# Brian P. Jackson Curriculum vitae

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# **Professional Employment**

2016-PRESENT	Research Professor, Department of Earth Sciences,
	Director, Trace Element Analysis Core Laboratory, Dartmouth College, NH, 03755
2010-2016	Research Associate Professor, Department of Earth Sciences,
	Director, Trace Element Analysis Core Laboratory, Dartmouth College, NH, 03755
2005-2010	Research Assistant Professor, Department of Earth Sciences,
	Director, Trace Element Analysis Core Laboratory, Dartmouth College, NH, 03755
1998-2005	ICP-MS Manager, Savannah River Ecology Laboratory, Aiken, SC, 29803
1998	ICP-MS Product Specialist, Perkin-Elmer Corporation, Norwalk, CT,
1993- 1998	Agricultural Research Assistant, University of Georgia, Athens, Georgia 30602
1990-1993	Assistant Editor, Royal Society of Chemistry, Cambridge, U.K.

#### **Education**

1998 Ph.D. Agronomy (Soil Chemistry)

University of Georgia, Athens, GA

Dissertation: Trace Element Solubility from Land Application of Fly Ash/Organic Waste

Mixtures with an Emphasis on Arsenic and Selenium Speciation.

Major Professor: William P. Miller

1989 B.A. Chemistry

Oriel College, Oxford University, Oxford, U.K.

Fourth year thesis: X-ray crystallography of selected organic compounds

### **Teaching Experience**

Dartmouth College, Department of Earth Sciences

Fall 2014,16,17	EARS 124	Analytical Chemistry and Instrumental Analysis
Fall 2013	EARS 62/162	Geochemistry
Spring 2013	EARS 124	Analytical Chemistry and Instrumental Analysis
Fall 2010	EARS 74/174	Soil and Aqueous Geochemistry
Winter 2010	EARS 202	Geochemistry. 'Concepts and Methods'.
Winter 2009	EARS 124	Analytical Chemistry and Instrumental Analysis.
Winter 2008	EARS88	Senior Seminar
Winter 2007	EARS 124	Analytical Chemistry and Instrumental Analysis.

## Perkin Elmer Corporation

April- October 1998 Instructor: ICP-MS training course, Perkin Elmer, Wilton CT

University of Georgia

Winter 96 Teaching Assistant for undergraduate Forest Soils

## **Advising and Mentoring**

Graduate and Post Doctoral Advisees: Livia Capaldi, Urshula Bajracharya, Jie Yang, Sam Beal, Jing Sun, Ji-Hye Seo, Vivien Taylor Ph.D. (Dartmouth)

*Graduate Committee Member:* Elena Ramirez, Andrew Quicksall, Owen Cadwalader, Derek Smith, Justin Richardson (Dartmouth). Franta Majs (UGA).

*Undergraduate Advisees:* Florence Ling, Laura Hempel, Ryan Akremi, Bridget Alex, Amanda Greenberg (Dartmouth). Anna Daigle (St Anslem). Jane Chen (Brown), Lauren Hendricks (Colby Sawyer).

## **Professional Affiliations**

American Chemical Society Geochemical Society

**Reviewer for:** Environmental Science and Technology, Environmental Toxicology and Chemistry, Chemosphere, Journal of Analytical Atomic Spectroscopy, Archives of Environmental Contamination and Toxicology, Journal of Environmental Monitoring, Journal of Environmental Quality, Soil Science Society of America Journal. US DOE, NIH/NIEHS (proposals).

### **Current Research Interests**

Speciation analysis of urine and blood by IC-ICP-MS, LC-ICP-MS
Applications of laser ablation-ICP-MS in environmental and biological sciences
Arsenic and other trace elements in foods

# **Funding**

# **Proposals**

### Submitted

Wiesskopf, M. (Jackson Co-I) Metals and Developmental Origins of Late Life Cognitive Function,

NIH RO1 09/01/2018-08/31/2023

Punshon, T. (Jackson, Co-PI) Arsenic methylation efficiency of Celiac Disease patients consuming a gluten-free diet. NIH R21 01/01/2019-12/31/2021

#### Current

Stanton, BA. (Jackson, Co-I) Sources and Protracted Effects of Early Life Exposure to Arsenic and Mercury. NIH/NIEHS. 04/01/14 - 03/31/19.

Leach, S. (Jackson, Co-I) National Cancer Center Support Grant NIH/NCI (5P30CA023108) 12/01/2014 - 11/30/2019

Karagas, MR. (Jackson, Co-I) A Prospective Study of Critical Environmental Exposures in Formative Early Life that Impact Lifelong Health in Rural US Children: The New Hampshire Birth Cohort Study, UG3OD023275 Annual Directs

Karagas, M.A. (Jackson, Co-I) Children's Environmental Health and Disease Prevention Research Center at Dartmouth. NIEHS/EPA 04/01/13-03/31/18.

Renshaw, CR. (Jackson, Co-I) Characterization of Arsenic Phases at Fort Devens, MA. Geosyntec Consultants Inc. 9/1/2016-12/31/2017. .

Jackson, BP, Hogan D Biotic and abiotic transformations of organo-arsenic compounds.

Dartmouth Superfund Internal Pilot (286051) 09/2014-03/2017..

Jackson BP, Renock, D. Renshaw, C. Fate of Androscoggin River Floodplain Mercury from the Chlor-Alkali Facility Superfund Site, Berlin, NH. Dartmouth Superfund Internal Pilot (510643) 09/2014-03/2017.

#### **Proposals:Completed**

- Chen, CY, Mason, RP., Jackson B.P., Ward, EJ. Examining impacts of changing climate and eutrophication on methylmercury dynamics in coastal ecosystems and implications for human exposure. NIH, 10/12-08/15,
- Jackson, B.P., Karagas, M.R. The Role of Cadmium and other Trace Elements in Young-onset Breast Cancer. NIH/NIEHS. 01/24/2016-01/24/2017.
- Jackson B.P. Low Level Measurement of Trace Metals in Biota. Tennessee Valley Authority. 12/15/2011-12/31/2012.
- Jackson B.P. Assessment of Arsenic Speciation and Exposure in Seaweed Products from New England. New Hampshire Sea Grant College ProgramNH Sea Grant Development Funds. Pilot funding.

- Jackson, B.P., Karagas, M.R. Measurement of Arsenic, Selenium, and Other Selected Elements in NEBCS & SEBCS Respondent Toenails. National Cancer Institute. 04/10-07/31/11.
- Stanton, B.A., (Jackson, Co-PI). American Recovery and Reinvestment Act of 2009 (ARRA). Toxic Metals in the Northeast: From Biological to Environmental Implications 09/06/09-08/31/11
- Bostick B. Renshaw, C. Kaste J. Jackson, B. Establishing a Quantitative Link between Mineral Transformations, Speciation, and the Transport of Arsenical Pesticides in Soils. USDA NRI.
- Hamilton, J.W. (Jackson, Co-PI) Toxic Metals in the Northeast: From Biological to Environmental Implications. NIEHS. 04/2005-04/2008.
- Ranville, J.R. B. Butler. Nanoparticle Stability in Natural Waters and its Implication for Metal Toxicity to Water Column and Benthic Organisms. EPA. October 06 -09 (Jackson, B.P. collaborator).
- Bertsch. P.M., B.P. Jackson, A.L. Neal, T. Glenn. The bioavailability, toxicity, and trophic transfer of manufactured ZnO nanoparticles: a view from the bottom. USEPA, 09/05-09/08.
- Bertsch, P.M., Sowder, A, Jackson, B.P. DOE Environmental Management Science Program . Linking chemical speciation, desorption kinetics, and bioavailability of U and Ni in aged-contaminated sediments: A scientific basis for natural attenuation and risk assessment".20 02-05.
- Jackson, B.P., Bertsch, P.M. and Seaman, J.C. Environmental fate of arsenic from poultry litter. USDA NRICGP Award. 2001. (3yr.)
- Adriano, D.C., A.C. Chang, S. Deng, M. Guerin, S. Harper, B.P. Jackson, A. Neal, and M. Wilson. Regulation of metal bioavailability in the floodplain continuum by carbon and sulfur cycling. NSF-Biocomplexity CBC. Exploratory awarded 2003-2004,.

#### **Publications**

- Everson, TM, Punshon, T, Jackson, BP, Hao, K, Lambertini, L., Chen, J, Karagas, MR., Marsit, CJ. 2018. Cadmium-Associated Differential Methylation throughout the Placental Genome: Epigenome-Wide Association Study of Two U.S. Birth Cohorts. 2018. Environmental Health Perspectives
- Andrew, AS., Chen, CY, Caller, TA, Tandan, R., Henegan, PL., Jackson, BP, Hall, BP, Bradley, WG., Stommel, EW. 2018. Toenail mercury levels are associated with amyotrophic lateral sclerosis (ALS) risk. Muscle and Nerve. DOI: 10.1002/mus.26055.
- Punshon, T., Jackson B.P. Essential micronutrient and toxic trace element concentrations in gluten containing and gluten-free foods. Food Chemistry, In press
- Shailendra Sharma, Jane Gralla, Joyce Gonzalez Ordonez, Maria-Elena Hurtado, Erik R. Swenson, Robert B. Schoene, Jackeline Pando Kelly, David Callacondo, Christopher Rivard, Carlos Roncal-Jimenez, Jeffrey Sirota, Richard Fuquay, Brian P. Jackson, Kai E. Swenson, Richard J. Johnson, Abdias Hurtado, Elizabeth Escudero, Acetazolamide and N-acetylcysteine in the treatment of chronic mountain sickness (Monge's disease), Respiratory Physiology & Neurobiology, Volume 246, 2017, Pages 1-8.
- Caito, S. W.; Jackson, B. P.; Punshon, T.; Scrimale, T.; Grier, A.; Gill, S. R.; Love, T. M.; Watson, G. E.; van Wijngaarden, E.; Rand, M. D., Variation in Methylmercury Metabolism and Elimination Status in Humans Following Fish Consumption. *Toxicological Sciences* **2017**,
- Appleton, A. A.; Jackson, B. P.; Karagas, M.; Marsit, C. J. 2017. Prenatal exposure to neurotoxic metals is associated with increased placental glucocorticoid receptor DNA methylation. Epigenetics, (just-accepted), 1-9.
- Barnaby, R.; Liefeld, A.; Jackson, B. P.; Hampton, T. H.; Stanton, B. A. 2017. Effectiveness of table top water pitcher filters to remove arsenic from drinking water. Environmental research, 158, 610-615.
- Cubadda, F.; Jackson, B. P.; Cottingham, K. L.; Van Horne, Y. O.; Kurzius-Spencer, M. 2017. Human exposure to dietary inorganic arsenic and other arsenic species: State of knowledge, gaps and uncertainties. Science of the Total Environment, 579, 1228-1239.
- Everson, T. M.; Kappil, M.; Hao, K.; Jackson, B. P.; Punshon, T.; Karagas, M. R.; Chen, J.; Marsit, C. J., Maternal exposure to selenium and cadmium, fetal growth, and placental expression of steroidogenic and apoptotic genes. 2017. Environmental Research 158, 233-244.
- Gossai, A.; Zens, M. S.; Punshon, T.; Jackson, B. P.; Perry, A. E.; Karagas, M. R., 2017. Rice Consumption and Squamous Cell Carcinoma of the Skin in a United States Population. Environmental Health Perspectives, 97005, 1.
- Nygaard, U. C.; Li, Z.; Palys, T.; Jackson, B.; Subbiah, M.; Malipatlolla, M.; Sampath, V.; Maecker, H.; Karagas, M. R.; Nadeau, K. C. 2017, Cord blood T cell subpopulations and associations with maternal cadmium and arsenic exposures. PloS one 12, (6), e0179606.

- Punshon, T.; Jackson, B. P.; Meharg, A. A.; Warczack, T.; Scheckel, K.; Guerinot, M. L. 2017. Understanding arsenic dynamics in agronomic systems to predict and prevent uptake by crop plants. Science of The Total Environment 581, 209-220.
- Rothenberg, S.; Jackson, B.; Carly, M. G.; Donohue, A.; Emmons, A., Co-exposure to methylmercury and inorganic arsenic in baby rice cereals and rice-containing teething biscuits. 2017. Environmental research, 159, 639.
- Van Dyke, J. U.; Jachowski, C. M. B.; Steen, D. A.; Jackson, B. P.; Hopkins, W. A., Spatial differences in trace element bioaccumulation in turtles exposed to a partially remediated coal fly ash spill. Environmental Toxicology and Chemistry 2017, 36, (1), 201-211.
- Baris, D.; Waddell, R.; Freeman, L. E. B.; Schwenn, M.; Colt, J. S.; Ayotte, J. D.; Ward, M. H.; Nuckols, J.; Schned, A.; Jackson, B., Elevated Bladder Cancer in Northern New England: The Role of Drinking Water and Arsenic. Journal of the National Cancer Institute 2016, 108, (9), djw099.
- Everson, T. M.; Armstrong, D. A.; Jackson, B. P.; Green, B. B.; Karagas, M. R.; Marsit, C. J., Maternal cadmium, placental PCDHAC1, and fetal development. Reproductive Toxicology 2016, 65, 263-271.
- Green, B. B.; Karagas, M. R.; Punshon, T.; Jackson, B. P.; Robbins, D. J.; Houseman, E. A.; Marsit, C. J., Epigenome-wide assessment of DNA methylation in the placenta and arsenic exposure in the new hampshire birth cohort study (USA). Environmental health perspectives 2016.
- Karagas, M. R.; Punshon, T.; Sayarath, V.; Jackson, B. P.; Folt, C. L.; Cottingham, K. L., Association of Rice and Rice-Product Consumption With Arsenic Exposure Early in Life. JAMA pediatrics 2016, 170, (6), 609-616.
- Punshon, T.; Li, Z.; Marsit, C. J.; Jackson, B. P.; Baker, E. R.; Karagas, M. R., Placental Metal Concentrations in Relation to Maternal and Infant Toenails in a US Cohort. Environmental science & technology 2016, 50, (3), 1587-1594.
- Richardson, J.; Renock, D.; Görres, J.; Jackson, B.; Webb, S.; Friedland, A., Nutrient and pollutant metals within earthworm residues are immobilized in soil during decomposition. Soil Biology and Biochemistry 2016, 101, 217-225.
- Taylor, V. F.; Jackson, B. P., Concentrations and speciation of arsenic in New England seaweed species harvested for food and agriculture. Chemosphere 2016, 163, 6-13.
- Van Dyke, J. U.; Jachowski, C. M. B.; Steen, D. A.; Jackson, B. P.; Hopkins, W. A., Spatial differences in trace element bioaccumulation in turtles exposed to a partially remediated coal fly ash spill. Environmental Toxicology and Chemistry 2016.
- Rand MD, Vorojeikina D, Wijngaarden E, Jackson BP, Scrimale T, Zareba G, Love, TM, Myers, GJ, Watson, G. 2015. Methods for individualized determination of methylmercury elimination rate and demethylation status in humans following fish consumption. Toxicological Sciences, 10.1093/toxsci/kfv24
- Notch EG, Goodale BC, Barnaby R, Coutermarsh B, Berwin B, Taylor VF, Jackson BP, Stanton BA. 2015. Monomethylarsonous Acid (MMAIII) Has an Adverse Effect on the Innate Immune Response of Human Bronchial Epithelial Cells to Pseudomonas aeruginosa. PLoS One. 2015 Nov 10;10(11):e0142392. doi: 10.1371/journal.pone.0142392. eCollection 2015. PMID: 26554712
- Punshon, TP, Davis, MA, Marist, CJ, Theiler, SK, Baker, ER, Jackson, DP, Conway, DC, Karagas, MR. 2015. Placental arsenic concentrations in relation to both maternal and infant biomarkers of exposure in a US cohort. Journal of Exposure Science and Environmental Epidemiology (2015) 00, 1–5. doi:10.1038/jes.2015.16.
- Punshon T, Chen S, Finney L, Howard L, Jackson BP, Karagas MR, Ornvold K. High-resolution elemental mapping of human placental chorionic villi using synchrotron X-ray fluorescence spectroscopy. Anal Bioanal Chem. 2015 Sep;407(22):6839-50. doi: 10.1007/s00216-015-8861-5.
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- Jackson, BP. 2015. Fast Ion Chromatography-ICP-QQQ for arsenic speciation. Journal of Analytical Atomic Spectroscopy. 30(6):1405-1407.

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- Jung D, Adamo MA, Lehman RM, Barnaby R, Jackson CE, Jackson BP, Shaw JR, Stanton BA. A novel variant of aquaporin 3 is expressed in killifish (Fundulus heteroclitus) intestine. Comp Biochem Physiol C Toxicol Pharmacol. 2015 Mar 9.pii: S1532-0456(15)00021-6. doi: 10.1016/j.cbpc.2015.03.001. [Epub ahead of print] PubMed PMID: 25766383.
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- Jackson, B.P., Liba, A., Nelson, J. 2015. Advantages of reaction cell ICP-MS on doubly charged interferences for arsenic and selenium analysis in foods. Journal of Analytical Atomic Spectroscopy. (30), 1179-1183.
- Carignan CC, Cottingham KL, Jackson BP, Farzan SF, Gandolfi AJ, Punshon T, Folt CL, Karagas MR. Estimated Exposure to Arsenic in Breastfed and Formula-Fed Infants in a United States Cohort. Environ Health Perspect. 2015 Feb 23. [Epub ahead of print] PubMed PMID: 25707031.
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- Davis, M.A., Li, Z. Gilbert Diamond., D., Mackenzie, T.A., Cottingham, K.L., Jackson, B.P., Lee, J.S., Baker, E.R., Marsit, C.J., Karagas, M.R. 2014, Infant toenails as a biomarker of in utero arsenic exposure. Journal of Exposure Science and Environmental Epidemiology, Sep:24(5):467-473.. PMCID: PMC4141012.
- Taylor, VF, Bugge, D,. Jackson, BP., Chen. CY. 2014. Pathways of CH3Hg and Hg Ingestion in Benthic Organisms: An Enriched Isotope Approach. Environmental Science and Technology. 48,9, 5058-5065. PMCID: PMC4014141
- Richardson, J.B., Friedland, A.J., Engerbretson, T.R., Kaste, J.M., Jackson, B.P. 2014. Forest Floor Lead Changes from 1980 to 2011 and Subsequent Accumulation in the Mineral Soil across the Northeastern United States. Journal of Environmental Quality. 43, 3, 926-935.
- Gosse, J.A., Taylor, VF. Jackson, BP. Hamilton, J.W., Bodwell, J.E. 2014. Monomethylated trivalent arsenic species disrupt steroid receptor interactions with their DNA response elements at non-cytotoxic cellular concentrations. Journal of Applied Toxicology. 34, 5, 498-505. PMCID: PMC3884051
- Tajuddin SM, Amaral AF, Fernández AF, Chanock S, Silverman DT, Tardón A, Carrato A, García-Closas M, Jackson BP, Toraño EG, Márquez M, Urdinguio RG, García-Closas R, Rothman N, Kogevinas M, Real FX, Fraga MF, Malats N; Spanish Bladder Cancer/EPICURO Study investigators. LINE-1 methylation in leukocyte DNA, interaction with phosphatidylethanolamine N-methyltransferase variants and bladder cancer risk. Br J Cancer. 2014 Apr 15;110(8):2123-30. doi: 10.1038/bjc.2014.67. Epub 2014 Mar 4. PubMed PMID: 24595004; PubMed Central PMCID: PMC3992509.
- Beck, ML, Hopkins, WA, Jackson, BP. 2014. Variation in riparian consumer diet composition and differential bioaccumulation by prey influence the risk of exposure to elements from a recently remediated fly ash spill. Environmental Toxicology and Chemistry. 33,11,2595-2608.
- Beal, S.A., Kelly, M.A., Stroup, J.S., Jackson, B.P., Lowell, T.V., Tapia, P.M., 2014. Natural and anthropogenic variations in atmospheric mercury deposition during the Holocene near Quelccaya Ice Cap, Peru. Global Biogeochemical Cycles. 28,4, 437-450.
- Beck, ML, Hopkins, WA, Jackson, BP. 2013. Spatial and Temporal Variation in the Diet of Tree Swallows: Implications for Trace-Element Exposure After Habitat Remediation. Archives of Environmental Contamination and Toxicology. 65,3,575-587.
- Van Dyke, J U., Beck, M.L., Jackson, B.P., Hopkins, W.A. 2013. Interspecific Differences in Egg Production Affect Egg Trace Element Concentrations after a Coal Fly Ash Spill. Environmental Science and Technology. 47,23, 13763-13771.

- Beal, S.A., Jackson, B.P., Kelly, M.A., Stroup, J.S., Landis, J.D., Effects of Historical and Modern Mining on Mercury Deposition in Southeastern Peru. 2013. Environmental Science and Technology, 47 (22), 12715-12720. PMCID: PMC3863380.
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- Tajuddin SM, Amaral AFS, Fernández AF, Rodríguez-Rodero S, Rodríguez RM, Moore LE, Tardón A, Carrato A, García-Closas M, Silverman DT, Jackson BP, García-Closas R, Cook AL, Cantor KP, Chanock S, Kogevinas M, Rothman N, Real FX, Fraga MF, Malats N. 2013. Genetic and Nongenetic Predictors of LINE-1 Methylation in Leukocyte DNA. Environmental Health Perspectives, 121,6, 650-655.
- Beck, ML, Hopkins, WA, Jackson, BP. 2013. Spatial and Temporal Variation in the Diet of Tree Swallows: Implications for Trace-Element Exposure After Habitat Remediation. Archives of Environmental Contamination and Toxicology. 65,3,575-587.
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### **Book Chapters and Proceedings**

- Punshon, T., B.P. Jackson, J. C. Seaman, D. C.Adriano and J. Burger. 2006. Arsenic and Selenium Speciation in Aged, FGD-Amended soil. In, Coal Combustion Products and Environmental Issues. Sajwan, K.S., I. Twardowska, T. Punshon, and A.K. Alva (Eds). Springer-Verlag Publishers, New York, USA.
- Jackson, B.P., W.A. Hopkins, J. Unrine, J. Baionno, and T. Punshon. 2005. Selenium speciation in amphibian larvae developing in a coal fly ash settling basin. *In*, Plasma source mass spectrometry, current trends and future developments. Holland, J.G. and Bandura D.R. Eds. The Royal Society of Chemistry, Cambridge, UK. pp. 225-234.
- Punshon, T., Neal, A.L., Jackson, B.P. 2004. Cadmium *In*: Trace and Ultratrace Elements in Plants and Soil. WIT Press Ashurst Lodge, Ashurst, Southampton, S040 7AA, UK.
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- Seaman, J.C., M. Guerin, B.P. Jackson P.M. Bertsch and J. Ranville. 2003. Characterizing complex mineral assmeblages: the application of advanced analytical techniques to the study of mobile groundwater colloids. *In* Geochemical Surface Controls on Trace Element Fate, ed. W. Kingery and H. Selim, CRC Press., Boca Raton, Fl.
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Smith, K. S., J. F. Ranville, P.J. Lamothe, and B.P. Jackson. 2003. Use of stable isotopes to examine metalattenuation and release processes in a fluvial tailings deposit. Proceedings of Joint conference of the Billings land reclamation symposium and the annual meeting of the American society of mining and reclamation, June 3 - 6, 2003. Billings, Montana.

## **Presentations**

- Chemical Analyses in Support of Studies of the Health Implications of Rice Consumption (invited).
- American Chemical Society, National Meeting, New Orleans, March 2018.
- Analysis of Toenails as a Biomarker of Human Exposure and Nutrient Status, Plasmachemistry Winter conference, Amelia Island, FL, January 2018.
- Arsenic in food and water: from analytical methods to human exposure considerations (*invited*), Harvard School of Public Health, November 2017.
- Arsenic in the Food Supply. (invited) University of New Hampshire, Earth Sciences, October 2017.
- Arsenic in the Marine and Terrestrial Environment. *(invited)* University of Maine, Departments of Marine Sciences and Molecular Sciences. September 2017
- Advances in Reaction Cell ICP-MS for Arsenic Speciation and Analysis. (*invited*) American Chemical Society National Meeting, Washington DC, August 2017.
- Understanding the Redistribution and Biogeochemical Cycling of Mercury in a Contaminated Floodplain, International Conference on Mercury as a Global Pollutant, July, 2017
- What, When and where. Applications of ICP-MS to Trace Metal Exposure Analysis. (*invited*) Rochester Exposure Assessment Symposium, May 2017.
- Fast Ion Chromatography-ICP-QQQ for Arsenic Speciation. *(invited)* American Chemical Society National Meeting, Boston, August 2016.
- Arsenic in Food. (*invited*) NE American Chemical Society Regional Meeting, Dartmouth College, Hanover, NH, October 2015.
- Analysis of Arsenic and Mercury in the Food and Water Supply (*invited*) Woods Hole Oceanographic Institute, Cape Cod, May 2014.
- Arsenic in Rice. (invited) Food and Nutrition Conference and Expo, October 2013, Houston.
- Arsenic in Food Products. American Chemical Society National Meeting. August 2012, Philadelphia, PA.
- Arsenic in our Food and Water. (invited) New Hampshire Science Café, June 2012, Concord, NH
- Arsenic in Food, Seminar, (invited) Dartmouth College, Department of Earth Sciences, April 2012.
- Arsenic, Organic Formula and the Food System. *(invited)* Institute for Agriculture and Trade Policy, Healthy Food Action Webinar, March 2012.
- Jackson, B.P., Chen, C.Y., Bugge, D.M., Hoopes, A.J., Giustini, A.J., Ranville, J.F., High, W. Laser ablation ICP-MS for nanoparticle toxicology and biomedical studies. Plasmachemistry Winter Conference, Tucson, January 2012.
- Jackson, B.P., Bugge, D.M., Ranville, Ling, F., Chen, C.Y., Bioaccumulation and trophic transfer of nanoparticles to *Leptocheirus plumulosus*. SETAC, Boston, November 2011.
- Jackson, B.P., Taylor, V.F., Cottingham, K, Punshon, T. Arsenic concentration and speciation in infant formulas and first foods. Trace Elements in Food 4, Aberdeen, Scotland, June 2011.
- Jackson, B.P., Bugge, D., Chen, C.Y. Trophic transfer of quantum dots from algae to amphipods. Nanotoxicology, Edinburgh, June 2010.
- Taylor, V. Jackson, B.P. Tools for assessing the role of particle association in point source Hg contamination. SETAC, Portland, OR, 2010
- Taylor, V. Jackson, B.P., Determination of arsenic and arsenic species in baby food. National Environmental Monitoring, Washington DC. August 2010
- Jackson, B.P. Taylor, V. Species-specific enriched stable isotopic spikes elucidate binding differences between Hg species in NE soils and sediments. American Chemical Society, San Francisco, CA, March, 2010.
- Jackson, B.P., Taylor, V., Lanzirotti, A., Ranville, J.F., High, W. Analytical approaches to study the fate of gadolinium contrast agents in biological tissues. Federation and Analytical Spectroscopy, Louisville, KY, October, 2009.
- Jackson, B.P., Taylor, V., Baker, R.A. Miller, E. Low level mercury speciation by isotope dilution GC-ICP-MS. High Resolution ICP-MS meeting, New Brunswick, NJ, September 2008.

- Jackson, B.P., Taylor, V.F., Species specific enriched stable isotope spikes elucidate the concentration and geochemistry of methylmercury in NE waters, New England Regional Meeting, American Chemical Society, Burlington, VT, August 2008.
- Jackson, B.P. Coupled analytical techniques for the determination of arsenic and selenium speciation in the environment. Chemistry Colloquium, Dartmouth College, February, 2008.
- Jackson, B.P. and Karagas, M. Arsenic and other contaminants in New Hampshire well waters. Invited Oral Presentation. Federation of Analytical Chemical Spectroscopists. Orlando, Fl. September 2006.
- Jackson, B.P., S. Harper, L. Smith, and J. Flynn. Laser ablation ICP-MS of rat brain sections: A rapid method for detecting metal rich areas. Winter Conference on Plasma Spectrochemistry, Tucson, AZ, January 2006.
- Jackson, B.P., J.R. Ranville, P.M. Bertsch and A. Sowder. Characterization of colloidal and humic bound Ni and U in the dissolved fraction of contaminated sediment extracts. International Conference on the Biogeochemistry of Trace Elements, Adelaide, Australia, April 2005.
- Punshon, T.P., B.P. Jackson, P.M. Bertsch, and J. Burger. The speciation of nickel in plants using liquid chromatography ICP-MS. International Conference on the Biogeochemistry of Trace Elements, Adelaide, Australia, April 2005.
- Jackson, B.P., P.L. Williams, A. Lanzarotti, and P.M. Bertsch. Synchrotron X-ray techniques to determine uptake, distribution and speciation of metals in the nematode *Caenorhabditis elegans*. SETAC fourth World Congress, Portland, November 2004.
- Unrine, J.M., W.A. Hopkins, B.P. Jackson, C.S. Romanek, B.P. Staub, L.S. Paddock. 2004. Assessment of selenium biomagnification in a swamp contaminated by coal-combustion waste using stable isotopes. *Platform presentation*. 4th Society of Environmental Toxicology and Chemistry World Congress. Portland, OR.
- Jackson, B. P\*., W.A. Hopkins, J.A. Baionno, J. Unrine, T. Punshon. Selenium speciation in amphibians inhabiting a coal fly ash settling basin. Durham Conference on Plasma Source Mass Spectrometry. Durham, England, 2004.
- Neal A.L., Jackson B.P. and Ranville J. Uranium binding to *Shewanella oneidensis* and a putative exopolymer studied with Flow Field Flow Fractionation-ICP-Mass spectrometry. 104<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA. May 2004.
- Jackson, B. P, T. Punshon, J. C. Seaman, D. C. Adriano. Arsenic and selenium speciation in aged, FGD-amended soils. International Conference on the Biogeochemistry of Trace Elements. Uppsala, Sweden, June, 2003.
- Ranville, J. F., M. Benedetti, B.P. Jackson\*, J.C. Seaman, J. Hendry. Determining the size distributions of colloid-associated trace elements using field flow fractionation-inductively coupled plasma-mass spectrometry (FFF-ICP-MS). International Conference on the Biogeochemistry of Trace Elements. Uppsala, Sweden, June, 2003.
- Jackson, B. P., J.C. Seaman, P.M. Bertsch. Fate of Organo-Arsenic Compounds in Poultry Litter Upon Land Application. Soil Science Society of America Annual Meeting. Denver, CO, November 2003.
- Jackson, B.P., A. Neal, and J.F. Ranville. Application of Flow Field Flow Fractionation-ICP-MS for the Study of Uranium Binding in Cell Suspensions of *Shewanella oneidensis* MR-1. American Geophysical Union Fall meeting, San Francisco, CA, December 2003.
- Gaines, K.F., J.M Novak, J.C. Cumbee, Jr., G.L. Mills, B.P. Jackson, A.Rodrigues-Navarro, and C.S. Romanek.. Oct 2002. Clapper Rails as indicator species of estuarine marsh health in the southeastern United States. Animals of Tidal Marshes Symposium Patuxent wildlife Research Center / Smithsonian Institute.
- Hopkins, W.A, B.P. Staub, J.A. Baionno, B.P. Jackson, J. H. Roe. 2002. Trophic and maternal transfer of selenium. Wildlife Ecotoxicology Symposium Society of Environmental Toxicology and Chemistry, Annual Meeting, Salt Lake City, UT.
- Romanek C.S., B.P., Jackson K. Hobson and J. Morison April. 2002 Baleen plates from Balaena mysticetus as a historical record of selenium uptake and stable isotope variation in the environment. Third International Conference on Applications of Stable Isotope Techniques to Ecological Studies. Falgstaff, Az,
- Jackson, B.P., P. M. Bertsch, M. L. Cabrera, J. J. Camberato, J. C. Seaman, and C. W. Wood. November 2002. Trace element speciation in poultry litter. Soil Science Society of America national meeting, Indianapolis, In.

- Jackson, B.P. Trace element bioavailability. Analytical speciation methods. OTKA-MTA-NSF International Workshop. Natural attenuation of metals along the Tisza river-floodplain-wetlands continuum. September 2002, Budapest, Hungary.
- Jackson, B. P., W. A. Hopkins, and J. Biaonno. Laser abaltion ICP-MS. A unique analytical tool for trace element exposure assessment. SETAC annual meeting, Salt Lake City, UT, November, 2002.
- Jackson, B.P. P. M. Bertsch, M. L. Cabrera, J. J. Camberato, J. C. Seaman, and C. W. Wood. August 2002. Trace element speciation in poultry litter. American Chemical Society national meeting, Boston, MA.
- Hopkins, W.A., J. H. Roe, J. W. Snodgrass, B. P. Staub, B. P. Jackson and J. D. Congdon. 2002. Effects of chronic dietary exposure to contaminants in aquatic water snakes. European Society of Environmental Toxicology and Chemistry, Annual Meeting. Vienna, Austria.
- Bryan, L. W.A. Hopkins, J.A. Baionno, B.P. Jackson. 2002. Maternal transfer of contaminants to eggs in common Grackles (Quiscalus quiscalus) nesting on coal fly ash basins. Arch. Environ. Contamination Toxicol. Annual Meeting of the Society of Environmental Toxicology and Chemistry. Salt Lake City, UT.
- Ranville, J.R. and B.P. Jackson. Analysis of the clay fraction of metal contaminated soils using SDFFF-ICP-MS. Winter Conference on Plasma Spectrochemistry. January 6 –12, 2002. Scottsdale Az.
- Jackson, B.P., P. Shaw-Allen, W. Hopkins, G. Mills, and C. Jagoe. Trace element in tissue extracts of fish from a fly ash settling basin. Winter Conference on Plasma Spectrochemistry. January 6 –12, 2002. Scottsdale Az.
- Jackson, B.P., J.C. Seaman, and D. Adriano. Trace Metal-colloid associations in contaminated soils: A study by FFF-ICP-MS. Annual ASA Meetings, October 21-25, 2001, Charlotte, NC.
- Seaman, J.C., P.M. Bertsch, M. Guerin, and B.P. Jackson. (Invited) Characterizing complex mineral assmeblages: the application of advanced analytical techniques to the study of mobile groundwater colloids. Sixth International Conference on the Biogeochemistry of Trace Elements, Guelph, Ontario, Canada, July 29 August 2, 2001.
- Jackson, B.P., P. Shaw-Allen, W. Hopkins, G. Mills, and C. Jagoe. Trace element—protein interactions in fish from a fly ash settling basin: A study using SEC-ICP-MS. International Conference on the Biogeochemistry of Trace Elements. University of Guelph, Ontario, Canada. July, 2001.
- Jackson, B.P. and P.M. Bertsch. Determination of arsenic species in poultry wastes. American Geophysical Union, Spring meeting, Boston, June 2001.
- Dawson, D. J., J.F. Ranville, P.B. Jackson, J.C. Seaman, and B. Honeyman. Particle size and element distributions of environmental colloids: Comparison of sizing methods and influence on transport. . 9th International Symposium on field-flow fractionation, 26-29 June, 2001, Golden, CO
- Seaman, J.C., J.M. Hutchison, V. Vulava, and B.P. Jackson. In Situ Stabilization of metals and radionuclides: A scientific basis for minimally invasive treatment techniques. AEHS West Coast Conference, San Diego, CA, March 19-22, 2001.
- Logan, J.S., J.R. McIntosh, J.C. Seaman, B.P. Jackson, and S. Aburime. Moisture retention and Hydraulic Conductivity of Coarse-Textured Soils Amended with Coal Combustion Fly Ash. Annual ASA Meetings, October 21-25, 2001, Charlotte, NC.
- Hopkins, W.A., Roe, J.H., Snodgrass, J.W., Staub B.P., Jackson, B.P., Rania, L., Sever, D.M., Congdon J.D. Effects of chronic dietary exposure to contaminants in squamate reptiles. Society of Environmental Toxicology and Chemistry, Annual Meeting. Baltimore, MD. November, 2001.
- Vulava, V.M., AG Sowder, BP Jackson, JC Seaman, and PM Bertsch. Selective extractants for Metals in aged and freshly contaminated sediments. Annual ASA Meetings, November 5-9, 2000, Minneapolis.
- Jackson, B.P. J.C. Seaman and W.P. Hopkins. Arsenic speciation in a coal fly ash settling basin. Poster presentation, American Geophysical Union Annual Meeting, San Francisco, CA. December 2000.
- Jackson, B.P. P.M. Bertsch and J.C. Seaman. The fate of p-arsanilic acid and roxarsone in soils: Ion chromatographic methods for separation and detection of inorganic, aliphatic and aromatic arsenic compounds. Soil Science Society of America Annual Meeting, Minneapolis, MN. November 2000
- Dawson, D.J., J. F. Ranville, J. Seaman, B.P. Jackson, and B. D. Honeyman. Characterization of Dispersible Soil Colloids Using Field Flow Fractionation Coupled to GF-AAS and ICP-MS. Annual ASA Meetings, November 5-9, 2000, Minneapolis.
- Seaman, J.C., V. Vulava, B.P. Jackson, and S. Aburime. Anion migration through highly weathered sediments under varying degrees of saturation using a centrifugation system. Fall AGU Meeting, San Francisco, CA, December 15-20, 2000.

- Hutchison, J., J.C. Seaman, V. Vulava, B. Jackson, and D. Radcliffe. In situ treatment of contaminated soils using Ca-Phytate. Annual ASA Meetings. November 5-9. 2000. Minneapolis.
- Vulava, V.M., J.C. Seaman, and B.P. Jackson. 1999. Mobilization of Pb by extracting agents in highly weathered natural porous media. AGU, 1999 Fall Meeting. San Francisco, CA.
- Seaman, J.C., J.S. Arey, C. Romanek, B. Jackson and P.M. Bertsch. 1999. In situ Cs and U stabilization using soil amendments. SSSA. Oct. 31-Nov. 4, Salt Lake City, Utah.
- Seaman, J.C., S. Arey, T. Meehan, J. Brailer, T. Parker, and B. Jackson. (Invited Seminar) In situ <sup>37</sup>Cs and U stabilization in contaminated sediments using soil amendments. Southeastern Geologic Society of America Meetings, March 24-25, 1999, Athens, GA.
- Jackson B.P. and W.P. Miller. Major and trace element solubility from land application of fly ash and organic wastes: an incubation study. Oral presentation. 5<sup>th</sup> International Conference on the Biogeochemistry of Trace Elements. Vienna, Austria, July, 1999.
- Jackson B.P. and W.P. Miller. Effectiveness of phosphate and hydroxide for desorption of arsenic and selenium species from iron oxides. Agronomy Abstracts, Annual Soil Science Society of America Meeting, Salt Lake City, UT, November, 1999.
- Jackson B.P. 1998. Soil solution speciation of As and Se using IC-ICP-MS. Invited presentation, Soil Science Society of America meetings, Baltimore. October 1998.