeting and Food Exposition, Chicago, Illinois, July 2003.

Randall Smith, Darryl M. Sullivan and James Wehrmann, "Implementing LC-MS/MS Analytical Applications in the Contract Laboratory," AOAC International Annual Meeting and Exposition, Atlanta, Georgia, September 2003.

CURRICULUM VITAE: DARRYL M. SULLIVAN

PRESENTATIONS (Continued)

Sullivan, D.M., "Compositional Analysis of Biotech-Derived Foods and Crops," AOAC International Annual Meeting and Exposition, Atlanta, Georgia, September 2003.

John Schmitz, Darryl M. Sullivan and James Wehrmann, "Validation of an LC-MS/MS Method for Quantitation of Ephedrine Alkaloids in Dietary Supplements," AOAC International Annual Meeting and Exposition, Los Angeles, California, September 2002.

Chad Scheuerell, Donald L. Hughes, Darryl M. Sullivan and James Wehrmann, "The Analysis of Acrylamide in Foods Using LC-MS/MS," AOAC International Annual Meeting and Exposition, Los Angeles, California, September 2002.

Sullivan, D.M., AOAC International Official Methods(sm) Program, "Actions of the AOAC Task Force to Develop/Validate Official Methods for Diet Supplement Analysis," IFT Annual Meeting and Food Exposition, Anaheim, California, June 2002.

Sullivan, D.M., "Problems and Pitfalls in Analysis of Foods, Feeds, and Crop Materials for Amino Acids," Pittsburgh Conference, New Orleans, Louisiana, March 2002.

Sullivan, D.M., "AOAC International Proactive Program of Work for Validating Analytical Methods for Dietary Supplements," SupplySide East International Trade Show & Conference, Secaucus, New Jersey, 2001.

Sullivan, D.M., "Low-Level Lactose Determination" Association of Official Analytical Chemists Meeting and Exposition, San Diego, California, 1997.

Sullivan, D.M., "Interlaboratory Collaboration Review, & Acceptance," Standardization and Validation of Methods for Characterizing and Analyzing Dietary Supplements Topical Conference, Baltimore, Maryland, 1996.

Sullivan, D.M., "Use of Reference Materials for Dietary Fiber Analysis in the Q.C. Laboratory," American Association of Cereal Chemists Meeting, Seattle Washington, 1992.

Sullivan, D. M., "Determination of Total Fat in Foods in Compliance with NLEA," American Association of Cereal Chemists Meeting, 1991.



Sullivan, D. M., "Comparison of Methods to Determine Total Fat in Food," American Association of Cereal Chemists Meeting, Minneapolis, Minnesota, 1990.

Polywacz, J. P. and Sullivan, D. M., "Determination of Total Dietary Fiber in Food," Midwest Association of Official Analytical Chemists Meeting, Fargo, North Dakota, June 1987.

Sullivan, D. M., "Determination of Omega-3 Polyunsaturated Fatty Acids," Fall Association of Official Analytical Chemists Meeting, San Francisco, California, September 1987.

Sullivan, D. M. and Giegerich, J. R., "Determination of Iodine in Foods Using Ion Chromatography," Pittsburgh Conference, Atlantic City, New Jersey, March 1986.

CURRICULUM VITAE: DARRYL M. SULLIVAN

PRESENTATIONS (Continued)

Sullivan, D. M., "Ion Chromatographic Analysis of Foods," Spring Association of Official Analytical Chemists Workshop, Seattle, Washington, April 1986.

Giegerich, J. R. and Sullivan, D. M., "New Methods for Food Analysis Using Ion Chromatography," Midwest Association of Official Analytical Chemists Meeting, Lincoln, Nebraska, June 1986.

Kehoe, D. F. and Sullivan, D. M., "Quantitation of Selenium in Infant Formula Using Hydride Generation Atomic Absorption Spectrophotometry," Fall Association of Official Analytical Chemists Meeting, Scottsdale, Arizona, September 1986.

Sullivan, D. M., "Determination of Iodine in Food Using Ion Chromatography," Fall Association of Official Analytical Chemists Meeting, Scottsdale, Arizona, September 1986.

Sullivan, D. M. and Smith, R. L., "Total Dietary Fiber in Food and Food Ingredients," presented at the Annual Meeting of the American Association of Cereal Chemists, Toronto, Canada, October 1986.

Sullivan, D. M. and Giegerich, J. R., "Analysis of Sulfites and Other Anions in Food by Ion Chromatography," Pittsburgh Conference, New Orleans, Louisiana, February 1985.

Sullivan, D. M. and Smith, R. L., "Comparison of Atomic Absorption and Inductively Coupled Argon Plasma Atomic Emission Spectrometry for the Analysis of Infant Formula," 1st Association of Official Analytical Chemists Conference on Infant Formula, Virginia Beach, Virginia, May 1985.

Smith, R. L. and Sullivan, D. M., "Comparison of Chromatographic and Microbiological Procedures for the Determination of Tryptophan Content in Infant Formula," 1st Association of Official Analytical Chemists Conference on Infant Formula, Virginia Beach, Virginia, May 1985.

Sullivan, D. M., "Ion Chromatographic Determination of Sulfites," Fall Association of Official Analytical Chemists Meeting, Washington, DC, October 1985.

Burkhart, M. O. and Sullivan, D. M., "Determination of Total Dietary Fiber in a Wide Variety of Food Products," Midwest Association of Official Analytical Chemists Meeting, Chicago, Illinois, June 1985.

Sullivan, D. M., "Ion Chromatographic Method for the Determination of Sulfites," Association of Official Analytical Chemists Sulfite Task Force Meeting, Washington, DC, August 1985.



Sullivan, D. M., "Quantitation of Sulfite in Foods Using Ion Chromatography," LabCon Central Meeting, Chicago, Illinois, October 1985.

Sullivan, D. M., "Ion Chromatographic Determination of Sulfites," Fall Association of Official Analytical Chemists Meeting, Washington, DC, October 1985.

Burkhart, M. O. and Sullivan, D. M., "Measurement of Total Dietary Fiber in a Wide Variety of Food Products," Fall Association of Official Analytical Chemists Meeting, Washington, DC, October 1985.

CURRICULUM VITAE: DARRYL M. SULLIVAN

PRESENTATIONS (Continued)

Sullivan, D. M., Giegerich, J. R., and Addison, T. A., "Ion Chromatography: A New Approach to Anion Analysis in Food," Midwest Association of Official Analytical Chemists Meeting, Minneapolis, Minnesota, June 1984.

Sullivan, D. M., Smith, R. L., and Richter, E. F., "Quantitation of Vegetable Sterols in Dairy Products Using Capillary Column Chromatography," Fall Association of Official Analytical Chemists Meeting, Washington, DC, October 1984.

Sullivan, D. M., "Aluminum in Food," Conference on Aluminum Analysis in Biological Materials, University of Virginia, Charlottesville, Virginia, June 1983.

Sullivan, D. M., "Determination of Selenium Levels in Feed After Dry Ashing," Midwest Association of Official Analytical Chemists Meeting, Ames, Iowa, June 1983.

Adams, M. L., Sullivan, D. M., Smith, R. L., and Richter, E. F., "Evaluation of a Direct Saponification Method for the Determination of Cholesterol in Meats," Fall Association of Official Analytical Chemists Meeting, Washington, DC, 1983.

PROFESSIONAL MEMBERSHIPS

Society for Applied Spectroscopy

AOAC INTERNATIONAL

Association of Official Analytical Chemists Sulfite Task Force, 1985-1986

Association of Official Analytical Chemists NLEA Task Force, 1993-1996

AOAC INTERNATIONAL Dietary Supplement Task Force, 2000-

AOAC INTERNATIONAL Dietary Supplement Task Force Chair, 2000-2003

AOAC INTERNATIONAL Official Methods Board Member, 1998-2001

AOAC INTERNATIONAL Official Methods Board Chair, 2001-2004

AOAC INTERNATIONAL Board of Directors, 2004-

Institute of Food Technologists

Dr. TAN Jing

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- * 13 years of academic and industrial experiences in analytical chemistry, specialized in food contaminants, nutrients, drugs, cosmetics and tobacco analysis.
- * Breadth of experience with modern analytical instrumentations including GC, GC-MS, LC-MS/MS, high resolution mass spectrometers (QToF, Orbitrap), ICP-MS, UV.
- * Well-versed in method development, optimization and validation.
- * Other research interests include chemometrics and multivariate data analysis.

PROFESSIONAL EXPERIENCES

Dec. 2011 - Now, Senior Scientist

Abbott Nutrition Research & Development, Asia-Pacific

• Apr. 2009 - Dec. 2011, Scientist cum Technical Manager

Cosmetics and Cigarette Testing Laboratory, Pharmaceutical Division

Health Sciences Authority, Singapore

• Sep. 2008- Mar. 2009, Research Assistant

Tropical Marine Science Institute, National University of Singapore

EDUCATION

Ph.D. in Analytical Chemistry (August 2004- August of 2008)

Department of Chemical and Biomolecular Engineering

National University of Singapore, Singapore

B.Eng. in Environmental Engineering (September 1999- July 2003)

Department of Environmental Science and Engineering

Wuhan University, China

PUBLICATIONS & PRESENTATIONS

- 1. J. Tan, J. Neo, T. Setiawati and C. Zhang. (2017). Determination of carotenoids in human serum and breast milk using high performance liquid chromatography coupled with a diode array detector (HPLC-DAD). Separations 4(2), 19.
- 2. J. Tan. (2017). "A special preparation to improve phosphocholine determination in liquid chromatography-tandem mass spectrometry (LC-MS/MS)". Poster presentation on 65th ASMS Conference on Mass Spectrometry and Allied Topics.
- 3. J.Tan. (2015) Determination of Human Milk Oligosaccharides in Human Breast Milk by HPAE-PAD with On-Line Sample Cleanup. ThermoFisher Scientific Customer Application Note 119.
- 4. J. Tan. (2013). Simultaneous determination of multi-mycotoxins in bovine milk derived matrices by liquid chromatography with tandem mass spectrometry (LC-MS/MS). Oral presentation on Conference Mycological Aspects of Food and Feed Safety (IC-MAFFS).
- 5. N. P. Cheah, N. Chong, J. Tan, et al. (2014) Electronic nicotine delivery systems: regulatory and safety challenges: Singapore perspective. Tobacco Control 23: 1119-125.
- 6. B. J. Venhuis, J. Tan, et al. (2012) Capsule shells adulterated with tadalafil. Forensic Science International. 214: 1-3.
- 7. J. Tan, M. Y. Low, et al. (2011) Characterization of Traditional Chinese Medicine by 2D GC-TOFMS. Separation Science. Volume 3 Issue 2.
- 8. Tan, J., J. P. Obbard. (2011). "Singapore: Exposure to Persistent Organic Pollutants and Human Health Risks. Encyclopedia of Environmental Health (Editor: J. Nriagu). Elsevier Publisher, USA.
- 9. J. Tan, A. Loganath, et al. (2008) "Exposure to Persistent Organic Pollutants in utero and Related Maternal Characteristics on Birth Outcomes: A Multivariate Data Analysis Approach." Chemosphere. 74: 428-433.
- 10. J. Tan, Q. Q. Li, et al. (2008). "Multivariate Data Analyses of Persistent Organic Pollutants in Maternal Adipose Tissue in Singapore." Environmental Science & Technology 42(7): 2681-2687.
- 11. J. Tan, A. Loganath, et al. (2008). "Persistent organic pollutants in human blood: A review of global data with a comparison to the Singapore population." Toxicological & Environmental Chemistry 90(5): 1 22.
- 12. Obbard, J. P., J. Tan, et al. (2007). "Persistent Organic Pollutants and Adverse Health Effects in Humans in Singapore." Persistent Organic Pollutants in Asia Sources, Distributions, Transport, and Fate (Editor: A. Li). Elsevier Publisher, USA.
- 13. J. Tan, S. M. Cheng, et al. (2007). "Polybrominated diphenyl ethers in house dust in Singapore." Chemosphere 66(6): 985-92.
- 14. J. Tan, S. M. Cheng, et al. (2007). "Selected organochlorine pesticide and polychlorinated biphenyl residues in house dust in Singapore." Chemosphere 68(9): 1675-82.
- 15. Li, Q. Q., J. Tan, et al. (2006). "Levels of persistent organic pollutant residues in human adipose and muscle tissues in Singapore." J Toxicology Environmental Health A 69(21): 1927-37.

16. Li, Q. Q., J. Tan, et al. (2006). "Persistent organic pollutants and adverse health effects in humans." J Toxicology Environmental Health A 69(21): 1987-2005.

Dr. Tomasz Tuzimski (Ph.D., Assoc. Prof.)
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Medical University in Lublin
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Phone (office): (+48-81) 448721 Fax: (+48-81) 4487208

E-mail: tomasz.tuzimski@umlub.pl

About Dr. Tomasz Tuzimski:

Tomasz Tuzimski is adjunct professor in Department of Physical Chemistry at Faculty of Pharmacy with Medical Analytics Division, Medical University of Lublin, (Lublin, Poland). His scientific interest include the theory and application of liquid chromatography, taking into considerations optimisation of chromatographic systems for separation and quantitative analysis of analytes in multicomponent mixtures. Dr. Tuzimski was rewarded for his achievements in field of study by chromatographic methods in analytical chemistry of pesticides (series of five publications and monograph T. Tuzimski, E. Soczewiński, Retention and Selectivity of Liquid-Solid Chromatographic Systems for the Analysis of Pesticides (Retention Database) in Problems of Science, Teaching and Therapy. Medical University of Lublin, Poland, No 12, Lublin, October 2002, Medical University of Lublin: Lublin, pp. 1-219) by the Ministry of Health of Poland (individual prize). Dr. Tuzimski was also rewarded as co-author of a handbook for students "Analytical Chemistry" (ed., by R. Kocjan, PZWL, 2000 and 2002, in Polish) by Ministry of Health of the Polish Republic (team prize). Dr. Tuzimski was invited by Professor Szabolcs Nyiredy to three-month practice in the Research Institute for Medicinal Plants in Budakalász (Hungary). The investigations were financially supported by the Educational Exchange Programme between Hungary and Poland – Hungarian Scholarship Board (No. MÖB 2-13-1-44-3554/2005). He actively participated in numerous scientific symposia, where he presented his research results as oral presentations and poster presentations on 25 international meetings and 20 national scientific symposia. Dr. Tuzimski so far published 75 research papers (including 25 individual papers) in journals of high level of impact factors (total IF = 92). He is the author of articles written at the special invitations of editors of Journal Chromatography A, Journal of Liquid Chromatography and Related Technologies and Journal of Planar Chromatography - Modern TLC. Besides above-mentioned monograph, Dr. Tuzimski is the author of chapters: Use of planar chromatography in pesticide residue analysis in: Handbook of pesticides: methods of pesticide residues analysis. Edited by Leo M.L. Nollet and Hamir Singh Rathore, Boca Raton 2010, CRC Press Taylor & Francis Group, pp. 187-264; Basic principles of planar chromatography and its potential for hyphenated techniques in: High-Performance thin-layer chromatography (HPTLC). [Ed.] ManMohan Srivastava. Springer, Heidelberg 2011, pp. 247-310; Multidimensional chromatography in pesticides analysis in: Pesticides - strategies for pesticides analysis. [Ed.] Margarita Stoytcheva. InTech, Rijeka 2011, pp. 155-196; Determination of pesticides in complex samples by one dimensional (1D-), two-dimensional (2D-) and multidimensional chromatography in: Pesticides in the modern world – trends in pesticide analysis. [Ed.] Margarita Stoytcheva. InTech, Rijeka 2011, pp. 281-318; Pesticide residues in the

environment in: Pesticides: evaluation of environmental pollution. [Eds.] Leo M.L. Nollet and Hamir Singh Rathore. CRC Press Taylor & Francis Group, Boca Raton 2012, pp. 149-204, Advanced spectroscopic detectors for identification and quantification: UV-Visible, fluorescence, and infrared spectroscopy in: Instrumental thin-layer chromatography. [Ed.] Colin F. Poole. Elsevier 2015, Amsterdam, Netherlands, pp. 239-248. He is also co-author with Prof. dr. T. Dzido of chapter: Chambers, sample application and chromatogram development in: Thin-Layer Chromatography in Phytochemistry edited by M. Waksmundzka-Hajnos, J. Sherma, T. Kowalska, Boca Raton 2008, CRC Press Taylor & Francis Group, pp. 119-174. Dr. Tuzimski is recipient of two grants from Polish Ministry of Science and Higher Education (2005-2008 and 2009-2011) for the study and procedure implementation of new methods of analysis of pesticides in original samples (e.g., water, medicinal herbs, wines, food), with application of modern extraction (QuEChERS) and analytical methods combined with diode array scanning densitometry (and mass (MS) or tandem mass spectrometry (MS/MS)). Dr. Tuzimski reviewed 250 submitted research manuscripts (Journal of Chromatography A, Journal of Chromatography B, Food Chemistry, Food Analytical Methods, Journal of Separation Science, Journal of Chromatographic Science, Journal of AOAC Int., Journal of Planar Chromatography – Modern TLC). He taught analytical and physical chemistry exercises with second-year students of the Faculty of Pharmacy. He also was instructor in post graduate chromatographic courses for scientific research staff from Polish universities and workers from industry. He was promoter of research work of 6 masters of pharmacy and supervised the research work of 10 masters of pharmacy. He is member of Polish Pharmaceutical Society. Dr. Tomasz Tuzimski is a member of the editorial board of Acta Chromatographica, The Scientific World Journal/Analytical Chemistry, Advances in Analytical Chemistry, American Journal of Environmental Protection, International Journal of Biotechnology and Food Science (IJBFS), Advancement in Scientific and Engineering Research (ASER). Dr. Tuzimski edited six Special Sections on pesticide residue analysis of Journal of AOAC International (2010, 2012, 2014, 2015, 2016, 2017 (in press)). For CRC/Taylor & Francis Group, Dr. Tuzimski coauthored and coedited with Professor Joseph Sherma the book titled 'High Performance Liquid Chromatography in Pesticide Residue Analysis' (was published in 2015) and the book 'Determination of Target Xenobiotics and Unknown Compounds Residue in Food, *Environmental and Biological Samples*' (will be published 6/15/2018).

Research Interest (short data for period time: 2013-2017)

Tomasz Tuzimski is adjunct professor in Department of Physical Chemistry at Faculty of Pharmacy with Medical Analytics Division, Medical University of Lublin (Lublin, Poland). My scientific interest include the theory and application of liquid chromatography, taking into considerations optimisation of chromatographic systems for separation and quantitative analysis of analytes in multicomponent mixtures of xenobiotics and unknown compounds residue in food, environmental and biological samples.

The main of research interest during last four years (2013-2017) was to develop analytical methods for xenobiotics analysis in food products of plant and animal origin by high performance liquid chromatography (HPLC-DAD, HPLC-MS and/or HPLC-MS/MS). In order to accomplish this goal, optimization experiments were conducted for,

both, the chromatographic conditions of separation and quantitative analysis, as well as sample preparation approach for efficient isolation of the analytes (eg., pesticides, 5-nitroimidazoles (NDZs), sulfonated azo dyes, drugs, bisphenol A and its metabolites) form different food samples and subsequent extract clean-up. Sample preparation procedures for the analysis of various commodities, including sunflower seeds, edible oils, milk, soya milk, wines, different beverages, candies and caviar/fish roe, were developed by the optimization of the conditions of analytes isolation from complex matrices and extracts clean-up. For that purpose, different extraction and clean-up techniques were used, mainly QuEChERS (quick, easy, cheap, effective, rugged and safe), ultrasound assisted extraction (UAE), solid-phase extraction (SPE), dispersive-SPE (d-SPE) and matrix solid-phase dispersion (MSPD).

Additional of research (2017, in cooperation) were:

- application of mobile phases containing ionic liquid for the separation of a mixtures of selected isoquinoline alkaloids by 2D-TLC and identification of analytes in *Coptidis Rhizoma* (Huang Lian) extract and *Thalictrum foetidum* root extract by TLC and HPLC–DAD;
- identification and quantitative analysis of new cancer prodrug in the serum samples: the determination of ethyl [4-oxo-8-(3-chlorophenyl)-4,6,7,8-tetrahydroimidazo[2,1-c][1,2,4]triazin-3-yl]acetate (ETTA), a new anticancer prodrug, using adsorptive stripping voltammetry (AdSV) was published for the first time.

SUDHAKAR YADLAPALLI

Address:- Flat No- 214, Manasa Nest, M. J. Colony, Moula Ali, Secunderabad, AP, India Mobile-+91-7569160006, +91-040-27136211 (R) *E-mail:-yadlapallii@hotmail.com*; Date of Birth:- 31.May.1968, Updated on: 16.01.2017

Professional in the area of laboratory management and analytical testing activities in the fields of Food and Agricultural, Drugs and Pharmaceuticals, Environmental, Minerals and Bio analytical with more than 20 years experience.

Areas of expertise:

- ✓ Laboratory management (Resource planning, Budgetary compliance, Forecasting and optimum utilization of Human Resource and Equipment to achieve Operational and Service Excellence).
- ✓ Exposure to wide spectrum of analytical testing activities in the fields of Food and Agricultural ,Drugs and Pharmaceuticals ,Environmental, Minerals and Bio Analytical,
- ✓ Sample preparatory techniques: Solid Phase Extraction, Solid phase micro extraction, Gel permeation Chromatography etc.
- ✓ Hands on experience on Analytical Instrumentation :Mass Spectrometry various technologies like GCMSD, GCMS (Ion trap) ,GCMSMS, LCMSMS, GC TOF MS, LCMS Q-TRAP, ICP MS, HRGC −HRMS (Auto Spec Waters).
- ✓ Method development and validation as per standard methodologies specified by European Commission, USFDA, USEPA and other International guidelines.

PUBLICATIONS

- i. Contributed in collaborative study toward method to detect agricultural residues at sub –parts–per-billon levels in <u>Soft drinks published as AOAC</u> <u>Official method 2007.08</u>, <u>First Action</u>.
- ii. Contributed in Multi lab study for Determination of metals in infant formula [AOAC 2011.19] published as AOAC official method. <u>AOAC 2011.19 ISO/DIS 20649 | IDF 235 (2015)</u>

- iii. Contributed in Multi lab study for Estimation of iodine in infant formula [AOAC 2012.15 published as AOAC official method). <u>AOAC 2012.15</u> <u>ISO/DIS 20647 | IDF 234 (2015)</u>
- iv. Contributed in Multi lab study for Estimation of vitamins in infant formula [AOAC 2011.11]
- v. AOAC SMPR(®) 2016.001. J AOAC Int. 2016 Jul; 99(4):1120-1. AOAC SMPR 2016.001 Standard Method Performance Requirements (SMPRs®) for Determination of Ethanol in Kombucha
- vi. AOAC SMPR(®) 2016.002. J AOAC Int 2016 Jul;99(4):1122-4
 AOAC SMPR 2016.002 Standard Method Performance Requirements
 (SMPRs®) for Detection and Quantization of Selected Food Allergens

Current Assignment: From Sep 2011 to till date

From September 2011 to till date associated as Vice President with FirstSource Laboratory Solutions LLP (Analytical Services)

Job responsibilities at FSLS (AS):

- Establishment and strategic growth of analytical testing laboratory to meet the requirements of export and domestic market for various commodities and products.
- Authorized to act as Top management independently and to take all the policy and financial decisions related to establishment and operation of Laboratory.
- Authorized to take the organizational decision related to strategy, operational and Regulatory aspects.

Previous Work Experience:

From Dec 2008, to Sep 2011: Associated as Head-Multi Labs (India) with SGS India Pvt. Ltd.

Job responsibility at SGS India:

(Reporting to Managing Director and member of affiliate operational council at SGS India)

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Leading the strategic growth of group of Multi laboratories (with more than 200 direct and indirect reportees and multiple expertise in the area of ultra trace analysis, residue analysis, metal and mineral analysis, Food and agricultural analysis, water analysis and environment monitoring) to achieve operational excellence and service excellence.

During two and half year tenure, laboratories have achieved:

Operational, Technical and Service excellence:-

- ✓ Lead the validated projects for more than 100 methods for expansion of analytical scope
- ✓ Achieved all major national and international accreditations, recognitions and approvals
- ✓ Achieved all major corporate approvals at all the locations.
- ✓ Focused approaches to improve Health and Safety practices in the labs.
- ✓ Laboratories have achieved more than 95% success rate in various PT program of international repute.
- ✓ Improvement of on-time delivery from 40% to more than 95% by developing a daily delay monitoring and follow-up system in all the labs.
- ✓ Optimized manpower utilization from less than 135 test/per week/FTE to more than 650 test / per week/ FTE.
- ✓ Developed the data extraction mechanism in order to get the harmonized data for set of same type of laboratories for core key performance indicator and weekly report MIS system in the labs of SGS India.

Projects:-

- ✓ Lead relocation projects for four laboratories, with developing a world class facility at Ambattur Chennai.
- ✓ Lead more than 5 work place projects for MPP course trainees.
- ✓ Lead the migration of labs from STAR LIMS (Paper based data management system) to C-Clas LIMS (Paper less data and information system).

(From November 1, 2007 to November 2008)

Associate Vice President – Residue Lab with additional charge of Food and Agricultural, Drugs and Pharma Dept. at Vimta Labs ltd, Hyderabad.

(From September 2005 to November 2007)

Manager – Analytical, Vimta Labs Limited, Hyderabad

Job Responsibilities

- ✓ Lead a team of 3 Group Leaders and 25 scientists for Round-the-clock lab operations trouble shooting and Analytical Method Development and validation
- ✓ Assigning the projects to Group Leaders
- ✓ Scheduling the projects to meet the sponsor and regulatory requirements
- ✓ Conducting trainings, maintaining training records of all Scientists
- ✓ Interacting with the sponsors and explaining about the bio-analytical and Analytical facility and systems.
- ✓ Involving in regulatory audits Co-ordination with Quality Assurance Department for implementation of GXPs, GLP and GMP

(From September 2003 to Sep 2005)

Group Leader – Analytical, Vimta Labs Limited, Hyderabad

Job Responsibilities

- ✓ Guidance to Scientist for Method development and Validation
- ✓ Development of Novel methods for Trace analysis
- ✓ To ensure in time delivery of test reports
- ✓ Review of division operation on day to day basis Contract review and Job allocation.
- ✓ Identify SOP needs: Preparation, Implementation and updation
- ✓ To provide better working environment and orientation towards goals for the team members

✓ Responsible for departmental inventory items procurement and their effective utilization.

July 2001 to September 2003

Scientist- Analytical, Vimta Labs Limited, Hyderabad

Job Responsibilities

- ✓ Method development and validation as per standard methodologies.
- ✓ Analysis of different products Food and Agricultural, Drugs and Water.

June 1998 to July 2001

Junior executive in Quality control Aurobindo Pharma Ltd, Unit V Pashamylaram

Job Responsibilities:

- ✓ Quality Control
- ✓ Bulk Drugs Analysis as per IP, BP, USP.
- ✓ Analytical Development in deploying chemical & Instrumental Methods

Bulk Drug

- ✓ In- Process Control Methodologies for Intermediates & Finished Products
- ✓ Implementation of All QA norms applicable to API Industry- Deviations, Change controls, IQA, Customer Complaints, and Validations etc. Total Process Control (Analytical) on HPLC for 7-ACCA Production in Plant
- ✓ Standardization of HPLC Methods for Intermediates and Finished Products Viz. 6-APA, 7-ADCA, MAEM, TAC, ACACY and Cephalosporin: Cefalexin, Cefadroxil, Cefradine, Cefixime trihydrate, Cefuroxime Axetil, Cefuroxime Acid, Cefotaxime acid, Ceftrioxone Disodium, Cefazolin Sodum Cephalothin Acid, Cefoperozone Acid, Ceftiofur Acid.
- ✓ Semi-synthetic penicillin : Ampicillin Trihydrate, Ampicillin Anhydrous etc

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✓ Standardization of GC Methods for analyzing Various Solvent Residues / Recovery Streams Viz. MDC/HMDO, Toluene / HMDO, Ethylacetoacetate, Methylacetoacetate, Ethyl acetate / THF, DMF, Acetone etc.

May 1995 to June 1998

Scientist - Analytical, Vimta Labs Ltd., Hyderabad, India

- ✓ Significant Contributions to development of Laboratory
- ✓ Environmental Monitoring: Water & Wastewaters, Soils & Industrial Sludges & Analysis (About 200 Physico Chemical Parameters and organic parameters as per USEPA and WHO).
- ✓ Water Quality Monitoring (Surface, Ground, Estuarine, Sea-Waters)

Achievements at Vimta:

- ✓ Actively engaged for the Growth of Trace analysis laboratory in Vimta for its Global Reputation
- ✓ Solely responsible for setting up of full-fledged Mass spectrometry Lab in Vimta (range of mass spectrometers from Single Quadruple to High resolution mass spectrometer)
- ✓ Completed around 100 Method developments and Validation in various fields like Bulk drugs, Trace analysis, Ultra trace analysis and Bio analytical fields
- ✓ Ultra-trace level analysis by using High resolution mass spectrometer WATERS AUTOSPEC.

Bio-Analytical:

- ✓ Engaged in the area of Bio-analytical method development/validation as per US-FDA guidelines
- ✓ Successfully completed a critical project for simultaneous determination of two antihypertensive drugs (Isosorbide dinitrates and its metabolites and Hydralazine) in blood plasma involving derivatization and detection with different instrumental techniques

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- ✓ Pivotal in the development and validation of over 10 assays using plasma and serum as the bio-matrices using GC-MS/MS instruments
- ✓ Leachable and Extractable:
- ✓ Developed the capability for testing Leachables and Extractables
- ✓ Supported the Pharma majors in Leachable and Extractable projects

Academic Qualifications

- ✓ M. Sc Chemistry, Andhra University, 1994, First Class
- ✓ B.Sc., Nagarjuna University, 1991, First Class

Membership

- Worked as member of the expert Group committee to review method of analysis of pesticide residues in carbonated water as per International standards by Ministry of Health, Govt. India
- Working as a member of **AOAC SPSFAM Allergens ERP.**
- One of the members in the committee to study pesticide residues and contaminants in organic products in India.
- Worked as external expert for review and finalization of DGHS manual under FSSAI.
 India
- Member in AOAC Stakeholder Panel on Infant Formula and Adult Nutritionals (SPIFAN) and participating multi lab collaborative study testing for vitamins and minerals in Infant formula.
- Member in AOAC Stakeholder Panel on Strategic Food Analytical Methods (SPSFAM)

Training

- ✓ Good Laboratory Practices (GLP) by an expert of Technical Assessment Systems, USA, Sponsored by Vimta Labs Ltd.,,Hyderabad,Aug.21-25,1995.
- ✓ In House Training on ISO 9002 Quality Systems, Sponsored by Vimta Labs Ltd., Hyderabad, April 1995.

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- ✓ Undergone basic training on GC MS TOF (2004-08-25 to 2004-09-01)
- ✓ Undergone on LCMSMS SCIEX API 2000 and 3000 Instruments (2004-04-12 to 2004-04-16)
- ✓ Under gone advanced training course on GCMSTOF (2005-04-11 to 2005-04-15)
- ✓ 2005-12-06 to 2005-12-07 successfully attended a Training course Good Laboratory practice.
- ✓ Quattro Micro GCMSMS operators Training course.(2006-07-17 to 2006-07-21)
- ✓ HRGC-HRMS operators training course (2006-07 -10 to 2006-07-20)

Honors / Awards

- ✓ Technical Excellence award from CMD, M/s. Vimta Labs Ltd during Vimta Bidecinal celebrations in the year 2004
- ✓ Customer delight award from CMD M/s. Vimta Labs Ltd., during 23rd foundation day Aug 2007.
- ✓ Appreciation received from CMD for achievement of EU accreditation for analysis of Pentachlorophenol in Guar gum samples.
- ✓ Technical and Scientific Excellence award for year 2015-2016 from AOAC, International.

Foreign Visits

- ✓ Visited South Africa for Advanced Training on GC TOF MS and 3 D systems in the period of 2005-04-08 to 2005-04-17
- ✓ Visited Europe for identifying the root cause for positive detection of pesticide residues in Indian Grape consignments exported from India to Europe.
- ✓ Visited United States of America to attend Annual meet of AOAC and also to receive the award from AOAC International.
- ✓ Visited Germany to Participate in Fruit Logistic 2017.

SUDHAKAR YADLAPALLI

Place: Hyderabad Date: 16-01-2017

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