Michael J. McCabe, Jr., Ph.D.
Principal Scientist

Professional Profile

Field of Experience

Pharmacology, Environmental Toxicology, Immunology, Virology, Immunotoxicology, and Microbiology

Education

1991 Ph.D., Biomedical Studies (Microbiology and Immunology), Albany Medical College

1990 M.S., Biomedical Studies (Microbiology and Immunology), Albany Medical College

1984 B.S., Biology, Siena College, Loudonville, NY

1984 *In Vitro* Cell Biology and Biotechnology, State University of New York at Plattsburgh and the W.H. Miner Agricultural Research Center, Chazy, NY

Current and Previous Positions

Principal Scientist, Toxicology and Immunology, Intertox, Inc. (2024 – present)[1]

National expert performing technical investigations, analyses, research, written reports and testimony aimed at supporting opinions directed toward the resolution (e.g., settlement or verdict) of litigation or insurance matters involving alcohol, cannabinoids, drugs of abuse or misuse, medical devices, vaccines, and environmental or occupational exposures to chemical (i.e., toxicants) or biological (i.e., pathogens) agents and their effects on human health, behavior and performance.

Temple University, Philadelphia, PA (2017 – 2024)
Department of Chemistry; College of Science and Technology

Adjunct Associate Professor, Lecturer Forensic Toxicology; Master's-level graduate students

Exigent Group Limited, Cape Town, South Africa (2019-2024)

Executive Director Exigent Forensic Consulting, Morae Global Corporation, Houston, TX (2023 - 2024)

[1] Dr. McCabe works from an office located in the greater Philadelphia area.

Had operational and technical oversight of a team of scientists and professionals who functioned as testifying experts in various disciplines including toxicology & pharmacology, liquor liability, human factors, clinical psychology, premises safety, biomechanics, etc.

Toxicology and Immunology Expert

Provided technical investigations, analysis, reports, and testimony involving the application of fundamental principles of toxicology and environmental medicine toward the resolution of torts and other litigation involving exposures to drugs, chemicals, xenobiotics and other environmental agents and stressors affecting human health and/or performance. Case examples involved the following:

- alcohol
- dram shop
- cannabinoids/marijuana
- opioids
- other drugs of abuse/misuse (e.g., benzodiazepines, cocaine)
- carbon monoxide and other gases (e.g., hydrogen sulfide, chlorine, methane)
- metals (e.g., lead, mercury, cobalt, zinc, nickel, arsenic, aluminum, etc.)
- asbestos
- pesticides and herbicides
- solvents (e.g., BTEX, VOCs)
- medical devices
- vaccines
- carcinogens
- food poisoning
- skin/eye irritants
- allergens
- adverse drug reactions

Toxicology and Immunology Expert, Robson Forensic, Inc., Lancaster and Philadelphia, PA (2009 – 2014)

Director of Practice Groups (2014 – 2019)

Accountable for technical oversight of expert work within all RFI Practice Groups (~100 experts). Responsibilities included recruiting, training, mentoring, and quality assurance (peer review).

Science Practice Group Leader (2012 - 2015; 2019)

Responsible for case assignment, technical oversight and peer review of expert work within scientific disciplines including toxicology, pharmacology, immunology, pharmacy, liquor liability, arboriculture, animal (equine) science, environmental health and safety, industrial hygiene, water quality, blood spatter, food safety and questioned documents.

University of Rochester Medical Center, Rochester, NY (2000 – 2017)
Department of Environmental Medicine; School of Medicine and Dentistry

- **Adjunct Associate Professor** (2009 – 2017)
- **Associate Professor (**2003 – 2009)
- **Assistant Professor** (2000 – 2003)

Research, Teaching, and Administrative duties as follows:

Research - function as a Principal Investigator responsible for operational and fiscal management and oversight of an NIH-funded scientific research program centered on mechanistic metal toxicology and immunotoxicology. Supervised technical and intellectual

efforts of approximately 25 scientists (Ph.D., M.S., B.S. levels) working on lab-based and epidemiological research projects.

Teaching - instructional responsibilities within and across university-wide medical and graduate curricula including lecturing (topics included metal toxicity, cell signaling, immunity, ethics), course development (e.g., Course Director, Target Organ Toxicology), and laboratory supervision and mentoring of postdoctoral, graduate (Ph.D. and M.S.) and undergraduate trainees.

Administrative - committee service in various capacities within the Environmental Health Sciences Center *"Environmental Agents as Modulators of Human Disease and Dysfunction"* (e.g., Director Immunomodulators and Immunopathogenesis Research Core), Toxicology Training Program (e.g., Deputy Director Toxicology Training Program, Curriculum Committee Chairman, Thesis Committee member on > 20 Ph.D. and M.S. dissertations), and appointments to various committees within the School of Medicine and the College (e.g., University Flow Cytometry Oversight Committee, Task Force to establish an Undergraduate Public Health Major).

Wayne State University, Detroit, MI (1992 – 2000)
Institute of Chemical Toxicology, Graduate School of Health Sciences

- **Assistant Professor** (1997 – 2000)
- **Adjunct Assistant Professor, Department of Pharmaceutical Sciences** (1994 – 2000)
- **Research Assistant Professor** (1992 – 1997)
  Established an extramurally-funded research program centered on mechanistic metal immunotoxicity. Responsible for teaching immunology and cellular biochemistry to graduate level students (Master's, Ph.D. and PharmD).
- **Director, Imaging and Cytometry Facility Core, Environmental Health Sciences Center in Molecular and Cellular Toxicology with Human Applications** (1997 – 2000)

  Responsible for establishing and operating a state-of-the-art flow cytometry facility serving the needs of ~20 scientists engaged in molecular cell biology research projects requiring immunophenotyping, cell cycle analysis, apoptotic marker analysis, intracellular cytokine analysis, etc.

Karolinska Institute, Stockholm, Sweden (1990 – 1992)
Institute of Environmental Medicine, Postdoctoral Research Associate

Training and research in mechanisms of toxicity, cell death, cell signaling, metal toxicology.

Albany Medical Center Hospital, Albany, NY (1985 – 1990)
Pathology and Laboratory Medicine, Medical Technician, Serology and Blood Bank

Continuing Education and Certifications

- An Introduction to Clinical and Medical Toxicology; Society of Toxicology Continuing Education Course; Nashville, TN, March 2023
- Certified as a Diplomate of the American Board of Toxicology; 2012 - 2021
- Fellow of the Academy of Toxicological Sciences (ATS); 2012 - 2018
- Ethics, Opioids and America's Drug Overdose Crisis; Society of Toxicology Webinar, December 2019
- TIPS Instructor Certification Training; TIPS/Health Communications, Inc., April 2018
- Ocular Toxicology. Pharmacology and Drug Delivery: An Eye to the Future. Society of Toxicology Contemporary Topics in Toxicology; San Francisco CA, June 2016
- New Horizons in Chemical Carcinogenesis: Advances in Mode of Action and Mechanism of Cancer Pathogenesis. Society of Toxicology Continuing Education Course; San Diego CA March 2015
- Toxicology and Regulatory Considerations for Combination Products. Society of Toxicology Continuing Education Course; San Diego CA, March 2015
- Advances in Safety Assessment of Medical Devices. Society of Toxicology Continuing Education Course; San Diego CA, March 2015
- 17th Annual Toxicology Teaching Day, Department of Emergency Medicine, Upstate Medical University/Upstate New York Poison Control Center; Syracuse, NY, November 2013
- The Changing Faces of Antidotes. American College of Medical Toxicology; San Juan PR, March 2013
- Alcohol Abuse Academy: Current Perspectives on Impairment, Dependence and Withdrawal. American College of Medical Toxicology; San Juan PR, March 2013
- Basic Principles of Human Risk Assessment. Society of Toxicology Continuing Education Course; San Antonio, TX, March 2013
- The REACH Regulation and Safety Assessment Approaches for Chemicals that Come in Contact with the Skin. Society of Toxicology Continuing Education Course; San Antonio, TX, March 2013
- 16th Annual Toxicology Teaching Day, Department of Emergency Medicine, Upstate Medical University/Upstate New York Poison Control Center; Syracuse, NY, November 2012
- Prescription Opioid Misuse Academy: The Dark Side of Prescription Opioids. American College of Medical Toxicology; San Diego, CA, March 2012
- The Robert F. Borkenstein Course on The Effects of Drugs on Human Performance and Behavior. Indiana University: Center for Studies of Law in Action; Bloomington, IN, April 2010

- The Robert F. Borkenstein Course on Alcohol and Highway Safety; Testing, Research and Litigation. Indiana University: Center for Studies of Law in Action; Bloomington, IN, December 2009
- First Forensic Course: Ethanol and Marijuana. American College of Medical Toxicology; Baltimore, MD, November 2009
- Servers and Managers Alcohol Responsibility Training (S.M.A.R.T.); Certified, 2009
- New Frontiers in Metal Toxicology; Genetic Susceptibility, Early Diagnosis, and Related Biological Indices. Society of Toxicology Continuing Education Course; Baltimore, MD, March 2009
- Faculty Development Medical Education Leadership Series. University of Rochester School of Medicine and Dentistry; Rochester, NY, 2007 - 2008
- Essentials of Metal Toxicology. Society of Toxicology Continuing Education Course; San Diego, CA, March 2006
- Radiation and Radioisotope Safety Training. University of Rochester Medical Center Radiation Safety Unit, August 2000
- Certified Key Operator, Becton Dickinson Immunocytometry Systems FACSCalibur Cell Analyzer and Sorter, Training Course; Mansfield, MA, December 1997

Professional Memberships

- Society of Toxicology, 1989 - present
- American Chemical Society, 2012
- American Association of Immunologists, 2003 - 2008

Honors and Awards

- Best Paper of the Year Award, Society of Toxicology, Immunotoxicology Specialty Section, 2009
- Outstanding Young Investigator Award, Society of Toxicology, Immunotoxicology Specialty Section, 2000
- Who's Who among Students at American Colleges & Universities, 1990
- Dean's Award for Excellence in Research, Albany Medical College, 1990
- Dean's Award for Excellence in Research, Albany Medical College, 1989
- Graduate Student Award for Excellence in Research, Society of Toxicology, Metals Specialty Section, 1989

Editorial Assignments

- Associate Editor, Toxicology and Applied Pharmacology, 2001 – 2013
- Editorial Board Member, Toxicology and Applied Pharmacology, 1999 – 2001
- Editorial Board Member, Toxicological Sciences, 2008 – 2015
- Editorial Board Member, Toxicology Letters, 2009 – 2013
- Editorial Board Member, Journal of Immunotoxicology, 2003 – 2013

Peer-reviewer for the following journals (selected list):

- Environmental Health Perspectives
- Toxicology
- Journal of Immunology
- Carcinogenesis
- Critical Reviews in Toxicology
- Chemical Research in Toxicology
- Journal of Inorganic Biochemistry
- Nutrition and Cancer
- Cell Proliferation
- Apoptosis
- Cellular Microbiology
- Journal of Pharmacy and Pharmacology
- Journal of Biochemical and Molecular Toxicology
- Journal of Applied Toxicology

International/National Advisory Health Councils and Research and Regulatory Review Committees

- ENVIRON International Corp., Environmental Exposures to Nickel and its Relationship to Disease: Respiratory Disease, Asthma and Cardiovascular Toxicity, Panelist, Arlington, VA, October 2012.
- Department of Defense, U.S. Army Medical Research and Materiel Command, Congressionally Directed Medical Research Programs, Gulf War Illness Research Peer-Review Panel Chairman, October 2011.
- National Institutes of Environmental Health Sciences, Division of Extramural Research and Training, Superfund Basic Research and Training Program Review Panel, 2011.

- National Institute of Environmental Health Sciences, Expert Panel Workshop to Examine the Role of Environment in the Development of Autoimmune Disease, Expert Panelist and White Paper Co-Author, 2010.
- U.S. Environmental Protection Agency - Workshop on Policy-Relevant Science to Inform and Plan for Review of the National Ambient Air Quality Standards for Lead, Expert Panelist, 2010.
- World Health Organization/International Programme of Chemical Safety, Harmonization Project – Guidance Document for Risk Assessment of Mercury Immunotoxicity, 2009 – 2010.
- Congressionally-Directed Medical Research Program (Department of Defense), Peer-Reviewed Medical Research Program Panel, (Gulf War Injury Proposals), 2000 - 2010, 2012, 2013.
- National Research Council of the National Academies of Science, Committee on Beryllium Alloy Exposures, Managing Health Effects of Beryllium Exposure, The National Academy Press, 2007 – 2008.
- National Institutes of Environmental Health Sciences, Division of Extramural Research and Training, Special Emphasis Review Panel, Interdisciplinary Partnerships in Environmental Health Sciences, 2006.
- Center for Scientific Review, NIH Division of Research Grants, Skeletal Biology Structure and Regeneration Study Section, *Ad hoc* member, 2006.
- Center for Scientific Review, NIH Division of Research Grants, Hypersensitivity, Autoimmune and Immune-mediated Disease Review Panel, *Ad hoc* member, 2006.
- National Institute of Dental and Craniofacial Research, Special Emphasis Review Panel, Sjogren's Syndrome, 2006.
- Environmental Protection Agency, External Reviewer, Air Quality Criterion for Lead, 2005.
- Center for Scientific Review, NIH Division of Research Grants, Integrative and Clinical Endocrinology and Reproduction Study Section, *Ad hoc* Member, 2005.
- Center for Scientific Review, NIH Division of Research Grants, ZRG1 MOSS Musculoskeletal R01 and Small Business Review Panel, 2005.
- National Institutes of Environmental Health Sciences, Division of Extramural Research and Training, Special Emphasis Review Panel, Centers of Biomedical Research Excellence (COBRE), 2005.
- National Workshop Research Asthma Disparities, 2005.
- National Institutes of Environmental Health Sciences, Division of Extramural Research and Training, Superfund Basic Research and Training Program Review Panel, 2004-2005.
- ALTX-4 (2) Special Emphasis Panel, Small Business Incentive Research Applications, 1999-2004.

- Center for Scientific Review, NIH Division of Research Grants, Alcohol and Toxicology (ALTX-4) Study Section, *Ad hoc* Member, 1999 – 2003.
- ALTX-4 (2) Special Emphasis Panel, Postdoctoral Fellowships, 2001.
- ALTX-4 (2) Special Emphasis Panel, Minority Pre-doctoral Fellowships, 1999.
- National Institutes of Environmental Health Sciences Special Review Panel, Biological Effects of Power Frequency Electromagnetic Fields (EMF), 1996.

Professional Service Assignments

National

- Society of Toxicology Ethics, Legal, Forensic and Societal Issues Specialty Section (2022 – present); Vice President (2022); President (2023/2024); Past-President (2024/2025),
- Society of Toxicology, Education Career Development Committee; Committee member, 2019 – 2021.
- Society of Toxicology, Career Resources and Development Committee; Committee member, 2018 – 2019.
- Society of Toxicology Metals Specialty Section; Councilor (2001 - 2004); Vice President-elect (2004); Vice President (2005); President (2006); Past-President (2007).
- Society of Toxicology Immunotoxicology Specialty Section; Program Committee (1999 - 2001), Executive Committee (1999 - 2000), Awards Committee (1999), Membership Committee Chairman (1997 - 2000); Councilor (2004 - 2006).

University

- Deputy Director, Toxicology Training Program, University of Rochester, 2004 – 2008.
- Chairman, Curriculum Committee, Toxicology Training Program, U. Rochester, 2006 – 2008.
- Director, Immunomodulators and Immunopathogenesis Research Core, Environmental Health Sciences Center, University of Rochester, 2003 – 2008.
- Member, Flow Cytometry Oversight Committee, University of Rochester, 2003 – 2009.
- Fenn Award Committee (review/select best Ph.D. thesis), University of Rochester, 2006 – 2008.
- Member, Admissions Committee, Toxicology Training Program, U. Rochester, 2001 – 2008.
- Member, Policy Committee, Toxicology Training Program, U. Rochester, 2001 – 2008.
- *Ad hoc* Member, Task Force on Public Health Undergraduate Major for the College, 2007.
- Facilitator, Ethics and Professional Integrity Core Course, 2004 – 2008.
- Member, Toxicology Training Program Retreat Committee, 2002 – 2007.

- Coordinator, Environmental Health Sciences Center Seminar Series, 2000 – 2007.

Invited Presentations (Does not include CLE presentations)

- Over 25 invited seminars at universities and government agencies across the country including (2019) Wayne State University; (2018) Wright State University; (2009) St. John's University; U.S. Food and Drug Administration; (2008) Texas A&M University, New York University; (2005) West Virginia University; (2004) Karolinska Institute, University of Louisville, (2000) Boston University, University of Connecticut; (1999) New York University; (1998) Pennsylvania State University, University of Texas at Austin, Medical College of Virginia, Rutgers University.
- Society of Toxicology Annual Meeting – Workshop Session, Complex Interpretations of Substance Detection and Impairment. Sins of Our Fathers: *Lessons Learned from the Evolution of Alcohol per se Limits to Driving Under the Influence of Drugs Policy*, Salt Lake City UT, March 2024.
- Society of Toxicology Annual Meeting – Ethics, Legal, Forensic and Society Issues Specialty Section, Inaugural Keynote Address, San Antonio TX, March 2018.
- Society of Toxicology Annual Meeting – Informational Session, Lead: Children's Exposures and Current Regulatory Standards. *Current State of Lead Research and Children's Issues*, Baltimore MD, 2009.
- Society of Toxicology Annual Meeting – Continuing Education Course, New Frontier in Metal Toxicology: Genetic Susceptibility, Early Diagnosis, and Related Biological Indices. *Cell Signal Pathways Targeted by Toxic Metals*, Baltimore MD, 2009.
- Ohio Valley Society of Toxicology Annual Meeting – *Attenuation of Apoptosis by Heavy Metals: Signaling Pathways Involved and Potential Importance in Autoimmunity*, Lexington KY, 2004.
- Society of Toxicology Annual Meeting – Symposium, Arsenic Disruption of Cell Cycle: Mechanisms and Effects on Apoptosis, Differentiation and Carcinogenesis. *Cell Cycle Dysregulation by Arsenite: Implications for Its Chemotherapeutic Actions*, Baltimore MD, 2004.
- National Institute of Environmental Health Sciences, – Workshop, Environmental Factors in Autoimmune Disease. *Attenuation of Activation-Induced Cell Death: A Potential Mechanism Contributing to Mercury-Induced Autoimmunity*, Durham, NC, 2003.
- Society of Toxicology Annual Meeting – Symposium, Molecular Mechanisms of Xenobiotic-Induced Autoimmunity, San Francisco CA, 2001.
- Society of Toxicology Annual Meeting – Symposium, Metals and Disorders of Cell Accumulation: Modulation of Apoptosis and Cell Proliferation. *Mechanisms Contributing to Systemic Autoimmune Disease: Mercury-Induced Tyrosine Phosphorylation and Disruption of the CD95/Fas Apoptotic Death Pathway*, New Orleans LA, 1999.

Extramural Grant Funding

- NIH ROI ES029484, Understanding the connection between exposure to mercury, auto immunity and tolerance in B cells, Consultant, 09/09/2018 - 08/31/2024,
- NIH R21 ES024476, Understanding the Role of Mercury Exposures in Disrupting Central Tolerance in B cells, Consultant, 08/01/2014 - 07/31/2016.
- NIH R21 ES021285, Understanding the Influence of n-3-Polyunsaturated Fatty Acids on Pro-inflammatory Aspects of Mercury, Consultant, 08/01/2012 - 07/31/2014.
- NIH R21 ES019228, Analysis of B Cell Receptor Signals Modified by Mercury, Consultant, 07/15/2010 - 06/30/2012.
- NIH R01 ES012403, Death Receptor Signaling and Mercury Immunotoxicity, Principal Investigator, 04/01/2003 - 03/31/2008.
- NIH R01 ES11000, Disruption of Lymphocyte Signal Transduction by Mercury, Co-Principal Investigator, 12/01/2001 - 11/30/2007.
- NIH R21 ES10351, Mechanisms Contributing to Mercury-Induced Autoimmunity, Principal Investigator, 10/01/1999 - 09/30/2003.
- NIH R25 RR123711, Environmental Cyberschoolhouse, Co-Principal Investigator, 09/01/1998 - 08/31/2002.
- NIH P30 ES06639-S, Shared Instrument Grant-Analytical Flow Cytometer System, Co-Principal Investigator, 09/01/1997 - 08/31/1998.
- NIH R29 ES07365, Mechanisms and Consequences of Immunomodulation by Lead, Principal Investigator, 08/01/1996 - 07/31/2002.
- NIH R01 ES04040, Cellular and Molecular Toxicity of Lead, Co-Investigator, 08/01/1995 - 07/30/1999.
- NIH R01 CA49935, Immunomodulation and Chemically Induced Carcinogenesis, Co-Principal Investigator, 12/01/1994 - 11/30/1997.

Peer-Reviewed Publications

- Gill R., **McCabe, Jr**., M.J. and Rosenspire A.J. Low level exposure to inorganic mercury interferes with B cell receptor signaling in transitional type 1 B cells. *Toxicol. Appl. Pharmacol.* 330:22-29, 2017 PMID: 28668464.
- Gill R., Jen K.L., **McCabe, Jr.**, M.J. and Rosenspire A.J. Dietary n-3 PUFAs augment caspase 8 activation in Staphylococcal aureus enterotoxin B stimulated T-cells. *Toxicol. Appl. Pharmacol.* 309:141-8, 2016 PMID: 27614254.
- Gill R., Lanni L., Jen K.L., **McCabe, Jr.**, M.J. and Rosenspire A.J. Docosahexaenoic acid counteracts attenuation of CD95-induced cell death by inorganic mercury. *Toxicol. Appl. Pharmacol.* 282:61-7, 2015 PMID: 25461680.

- Gill R.F., McCabe Jr., M.J. and Rosenspire A.J. Elements of the B cell signalosome are differentially affected by mercury intoxication. *Autoimmun. Dis.* 2014:1-10, 2014 PMID: 239358.
- Songdej, N., Winters, P.C., **McCabe, Jr.**, M.J., and van Wijngaarden E. A population-based assessment of blood lead levels in relation to inflammation. *Environ. Res.* 110:272-277, 2010. PMID: 20116055.
- Stamatina E., Ziemba, S.E., Menard, S.L., **McCabe, Jr.**, M.J. and Rosenspire, A.J. T Cell Receptor Signaling is Mediated by Transient Lck Activity Which is Inhibited by Inorganic Mercury. *FASEB J.* 23:1663-1671, 2009. PMID:19168706.
- Yang, S., Yao,H., Rajendrasozhan, S., Chung, S., Edirisinghe, I., Valvo, S., Fromm, G., **McCabe, Jr.**, M.J., Sime P.J., Phipps, R.P., Li, J., Bulger, M. and Rahman I. RelB is differentially regulated by IκB-Kinase(IKK) in B cells and mouse lung by cigarette smoke. *Am. J. Respir. Cell Mol. Biol.* 40: 147-158, 2009. PMID:18688039.
- Williams, L.K., Oliver, J., Peterson, E.L., Bobbitt, K.R., **McCabe, Jr.**, M.J., Smolarek, D., Havstad, S.L., Wegienka, G., Burchard, E.G., Ownby, D.R., and Johnson, C.C. Gene-environment interactions between CD14 C-260T and endotoxin exposure on Foxp3+ and Foxp3- CD4+ lymphocyte numbers and total serum IgE in early childhood. *Annals Allergy Asthma & Immunol.* 100:128-136, 2008. PMID: 18320914.
- Farrer, D.G., Hueber, S. Laiosa, M.D., Eckles, K.G. and **McCabe, Jr.**, M.J. Reduction of myeloid suppressor cell derived nitric oxide provides a mechanistic basis of lead enhancement of alloreactive CD4+ T cell proliferation. *Toxicol. Appl. Pharmacol.* 229:135-145, 2008. PMID: 18433816.
- McNeely, S.C., Belshoff, A.C., Taylor, B.F., Fan, T.M., **McCabe, Jr.**, M.J., Pinhas, A.J. and States, J.C. Sensitivity to sodium arsenite depends upon susceptibility to arsenite-induced mitotic arrest. *Toxicol. Appl. Pharmacol.* 229:252-261, 2008.
- Lehman, G. M. and **McCabe, Jr.**, M.J. Arsenite Slows S Phase Progression Via Inhibition of cdc25A Dual Specificity Phosphatase Gene Transcription. *Toxicol. Sci.* 99:70-78, 2007.
- Laiosa, M.D., Eckles, K.G., Langdon, M., Rosenspire, A.J. and **McCabe, Jr.**, M.J. Exposure to inorganic mercury *in vivo* attenuates extrinsic apoptotic signaling in Staphylococcal Enterotoxin B stimulated T-cells. *Toxicol. Appl. Pharmacol.* 225:238-250, 2007.
- **McCabe, Jr.**, M.J., Laiosa, M.D., Li, L., Menard, S.L., Mattingly, R.R., and Rosenspire, A.J. Low and non-toxic inorganic mercury burdens attenuate BCR-mediated signal transduction. *Toxicol. Sci.* 99:512-521, 2007.
- Ziemba, S. E., Mattingly, R. R., **McCabe, Jr.**, M. J., Rosenspire, A. J. Inorganic Mercury. Inhibits the activation of LAT in T cell receptor-mediated signal transduction. *Toxicol. Sci.* 89:145-153, 2006.
- McNeely, S.C., Xu X., Taylor B.F., **McCabe, Jr.**, M.J., Zacharias W., States, J.C. Exit from arsenite induced mitotic arrest is p53-dependent. *Environ. Health Perspect.* 114:1401-1406, 2006.

- Taylor, B.F., McNeely, S.C., Miller, H.L., Lehmann, G. **McCabe, Jr.**, M.J., States, J.C. P53 suppression of arsenite-induced mitotic catastrophe is mediated by p21. *J. Pharmacol. Exper. Therapeut.* 318:142-151, 2006.
- **McCabe, Jr.**, M. J., Whitekus, M. J., Hyun, J., Langdon, M., Clarkson, T. W., and Rosenspire, A. J. Attenuation of CD95-Induced Apoptosis by Inorganic Mercury: Caspase-3 Is Not a Direct Target of Hg2+. *Toxicol. Lett.* 155:161-170, 2005.
- Ziemba, S. E., **McCabe, Jr.**, M. J., Rosenspire, A. J. Inorganic Mercury Dissociates Pre-assembled Fas/CD95 Receptor Oligomers in non-apoptotic T lymphocytes. *Toxicol. Appl. Pharmacol.* 206:334-342, 2005.
- McCollum, G., Keng, P., States, J. C., and **McCabe, Jr.** M. J. Arsenite Delays Myeloid Leukemia Cells in Each Cell Cycle Phase and Induces Apoptosis Following G2/M Arrest. *J. Pharmacol. Exp. Therapeut.* 313:877-887, 2005.
- Farrer, D. F., Hueber, S., and McCabe, Jr., M. J. Lead Enhances CD4+ T Cell Proliferation Indirectly by Targeting Antigen Presenting Cells and Modulating Antigen-Specific Interactions. *Toxicol. Appl. Pharmacol.* 207:125-137, 2005.
- Joseph, C.L.M., Havstad, S., Ownby, D.R., Peterson, E.L., Maliarik, M., **McCabe, Jr.**, M. J., Barone, C., and Cole-Johnson, C. Blood Lead Level and risk of Asthma. *Environ. Health Perspect.* 113:900-904, 2005.
- **McCabe, Jr.**, M. J., Whitekus, M. J., Hyun, J., Eckles, K. G., McCollum, G., and Rosenspire, A. J. Inorganic Mercury Attenuates CD95-mediated Apoptosis by Interfering with Formation of the Death Inducing Signaling Complex. *Toxicol. Appl. Pharmacol.* 190:146-156, 2003.
- **McCabe, Jr.**, M. J. Mechanisms and Consequences of Silica-Induced Apoptosis. *Toxicol. Sci.* 76:1-2, 2003.
- **McCabe, Jr.**, M. J., Singh, K. P., and Reiners, Jr., J. J. Low-level Lead Exposure In Vitro Stimulates the Proliferation and Expansion of Alloantigen-reactive CD4high T Cells. *Toxicol. Appl. Pharmacol.* 177:219-231, 2001.
- Lawrence, D. A. and **McCabe, Jr.**, M. J. Immunomodulation by Metals. *Int. Immunopharmacol.* 234:293-302, 2002.
- Guity, P., **McCabe, Jr.**, M. J., Santini, R. P., Pitts, D., and Pounds, J. P. Protein Kinase C Does not Mediate the Actions of Lead on the Vitamin-D3-Dependent Production of Osteocalcin. *Toxicol. Appl. Pharmacol.* 178:109-116, 2002.
- States, J. C., Reiners, Jr., J. J., Pounds, J. G., Kaplan, D. J., Beauerle, B. D., McNeeley, S. C., Mathieu, P., and **McCabe, Jr.**, M. J. Arsenite Disrupts Mitosis and Induces Apoptosis in SV40-Transformed Human Skin Fibroblasts. *Toxicol. Appl. Pharmacol.* 180:83-91, 2002.
- Mattingly, R. R., Felczak, A., Chen, C., **McCabe, Jr.**, M. J., and Rosenspire, A. J. Low Concentrations of Inorganic Mercury Inhibit Ras Activation During T Cell Receptor-mediated Signal Transduction. *Toxicol. Appl. Pharmacol.* 176:162-168, 2001.

- Waalkes, M. P., Fox, D. A., States, J. C., Patierno, S. R., and **McCabe, Jr.**, M. J. Forum: Metals and Disorders of Cell Accumulation: Modulation of Apoptosis and Cell Proliferation. *Toxicol. Sci.* 56:255-261, 2000.
- Ben-Ozer, E. Y., Rosenspire, A. J., **McCabe, Jr.**, M. J., Worth, R. G., Kindelskii, A. L., Warra, N. S., and Petty, H. R. Mercuric Chloride Damages Cellular DNA by a Non-Apoptotic Mechanism. *Mut. Res.* 470:19-27, 2000.
- **McCabe, Jr.**, M. J. Singh, K. P., Reddy, S. A., Chelladurai, B. S., Pounds, J. G., Reiners, Jr., J. J., and States, J. C. Sensitivity of Myelomonocytic Leukemia Cells to Arsenite-Induced Cell Cycle Disruption, Apoptosis and Enhanced Differentiation is Dependent on the Interrelationship Between Arsenic Concentration, Duration of Treatment and Cell Cycle Phase. *J. Pharmacol. Exp. Therapeut.* 295: 724-733, 2000.
- Whitekus, M. J., Santini, R. P., Rosenspire, A. J., and **McCabe, Jr.**, M. J. Protection Against CD95-mediated Apoptosis by Inorganic Mercury in Jurkat T Cells. *J. Immunol.* 162:7162-7170, 1999.
- **McCabe, Jr.**, M. J., Santini, R. P., and Rosenspire, A. J. Low and Non-Toxic Levels of Ionic Mercury Interfere with the Regulation of Cell Growth in the WEHI-231 B Cell Lymphoma. *Scand. J. Immunol.* 50:233-241, 1999.
- Pokorski, P. L., **McCabe, Jr.**, M. J., and Pounds, J. G. Lead inhibits meso-2,3-Dimercaptosuccinic Acid Induced Calcium Transients in Cultured Rhesus Monkey Kidney Cells. *Toxicol.* 134:19-26, 1999.
- Pokorski, P. L., **McCabe, Jr.**, M. J., and Pounds, J. G. DMSA Induces Calcium Transients in Cultured Rhesus Monkey Kidney Cells. *Toxicol.* 138:81-91, 1999.
- **McCabe, Jr.** M. J., Singh, K. P., and Reiners, Jr., J. J. Delayed Type Hypersensitivity is Impaired in Lead Intoxicated Mice. *Toxicol.* 139:255-264, 1999.
- Rosenspire, A. J., Bodepudi, S., Mathews, M., and **McCabe, Jr.**, M. J. Low Levels of Ionic Mercury Modulate Protein Tyrosine Phosphorylation in Lymphocytes. *Int. J. Immunopharm.* 20:697-707, 1998.
- Jiang, S. A., Chow, S. C., **McCabe, Jr.**, M. J., and Orrenius, S. Lack of Ca2+ Involvement in Thymocyte Apoptosis Induced by Chelation of Intracellular Zn2+. *Lab. Invest.* 73(1):111-117, 1995.
- **McCabe, Jr.**, M. J. and Orrenius, S. Genestein Induces Apoptosis in Immature Human Thymocytes by Inhibiting Topoisomerase-II. *Biochem. Biophys. Res. Comm.* 194(2):944-950, 1993.
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- Waalkes, M. P., Fox, D. A., States, J. C., Patierno, S. R., and **McCabe, Jr.**, M. J. Forum: Metals and Disorders of Cell Accumulation: Modulation of Apoptosis and Cell Proliferation. Toxicol. Sci. 56: 255-261, 2000.
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Teaching

Lecturing

- Adjunct Associate Professor, Temple University, Philadelphia, PA; Department of Chemistry, Course Director – Forensic Toxicology, 2017, 2018, 2019, 2020, 2021, 2022, 2023.
- Forensic Immunotoxicology; New York University School of Medicine, 3 hours/year, 2020.
- Principles of Toxicology, New York University School of Medicine, Lecturer – Overview of Forensic Toxicology; 1.5 lecture hours/year, 2011 - 2013; 2017, 2018.
- Society of Toxicology Undergraduate Diversity Program. Fundamentals of Forensic Toxicology, Society of Toxicology Annual Meeting, Baltimore, MD, Presenter, March 12, 2017.
- CJFI410, Advanced Crime Scene Forensics, Colorado Technical University, undergraduate, “Overview of Forensic Toxicology,” 2015.

- TOX-501, Forensic Pathology, University of Rochester School of Medicine, Toxicology Training Program, Course Co-Director, 2012, 2014.
- Environmental Immunotoxicology, New York University School of Medicine, Lecturer – Signal Transduction Mechanisms; 3 lecture hours/year, 2010, 2012.
- Forensic Science, University of New Haven, Lecturer – Alcohol & Drug Toxicology, March 2011.
- TOX-590, Reproductive Toxicology, University of Rochester School of Medicine, Toxicology Training Program, Lecture – Reproductive Immunotoxicology; 2 lecture hours/year, 2007.
- TOX-522, Target Organ Toxicology, University of Rochester, Toxicology Training Program, Lecturer – Metal Toxicology; 2 lecture hours/year, 2007.
- TOX-521, Molecular Toxicology, University of Rochester School of Medicine, Toxicology Training Program, Lecturer – Apoptosis; 2 lecture hours/year, 2006 – 2008.
- TOX-595, Current Topics in Immunotoxicology, University of Rochester, Toxicology Training Program, Course Director, 1.5 hours/week/semester, 2005 – 2009.
- IND-501, Ethics and Professional Integrity in Research, University of Rochester School of Medicine, Graduate Education Curriculum, Group Facilitator; 6 lecture hours/year, 2005 – 2008.
- TOX-521 & 522, Molecular Toxicology, University of Rochester School of Medicine, Toxicology Training Program, Course Director, 2005 – 2007.
- TOX-595, Seminars in Toxicology, University of Rochester School of Medicine, Toxicology Training Program, Course Director, 2005 – 2007.
- TOX-522, Target Organ Toxicology, University of Rochester School of Medicine, Toxicology Training Program, Lecturer; Innate Immunity; 2 lecture hours/year, 2008 – 2010; Autoimmune Diseases; 2 lecture hours/year, 2007 – 2009; Metal Toxicology; 2 lecture hours/year, 2007; Immunotoxicology; 8 lecture hours/year, 2004 – 2008.
- Year Two Case Seminars, HD- Emerging Diseases and The Environment, University of Rochester School of Medicine, Medical Student Curriculum, Lecturer – Lead Poisoning, 2004 – 2007.
- Workshop Leader, University of Rochester School of Medicine, Toxicology Training Program, How to Write a Research Paper, 2004 – 2007.

Thesis Adviser – Graduate Students and Post-doctoral Fellows Trained

- Michael A. Laiosa, Ph.D. (2006 - 2008) University of Rochester, Toxicology Training Program, Postdoctoral Fellow.
- David Farrer, Ph.D. (2002 - 2006) University of Rochester, Toxicology Training Program, Thesis: Target Cells and Key Mediators in Lead-Induced Immune Modulation.

- Geniece McCollum, Ph.D. (2001 - 2006) University of Rochester, Toxicology Training Program; Thesis: Mechanism of Arsenic-Induced Growth Inhibition of a Myeloid Leukemia Cell Line.
- Michael J. Whitekus, Ph.D. (1996 - 2000), Wayne State University, Multidisciplinary Program in Molecular and Cellular Toxicology. Thesis: Inorganic Mercury and Dysregulation of Fas-Mediated Apoptosis.
- Parto Guity, Ph.D. (1993 - 1998), Wayne State University, Department of Pharmaceutical Sciences. Thesis: Effect of Lead on Vitamin-D-Induced Osteocalcin Secretion: Involvement of Protein Kinase C.
- Philip Pokorski, Ph.D. (1993 - 1997), Wayne State University, Department of Pharmaceutical Sciences. Thesis: Effects of Lead on Renal Proximal Tubule Cells and the Restorative Effects of Dimercaptosuccinic Acid in Treatment of Lead Poisoning.

Member of more than 25 Ph.D. and M.S. thesis dissertation committees and qualifying examinations over the past thirty years.