

Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

MICHAEL J. McCABE JR., PH.D. Toxicologist

PROFESSIONAL EXPERIENCE

2009 to present **Robson Forensic, Inc.**
Associate

Provide technical investigations, analysis, reports, and testimony toward the resolution of commercial and personal injury litigation of toxicology and human health assessments involving environmental and occupational exposures to agents such as metals, solvents, polychlorinated biphenyls (PCBs)/polyaromatic hydrocarbons (PAHs), environmental estrogens and endocrine disruptors, pesticides, blood alcohol and recreational drugs and substance abuse, food allergens, cosmetic products and related issues and failure analysis.

2000 to present **University of Rochester School of Medicine and Dentistry**, Rochester, New York
Adjunct Associate Professor, Department of Environmental Medicine 2009-present
Associate Professor, Department of Environmental Medicine 2003-2009
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-commensurate with promotion to Associate Professor, increased committee service in various capacities within the Environmental Health Sciences Center (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).

Assistant Professor, Department of Environmental Medicine 2000-2003
Similar activities as described above under Associate Professor but with emphasis on establishing an extramurally-funded research program. Research, Teaching and Administrative duties as follows:

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- 1997 to 2000 **Wayne State University**, Detroit, Michigan
Director, Imaging and Cytometry Facility Core Environmental Health Sciences Center 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.
- Assistant Professor, Institute of Chemical Toxicology* 1997-2000
Established an extramurally-funded research program centered on mechanistic metal immunotoxicity
- Adjunct Assistant Professor, Department of Pharmaceutical Sciences* 1994-2000
- Research Assistant Professor, Institute of Chemical Toxicology* 1992-1997
- 1990 to 1992 **Karolinska Institute**, Stockholm, Sweden
Postdoctoral Research Associate, Institute of Environmental Medicine
- 1985 to 1990 **Albany Medical Center Hospital**, Albany, New York
Medical Technician, Serology and Blood Bank

EDUCATION

Ph.D., Microbiology and Immunology, Albany Medical College, Albany, NY, 1991
M.S., Microbiology and Immunology, Albany Medical College, Albany, NY, 1990
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, New York, 1984

Continuing Education and Certifications

The Robert F. Borkestein Course on The Effects of Drugs on Human Performance and Behavior. Indiana University: Center for Studies of Law in Action. April 11 – 16, 2010, Bloomington, IN.

The Robert F. Borkestein Course on Alcohol and Highway Safety; Testing, Research and Litigation. Indiana University: Center for Studies of Law in Action; December 6 – 11, 2009, Bloomington, IN.

First Forensic Course: Ethanol and Marijuana. American College of Medical Toxicology; November 18 – 19, 2009, Baltimore, MD.

Servers and Managers Alcohol Responsibility Training (S.M.A.R.T.) Certified, 2009.

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New Frontiers in Metal Toxicology; Genetic Susceptibility, Early Diagnosis, and Related Biological Indices. Society of Toxicology Continuing Education Course; March 15, 2009, Baltimore, MD.

Faculty Development Medical Education Leadership Series. University of Rochester School of Medicine and Dentistry; 2007 – 2008, Rochester, NY.

Essentials of Metal Toxicology. Society of Toxicology Continuing Education Course; March 5, 2006, San Diego, CA.

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 December 1997, Mansfield, MA.

PROFESSIONAL MEMBERSHIPS

Society of Toxicology, 1989-present

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-present

Editorial Board Member, *Toxicology Letters*, 2009-present

Editorial Board Member, *Toxicological Sciences*, 2008-present

Editorial Board Member, *Journal of Immunotoxicology*, 2003-present

Editorial Board Member, *Toxicology and Applied Pharmacology*, 1999-present

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In addition, 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*

INTERNATIONAL/NATIONAL ADVISORY HEALTH COUNCILS AND RESEARCH AND REGULATORY REVIEW COMMITTEES

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

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

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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 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-present), Membership Committee Chairman (1997-2000); Councilor (2004 -2006)

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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

Over 25 invited seminars at Universities and government agencies across the country including (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, Baltimore, MD, 2009 – Informational Session, Lead: Children's Exposures and Current Regulatory Standards. *Current State of Lead Research and Children's Issues*

Society of Toxicology Annual Meeting, Baltimore, MD, 2009 – Continuing Education Course, New Frontier in Metal Toxicology: Genetic Susceptibility, Early Diagnosis, and Related Biological Indices. *Cell Signal Pathways Targeted by Toxic Metals*

Ohio Valley Society of Toxicology Annual Meeting, Lexington, KY, 2004-*Attenuation of Apoptosis by Heavy Metals: Signaling Pathways Involved and Potential Importance in Autoimmunity*

Society of Toxicology Annual Meeting, Baltimore, MD, 2004-Symposium, Arsenic Disruption of Cell Cycle: Mechanisms and Effects on Apoptosis, Differentiation and Carcinogenesis. *Cell Cycle Dysregulation by Arsenite: Implications for Its Chemotherapeutic Actions*

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National Institute of Environmental Health Sciences, Durham, NC, 2003 – Workshop, Environmental Factors in Autoimmune Disease. Attenuation of Activation-Induced Cell Death: A Potential Mechanism Contributing to Mercury-Induced Autoimmunity

Society of Toxicology Annual Meeting, San Francisco, CA, 2001-Symposium, Molecular Mechanisms of Xenobiotic-Induced Autoimmunity. Attenuation of Apoptosis by Heavy Metals: Signaling Pathways Involved and Potential Importance in Autoimmunity

Society of Toxicology Annual Meeting, New Orleans, LA, 1999-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

EXTRAMURAL GRANT FUNDING

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), 04/01/03-03/31/08

NIH R01 ES11000, *Disruption of Lymphocyte Signal Transduction by Mercury*, Co-Principal Investigator, 12/01/01-11/30/07

NIH R21 ES10351, *Mechanisms Contributing to Mercury-Induced Autoimmunity*, Principal Investigator, 10/01/99-09/30/03

NIH R25 RR123711, *Environmental Cyberschoolhouse*, Co-Principal Investigator, 09/01/98-08/31/02

NIH P30 ES06639-S, *Shared Instrument Grant-Analytical Flow Cytometer System*, Co-Principal Investigator, 09/01/97-08/31/98

NIH R29 ES07365, *Mechanisms and Consequences of Immunomodulation by Lead*, Principal Investigator, 08/01/96-07/31/02

NIH R01 ES04040, *Cellular and Molecular Toxicity of Lead*, Co-Investigator, 08/01/95-07/30/99

NIH R01 CA49935, *Immunomodulation and Chemically Induced Carcinogenesis*, Co-Principal Investigator, 12/01/94-11/30/97

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PEER-REVIEWED PUBLICATIONS

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.

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. In Press, *FASEB J.* 23: 1663-1671, 2009.

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 I κ B-Kinase (IKK) in B cells and mouse lung by cigarette smoke *Am. J. Respir. Cell Mol. Biol.*, 40: 147-158, 2009.

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.

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.

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.

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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 CD4^{high} 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.

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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.

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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 Ca^{2+} Involvement in Thymocyte Apoptosis Induced by Chelation of Intracellular Zn^{2+} . *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.

McCabe, Jr., M. J., Jiang, S. A., and Orrenius, S. Chelation of Intracellular Zn^{2+} Induces Apoptosis in Mature Thymocytes. *Lab. Invest.* 69(1):101-110, 1993.

Chow, S. C., Kass G. E. N., **McCabe, Jr., M. J.**, and Orrenius, S. Tributyltin Increases Cytosolic Free Ca^{2+} Concentration in Thymocytes by Mobilizing Intracellular Ca^{2+} , Activating a Ca^{2+} Entry Pathway, and Inhibiting Ca^{2+} Efflux. *Arch. Biochem. Biophys.* 298(1):143-149, 1992.

McCabe, Jr., M. J. and Lawrence, D. A. Lead, a Major Environmental Pollutant, Is Immunomodulatory by Its Differential Effects on $CD4^+$ T Cell Subsets. *Toxicol. Appl. Pharmacol.* 111:13-23, 1991.

McCabe, Jr., M. J., Dias J. A., and Lawrence, D. A. Lead Influences Translational or Post-translational Regulation of Ia Expression and Increases Invariant Chain Expression in Mouse B Cells. *J. Biochem. Toxicol.* 6(4):269-276, 1991.

McCabe, Jr., M. J. and Lawrence, D. A. The Heavy Metal Lead Exhibits B Cell Stimulatory Factor Activity by Enhancing B Cell Ia Expression and Differentiation. *J. Immunol.* 145(2):671-677, 1990.

BOOK CHAPTERS

Lynes, M.A., Pietrosimone, K., Marusov, G., Donaldson, D.V. Tarracciano, C., Yin, X., Lawrence, D.A. and **McCabe, Jr., M.J.** *Metal Influences on Immune Function*. In, Cellular and Molecular Biology of Metals, J. Koropatnick and R. Zalups (eds), Taylor & Francis, pp. 379 – 414, 2010.

Dietert, R.R. & **McCabe, Jr., M. J.** *Lead Immunotoxicity*, In, Immunotoxicology and Immunopharmacology, 3rd edition, R. Luebke, R. House, and I. Kimber (eds), Raven Press, pp. 207-224, 2005.

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McCabe, Jr., M. J. *Lead*. In, Metal Immunotoxicology, J. Zelikoff and P. T. Thomas (eds), Taylor & Francis, pp. 111-130, 1998.

McCabe, Jr., M. J. *T Cell Regulatory Functions*. In, Comprehensive Toxicology, volume V, D. A. Lawrence (volume editor), I. G. Sipes, C. A. McQueen, A. J. Gandolfi (eds), Elsevier Pergamon Press, pp. 261-278, 1997.

McCabe, Jr., M. J. and Pounds, J. G. *The Calcium Messenger System*. In, Comprehensive Toxicology, volume I, J. J. Bond (volume editor), I. G. Sipes, C. A. McQueen, A. J. Gandolfi (eds), Elsevier Pergamon Press, pp. 255-274, 1997.

Lawrence, D. A. and **McCabe, Jr., M. J.** *Immune Modulation by Toxic Metals*. In, Metal Toxicology, R. A. Goyer, M. P. Waalkes, and C. D. Klaasen (eds), Academic Press, pp. 305-337, 1995.

McCabe, Jr., M. J. and Orrenius, S. *Protein Kinase C: A Key Enzyme Determining Cell Fate in Apoptosis?* In, "Protein Kinase C", J. F. Kuo (ed), Oxford University Press, pp. 290-304, 1994.

McCabe, Jr., M. J. *Mechanisms and Consequences of Immunomodulation by Lead*. In, Immunotoxicology and Immunopharmacology, 2nd edition, J. H. Dean, M. I. Luster, A. E. Munson, and I. Kimber (eds), Raven Press, pp. 143-162, 1994.

McCabe, Jr., M. J. and Lawrence, D. A. *The Effects of Metals on the Development of the Immune System*. In, Xenobiotics and Inflammation, L. B. Schook and D. L. Laskin (eds), Academic Press, pp. 193-216, 1994.

Kowolenko, M., **McCabe, Jr., M. J.**, and Lawrence, D. A.. *Metal-induced Alterations of Immunity*. In, Clinical Immunotoxicology, D. S. Newcombe, N. R. Rose, J. C. Bloom (eds), Raven Press, pp. 401-420, 1992.

McCabe, Jr., M. J. and Lawrence, D. A. *Aspects of Lead Potentiation of B Lymphocyte Responses and Their Relationship to Immune Dysregulation*. In, Metal Ions in Biology and Medicine, P. Collery, L. A. Poirer, M. Manfait, and J. C. Etienne (eds), John Libbey Eurotext, Paris, pp. 271-276, 1990.

Lawrence, D. A., **McCabe, Jr., M. J.**, and Kowolenko, M. *Metal Influences on the Incidence of Autoimmunity and Infectious Disease*. *Ibid*, pp. 237-242, 1990.

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LETTERS, EDITORIALS, SHORT ARTICLES AND OTHER CONTRIBUTIONS

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.

McCabe, Jr., M. J. and Orrenius, S. Deletion and Depletion: Involvement of Viruses and Environmental Factors in T-lymphocyte Apoptosis. *Lab. Invest.* 66:403-406, 1992.

McCabe, Jr., M. J., Nicotera, P., and Orrenius, S. Calcium-dependent Cell Death: Role of the Endonuclease, Protein Kinase C, and Chromatin Structure. *Ann. N. Y. Acad. Sci.* 663:269-278, 1992.

Orrenius, S., **McCabe, Jr., M. J.**, and Nicotera, P. Ca²⁺-dependent Mechanisms of Cytotoxicity and Programmed Cell Death. *Toxicol. Let.* 64/65:357-364. 1992.

TEACHING EXPERIENCE

Lecturing:

TOX-590, Reproductive Toxicology, University of Rochester, 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, 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, Graduate Education Curriculum, Group Facilitator; 6 lecture hours/year, 2005-2008

TOX-521 & 522, Molecular Toxicology, University of Rochester, Toxicology Training Program, Course Director, 2005-2007

Tox595, Seminars in Toxicology, University of Rochester, Toxicology Training Program, Course Director, 2005-2007

TOX-522, Target Organ Toxicology, University of Rochester, Toxicology Training Program, Lecturer-*Immunotoxicology*; 8 lecture hours/year, 2004-2008

Year Two Case Seminars, HD- Emerging Diseases and The Environment, University of Rochester, Medical Student Curriculum, Lecturer – *Lead Poisoning*, 2004-2007

Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

MICHAEL J. McCABE JR., PH.D. Toxicologist

Workshop Leader, University of Rochester, Toxicology Training Program, *How to Write a Research Paper*, 2004-2007

Thesis Advising:

Served on well over 25 Ph.D. and M.S. thesis dissertation committees and qualifying examinations over the past 10 years.

David Farrer (2002-2006) University of Rochester, Toxicology Training Program Thesis: *Target Cells and Key Mediators in Lead-Induced Immune Modulation*

Geniece McCollum (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), graduate student (Wayne State University, Pharmaceutical Sciences). Thesis co-advisor. Thesis: *Effect of Lead on Vitamin-D-Induced Osteocalcin Secretion: Involvement of Protein Kinase C*

Philip Pokorski, Ph.D. (1993-1997), graduate student (Wayne State University, Pharmaceutical Sciences). Thesis co-advisor. Thesis: *Effects of Lead on Renal Proximal Tubule Cells and the Restorative Effects of Dimercaptosuccinic Acid in Treatment of Lead Poisoning*