

Brian T. Buckley, Ph.D.*Environmental and Occupational Health Sciences Institute*

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EDUCATION

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| 1990 | Post Doctoral Fellowship
Oak Ridge National Laboratory |
| 1989 | Ph.D. in Analytical Chemistry with a Minor Organic Chemistry
North Carolina State University |
| 1983 | B.S. in Chemistry
University of New Hampshire |

Personal statement

I am a Ph.D. analytical chemist and I am a nationally and internationally recognized authority on inorganic analytical chemistry, as well as a scientific and technical expert in speciation and species intact extraction. I provide advisory support to both State and Federal agencies whose responsibility it is to evaluate analytical methodology and set policy based on the limitations of the measurement. In my current position I have responsibility for pursuing analytical excellence and providing expert advice to researchers both within the Institute and to decision makers at the University. I provide programmatic leadership to the laboratory staff, oversight and quality control of analytical data collection and release as well as scientific expertise to the Institute's principal investigators. I am responsible for anticipating future analytical needs of Institute investigators and creating a programmatic response to meet those needs. This includes evaluation of state-of-the-art instrumentation and requires detailed knowledge of current practices as well as creativity in planning and implementation. I also provide expertise professionally, as a consultant, in many areas of analytical chemistry including assays of biological fluids for assessment of potential metal toxicity.

As Acting Executive Director I have created operational policy within a Research Institute of more than 250 people. I also had budget management and fiscal accountability, for an Institute operating budget of more the \$2M. I was responsible for budget initiatives within the Institute and supervised departments including: safety, information technology, facilities management and laboratory services. The latter required evaluation of potential implementation of a LIMS. I initiated scientific programs in emergency response to chemical, biological or nuclear terrorism incidents and on engineered foods. As Executive Director, my primary responsibility was to integrate the support services for the Institute's researchers. I also provided direction to 14 professional staff who reported to me directly.

AREAS OF EXPERTISE

My current areas of expertise include: development of new analytical inorganic, organic and organometallic methods for biological and environmental samples; evaluation of new analytical technologies for potential application to environmental health biomonitoring projects; development of quality assurance programs for Institute investigators and providing logistical support for biomonitoring projects. I have initiated programs in analytical mass spectrometry covering all areas from proteins to atoms. I have been responsible for development of programs in assessing bioavailability, metal speciation, small molecule isolation and identification, metabolite profiling and metabolomics. My expertise also includes instrument modification and interface for method optimization.

PROFESSIONAL EXPERIENCE

Executive Director Laboratories, *Environmental and Occupational Health Sciences Institute, UMDNJ/Rutgers University, Piscataway, N.J. 2/03 -Present.*

Reporting to the Director, responsible for creation of a fee for service based analytical core facility within the Institute. Generates and administers budgets for laboratory operation and modification expenses of approximately \$1.0 M. Creates an organizational structure to all steps in operations of an analytical laboratory including sample tracking, data review quality assurance and billing. Created a proteome analytical mass spectrometer center in conjunction with gel electrophoresis center. Currently assembling a metabolomics facility including; sample preparation schemes, analytical instrumentation, a searchable library, a relational database and multivariate analysis tools. Generates income streams from both internal and external analytical core facility users. Initiates new methods development projects for Institute users and authors research proposals funded for an excess of \$200,000 in 2003. Responsible for more than seven faculty staff and student personnel. Organized external presentations for external customers describing analytical capabilities of the facility. Primary interface to multiple external customers including small and medium sized pharmaceutical companies who will use these facilities as their primary source for analytical methods development. Recently negotiated contract for analytical research with a pharmaceutical company including confidentiality and intellectual property agreements. Responsible for startup drug analytical methods development in conjunction with investigators from RU School of Pharmacy. Responsible for QA/QC measures within the facility and have begun to migrate the laboratory to GLP like methods.

Acting Executive Director, *Environmental and Occupational Health Sciences Institute, UMDNJ/Rutgers University, Piscataway, N.J. 11/00-2/03*

Reporting to the Director, responsible for initiation and implementation of all administrative activities in \$30M research Institute (operating budget ~\$2M) dedicated to examining health risks as they relate to environmental contamination. Provided support for the 80 plus faculty, 120 plus students and postdocs and 50 plus staff. Responsible for governance of all aspects of central administration. Had greater than 10 direct reports and responsibility for performance evaluations. Had responsibility for all higher level Institute day to day activities as well as long term planning for operations. Mediated most disputes among faculty and was their primary interface for all external operations functions. Was responsible for all aspects of IT, business, laboratories safety and facilities operations. Reviewed and approved operating expenses, major Institute purchases and building modifications. Principal author for \$2M building modification grant from NIH. Created business plan for debt service related to construction costs. Reviewed and approved all architectural drawings and plans for construction of proposed addition. Negotiated a change in the indirect cost return agreement between Laboratory for Cancer Research, EOHSI and Rutgers University. Acted as EOHSI ambassador to University for most events and as its

representative for external meetings, both nationally and internationally. Served as EOHSI representative for University initiatives such as Homeland Security/Defense. Served on committee to assess best direction for concerted University effort in conducting Homeland Security/Defense research projects. Served as project manager for EOHSI initiative in homeland security called Quantum Leap. Project designed to provide real-time risk assessment to health agencies evaluating field data of illness reports against possible threats from chemical, biological and nuclear agents.

Director, NIEHS Center Chemical Analysis Facilities Core, *Environmental and Occupational Health Sciences Institute, UMDNJ/Rutgers University, Piscataway, N.J. 1/00-Present.*

Responsible for presentation of facility core activities and report generation during annual review. Responsible for creation and maintenance of sample analysis tracking of facility cores. Interface with all Center members requesting analysis.

Adjunct Associate Professor, Environmental and Occupational Health Division *School of Public Health, UMDNJ, Piscataway N.J. 06/02- present*

Direct the research of three former MPH students and one PhD candidate. Share in committee oversight of others.

Member, Graduate Faculty of the Joint Graduate Program in Toxicology, *Earnest Mario School of Pharmacy, Rutgers University, Piscataway NJ 06/05-present*

Mentor graduate students. Provide working environment and suitable graduate research projects related to toxicology

Member, Graduate Faculty of Environmental Science, *Cook College, Rutgers University, New Brunswick, N.J. 10/95 - Present.*

Primary advisor for two former Ph.D. students and currently directing research for two others. Served on multiple additional advisory committees. Directed the research activities of five post-doctoral fellows and one research associate.

Director of Laboratories and Facilities, *Environmental and Occupational Health Sciences Institute, UMDNJ/Rutgers University, Piscataway, N.J. 6/94- 11/00.*

In addition to specific responsibilities described below, was responsible for all building installations, renovations repairs and upgrades. Responsible for direction and coordination of all major building and laboratory construction projects including multiple laboratory and office reconstruction. Interfaced directly with Rutgers Facilities staff. Coordinated the removal and remediation of fiberglass insulation in the building as a series of weekend projects, a \$650,000 project. Required the removal of all laboratory and office items and subsequent replacement with minimum disruption (3 days or less). Created or reviewed safety policies in the institute. Created solutions to internal safety issue such as pregnant laboratory workers and implemented new safety protocols for the use of radioactive isotopes not previously used on the university. Serve on internal committees for radiation and chemical safety and on the University's external laboratory safety committee. Acted as Co-PI and Co-I to Institute investigators on grants requiring analytical expertise. Developed assays for the quantification of biologically relevant organic compounds by HPLC/MS or GC/ITMS. Responsible for the development of methods for the detection of metabolites of contaminants in target organ toxicity studies. Responsible for development of new assays for semi-volatile organic chemicals in environmental samples at concentrations far below previous detection limits. Responsible for development of microwave assisted solvent extraction techniques for organic, inorganic and organometallic analytes.

Administrative Director of Laboratories, Environmental and Occupational Health Sciences Institute, UMDNJ/Rutgers University, Piscataway, N.J. 6/92- 6/94 Reporting to the Executive Director was responsible for administration of Analytical center which houses more than \$1M worth of chemical instrumentation. Responsible for interface between investigators and research analysts. Responsible for direction of analytical personnel in methods development. Direct research activities of B.A. and M.S. and Ph.D. research analysts. Control and project budget for analytical lab and responsible for cost recovery from analytical center projects. Responsible for evaluation and recommendation of all major Institute instrument purchases. Developed speciation technique for fate and transport studies of metals in the body and the environment. Developed assay for determination of bioavailable fraction of contaminants using synthetic bio fluids. Quality assurance resource for Institute. Acted as quality assurance officer for EPA and NIEHS projects including conducting of field audits. Developed extensive QA protocols for large projects. Acted as a quality assurance resource for institute investigators by reviewing new protocols and providing protocol or standard operating procedure templates for investigators who need to develop a QA document.

Laboratory Manager, Nestle Quality Assurance Laboratory Elemental and General Chemistry Groups. Dublin Ohio 12/90-6/92

Responsible for supervision of 14 personnel and approval of analysis results for food and cosmetics. Responsible for supervision of more than 200 different wet chemical tests and more than \$300, 000 of chemical instrumentation. Produced much of the primary nutritional labeling data used on many of Nestle products. Received funding from internal grant request and purchased an ICP/MS. Designed lab to house ICP/MS with clean room 1000 conditions. Established ICP/MS analysis protocols.

Post Doctoral Fellow, Oak Ridge National Laboratory. Oak Ridge Tennessee 8/89-12/90.

Research focus: Resonant and resonant enhanced ionization spectroscopy in low pressure environments including thermionic diodes and the Finningan ion trap detector/mass spectrometer. Developed measurement techniques with high power tunable lasers.

Graduate Teaching Assistant, North Carolina State University, Raleigh North Carolina 9/84-8/89.

Responsible for course development of graduate instrumentation, advanced spectroscopy, electronics and programming courses. Taught part of a graduate level course on atomic spectrometry.

Research Chemist, Army Corps. of Engineers Cold Regions Research and Engineering Lab (CRREL) Hanover New Hampshire 12/83-8/84

Research focus: Methods development HPLC/GC. Responsible for extraction techniques development for analysis of contaminants in ground water.

Chemist for Consulting Center, University of New Hampshire, Durham New Hampshire. 6/83-8/84

Research focus: Methods testing and development of analytical procedures for various industrial applications including assays for the reclamation of acids used in the semi-conductor industry. Required design of elevated temperature inert atmosphere transfer of extremely hazardous chemicals

AWARDS

Virgil Payne Award for Outstanding Chemical Service Achievement 2003

NIH Travel Award Metabolic Profiling Conference 2003
ACS SEED program excellence in participation, 2002
Administrative Excellence 1997-1998
Administrative Excellence 1996-1997
Administrative Excellence 1994-1995
Outstanding Teaching Award 1987-1988

CURRENT RESEARCH GRANTS

Understanding Cellular Damage Related to Chromium's Teratogenic and Mutagenic Properties by Measurement of Intra and Extra Cellular Redox Cycling with Stable Isotope Labels, NIEHS Pilot study, \$25,000, P.I.

Determination of Purgable Organic Compounds and Polar Organic Compounds Using Ion Trap Mass Spectrometric Techniques to Complement the Demonstration Project Methods, 2008-2009, NJ Department of Environmental Protection \$75,000, P. I

Chromatographic Resolution of Stable Isotopes of Chromium in Air Particulate, 2007-2009, NJ Department of Environmental Protection, \$25,368. Co-I

NIEHS Chemical Analysis Facility Core Operations, 2009-14. NIEHS Center of Excellence ES05022, \$492,675 Director of Facility Core

SUMMARY OF COMPLETED RESEARCH PROJECTS

Twenty four additional Research grants as PI or Co-PI totaling more than \$4 M from agencies including NSF, DoD, ARI and NJDEP

ADVISORY COMMITTEES

EPA SW-846 Inorganic/Metals Workgroup, 2001-
Rutgers Research/Technical Titles Review Committee 2003-
Picatinny Coordination Planning Committee, 2003-2004
NJDOHSS Biomonitoring Advisory Committee 2002-2003
University Laboratory Safety and Design Committee, 1998-
NJ Future Advisory Committee for the Sustainable Goals and Indicators Process, 1997-1999
Science Advisory Committee for James J. Howard (NOAA) Laboratory, 1994- 1996
NJDEP Pesticide Review Committee, 1995 - 1997

PROFESSIONAL AFFILIATIONS

Editorial Board Journal of Environmental and Public Health 2009 - present
NIEHS Center of Excellence Analytical Facility Core, Director
Society of Research Administrators International
American Chemical Society Monmouth County Section
 Chairman 1994-1995
 Executive Committee 1994-2005
 Councilor 1997- 2000
 Treasurer 2001-2003
Society for Applied Spectroscopy
 Governing Board Councilor at large 2000-2002

OUTSIDE AFFILIATIONS

President Board of Education, Sea Girt School District 2005 – present
Member Board of Education, Sea Girt School District 2004 – 2005
Member Board of Directors Spring Lake Sea Girt Little League 2002-2007
Vice President Sea Girt Education Foundation 2006 - present
President Sea Girt Real Estate Owner Association, 1999-2002
Vice President Sea Girt Real Estate Owner Association, 1996-1999

GRADUATE STUDENT THESIS ADVISOR

Steve Spayd, Dissertation title: Using Biomonitoring Data to Evaluate Arsenic Removal Strategies for Private Wells in the Piedmont Region of NJ, May 2009.

Ruimin Xie, Dissertation title: Speciation of Arsenic And Platinum In Body Fluids Using Liquid Chromatography And Hydride Generation Coupled To Inductively Coupled Plasma Mass Spectrometry; completed January 2007

Robert Stiles, Dissertation title: Extraction Strategies For The Detection Of Semi Volatile Organic Contaminants In Ground And Treated Waters In New Jersey; completed October 2005

Ill Yang, Dissertation title: Applications Of Ion Trap Mass Spectrometer For Semivolatile Organic Pollutant Monitoring In Environmental Samples; completed October 2003

Current Graduate Students

Haiping Wang, Dissertation Project: Understanding Bisphenyl-A Metabolic Processes in Culture and Animals with Mass Spectrometric Methods and Theoretical Mass Modeling

Min Yoon, Dissertation Project: Optimizing HPLC/MS and GC/MS Analytical Techniques for Monitoring Non Regulated Contaminants in Municipal Drinking Water Samples

PREVIOUS POST-DOCTORAL TRAINEES

Robert Stiles *Evaluation of Multiple Analytical Techniques for Hexavalent Chromium, 2005-2007*

John Hunter *Assessing the Bioaccessible Fraction of Tungsten In Particulate Using a Lung Fluid Simulant 2003-2004*

Qiang Tu *Development of Mercury Speciation Measurement Methods for Use as Predictors of Bioavailability, 2001-2002*

Eric Fisher *Development of Speciation Extraction Methods for the Analysis of Mercury Compounds in the Environment. 1998-2000*

Mark Heintz: *Using SFC and Chromatography Coupled with Mass Spectrometry for Speciation of Mercury in Environmental Samples 1995-1996*

PEER REVIEWED PUBLICATIONS and CHAPTERS

1. Merlin, M., Marques-Baptista, Yang, H., Ohman-Strickland, P., Aquina and **Buckley, B.** Evaluating Degradation with fragment formation of Prehospital Succinylcholine by Mass Spectrometry, *Emergency Medicine* accepted for publication
2. Whitehead, Jr. R., Montesano, A., Jayatilaka, N., **Buckley, B.**, Winnik, B., Needham, L. and Barr D., Method for measurement of the quaternary amine compounds paraquat and diquat in human urine using high-performance liquid chromatography-tandem mass spectrometry, *J. Chrom. A.*, accepted for publication.
3. Winnik, B., Barr, D., Thiruchelvam, M., Montesano, A., Richfield E., and **Buckley, B.**, Quantification of Paraquat, MPTP, and MPP+ in Brain Tissue using Microwave Assisted Solvent Extraction (MASE) and High Performance Liquid Chromatography-Mass Spectrometry, *Anal. and Bioanal. Chem.* **395**:195–201, 2009.
4. Richardson, J., **Buckley, B.**, Winnik, B., O`Suilleabhain, P, Diaz-Arrastia, R., German, D., Elevated Pesticide Levels in the Serum of Patients with Parkinson's Disease, *Archives of Neurology*, **66**(7): 870-875, 2009.
5. Prasad,K., Tarasewicz, E., Mathew, J., Ohman Strickland, P., **Buckley, B.**, Richardson, J., and Richfield, E., Toxicokinetics and Toxicodynamics of Paraquat Accumulation in Mouse Brain *Experimental Neurology*, 215 2009 358–367
6. Barr D and **Buckley B.** Assessing human exposure to environmental toxicants. In: Encyclopedia of Environmental Health. Jerome Nrigau (ed.). Part 3, chapter 7. In press (INVITED)
7. Riedt, C., **Buckley, B.**, Brolin, R., Ambia-Sobhan, H., Rhoads, G., Shapses, S., Blood Lead Levels and Bone Turnover with Weight Reduction In Women, *J Expo Sci Environ Epidemiol.* 2009 Jan;19(1):90-6. Epub 2008 Mar 5.
8. Nagourney, S.J., Wilson,S.A., **Buckley, B.**, Kingston, H. M., Yang S-Y and Long, S.E., Development of a NIST Standard Reference Material for Cr(VI) in Contaminated Soil, *J. Anal. At. Spectrom.*, 23, 1550 2008, advanced publication DOI: 10.1039/b808488b.
9. Lee, H. J., Paul, S., Atalla, N., Thomas, P., Lin, J., Yang, I., **Buckley, B.**, Lu, G., Zheng, X., Lou, Y-R., Conney, A., Maehr, H., Uskokovic, M. and Suh, N., Gemini Vitamin D Analogs Inhibit Estrogen Receptor Positive and Estrogen Receptor Negative Mammary Tumorigenesis without Hypercalcemic Toxicity, *Cancer Prevention Research*, 1(6), 476-484, 2008.
10. Sang, S., Lee, M.-J., Yang, I., **Buckley, B.** and Yang, C.S. Human urinary metabolite profile of tea polyphenols analyzed by liquid chromatography/electrospray ionization tandem mass spectrometry with data-dependent acquisition *Rapid Commun. Mass Spectrom.* 2008; 22: 1567–1578
11. Stiles, R., Yang, I., Lippincott, L., Murphy, E., **Buckley, B.**; Measurement of Drinking Water Contaminants by Solid Phase Microextraction (SPME) Initially Quantified in Source Water Samples by the USGS, *Environ. Sci. and Tech.*, 42 (8): 2976-2981, 2008
12. Petchuay,C., Thoumsang, S., Visuthismajarn, P., Vitayavirasak, B., **Buckley, B.**, Hore, P., Borjan, M., and Robson, M., Analytical Method Developed for Measurement of Dialkylphosphate Metabolites in Urine Collected from Children Non-Occupationally Exposed

to Organophosphate Pesticides in an Agricultural Community in Thailand, *Bull. Environ. Contam. Toxicol*, 81:401–405, 2008.

13. Williams, B., Barr, D., Wright, J.M., **Buckley, B.**, Magsumbol, M., Interpretation of Biomonitoring Data in Clinical Medicine and the Exposure Sciences, *Toxicology and Applied Pharmacology*, 2008 May 9. PMID: 18561969.
14. Prasad, K., Winnik, B., Thiruchelvam, M., **Buckley, B.**, Mirochnitchenko, O. and Richfield, E., Prolonged Toxicokinetics and Toxicodynamics of Paraquat in Mouse Brain, *Environmental Health Perspectives* 115 (10): 1448-1453 2007.
15. Sang, S., Yang, I., **Buckley, B.**, Ho, C-T., and Yang, C.S. Autoxidative Quinone Formation In Vitro and Metabolite Formation In Vivo From Tea Polyphenol (-)-Epigallocatechin-3-Gallate: Studied by Real-Time Mass Spectrometry Combined with Tandem Mass Ion Mapping, *Free Radical Biology & Medicine* 43: 362-371, 2007.
16. Xie, R., Johnson, W., Spayd, S., Hall, G. and **Buckley, B.**, Determination Of Total Toxic Arsenic Species In Human Urine Using Hydride Generation Inductively Coupled Plasma Mass Spectrometry, *J. Anal. Atomic Spec.*, **22**, 553 – 560, 2007.
17. Xie, R., Johnson, W., Rodriguez, L., Gounder, M., Hall, G. and **Buckley, B.**, A Study Of The Interactions Between Carboplatin And Blood Plasma Proteins Using Size Exclusion Chromatography Coupled To Inductively Coupled Plasma Mass Spectrometry, *Anal. and Bioanal. Chem.* **387**:2815–2822, 2007.
18. Stiles, R., Yang, I., Lippincott, R.L., Murphy, E., and **Buckley, B.**, Identifying Potential Sources of Background Contaminants Resulting From Solid Phase Extraction and Solid Phase Microextraction, *J. Sep.Sci.*, **30**, 1029 – 1036, 2007.
19. Xie, R., Johnson, W., Spayd, S., Hall, G. and **Buckley, B.**, Arsenic Speciation Analysis In Human Urine Using Ion Exchange Chromatography and Inductively Coupled Plasma Mass Spectrometry, *Anal. Chim. Acta.*, **578**, 2, 186-194, 2006.
20. Agrawal, S., Winnik, B., **Buckley, B.**, Mi, L., Chung, F.-L., and Cook T., Simultaneous Determination of Sulforaphane and its Major Metabolites from Biological Matrices with Liquid Chromatography-Tandem Mass Spectroscopy, *J. Chrom. B.*, 840, 12, 99-107, 2006.
21. Shalat, S., Solo Gabriele, H., Fleming, L. E., **Buckley, B.**, Black, K., Jimenez, M., Shibata, T., Durbin M., Graygo, J., Stephan, W., Van De Bogart, G., A Pilot Study of Children's Exposure to CCA-Treated Wood from Playground Equipment *Science of the Total Environ.* **367**, 80-88, 2006.
22. Iba, M., Fung, J., Chung, L., Zhao, J., Winnik, B., **Buckley, B.**, Chen, L., Zelikoff, J. and Kou, Y., Differential inducibility of rat pulmonary CYP1A1 by cigarette smoke and wood smoke *Mutation Research*, **606**, 1-11, 2006.
23. Thiruchelvam, M., Prokopenko, O., Cory-Slechta, D.A., Richfield, E.K., **Buckley, B.**, Mirochnitchenko, O., Overexpression of superoxide dismutase or glutathione peroxidase protects against the paraquat+maneb-induced Parkinson's disease phenotype. *J. Biol. Chem.*, **280**, 1 23, 22530–22539, 2005.

24. Yiin, L-M., Millette, J., Vette, A., Ilacqua, V., Quan, C., Gorczynski, J., Kendall, M., and Chen, L., Weisel, C., **Buckley, B.**, Yang, I., and Lioy, P. "Comparisons of the Dust/Smoke Particulate that Settled Inside the Surrounding Buildings and Outside on the Streets of Southern New York City after the Collapse of the World Trade Center, 11 September 2001", *Journal of Air and Waste Management*, **54**: 515-528, 2004.
25. Qian, J. Timko, M., Allen, A., Russell, C., Winnik, B., **Buckley, B.**, Steinfeld J., and Tester, J., Solvophobic acceleration of Diels-Alder reactions in supercritical carbon dioxide. *Journal of the American Chemical Society*, v 126, **17**, 5465-5474, 2004.
26. Hg, R., Hubbar, V., Kim, B-R., Chen, C., Winnik, B., **Buckley, B.**, Tolia, P., Hart, R., and Kong, A-N T., In Vivo Pharmacokinetics and Regulation of Gene Expression Profiles by Isothiocyanate Sulforaphane in the Rat, *Journal of Pharmacology and Experimental Therapeutics* **310**, (1), 263-271, 2004.
27. **Buckley, B.**, Johnson, W., Fischer, E., Tu, Q., and Heintz, M., Measurement of Heavy Metals in Biological and Environmental Matrices Using Microwave Extraction, Inductively Coupled Plasma Mass Spectrometry and Ion Chromatography for Assessing Potential Risk to Human Health, (Chinese) *Journal of Environmental and Occupational Medicine*, **20**, 6, 418-421, 2003.
28. Tu, Q. Johnson Jr., W. and **Buckley, B.** Mercury Speciation Analysis In Soil Samples By Ion Chromatography, Post-Column Cold Vapor Generation And Inductively Coupled Plasma Mass Spectrometry, *J. Anal. Atomic Spectrometry*, **18**: 696-701, 2003.
29. Lioy, P., Weisel C. , Millett J., Eisenreich S., Vallerio D., Offenberg J., **Buckley B.**, Turpin B., Zhong M., Cohen M., Prophete C., Yang I. , Stiles R., Chee G. , Johnson W., Alimokhtari S., Weschler C., Chen L., Characterization of the Dust/smoke Aerosol That Settled East of the World Trade Center (WTC) in Lower Manhattan after the Collapse of the WTC September 11, 2001, *Environ. Health Perspec.* 110, 703-714, 2002.
30. Strucinski, P., Ludwicki, J., Goralczyk, K., Olszewski, W., Czaja K., **Buckley, B.**, Jethon, J., Baranska, J., and Hernik, A., Storage of Persistent Organochlorine Insecticides in Adipose Breast Tissue of Polish Women in 1997-2001, *Organohalogen Compounds Vol. 58*, 261-264, 2002.
31. Strucinski, P., Ludwicki, J., Goralczyk, K., Wojtyniak, B., Olszewski, W., **Buckley, B.**, Czaja K., Jethon, J., Baranska, J., and Hernik, A., Hexachlorobenzene (HCB) and Total Polychlorinated Biphenyls (3PCBs) in Human Breast Lipids and Breast Cancer Risk in Polish Women *Organohalogen Compounds* 59, 365-368, 2002.
32. Bonanno, J., Robson, M., Johnson, W. **Buckley, B.** and Modica, M. Lead Exposure at a Covered Outdoor Firing Range. *Bull. Environ. Contam. Toxicol.*, 68:315-323, 2002.
33. Li, C., Winnik, B., Lee, M.-J., Meng, X., Lu, H., Sheng, S., **Buckley, B.**, Yang, C., Liquid Chromatography/Electrospray Ionization Mass Spectrometry for Analysis of Metabolites of Tea Catechins in Urine. *Research Chem. Tox.* 4: 702-705 2001.
34. Prabhu, S., Lee, M_J., Hu, W-Y., Winnik, B., Yang, I., **Buckley, B.** and Hong, J-Y., Determination of 2- Amino-1-methyl-6-phenylimidazo[4,5-b] pyridine (PhIP) and Its Metabolite 2-Hydroxyamino-PhIP by Liquid Chromatography/Electrospray Ionization-Ion Trap Mass Spectrometry, *Anal. Biochem.*, 298, 306-313, 2001.

35. Ellikson, K., Meeker, R., Gallo, M., **Buckley, B.** and Lioy, P. Oral Bioavailability of Lead and Arsenic from a NIST Standard Reference Material. *Archives of Environmental Contamination and Toxicology*. 40:128-135, 2001.
36. **Buckley, B.**, Ettinger, A., Hore, P. Lioy, P. and Freeman, N. Using Observational Information in Planning and Implementing of Field Studies with Children as Subjects. *J. Exposure Anal. Environ. Epidemiol.* 10:695-702, 2000.
37. Strucinski, P., Ludwicki, J., Goralczyk, K., Czaja, K., Olszewski, W., Baranska, J., Robson, M. and **Buckley, B.** Organochlorine Pesticides Residues in Human Breast Adipose Tissue in Poland. *Central European Journal of Public Health, Supplement 8*. pp 25-26. July 2000.
38. Li, T-H., Hooper, K., Fischer, E., Laskin, D., **Buckley, B.** and Turpin, B. An Exposure System to Study the Effects of Water-Soluble Gases on PM-Induced Toxicology. *Inhalation Toxicology*. 12:563-567. 2000.
39. Carlton, A., Turpin, B., Johnson, W., **Buckley, B.**, Simick, M., Eisenreich, S. and Porcja, R. Micro Analysis Methods for Characterization of Personal Aerosol Exposures. *Aerosol Science and Technology*. 31:66-80. 1999.
40. Gurunathan, S., Robson, M., Freeman, N., **Buckley, B.**, Roy, A., Meyer, R., Bukowski, J. and Lioy, P. Accumulation of Chlorpyrifos on Residential Surfaces and Toys Accessible to Children. *Environmental Health Perspectives*. 106:9-16. 1998.
41. Hamel, S., **Buckley, B.**, and Lioy, P. Bioaccessibility of Metals in Soils for Different Liquid to Solid Ratios in Synthetic Gastric Fluid. *Environ. Sci. and Tech.* 32:358-362. 1998.
42. Johnson, W., Grover, A.M., Turpin, B. and **Buckley, B.** Measurements in Air and Water at Ambient Concentrations How Low Can We Go? *ICP information Newsletter*. 22(10): 758. 1997.
43. **Buckley, B.**, Kaur, R., Park, S., Kim, Y. and Cooper, K., Toxicity Test of Nanji Island Landfill (Soeul, Korea) Leachate Using Japanese Medaka (*Oryzias latipes*) Embryo Larval Assay, *Bull. Environ. Contam. Toxicol.* 57 -84. 1996.
44. Bukowski J., Robson M., **Buckley B.**, Russell D. and Meyer L. Air-levels of volatile organic compounds following indoor application of an emulsifiable concentrate insecticide. *Environmental Science and Technology*. 30:8:2543-2546. 1996.
45. **Buckley, B.**, Heintz, M., Fang, W. and Johnson, W. Mercury Speciation with an IC/ICPMS System: A Marriage of Convenience. *ICP Information Newsletter*. 21(8):635. 1996.
46. **Buckley, B.**, Heintz, M., Fang, W. and Johnson, W. Determination of Isotope Ratios for Individual Mercury Species. *ICP Information Newsletter*. 20(7):224. 1995.
47. **Buckley, B.** and Boss, C., A Tungsten Filament Vaporizer for Sample Introduction into a Direct-Current Plasma, *Appl. Spectrosc.* 44:505. 1990.

48. J. M. Ramsey, J. M., Whitten, W., Goeringer, D. and **B. Buckley, B.**, "Collisional and Electric-Field Ionization of Laser-Prepared Rydberg States in an Ion Trap Mass Spectrometer, *Proceedings of the Fifth International Conference on Resonance Ionization Spectroscopy and Its Applications*; Ed. N. Omenetto and J.E. Parks; Institute of Physics: Bristol, UK, Vol. 114, pg. 301-306, (1990)

SUBMITTED MANUSCRIPTS

1. Thiruchelvam, M., Kochar, J., Mehta, H., Prokopenko, O., **Buckley, B.**, and Mirochnitchenko, O., Mechanisms Associated With Gender Difference In The Paraquat + Maneb Animal Model Of Parkinson's Disease, submitted to *Neurobiology of Disease*.
2. Whitehead, Jr. R., Montesano, A., Jayatilaka, N., Buckley, B., Winnik, B., Needham, L. and Barr D., Method for measurement of the quaternary amine compounds paraquat and diquat in human urine using high-performance liquid chromatography-tandem mass spectrometry, *submitted J. Chrom. A.*
3. Sonsalla, P., Wong, L., **Buckley B.** and Winnik B., Zonisamide Alters MPTP Pharmacokinetics And Toxicity In Mice By Mao-B Inhibition, *Journal of Neurochemistry*

MANUSCRIPTS IN REVISION OR PREPARATION

4. **Buckley, B.**, Application and Significance of Toxic Metal Speciation for Biological and Environmental Sample Analysis, Invited Review *J. of Exposure Science Environ. Epi*.
5. Fischer, E., Tu, Q., Nagourney, S., England, R., and **Buckley, B.**, Microwave-Assisted Solvent Extraction for the Quantitative Simultaneous Extraction of Inorganic Mercury and Methylmercury from Soils, submitted to *Analytica Chimica Acta*
6. Domico, L., Yang, I., Buckley, B., Zeevalk, G., Cooper, K., Lipophilicity and Kinetic Stability Of Mancozeb In Mesencephalic Cells, in revision for Toxicological Sciences

PUBLISHED REPORTS

1. Buckley, B., Stiles, R, and Lippincott, L, Evaluation of Methods for Quantifying Cr (VI) and Cr (III) in Soils and Wastes, Final Report to NJDEP, 2007.
2. Turpin, B., Weisel, C., Morandi, M., Colome, S., Stock, T., Eisenreich, S., Buckley, B., and Others, Relationships of Indoor, Outdoor, and Personal Air (RIOPA). Part II, Analyses of Concentrations of Particulate Matter Species Report, Health Effects Institute Research Report, 130-II, August 2007, 1-73.
3. Buckley, B., Mercury Speciation in Sludge Samples Using Method 6800 to Monitor for Speciation Changes, Final Report to the New Jersey Department of Environmental Protection, August 2006.
4. Buckley, B., Uranium Measured in Surface Wipe Samples, Report to USDOD, June 2005.

5. Buckley, B., and Stiles, R., Analytical Determination of Tentatively Identified Compounds in Drinking Water Supplies to Correspond with the USGS Pharmaceutical Work, Report to the New Jersey Department of Environmental Protection, May 2005.
6. Hunter, J., and Buckley, B., Solubility and Biosolubility of Metals in Tungsten Report to USDoD, January 2005.
7. Laskin, D., Morio, L., Hooper, K., Li, T-H., Buckley, B., and Turpin, B., Peroxides and Macrophages in the Toxicity of Fine Particle Matter in Rats, Health Effects Institute Research Report, 117 December 1-66 2003.
8. Buckley, B., Mercury Speciation by Ion Chromatography Coupled to Inductively Coupled Plasma Mass Spectrometry, Final Report to the New Jersey Department of Environmental Protection, June 2003.
9. Tu, Q., and Buckley, B., Speciation Analysis of Mercury in Two Soil Reference Materials by Proposed EPA Method 3200, submitted to the Inorganic Methods Working Group for EPA, June 2003.
10. Murphy, E., Buckley, B., Lippencott, L., Yang I. and Rosen, B., "The Characterization of Tentatively Identified Compounds in Water Samples Collected from Public Water Systems in New Jersey", March 2003
11. Buckley, B. and M. Gayer, Review of Potential Technologies for Mail Sanitization By the Environmental and Occupational Health Sciences Institute, December 2001.
12. Buckley, B., Murphy, E., Lippincott, L. and Yang, I., Analyses to Characterize "Unknown 25" in Water Samples, October 2000.
13. National Environmental Policy Institute, Nakles, D. (Chair). Assessing the Bioavailability of Organic Compounds in Soil for Use in Human Health Risk Assessments, Final Version. September 11, 2000
14. Weisel, C., Turpin, B., Buckley, B., Eisenreich, S., Zhang, J., Morandi, M., Stock, T., Colome, S. and Spektor, D. The Relationship Among Indoor, Outdoor, and Personal Air (RIOPA) Study. June 30, 2000.
15. Turpin, B., Weisel, C., Buckley, B., Eisenreich, S., Zhang, J., Morandi, M., Stock, T., Colome, S. and Spektor, D. Contributions of Outdoor PM Sources to Indoor Concentrations and Personal Exposures: A Three City Study. October 26, 1998.
16. Buckley, B., Heintz, M. and Fang, W. Speciation of Mercury in Environmental Samples Chromatography Coupled with Mass Spectrometry. Final Report March 1996.

COURSES TAUGHT OR LECTURED IN

Biochemical Mechanisms of Toxicology "HPLC techniques", Fall 2005, 2007

Molecular Toxicology: Spring "Separation Mass Spectrometry"
2003 - 2008

Biochemical Toxicology and Advanced Drug Metabolism
Fall 2003

Analytical Techniques in Environmental Chemistry "Elemental Analysis":

Fall 1995, 1999, 2002, 2003, 2005, 2007
Practical Methods of Microwave Digestion for Trace Analysis: University of Massachusetts
Atomic Spectroscopy “Theory, Instrumentation and Speciation”
August 1997- 2002
Water Quality Applications and Environmental Chemistry “Environmental Sampling for Metal
Contaminants”:
January 2000, 2002 Winter Plasma Conference
“Environmental Sample Preparation and Analysis” University of Pernambuco, Recife Brazil
(Graduate Course):
July-August 2000,

INVITED PRESENTATIONS

1. Buckley, B., Tools for Measurement of Environmental Contaminants in Their Native Matrices, *Workshop on Analytical Methods and Scientific Writing, International Training and Research in Environmental and Occupational Health*, Bangkok Thailand, Jan 8th, 2009
2. Buckley, B., Inorganic Contaminants in the Biological World; Changing Lead to Golden Opportunities, *Workshop on Analytical Methods and Scientific Writing, International Training and Research in Environmental and Occupational Health*, Bangkok Thailand, Jan 8th, 2009
3. Buckley, B., Turning a Method into a Paper; How Much Do I Need and How Do I Show What I've Done? *Workshop on Analytical Methods and Scientific Writing, International Training and Research in Environmental and Occupational Health*, Bangkok Thailand, Jan 8th, 2009
4. Buckley, B., Yang, I., Winnik, B., Barr, D., Spayd, S., Domico, L., Yang, CS., Sang S., Thiruchevalm, M., Richardson, J., Mass Spectrometric Measurements in Biomonitoring of Environmental Contaminants and Their Effects; Can You Really Diagnose Disease with a Mass Spectrometer?, *Thermo Mass Spectroscopy Users Group Meeting*, Somerset NJ, October 7, 2008.
5. (Keynote) Buckley, B., Winnik, B., Stiles, R., Eric Fischer, and Yang, I., Microwave Extraction for Measuring Environmental Toxicants: It's not just a Popcorn Popper in Your Laboratory, *Southern Section AOAC Meeting*, Atlanta GA, April 20th, 2008.
6. Yang, I., Dimico, L., Zeevalk, G., Sang, S., Yang, C.S., and Buckley B., Direct Infusion Mass Spectrometry for Identification of Unknown Metabolites Biomarkers and Breakdown Products in Biological Systems, Chinese-American Chemical Society Symposium on Characterization of Small Molecules by Mass Spectrometry, October 14, 2006.
7. Buckley, B., Stiles, R., Johnson W., Nagourney S., Lippincott, L., and Murphy, E., Recovery of Chromium Species from Soils; What factors Are Most Important?, National Environmental Monitoring Conference, Arlington VA. August 30th, 2006.
8. Buckley, B., Tu, Q., and John Hunter, J., An in vitro Lung Solubility Model for Risk Assessment of Inhalation Hazards from Heavy Metal Particulate, Force Health Protection Conference, Albuquerque NM, August 9th, 2006.

9. Cr Speciation in Soils Using As Many Methods as We Can Find, Buckley, B., Johnson, W., Tu, Q., Fisher, E., Xie, R., Stiles, R., USEPA Laboratory Technical Information Group Annual Meeting, May 3rd, 2006.
10. Buckley, B., Estimating Tungsten Inhalation Exposure Using a Synthetic Lung Fluid Solubility Model, Heavy Metals Forum, Baltimore MD, March 7th 2006
11. Buckley, B., and Yang, I., Building a Metabolomics Program, One Molecule at a Time, Thermo Small Molecule, Philadelphia PA, February 15th, 2006.
12. (Plenary) Buckley, B., Spayd, S., Xie, R., and Johnson, W., Looking At Arsenic in America: Should Government Regulate Nature? *Congresso Brasileiro De Geologia E li Simpósio De Geoquímica Dos Países Do Mercosul*, Porto de Galinhas, Pernambuco, Brazil, November 3rd, 2005.
13. Buckley, B., Johnson, W., Fischer, E., Tu Q., and Riumin Xie, Are There Alternatives to 6800? "To Label or Not To Label? That Is the Question", *National Environmental Monitoring Conference*, Washington D.C. July 26th, 2005.
14. Buckley, B., Health Effects of Mercury and Major Pathways of Exposure, Mid Atlantic Region Air Management Association, Princeton N.J. September 8th, 2004.
15. Fisher, E., Tu, Q., Naguorney, S., England R., and Buckley, B., Microwave Assisted Solvent Extraction for the Quantitative Simultaneous Extraction of Inorganic and Methylmercury Species from Soils, *National Environmental Monitoring Conference*, Washington D.C. July 20th, 2004.
16. Buckley, B., Gilmarten, C., Skorupsky, S., Ellickson, K., Hamel, S., Liroy, P., Meeker, B., Faria, E., Gallo, M., Estimates of Bioavailability of Metals in Soils with Synthetic Biofluids: Is This a Replacement for Lab Rats?, *Heavy Alloys Workshop*, Steven's Institute of Technology, February 11th, 2004.
17. Buckley, B., Measuring a Contaminant's Affect on Human Health, Analytically, *Workshop on Environmental Risk Assessment: Globalization to Local Perspectives*, Hat Yai Thailand March 19th, 2003
18. Buckley, B. and Gayer, M., The Anthrax Crisis in America, N.J. as Ground Zero, Prince of Songkla University, Hat Yai Thailand, March 18th, 2003.
19. Buckley, B. Analytical Advances in Biological and Environmental Measurements, Mahidol University Bangkok Thailand, March 15th, 2003.
20. Buckley, B. Detecting Biological and Chemical Terrorism Agents Using Their Chemical Signatures, *Eastern Analytical Symposium*, November 18th, 2002.
21. Buckley, B. and M. Gayer, The Anthrax Crisis in New Jersey, *Annual Meeting of the American College in Toxicology*, November 13th, 2002.
22. Buckley B., Human Health Impact of Heavy Metals, *Asian Conference on Occupational Health*, Taipei Taiwan, November 3rd, 2002.

23. Heavy Metals: Analytical Methodology and Risk Assessments, *Chinese American Conference for Environmental Health*, Shanghai China October 21st, 2002.
24. Buckley B., The Analysis of Synthetic Organic Chemicals in Raw and Finished Drinking Water, *Eastern Analytical Symposium*, October 1, 2001.
25. Buckley, B. and Yang, I. Occurrence of Non-Regulated Synthetic Organic Chemicals in Raw and Finished Drinking Water Systems Impacted by Hazardous Waste Sites. *Current Issues and Research in Drinking Water NJDEP*. February 20th, 2001.
26. Buckley, B., Letting People Decide About Water Quality Issues in the Most Densely Populated Part of the USA, DeBacias Gestao Hidrograficas Qualidade De guas Superficias, (Water Resources Meeting). August 7, 2000.
27. Murphy, E. and Buckley, B. Impact of Contaminated Sites on Groundwater used for Drinking Water. EOHSI/Division of Science, Research and Technology Joint Research Meeting. April 5, 2000.
28. Buckley, B. Measuring Unknowns in Water to New Detection Limits with Ion Trap Mass Spectrometry. New Jersey AWWA Water Research Forum . December 3, 1999.
29. Buckley, B., Ettinger, A., Reed, K., Hore, P., Lioy, P. and Freeman, N. QA for Sample Collection in Children or How Do I Get a Quality Sample When My Sample Won't Hold Still?. American Chemical Society, National Meeting. August 22, 1999.
30. Buckley, B., Johnson, W., Grover, A. and Turpin, B. Microwave Sample Preparation for Metals Analysis, Able to Leap Tall and Small Problems in a Single Vessel. Eastern Analytical Symposium. November 19, 1998.
31. Buckley, B., Heintz, M., Johnson, W., Fischer, E. and Bartha, R. Mercury, How It Gets from Your Fillings to My Brain. Mid Atlantic Regional Meeting of the American Chemical Society. May 18th, 1999.
32. Buckley, B. Estimates of Bioavailability of Metals in Soils with Synthetic Biofluids: Is this a Replacement for Animal Studies? Bioavailability, Quantifying the Real Toxicity of Common Soil Contaminants. December 12th, 1997.
33. Buckley, B. What is the Future of Chemical Instrumentation? Chemical Detection Methods (Panelist). International Society of Exposure Analysis. November 4, 1997
34. Buckley, B., Heintz, M., Johnson, W., Grover, A. and Turpin, B. Measuring Air and Water at Ambient Concentrations How Low Can We Go? Federation of Analytical Chemistry and Spectroscopy Societies. October 30, 1997.
35. Buckley, B., Hamel, S., Fang, W., Gilmartin, C. and Lioy, P. Estimation of the Bioavailable fraction of Metal Contaminant in Soils using Synthetic Bio-Fluid Extraction. Society for Risk Analysis and International Society of Exposure Analysis. December 11, 1996.
36. Buckley, B., Fang, W., Johnson, W., Franco, M. and Heintz, M. Chromium Analysis and Redox Speciation Using IC-ICPMS, Florida Environmental Chemistry Conference. September, 12, 1996.

37. Buckley, B., Fang, W. and Johnson, W. Speciation of Metals in Environmental Samples by Ion Chromatography Inductively Coupled Plasma Mass Spectrometry Federation of Analytical Chemistry and Spectroscopy Societies. October 5, 1994

PUBLISHED PROCEEDINGS, PRESENTATIONS and ABSTRACTS

1. Barlow, B., Kochar, J., Winnik, B., Buckley, B., Thiruchelvam M., Estrous Cycle and Estradiol Supplementation Modify Paraquat Toxicokinetics In Mouse Striatum, Society of Toxicology, March, 2009.
2. Prasad, K., Tarasewicz, E., Mathew, J., Ohman Strickland, P., Buckley, B., Richardson, J. and Richfield, E., The Unusual Toxicokinetic and Toxicodynamic Properties of Paraquat May Contribute to the Risk of Parkinson's Disease, Society of Neuroscience, November, 2008.
3. Buckley BT, Xie R, Tu Q, Stiles R, Spayd S, The Need for Speciation of Organometallic Contaminants in Biomonitoring, aka It's Not Just the Metal, It's What It's Wearing, International Society for Environmental Epidemiology and International Society of Exposure Analysis , Pasadena CA, October 14th, 2008.
4. Fan Z,* Yu C,* Buckley B,* Bonanno L,† Korn L, Spatial and Temporal Variation of Ambient Hexavalent Chromium in Urban Communities in Paterson, New Jersey, International Society for Environmental Epidemiology and International Society of Exposure Analysis , Pasadena CA, October 14th, 2008.
5. Huang L, Fan Z, Lin L, Buckley B, Bonanno L, Optimization and Evaluation of a Sampling and Analytic Method for the Measurement of Hexavalent Chromium in Ambient Air, International Society for Environmental Epidemiology and International Society of Exposure Analysis , Pasadena CA, October 13th, 2008.
6. Buckley, B., Stiles, R., Johnson, W., Nagourney, S., Lippincott L. and Murphy, E., Recovery of Chromium Species from Soils; What factors Are Most Important? National Environmental Monitoring Conference, Washington D.C August 18th, 2008.
7. Yoon, M., Lippincott, L., Yang, I., Murphy E., and Buckley, B., Isolation and Quantification of Perfluorinated Compounds In Drinking Water Supply Samples Using SPE Preconcentration and LC/MS Detection, Federation of Analytical Chemistry and Spectroscopy Societies, October 2007
8. Buckley, B., Yang, I., and Brooks, A., Metabolomic Database Formats; What Do We Save and How Do We Save It?, Association of Biomolecular Resource Facilities Meeting, April 2007
9. Yang, I., Domico, L., Sang, S., Yang, C.S., and Buckley B., Direct Infusion Mass Spectrometry for Biomarker Detection of an Unstable Pesticide in Cells and Tea Metabolites in Plasma, Association of Biomolecular Resource Facilities Meeting, April 2007

10. Winnik, B., Thiruchelvam, M., and Buckley, B., HPLC/MS of Pesticides and Metabolites in Brain Tissue using Microwave Sample Preparation and MS Specific Experiments Association of Biomolecular Resource Facilities Meeting, April 2007
11. Williams, B., Melina, S., Magsumbol M., Dhanireddy R., Barr, D., and Buckley, B., Body Burdens of Neurotoxic Heavy Metals among a Cohort of African-American Neonates: Implications for Neurological Development, Annual Toxicology and Risk Assessment Meeting 2006
12. Domico, L., Zeevalk, G., Yang, I., Buckley, B., Johnson, W., Bernard, L., Thiruchelvam, M., and Cooper, K., The Role Of Oxidative Stress In The Neurotoxicity Of Mancozeb and Maneb, Society of Toxicology, March 2006.
13. Domico, L., Zeevalk, G., Buckley, B., Winnik, B., Thiruchelvam, M., Cooper, K., Mancozeb and Maneb Neurotoxicity In Mesencephalic Cells: Possible Risk Factor For Parkinsonism, Neurotoxicology September 2005 and Society for Neuroscience November 2005
14. Thiruchelvam, M., Mayson, S., Buckley, B., Richfield, E., Cory-Slechta, D., Combined exposure to diethyldithiocarbamate (ddc) and iron (Fe): effects on the nigrostriatal dopaminergic system, Society for Toxicology Annual Meeting March 2003
15. Exposure to diethyldithiocarbamate (ddc) and iron (Fe): effects on the nigrostriatal dopaminergic system, Society for Neuroscience Annual Meeting 2003
16. Stiles, R., Yang, I., Murphy E., Lippincott, L. and Buckley B., Recovery Optimization Considerations for EPA Method 525.2, Federation of Analytical Chemistry and Spectroscopy Societies, October 17, 2002
17. Tu, Q., and Buckley, B., Determination of Mercury Species In Environmental Samples By Ion Chromatography, Post-Column Cold Vapor Generation and Inductively Coupled Plasma Mass Spectrometry, Federation of Analytical Chemistry and Spectroscopy Societies, October 15, 2002.
18. Johnson, W., Silva, P., Spayd, S., Gochfeld M. and Buckley, B., A Case Study in Arsenic Poisoning: The Quantification and Speciation of Arsenic in the Blood, Urine, and Well Water of an Arsenic Burdened Family via IC-ICP-MS, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 19, 2002.
19. Buckley, B., Agnant, J., Johnson, W., Farkas, A., Gallo, M., Sampling, Microwave Digestion and ICPMS Measurement of Metals in Human Prostate Tissue: Finding the Needles in the Haystacks, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 19, 2002.
20. Winnik, B., Mlodyk, A., Robson, M., Goralczyk, C., and Buckley, B., Tandem SPE for Cholesterol and Pesticides Extraction from Fat Tissue: Can I get You Some Cholesterol with Your Pesticides? Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 18, 2002.
21. Winnik, B. and Buckley, B. Microwave Assisted Protein Digests, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 18, 2002.

22. Stiles, R., Yang, I., W., Murphy, E., Lippencott, L., and Buckley, B., Characterization of Background Organic Compounds (BOCs) Resulting from Solid Phase Extraction, Federation of Analytical Chemistry and Spectroscopy Societies. October 12, 2001.
23. Yang, I., Rodriguez, W., Murphy, E., Lippencott, L., and Buckley, B., Development and Optimization of a Continuous Flow-Solid Phase Extraction to Treat Multi-Drinking Water Samples, Federation of Analytical Chemistry and Spectroscopy Societies. October 12, 2001.
24. Yang, I. and Buckley, B., A combined GC/EI-ITMS and CI/ITMS as a Tool for Identifying Unknowns in Drinking Water, Federation of Analytical Chemistry and Spectroscopy Societies. October 11, 2001.
25. Tu, Q., Fischer, E., Heintz, M., Johnson, W., Nagourney, S., England R., and Buckley, B., Mercury Speciation In Soils Using Microwave Assisted Solvent Extraction (MASE) With Ion Chromatography Separation And Inductively Coupled Plasma Mass Spectrometry Detection, Federation of Analytical Chemistry and Spectroscopy Societies. October 10, 2001.
26. Buckley, B., Johnson, W., Fischer, E., Heintz, M., and Tu, Q., What Does Metal Speciation Mean Anyway?, Federation of Analytical Chemistry and Spectroscopy Societies. October 8, 2001.
27. Madison, R., Rodriguez, W., Schnieder, J., Johnson, W., Farkas, A. and Buckley, B. Finding Small Amounts of Metals In Even Smaller Biological Samples, What Are the Limits of the Measurement? Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 8, 2001.
28. Johnson, W., Fang, W., Huang, M., Lewis, A. and Buckley, B. Hexavalent and Trivalent Chromium Speciation by IC/ICP/MS in the Analysis of Dust Samples Collected From Chromium Contaminated Homes. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 8, 2001
29. Winnik, B., Goralczyk, K., Rodriguez, W., Robson, M. and Buckley, B. Extraction of Pesticides and PCBs From Fat by Solid Phase Extraction. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 7, 2001.
30. Buckley, B., Reuhl, K., Farkas, A., Winnik, B. and Johnson, W. Microwave Sample Preparation and Mass Spectral Analysis of Small Biological Tissue Samples; Little Body Parts in Big Analytical Schemes. Federation of Analytical Chemistry and Spectroscopy Societies. September 28, 2000.
31. Yang, I., Lippencott, L., Murphy, E. and Buckley, B. Approaches to Increasing Sensitivity and Improving Spectral Quality in Electron Ionization-ion Trap Mass Spectrometry Using Optimized Parameters. Federation of Analytical Chemistry and Spectroscopy Societies. September 27, 2000.
32. Strucinski, P., Ludwicki, J.K., Goralczyk, K., Czaja, K., Olszewski, W., Baranska, J., Buckley, B. and Robson, M. DDT and Its Metabolites in Women's Breast Adipose Tissue and Female Reproductive System Tissues. Fifth International Symposium and Exhibition on Environmental Contaminants in Central and Eastern Europe. Prague, Czech Republic. September 14, 2000.

33. Strucinski, P., Ludwicki, J.K., Goralczyk, K., Czaja, K., Olszewski, W., Baranska, J., Robson, M. and Buckley, B. Organochlorine Pesticides Residues in Human Breast Adipose Tissue in Poland. Sixth Meeting of the Central and Eastern European Regional Section in Conjunction with the Annual Meeting of the Union of Hungarian Toxicologists Organochlorine Pollution in Central and Eastern Europe - Hazard and Risk for Humans and the Environment. Balatonfoldvar, Hungary. September 22, 1999.
34. Haffer, M., Yang, I., Cashman, K. and Buckley, B. An Improved Microwave Extraction Method for the Analysis of Semi-volatile Organic Compounds Extracted from Soils and Sediments Using GC/ITMS and GC/ITMSMS, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 16, 2000.
35. Petlick, S., Kwok, J., Hore, P., Robson, M., Meyer, R. and Buckley, B. Using a Laboratory Developed Measurement Method for Active Pesticide Levels to Compare Active Pesticide Levels to Voc Levels in a Controlled Environment. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 15, 2000.
36. Goralczyk, K., Winnik, B., Robson, M., Huhtala, N., Yang, I. and Buckley, B. Microwave Assisted Solvent Extraction for Pesticides and PCBs in Human Adipose Tissue: Getting the Fat Out of the Solution. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 15, 2000.
37. Johnson, W., Lewis, A., Fischer, E., Wong, M., Fang, W. and Buckley, B. Microscale Sample Dissolution Techniques. Winter Plasma Conference. January 13, 2000.
38. Buckley, B., Goralczyk, K., Yang, I., Haffer, M., Cashman, K. and Fisher, E. Using Microwave Extraction Techniques to Attack Organometallics Contaminants in Environmental and Biological Samples; the Species Battles. Federation of Analytical Chemistry and Spectroscopy Societies. October 25, 1999.
39. Yang, I., Erstfeld, K. and Buckley, B. A Comparison of HPLC-Electrospray and GC/Ion-Trap Mass and Tandem Mass Spectrometry in Tracing Triazines and Their Metabolites in an Environmental Mimic System. Federation of Analytical Chemistry and Spectroscopy Societies. October 27, 1999.
40. Czaja, K., Ludwicki, J., Robson, M., Goralczyk, K., Strucinski, P. and Buckley, B. Concentrations of Persistent Organochlorine Compounds in the Placenta and Milk of the Same Women. American Chemical Society. 217th ACS National Meeting, Anaheim, CA. Division of Environmental Chemistry. March 15, 1999.
41. Nagourney, S., Buckley, B. and Fisher, E. Speciation of Mercury in Soil. Waste Testing and Quality Assurance Symposium. July 1999.
42. Petlick, S., Kwok, J. and Buckley, B. Using Measured Data to Improve the Predictive Capabilities of EPA Indoor Air Model for VOCs in a Pesticide Environment. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 10, 1999.
43. Buckley, B., Haffer, M. and Yang, I. GC/Ion Trap Mass Spectrometry for Semi-volatile Organics Monitoring in Drinking Water Sources, Fish Tissue and Sediments, Same Instrument Different Songs. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 10, 1999.

44. Buckley, B., Cashman, K., Emerson, T. and Johnson, W. Sample Preparation of Small Biological Samples for Analysis by ICPMS, Micro-samples by Microwave. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 8, 1999.
45. Buckley, B. Peroxide Particulate Monitoring Using a Laboratory Constructed Field Transportable Spectrophotometer, Federation of Analytical Chemistry and Spectroscopy Societies. October 15, 1998.
46. Buckley, B. How Strong is Ion Trap Mass Spectrometry (ITMS) at Powering Through Quadrapole Methods in Water Sample Analysis. Federation of Analytical Chemistry and Spectroscopy Societies. October 15, 1998.
47. Buckley, B. Can We Think Smarter Using Stable Isotope Labeling for Metal Uptake Studies in Brain Tissue? Federation of Analytical Chemistry and Spectroscopy Societies. October 13, 1998.
48. Huang, M., Yang, I. and Buckley, B. Huang, Yang, and Buckley Analysis of PCBs in the Environmental and Biological Matrices. American Society of Mass Spectroscopy Annual Meeting. June 1998.
49. Czaja, K., Ludwicki, J.K., Robson, M., Goralczyk, K., Strucinski, P. and Buckley, B. Concentrations of persistent organochlorine compounds in the placenta and milk of the same women. American Chemical Society. Division of Environmental Chemistry. Preprints of Extended Abstracts Presented at the 217th ACS National Meeting, Anaheim, CA. Vol. 39 No. 1, Pages: 150-152. March 23, 1999.
50. Johnson, W., and Buckley, B. Microscale Sample Dissolution and Analysis Techniques for Metals in Environmental Media, How Small is too Small. Mid Atlantic Regional Meeting of the American Chemical Society. May 18, 1999.
51. Murray, E., Lippincott, R., Buckley, B., Rosen, R. and Yang, I. Synthetic Organic Chemicals in Drinking Water: Are Conventional Analytical Methods Adequate? Mid Atlantic Regional Meeting of the American Chemical Society. May 18, 1999.
52. Buckley, B. Microwave Sample Preparation of Low Mass Biological Tissues for Metals Analysis by ICPMS. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 2, 1998.
53. Buckley, B. Measurement of Chromium Speciation Changes in in-vitro Bio-Availability Assays by IC-ICP/MS, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 4, 1998.
54. Buckley, B. Measurement of VOCs and Pesticides Aerosols in a Controlled Field Environment - Were the Models Wrong?, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 5, 1998.
55. Buckley, B. Pesticide Measurement in Toys, Plates and Walls - How Dry is Dry?, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 5, 1998.

56. Buckley, B. The Bioavailability of Heavy Metals in Soil: A Mass-Balance Protocol Using Artificial Human Fluids, International Society of Exposure Assessment. November 2, 1997.
57. Buckley, B. NHEXAS Region V Study: Preliminary Assessment of Data Quality, International Society of Exposure Assessment, November 4, 1997.
58. Buckley, B. Attractive Models for Bioavailability of Metals in Soils: Can We Replace Lab Rats? Federation of Analytical Chemistry and Spectroscopy Societies. October 26, 1997.
59. Buckley, B. Thermospray HPLC-MS Determination of Adducts of an Aldehydic Benzene Metabolite with N-Acetyl Lysine Methyl Ester. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 18, 1997.
60. Buckley, B. Chromium Reduction and Complexation Mechanisms in Human Digestive Processes and in Food Preparation by IC-ICP/MS. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 19, 1997.
61. Buckley, B. Speciation of Mercury in Lakewater with an IC/ICPMS, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 21, 1997.
62. Buckley, B. Measurement of chlorpyrifos residues in an indoor environment to assess the dermal and non-dietary oral exposure pathways. International Society of Exposure Assessment. December 11, 1996.
63. Buckley, B. Quantitative Assessment of Risk Perception: The Risk Communication Profile Instrument. International Society of Exposure Assessment. December 10, 1996.
64. Buckley, B. Isotope Ratio Measurements of Labeled Mercury Species in Soil Using an ICPMS System, Federation of Analytical Chemistry and Spectroscopy Societies. October 4, 1996.
65. Buckley, B. Chromium Speciation in Biological and Environmental Media Using Ion Chromatography Coupled to ICP/MS. Federation of Analytical Chemistry and Spectroscopy Societies. October 4, 1996.
66. Buckley, B. Cr(VI) Extraction Methods, Are We Seeing All of the Chromium? Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 6, 1996.
67. Buckley, B. Supercritical Fluid Extraction of Inorganic and Organomercury Compounds, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 7, 1996.
68. Buckley, B. Extraction and Speciation of Mercury Pollutants in and Around Freshwater Lakes, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 8, 1996.
69. Buckley, B., Heintz, M., Johnson, W. and Fang, W. Mercury Speciation with an IC/ICPMS System: A Marriage of Convenience. Winter Plasma Conference. January 9, 1996.

70. Buckley, B., Heintz, M., Johnson, W. and Fang, W. Determination of Isotope Ratios for Individual Mercury Species. Winter Plasma Conference. January 12, 1996.
71. Buckley, B. Is There Chromium (VI) in the Mineral Supplements You Are Taking?, Federation of Analytical Chemistry and Spectroscopy Societies. October 19, 1995.
72. Buckley, B. Fast Kinetic Measurements of the Reduction of Chromium with Cellular Components by UV/Vis Spectroscopy, Federation of Analytical Chemistry and Spectroscopy Societies. October 16, 1995.
73. Buckley, B. Speciation of Environmental Mercury and Chromium Samples Using IC. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 9, 1995.
74. Buckley, B. Using Sequential Aqueous Extraction for Approximating the Bio-Available Fraction of Heavy Metals in Soil and Sediment. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 9, 1995.
75. Buckley, B. Quantitative Determination of Neurotoxicants in Tissues Using HPLC/MS. Federation of Analytical Chemistry and Spectroscopy Societies. October 6, 1994.
76. Buckley, B. IC-ICP/MS for Metal Speciation at the Sub-Parts-Per-Billion Level, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 3, 1994.
77. Buckley, B. An Alternative to HF Digests. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 3, 1994.
78. Buckley, B. Fundamental Studies of a Filament Vaporization Source for Sample Introduction into a DCP. Federation of Analytical Chemistry and Spectroscopy Societies. October 5, 1989.
79. Buckley, B. Concomitant Interaction in a Direct Current Plasma, Federation of Analytical Chemistry and Spectroscopy Societies. November 1, 1988.
80. Buckley, B. Modification of a Magnetically Modulated Direct Current Plasma, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. February 23, 1988.
81. Buckley, B. Excitation Temperature and Electron Number Density Measurements in a Modulated Direct Current Plasma, Federation of Analytical Chemistry and Spectroscopy Societies. October 5, 1987.
82. Buckley, B. Filament vs. Furnace: Vaporization Sources for the DCP. Colloquium Spectroscopium Internationale. June 25, 1987.
83. Buckley, B. Spatially Modulated DC Plasma for Atomic Emission Spectrometry. Colloquium Spectroscopium Internationale. June 26, 1987.
84. Buckley, B. Modulated DCP: A Tool for Determination of Excitation Mechanisms, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. March 11, 1987.

85. Buckley, B. Modification of a Graphite Furnace for Use as a Vaporization Source in Plasma Emission Spectroscopy. Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy March 13, 1986.