

## **Nigel John Walker**

### **Work Address**

National Institute of Environmental Health Sciences (NIEHS)  
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### **Citizenship**

US Citizen

### **Education**

Ph.D. 1993 Biochemistry, University of Liverpool, United Kingdom.  
B.Sc. 1987 Biochemistry, University of Bath, United Kingdom.

### **Board certification**

2007-present Diplomate, American Board of Toxicology (Recertified; 2012, 2016, 2021)

### **Current Role**

2018-present Chief (Acting), Systems Toxicology Branch (formerly the Toxicology Branch; 2007-2021)  
Division of Translational Toxicology (formerly the Division of the National Toxicology Program; 2011-22)

- Provide senior level scientific leadership and direction for the planning, implementation, management, and evaluation of a broad, coordinated national/international toxicology research and testing program.
- Responsible for all the major functions of the Branch comprised of 12 federal staff (GS13, GS14, GS15, T42g), and postdoctoral trainees, that provides much of the design, interpretation and reporting of toxicology and carcinogenesis studies conducted in support of the National Toxicology Program.
- Review and clear scientific proposals, project strategies and products.
- Supervise and mentor branch staff, postdoctoral fellows, and junior scientists to prepare future leaders in toxicological research.
- Communicate the results and outputs to the public and stakeholders both within and outside of the NIH and HHS

### **Professional Experience**

2011-2019 Deputy Division Director, Division of the National Toxicology Program (DNTP), NIEHS, NIH

2007-2011 Deputy Program Director, National Toxicology Program, Division of Intramural Research (DIR), NIEHS

- Major duties involved working with the NTP Program Director/DNTP Division Director in the formulation, coordination, implementation, management, and oversight of activities necessary to carry out the scientific missions of the National Toxicology Program (NTP), an interagency program headquartered at NIEHS/NIH
- Served as a senior science advisor to analyze NTP science requirements and help determine the best course of action within the Division's scientific mission
- Served as the project officer for a multi-million dollar interagency agreement (IAA) between NIEHS and FDA and to liaise with counterpart FDA senior staff to provide overall oversight of the IAA, including evaluation and prioritization of research, budget management, and coordination between FDA and NIEHS to ensure the desired research programs meets NTP scientific objectives.

2004-2007 Staff Scientist, Toxicology Operations Branch, DIR, NIEHS

- Provided scientific support to the NIEHS/NTP is via participation in the design, planning, evaluation and reporting of toxicology studies on agents of public health concern nominated to the NTP.
- Led multidisciplinary teams assessing the human hazard potential of nanoscale materials and persistent organic pollutants.

2002-2004 Staff Scientist, Laboratory of Computational Biology and Risk Analysis, DIR, NIEHS

1998-2002 Research Fellow, Laboratory of Computational Biology and Risk Analysis, DIR, NIEHS

- Supported the research of the NTP Associate Director by managing a small research group developing and supervising the research activities of two graduate students, two biologists, a postdoctoral scientist and summer students.
- Principal scientist for multiple chronic in vivo rodent carcinogenicity/toxicity studies on persistent organic pollutants, conducted according to GLP by extramural testing facilities for the NTP.

1995-1998	Postdoctoral Trainee, Laboratory of Computational Biology and Risk Analysis, DIR, NIEHS
1993-1995	Postdoctoral Trainee, Division of Toxicological Sciences, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Maryland.
1989-1993	PhD Graduate student (Biochemistry), University of Liverpool, United Kingdom
1987-1989	Research Technician, Division of Neurology, Duke University Medical Center, Durham, North Carolina.
1986	Summer intern, Division of Neurology, Duke University Medical Center, Durham, North Carolina.
1985	Summer intern, Department of Clinical Pathology, Bristol Maternity Hospital, Bristol, Avon, United Kingdom
1983-1987	BSc Honors Undergraduate student (Biochemistry) University of Bath, United Kingdom.

### **NIEHS Mentoring activities: (Female or Under-represented mentees in Bold)**

#### NIEHS Postdoctoral mentees (current position)

<b>Rebecca Arechavala</b>	Branch trainee (Branch chief, Secondary mentor) 2023-present
<b>Kristin Eccles</b>	Branch trainee (Branch chief, Secondary mentor) 2022-2023 (Research Scientist, Health Canada)
<b>Rachel Dee</b>	Branch trainee (Branch chief, Secondary mentor) 2018-2022 (Senior Regulatory Toxicologist, Corteva)
<b>Shannah Witchey</b>	Branch trainee (Branch chief) 2018-2022 (Study Director; Innoviv)
<b>Mimi Huang</b>	Branch trainee (Branch chief) 2018-2021 (Toxicologist, Premier Consulting)
AtLee Watson	Branch trainee (Secondary mentor) 2018-2020, (Study Director; Innoviv)
Troy Hubbard	Toxicology Branch trainee (Secondary mentor) 2017-2020, (Toxicologist, USFDA)
Brian Sayers	Toxicology Branch trainee, (Secondary mentor) 2012-2015 (Associate Director, Incyte)
<b>Jeanelle Martinez</b>	NIEHS IRTA trainee (Primary mentor) 1999-2005 (Principal R&D Engineer, Medtronic)

#### Graduate Student mentees (current position)

<b>Amy Kim</b>	1997 – 2002	UNC Toxicology (primary mentor) (Senior Director, Seagen. Inc)
Michael Wyde	1996 – 2000	UNC Toxicology (secondary mentor) (NIEHS, DTT)

#### NIEHS Summers of Discovery Intern mentees

<b>Monique Richards</b>	2003	UNC Toxicology Summer rotation student Research Mentor
Logan Buck	2000	NIEHS Summers of Discovery Research Mentor
Mark Lebetkin	1999	NIEHS Summers of Discovery Research Mentor
<b>Anika Alfred</b>	1998	UNC Toxicology Summer rotation student Research Mentor
<b>Tara Almekinder</b>	1998	NIEHS Summers of Discovery Research Mentor
<b>Patricia Ligon</b>	1997	NIEHS Summers of Discovery Research Mentor

#### High School/Youth development

Junior Leadership Durham	Invited Participant in a local program enabling high school students to interact with business, community and government leaders to gain an in-depth knowledge and to encourage them to explore ways in which they can contribute to their community. 2013, 2014, 2015, 2017, 2018
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**Professional Career mentees**

<b>Darcie Smith</b>	Assistant Center Director; Center for Environmental Solutions and Emergency Response, USEPA <i>NIEHS-EPA mentoring program participant</i>
<b>Salik Hussain</b>	Associate Professor of Physiology and Pharmacology, West Virginia University <i>Former NIEHS-DIR trainee working on nanoscale materials</i>
<b>Mamta Behl</b>	Principal Scientist, Neurocrine Biosciences <i>Former NIEHS toxicology postdoctoral trainee</i>
<b>Marusia Popovech</b>	Toxicology Associate ExxonMobil <i>SOT Nanotoxicology Specialty Section mentoring program participant</i>
<b>Alexandra Noel</b>	Associate Professor; Louisiana State University, School of Veterinary medicine <i>SOT Nanotoxicology Specialty Section mentoring program participant</i>
<b>Lisa Truong</b>	Assistant Professor, Oregon State University <i>SOT Nanotoxicology Specialty Section mentoring program participant</i>
<b>Janet Anderson</b>	Principal consultant, GSI Environmental <i>Former EPA postdoctoral trainee working on Dioxins/PCBs</i>
<b>Melissa Rhodes</b>	Chief Development Officer, Kriya Therapeutics <i>Former ETP Toxicology NIEHS trainee</i>
<b>Daniele Wikoff</b>	Health Sciences Practice Leader, ToxStrategies <i>Former UNC Toxicology trainee working on dioxins/PCBs</i>

**Non-vocational youth development and mentoring- Boy Scouts of America (2006-present)**

- Cubscout Pack 423 Den leader (2006-2011)
- Scout Troop 451- Advancement Chair (2012-2017)
  - Advancement Advisor to more than 50 Scouts who earned the rank of Eagle Scout
- District Advancement Chair for the Durham area (2017-2020)
  - Part of the team that formed Durham's first Scouts BSA Troop 456 for Girls
- Scouts BSA Troop 456 for Girls-Advancement Chair (2019-2021)
  - Founding member of troop adult leadership team for Durham's first Scouts BSA Troop 456 for Girls
  - Supported the troop achievement of Gold Journey to Excellence (highest grade) in its first year
  - Eagle Scout Advisor to first female scout to earn the rank of Eagle Scout in Durham NC

**Academic activities:**

- Doctoral Thesis Committee member, Lina Gao, University of North Carolina Chapel Hill, NC, 2009-2011.
- Doctoral Thesis Committee member, Joshua Harrill, UNC Curriculum in Toxicology, University of North Carolina Chapel Hill, NC, 2005-2008
- Adjunct Associate Professor, University of North Carolina at Chapel Hill, Curriculum in Toxicology (2008-present).
- Adjunct Assistant Professor, University of North Carolina at Chapel Hill, Curriculum in Toxicology (2001-2008).

**Society of Toxicology (SOT) Officer/Committee Activities**

- Councilor 2015-2017 Mixtures Specialty Section
- Committee Member 2012-2013 Current Concepts in Toxicology Conference Committee
- Councilor 2009-2011 Nanotoxicology Specialty Section
- Founding committee member 2007-2008 Nanotoxicology Specialty Section
- President 2005 North Carolina Regional Chapter; (NCSOT)
- President-elect 2004 North Carolina Regional Chapter; (NCSOT)
- Vice-President 2003 North Carolina Regional Chapter; (NCSOT)
- Committee Member 2002-2003 Committee on Public Communications

**Awards**

- Herbert E. Stokinger Award 2015. American Conference of Governmental Industrial Hygienists (ACGIH): Awarded each year to an individual who has made a significant contribution to the broad field of industrial and environmental toxicology.
- “Best Paper Demonstrating the Application of Risk Assessment for 2005”, SOT Risk Assessment Specialty Section (RASS) at the Society of Toxicology; Walker et al (2005) Environ. Health Perspect. 113, 43-48.
- “Best Paper Advancing the Science of Risk Assessment for 2004”, SOT Risk Assessment Specialty Section: Toyoshiba et al (2004). Environ Health Perspect 112, 1217-1224.
- Graduate student mentoring award 2002 . Risk Assessment Specialty Section

**NIH/NIEHS Awards**

- NIEHS Directors Award of Merit 2018 “For outstanding leadership in development of a Translational Research Framework specifically tailored to the environmental health sciences” (Group award)
- NIEHS Directors Award of Merit 2017 “For exceptional efforts to rapidly review data and issue a report of partial findings from the NTP Radio-Frequency Radiation Studies” (Group award)
- NIEHS Directors Award of Merit 2016- “For outstanding leadership and oversight of the CLARITY-BPA Program.” (Group award)
- NIEHS Directors Award of Merit 2013- “For superb teamwork in development and management of a program of research addressing the health impacts of engineered nanomaterials.” (Group award)
- NIEHS Directors Award of Merit 2008- “For highly significant scientific and technical contributions to the implementation of the realignment of the National Toxicology Program.” (Group award)
- NIEHS Directors Award of Merit 2007- “For highly significant scientific and technical contributions to the analysis and reporting of the NTP studies of sodium dichromate dihydrate, a “hexavalent chromium” compound.” (Group award)
- NIEHS Directors Award of Merit 2004- “For highly significant scientific and technical contributions to the analysis and reporting of the NTP “dioxin-like chemicals” TEF initiative. (Group award)
- NIH Fellows Award for Research Excellence (FARE), 1997.

**Invited Presentations/Lectures**

- RTP Rodent Pathology Course; Pulmonary toxicity associated with inhalation of carbon-based nanomaterials. Raleigh, September 2019

- NIH Office of Dietary Supplements Seminar; Evaluating Botanical Dietary Supplement Safety: Lessons Learned and Future Directions. Rockville, MD, September 2019
- Cancer Free Economy Network (external NIEHS public stakeholder group), RTP, NC; Applied research and analyses impacting environmental health: U.S. National Toxicology Program (NTP). April 2019
- European Food Safety Authority Conference; “Integrating regulatory and academic investigations in hazard assessments by the US National Toxicology Program. Lessons learned from the CLARITY-BPA initiative.” Parma, Italy. September 2018
- Summer STEM at National Institute of Environmental Health Sciences; “Integrated research and analyses impacting environmental health: Lessons learned from the CLARITY-BPA initiative.” NIEHS, July 2018
- EUROTOX (European Society of Toxicology) Annual Meeting. “New approaches addressing the challenge of evaluating safety of botanical dietary supplements.” Bratislava, Slovakia, September 2017
- Interagency Coordinating Committee on the Validation of Alternative Methods Public Forum, “National Toxicology Program Update” Bethesda MD, May 2017
- Invited presentation to Korean National Toxicology Program delegates at KNTP-US NTP MOU Signing “US National Toxicology Program research and activities”. Baltimore, MD, March 2017
- SOT FDA Colloquium on Considerations for the Determination of Adversity in Food Chemical Safety Evaluations, “Adversity in Regulatory Science: Historical Perspective and Future Challenges” College Park, Maryland, March 2017
- 2017 Institute of Biological Engineering Annual Conference; Convergence for Advancing Regulatory Science. Salt Lake City, March 2017
- NICEATM Webinar Series: Using Informatics to Improve Data Analysis of Chemical Screening Assays Conducted in Zebrafish; “An Overview of The National Toxicology Program’s Systematic Evaluation of the Application of Zebrafish in Toxicology (SEAZIT)”. February 2017
- North Carolina Central University Department of Chemistry and Biochemistry, Departmental seminar: “Applied research and analyses impacting environmental health: role of the U.S. National Toxicology Program (NTP)” Durham NC, January 2017
- NIEHS Science, Teachers, & Research Summer (StaRS) seminar series, NIEHS RTP, “Applied research and analyses impacting environmental health: role of the U.S. National Toxicology Program (NTP)” NIEHS, July 2016
- North Carolina Association for Biomedical Research; Rx for Science Literacy Workshop, Research Triangle Park, NC “Applied research and analyses impacting environmental health: role of the U.S. National Toxicology Program (NTP)” April 2016
- Society of Toxicology Annual Meeting “Overview of Nanomaterial Toxicology and Strategies for Assessing the Safety of Nanoscale Materials.”, New Orleans, LA, March 2016
- Society of Toxicology Annual Meeting “Biological Canaries in the Coal Mine: Strategic Implications for Utilizing Bioactivity-Based Margins of Exposures in Human Health Risk Assessments.” New Orleans, LA, March 2016
- Scholars Connect Program Seminar, NIEHS “Overview of Research at the U.S. National Toxicology Program (NTP) and Career Aspirations as a Scientist” March 2016
- Federal Partners Meeting on MWCNTs, “NTP research assessing the toxicity of MWCNTs”, Washington DC, December 2015
- EFSA Scientific Conference-Shaping the Future of Food Safety, Together; “Identification, prioritization and conduct of applied research and analyses impacting policy development: lessons learned from the U.S. National Toxicology Program (NTP)”, Milan, Italy, October 2015
- ACGIH Herbert E. Stockinger Award Lecture: American Industrial Hygiene Conference & Exposition, “A 21st Century Paradigm for Evaluating the Health Hazards of agents in the workplace: The Challenge of Nanoscale Materials”, Salt Lake City, UT, June 2015
- NC State Veterinary Scholars Program Seminar, NIEHS, “Research and Testing in the US National Toxicology Program”, June 2015
- Scholars Connect Program Seminar, NIEHS. “Management of Research and Testing in the US National Toxicology Program” February 2015

- Scholars Connect Program Seminar, NIEHS. “Overview of Research and Testing in the US National Toxicology Program.” January 2014
- EPA Nanomaterials Research Planning Meeting, RTP, NC, “NTP activities on Nanomaterials”. February 2014
- Scientific Advisory Committee on Alternative Toxicological Methods (SACATM) meeting, RTP, NC. “NIEHS update on alternative toxicological methods”. September 2014
- The Toxicology Forum; 38<sup>th</sup> Annual Winter meeting, Washington DC. “The Cancer Bioassay: An NTP perspective.” January 2013
- Society of Toxicology Annual Meeting, San Antonio, TX. “Overview of concepts and strategies needed for assessing the safety of nanoscale materials.” March 2013
- Society of Toxicology Annual Meeting, San Antonio, TX. “Supervisors, Mentors, and Yodas: A perspective on their role in your career development.” March 2013
- XIII International Congress of Toxicology, Seoul, South Korea. “Overview of Research and Testing in the US National Toxicology Program.” July 2013
- KNTP-USNTP Joint Symposium, Korean Ministry of Food and Drug Safety, Osong, South Korea “Ongoing research on herbal medicines and the safety of nanomaterials.” July 2013
- GlaxoSmithKline Nanotechnology and Nanotoxicology Symposium, Research Triangle Park, NC, USA “Nanotoxicology: Assessing the Safety of Engineered Nanoscale Materials.” November 2013
- Council for Responsible Nutrition/Natural Products INSIDER Webinar. “Overview of the National Toxicology Program activities on dietary supplements.” December 2013
- Society of Toxicology Annual Meeting, San Francisco, CA. “Selling your Science up the Food Chain: Tips on communicating your science to upper management.” March 2012
- Council for Responsible Nutrition webinar. “Overview of the National Toxicology Program: dietary supplements”, May 2005
- National Center for Toxicological Research, Scientific Advisory Board Meeting, Jefferson, AK “ Overview of National Toxicology Program Activities: Current and Future Collaborations.”, November 2012
- North Carolina Society of Toxicology Annual Meeting, RTP, NC. “Nanotoxicology: Assessing the Safety of Nanomaterials.” February 2011
- NIEHS Laboratory of Toxicology and Pharmacology Retreat, RTP, NC. “Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials.” February 2011
- NC Society of Women Environmental Professionals/Sigma-Xi Nanotechnology Mythbusters Panel, Research Triangle Institute, RTP, NC. “Nanotoxicology”. March 2011
- Society of Toxicology Annual Meeting, Washington DC. “Minimum material characterizations for nanotoxicology studies: A necessity or a nuisance?” March 2011
- US-EU Workshop Bridging Nano EHS efforts-A joint workshop, Washington DC, USA. “NIEHS and NTP Activities Evaluating the Safety of Nanoscale Materials”. March 2011
- NCTR Scientific Advisory Board NanoCore Subcommittee Meeting, Jefferson, AK. “NIEHS and NTP Activities Evaluating the Safety of Nanoscale Materials”. August 2011
- NORA Manufacturing Sector Conference: Partnerships to Improve Occupational Safety and Health. Cincinnati, OH. “The National Toxicology Program (NTP): Priorities and Partnerships for Cancer Research” September 2011
- Introduction to Nanotechnology Science and Regulation at FDA, White Oak, Maryland, USA “ Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials” September 2011
- COIN Nano&Bio Roundtable: An Ounce of Prevention: Developing Safe Nanomaterials For Commercial Use, East Carolina Heart Institute, Greenville, NC “Nanotoxicology: Assessing the Safety of Engineered Nanomaterials” September 2011
- International Conference; Toxicology of Mixtures, Arlington, VA. “Mixtures Research and the NIEHS and NTP; An Evolving Program.” October 2011

- NIH Botanical Research Centers meeting, Winston Salem, NC; “National Toxicology Program studies evaluating the safety of dietary supplements”. November 2011
- North Carolina State University, Raleigh, NC “Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials”.
- Oak Ridge National Laboratory, Oak Ridge, TN. “Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials”.
- 30<sup>th</sup> International Symposium on Halogenated Persistent Organic Pollutants (Dioxin 2010), San Antonio, TX. “Assessing the cumulative effects of mixtures: Lessons learned from the NTP chronic bioassays of mixtures of dioxins and PCBs.”
- Karolinska Institutet, Stockholm, Sweden, “A 21st century Paradigm for assessing the Health Hazards of Engineered Nanomaterials”.
- SRA International Brown Bag Seminar, RTP, NC. “Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials”.
- Society of Nuclear Medicine, 4th Annual Molecular Imaging Summit: Nanomedicine and Molecular Imaging, Albuquerque, NM; “Nanotoxicology: Assessing the Health Hazards of Engineered Nanomaterials.”
- Society of Toxicology Annual Meeting, Salt Lake City, UT. “NTP activities assessing the safety of dietary supplements and herbals medicines.”
- Society of Toxicology Annual Meeting, Nanotoxicology Specialty Section Debate, Salt Lake City, UT. “Nanotoxicology publications should be required to include a specified set of minimum material characterizations”.
- Society of Risk Analysis Annual Meeting, Baltimore MD; “The Toxicology of Fullerenes: Current Efforts at the National Toxicology Program.”
- Society of Toxicology of Canada Annual Meeting, Montreal, Canada; “Assessing the cumulative effects of mixtures: Lessons learned from NTP chronic bioassays of mixtures of dioxins and PCBs.”
- 2009 Environmental Health Summit, Research Triangle Park, NC; “Current knowledge on nanomaterial toxicity: Implications for assessing product safety at the end of the life-cycle.”
- NIEHS Engineered Nanomaterials Grand Opportunity Grantee Meeting, Research Triangle Park, NC; “Current NTP efforts on ENMs Health and Safety”
- 46<sup>th</sup> Congress of the European Societies of Toxicology (EUROTOX 2009), Dresden, Germany; “SOT-EUROTOX debate, Nanotoxicology: Is it much ado about nothing?”
- International Conference on Nanotechnology for the Forest Products Industry, Edmonton, Canada; “Current knowledge on nanomaterial toxicity.”
- Society of Toxicology Annual Meeting, Baltimore, MD; “SOT-EUROTOX debate, Nanotoxicology: Is it much ado about nothing?”
- American Society of Safety Engineers (ASSE) meeting, Cary, NC; “Industrial Safety in Nanotechnology”
- University of North Carolina at Chapel Hill, Curriculum in Toxicology TOXC/ENVR 722 seminar; “The Health Risks of Nanotechnology: A big issue in a small world.”
- North Carolina Nanotechnology Safety and Response Seminar, Sanford, NC. “Industrial Safety in Nanotechnology”
- 2008 Priester Conference Participant Meeting, NIEHS, NC. “The National Toxicology Program (NTP): Better Science for Better Decisions”
- Science Communicators of North Carolina Meeting, NIEHS, NC. “NIEHS activities on Nanotechnology: Nanoscale Science and Toxicology”
- National Research Council Committee on the Health Risks of Phthalates, Washington DC. “Rationale Used in Cumulative Risk Assessment: Dioxins, A Case Study”
- Business Environmental and Safety Training (BEST) Conference, Raleigh, NC “Current knowledge on nanomaterial toxicity”
- U.S. Food and Drug Administration Annual Science Symposium, Washington, DC. “Current knowledge on nanomaterial toxicity.”

- University of North Carolina, Lineberger Comprehensive Cancer Center Seminars, Chapel Hill, NC "Assessing the health risks of Nanotechnology: A big issue in a small world."
- USEPA Interagency Workshop on the Environmental Implications of Nanotechnology, Washington DC. "NIEHS activities on Nanotechnology: Nanoscale Science and Toxicology."
- Second Annual International Food Nanotechnology Conference, Chicago, IL. "Nanotechnology Safety Initiative of the NIEHS and the National Toxicology Program."
- American Association for Pharmaceutical Scientists Annual National Biotechnology Conference, San Diego, CA. "Assessing the health risks of Nanotechnology: A mega-issue in a nano-world."
- NIEHS Public Interest Group Webinar, NIEHS, Research Triangle Park, NC. "National Toxicology Program Nanotechnology Safety Initiative".
- Society of Toxicology Annual Meeting Roundtable: Chemical mixtures: is the problem solvable?, Charlotte, NC. "How can pharmacokinetic and pharmacodynamic modeling be used to understand observed interactions?"
- The Toxicology Forum 32nd Annual Winter Meeting, Washington DC. "The National Toxicology Program's Nanoscale Materials Research and Testing Program"
- University of Illinois at Chicago, Laboratory for Molecular Biology, Chicago, IL. "'Assessing the health risks of Nanotechnology: A big issue in a small world.'"
- Superfund Basic Research Program/EPA Risk-e-Learning Web Seminar Series, Research Triangle Park, NC. "Nanotechnology and toxicology: an overview"
- Carolina Center of Cancer Nanotechnology Excellence 1<sup>st</sup> Annual Symposium on Cancer Nanotechnology, Chapel Hill, NC. "Evaluating the safety of engineered nanoscale materials."
- American College of Toxicology Annual Meeting, Indian Wells, CA. "NIEHS Efforts to Evaluate the Human Health Hazards Associated with Exposure to Nanomaterials".
- USEPA Seminar series, Research Triangle Park, NC. "National Toxicology Program activities evaluating the safety of nanoscale materials."
- ILSI-Health and Environmental Sciences Institute (HESI), Washington DC. "Nanomaterial Risk Evaluation Activities at the National Institute of Environmental Health Sciences".
- National Institute for Occupational Safety and Health, Morgantown, WV: "National Toxicology Program activities evaluating the safety of nanoscale materials."
- FDA National Center for Toxicological Research-Toxicology Study Selection and Review Committee, Jefferson AK: "Tumorigenicity of Nanoscale TiO<sub>2</sub> in Tg:AC Transgenic Mice".
- Mid-Atlantic Chapter of the Society of Toxicology Webinar; "Evaluation of toxicity of nanoscale materials: Strategies, study design and interpretation".
- National Toxicology Program Nanotechnology Working Group public meeting. Washington, DC.
- US Measurement System Workshop on the Measurement and Standards Needs in Nanobiotechnology, Houston, TX; "National Toxicology Program activities evaluating the safety of nanoscale materials."
- National Capital Area Chapter of the Society of Toxicology Fall Symposium on Biological, Toxicological, and Regulatory Assessment of Nano-Materials, Washington DC; "National Toxicology Program Activities Evaluating the Safety of Nano-scale Materials."
- Symposium on Nanoscale Science & Engineering: Convergence of the Top Down and Bottom Up Approaches, University of North Carolina - Charlotte, Charlotte, NC. "Evaluating the safety of nanoscale materials: Current challenges and future directions."
- 2nd International Symposium on Nanotechnology and Occupational Health, Minneapolis, MN; "National Toxicology Program Activities Evaluating the Safety of Materials Produced Through Nanotechnology."
- Molecular and Environmental Toxicology Center, University of Wisconsin, Madison, WI; "Evaluating Dose Additivity for Toxicity and Carcinogenicity of Mixtures of Dioxins and Polychlorinated Biphenyls."
- National Forum on Contaminants in Fish, Baltimore, MD; "Overview of National Toxicology Program Studies of Interactions Between Individual PCB Congeners."



- National Toxicology Program Nanotechnology Working Group public meeting. RTP, NC.
- National Academy of Sciences, National Research Council, Third Meeting of the Committee on EPA's Exposure and Human Health Reassessment of TCDD and Related Compounds. Washington DC; "The National Toxicology Program Dioxin/PCB Cancer Bioassays: Evaluation of Dose-Response Relationships and Dose-Additivity for Dioxin-Like Compounds."
- Society of Toxicology Annual Meeting, New Orleans; Roundtable speaker "Conducting a Comprehensive Toxicological and Safety Evaluation of Nanomaterials: Current Challenges and Data Needs"
- Society of Toxicology Annual Meeting, New Orleans; Workshop on Dose additivity of mixtures, New Orleans; "Testing the Toxic Equivalency Factor (TEF) hypothesis: The NTP Dioxin/PCB Cancer bioassays."
- NIBIB/DOE Workshop on Biomedical Applications of Nanotechnology, Washington DC; "Evaluating the Safety of Materials Produced Through Nanotechnology"
- Toxicology Forum meeting, Washington DC. "Dose-Additivity modeling applied to the new NTP dioxin cancer bioassays."
- USEPA Workshop "Representations of Dose-Response Relationships for Chemicals Associated with Non-Cancer Effects and Their Policy Implications." Oakland CA; "Dose response modeling of animal results for dioxin."
- American Chemistry Council CHEMSTAR Nanotechnology Workshop, Washington DC; "Evaluating the safety of materials produced through nanotechnology: A big issue in a small world"
- University of North Carolina at Charlotte Biotechnology symposium; "Evaluating the safety of materials produced through nanotechnology: A big issue in a small world"
- 24th International Symposium on Halogenated Environmental Organic Pollutants and POPs (Dioxin 2004), Berlin, Germany; "Carcinogenicity of individual and a mixture of dioxin-like compounds in female Harlan Sprague Dawley rats."
- 24th International Symposium on Halogenated Environmental Organic Pollutants and POPs(Dioxin 2004) , Berlin, Germany; "Implications and findings of the National Toxicology Program (NTP) TEF Studies."
- Polychlorinated Biphenyls (PCB) Workshop, University of Illinois at Champagne; "Evaluating dioxin Toxin Equivalency Factors (TEFs) for the carcinogenicity of dioxins and PCBs in rodents."
- Polychlorinated Biphenyls (PCB) Workshop, University of Illinois at Champagne; "Cardiotoxicity in rats following chronic exposure to dioxins and PCBs."
- ILSI-HESI workshop on the human relevance of rodent liver tumors, Research Triangle Park; "Chronic toxicity and carcinogenicity of dioxin-like compounds in female Harlan Sprague-Dawley rats"
- NIEHS microarray user group seminar series; "Ah-receptor activated signaling pathways." 2003
- International Symposium on Endocrine Disruptors, National Institute of Toxicological Research, Seoul, South Korea; "Dioxins: Toxicology and Risk Assessment" 2002
- Seoul National University, Seoul, South Korea; "Gene expression profiling in rat liver after subchronic exposure to dioxin." 2002
- Catholic University of Daegu, Daegu, South Korea; "Gene expression profiling in rat liver after subchronic exposure to dioxin." 2002
- NIEHS microarray user group seminar series; "Gene expression profiling in rat liver after subchronic exposure to dioxin." 2000
- Workshop on Recent Advances in the Environmental Toxicology and Health Effects of PCBs, Lexington, Kentucky; "The National Toxicology Program Dioxin TEF study: Chronic carcinogenicity studies to evaluate toxic equivalency factors for dioxins and PCBs." 2000
- Laboratory of Molecular Carcinogenesis seminar series, NIEHS; "Quantitative analysis of dioxin-induced gene expression." 2000
- National Toxicology Program Advisory Committee on Alternative Toxicological Methods, NIEHS; "Real Time and Quantitative PCR" 2000
- NIEHS DIR-retreat, Southern Pines; "Real Time and Quantitative PCR" 2000

- 19th International Symposium on Halogenated Environmental Organic Pollutants and POPs, Venice, Italy; “Mechanisms of dioxin-induced hepatocarcinogenesis in rats.” 1999
- Symposium on Carcinogenesis Modeling and Risk Assessment, Park City, Utah; “Comparative dose-metrics for changes in cell proliferation and gene expression in female Sprague-Dawley rat liver following chronic exposure to dioxin.” 1998

### **Invited scientific consultations and interactions**

- Invited Panel member; Responsible Innovation for bioPlastics in the Environment (RIPE) October 2020
- Invited participant; Nanoplastics Feds-Only Meeting; Washington DC Feb 2020
- Invited Panel member: National Academy of Sciences meeting on Emerging Technologies to Advance Research and Decisions on the Environmental Health Effects of Microplastics, Washington DC, February 2020
- Invited member of the Scientific Oversight Committee for the National Cancer Institute’s Nanotechnology Characterization Laboratory (NCL) 2006-present.
- Invited member; US FDA/CFSAN Toxicology Research Working group; 2014-present
- Invited conference session chair, Global Summit on Regulatory Science (GSR16) Nanotechnology Standards and Applications, NIH, Bethesda, September 2016.
- Invited member of the Nanomaterial Registry Advisory Board, Research Triangle Institute, NC, January 2011-2015.
- Invited member; Working Group for the NIH Intramural Research Program review of the Division of the National Toxicology Program. April-August 2014
- Invited participant- Cross US Federal Agency Flame Retardant Meeting, RTP, NC. May 2014
- Invited member of the Working Group for the International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans; Volume 107; Polychlorinated biphenyls and polybrominated biphenyls. Lyon France. February 2013
- Invited Breakout Group Chairperson: US-EU Workshop Bridging Nano EHS efforts-A joint workshop, Washington DC, USA., March 2011
- Invited Panelist, Environment: A Human Health Perspective; Teacher Professional Development Workshop, NIEHS, RTP, NC, August 2011
- Invited participant. NIEHS Strategic Planning Stakeholder Workshop and Working Group meetings. September-October 2011, RTP, NC
- Invited discussant. NIEHS Public Interest Partners Meeting, Washington DC, “NIEHS/NTP Activities Evaluating the Safety of Nanoscale Materials”. December 2011
- Invited workshop participant, Johns Hopkins Bloomberg School of Public Health Center for Alternatives to Animal Testing Workshop “Nanotechnology and Nanomaterials – Addressing Challenges to Safety Assessment and Regulation Baltimore, MD, October 2010
- Invited panelist- Dose-Response Approaches for Nuclear Receptor- Mediated Modes of Action Workshop NIEHS, RTP, NC, September, 2010
- Invited participant- Roundtable discussion: Toxicology Testing in the 21st Century: Is This The Right Course for Better, Quicker Regulatory Decisions? 36th Annual Summer Meeting of The Toxicology Forum, Aspen, CO, July 2010
- Participant in the US Government Interagency Working Group on Nanotechnology Environmental and Health Implications (NEHI), of the Nanoscale Science, Engineering, and Technology Subcommittee of the President’s National Science and Technology Council. 2004-2011
- Invited member of the Advisory Board for the University of California’s Lead campus Program in Nanotoxicology Research and Training. 2006-2010
- Invited member of International Advisory Board (IAB) of the European Union project “Assessing the toxicity and hazard of non-dioxin like PCBs” (ATHON) (FOOD-CT-2005-022923) 2006-2010
- Invited peer-reviewer: U.S. EPA's “Recommended Toxicity Equivalency Factors (TEFs) for Human Health Risk Assessments of Dioxin and Dioxin-Like Compounds” October 2009.

- Invited participant, EPA Nanomaterial Case Studies Workshop, Research Triangle Park, September 2009
- Invited participant, Interagency Workgroup for identification of data needs for hazard assessment, risk assessment, and predictive modeling for nanomaterials. Washington DC, May 2009
- Invited participant, Interagency Advisory group for NIST activities on Nano-EHS measurement and standards. Washington DC, May 2009,
- Invited expert panel member and session chair. USEPA Dioxin Workshop, Cincinnati, OH, February 2009
- Invited member of the Council of Canadian Academies' Expert Panel on Nanotechnology. 2007-2008
- Invited member and regular participant: ILSI-Health and Environmental Sciences Institute (HESI) Nanomaterial Safety Subcommittee, 2004-2008.
- Invited participant, NanoHealth Enterprise Coordination Meeting, Bethesda, MD. 2008
- Consulted by French Government Representative Claude Gatignol, Office for Science and Technology Options Assessment, on status of NTP activities on pesticides. June 2008.
- Invited participant; International Congress on Nanotechnology's Nanomaterial Environmental Health and Safety Research Needs Assessment Workshop, Washington DC. January 2007
- Invited external peer reviewer for NIOSH's Nanotechnology Research Center Progress Report, 2006.
- Invited Peer Review Panel member for USEPA's Nanotechnology White Paper, Washington DC. April 2006
- Invited working group chairperson: Woodrow Wilson International Center for Scholars' Working Conference on Engineered Nanomaterials & Human Health, Washington DC, April 2006
- Invited expert: World Health Organization (WHO) expert panel re-evaluation of human and mammalian toxic equivalency factors (TEFs) for dioxins and dioxin-like compounds, Geneva, 2005.
- Invited peer reviewer for the Ontario Ministry of the Environment's technical report on "Interim Toxicological Reference Values (TRVs) for Polychlorinated Biphenyls (PCBs) and Dioxin-like Compounds", 2005
- Invited expert panelist: National Research Council, Committee on Emerging Issues and Data on Environmental Contaminants, Workshop on Application of Genomic Signatures, Oregon, December 2005
- Invited External Advisory Board member— Michigan State University Superfund Basic Research Program. 2005-2009.
- Invited member of External Advisory Board for the UNC-CH program grant entitled "Bioengineering partnership to improve chemical hazard testing paradigms." 2005-2009
- Invited participant: ILSI-HESI workshop on "Improving the use of quantitative pharmacokinetic methods to determine dosimetry for evaluating human health risks", Research Triangle Park, December 2005.
- Invited workshop participant, RAND corporation workshop on Nanotechnology and Occupational Health and Safety, Washington, DC, 2005
- Invited expert; European Food Safety Authority (EFSA) Scientific Colloquium: Methodologies and principles for setting tolerable intake levels for dioxins, furans and dioxin-like PCBs, Brussels, Belgium, June 2004
- Invited roundtable panelist; "Is It Time to Reevaluate the Toxic Equivalency Factors For PCDDs, PCDFs, and Dioxin-Like PCBs?" Dioxin 2004 Conference, Berlin, Germany, September 2004.
- Invited workshop participant "HESI Nanomaterial Safety Subcommittee Scoping meeting", Washington June 2004.
- Invited roundtable panelist; "Nanotechnology" NIEHS leadership retreat, Greensboro, May 2004
- Interviewed for and quoted in an article titled "Nanotechnology: Looking As We Leap" published in the September 2004 issue of Environmental Health Perspectives (Vol 112, Number 13).
- Invited participant; Society of Toxicology Expert Panel Workshop: "Risk Assessment of Mixtures: Development of Testable Hypotheses", Atlanta, GA, September 2002
- Invited workshop participant and breakout group chairperson; "Virtual Body Workshop; Human biology models for environmental health effects" NIEHS June 2000.

**Media interviews**

- Interviewed for and quoted in an article on Aloe vera safety by Men's Health magazine, the best selling men's magazine in the U.S. May 2014.
- Interviewed for development of Lux Research's "The Nanotech Report", 2008
- Interviewed for development of Lux Research's "The Nanotech Report", 4th Edition. 2006.
- Interviewed for a segment on nanotechnology research at NIEHS for the UNC-TV program "North Carolina Now" aired on September 18th 2006
- Interviewed for and quoted in an article titled "Nanotech's tiny revolution raises caution" published in the Sacramento Bee, August 19th , 2006
- Interviewed for an article on nanotoxicology by Mechanical Engineering magazine, July 2006
- Interviewed for an article on nanotechnology by VEJA, Brazil's best-selling news magazine, June 2006.
- Interviewed for and quoted in an article titled "Science's Tiny, Big Unknown. Nanotechnology may revolutionize our lives." published in the Los Angeles Times, June 1st 2006
- Interviewed for an article titled "When nanopants attack" published by Wired News, June 2005.
- Interviewed for and quoted in an article titled "Yushchenko will feel poison's effects for years" published in the International Herald Tribune, Dec 27th 2004, dealing with dioxin poisoning.

**Scientific Community Activities**

- Chairperson and co-organizer; Society of Toxicology Annual Meeting March 2021; Workshop on Tackling the Potential Human Health Impacts of Microplastics and Nanoplastics: Challenges for Toxicologists in the Assessment of Real-World Complex Mixtures
- Chairperson and co-organizer: Society of Toxicology Annual Meeting March 2019 "Understanding the Impact on the Immune System of Occupationally Relevant Exposures to Multiwalled Carbon Nanotubes"
- Chairperson and co-organizer, Society of Toxicology Annual Meeting, March 2016, "Workshop: Bioactivity Based Margin of Exposure Safety Assessment: The Next Stop along the Road to 21st Century Safety Assessments."
- Chairperson and co-organizer: Society of Toxicology Annual Meeting, March 2013. "Symposium: From immunotoxicity to nanotherapy: the effects of nanomaterials on the immune system".
- Chairperson; Society of Toxicology Annual Meeting, March 2013. "Session: Toxicity of nanoparticles: cerium oxide". Society of Toxicology Annual Meeting, March 2013.
- Invited participant for the Society of Toxicology Postdoctoral Assembly Speed networking sessions; 2018, 2018, 2019.
- Organizing Committee and breakout group rapporteur; Research Triangle Environmental Health Collaborative's Summit "Environmentally Responsible Development of Nanotechnology", Research Triangle Park, NC, October 2009
- Organizing Committee; "Ensuring appropriate material characterization in nano-toxicity studies" (Oct 2008, Washington DC)
- Organizing Committee Society of Risk Analysis workshop on risk of nanomaterials (Sept 2008, Washington DC)
- Chairperson and co-organizer: "Nanomaterial pharmacokinetics and pharmacokinetics modeling: Where we are and where do we need to go?", Society of Toxicology Annual Meeting 2008.
- Organizing committee; Interagency Workshop on Standards for Toxicity Testing and Risk Assessment of Nanomaterials. Gaithersburg, MD. September 2007
- Symposium Co-organizer, North Carolina Society of Toxicology Annual Meeting 2006.
- Chairperson; Persistent Organic Pollutants Poster session, Society of Toxicology Annual meeting, March 2006.
- Symposium Organizer; "North Carolina Society of Toxicology Spring Meeting- Implications of Nanotechnology for Toxicologists", 2005.

- Co-Chairperson; Symposium; “Mechanisms of cardiovascular toxicity by 2,3,7,8-tetrachlorodibenzo-p-dioxin and related halogenated aromatic hydrocarbons.” Society of Toxicology Annual meeting, March 2004.
- Chairperson; TCDD, Poster session, Society of Toxicology Annual meeting, March 2004.
- Symposium Organizer; “North Carolina Society of Toxicology Fall Meeting-Allergic Sensitization and Childhood Asthma”, 2003
- Chairperson; Role of Environmental Agents in Cardiovascular Disease. Poster session, Society of Toxicology annual meeting, March 2003.
- Chairperson; Global profiling. Poster session, Society of Toxicology annual meeting, March 2002.
- Chairperson; TCDD III Poster session, Society of Toxicology annual meeting, March 2001.
- Chairperson; TCDD Poster session, Society of Toxicology annual meeting, March 2000.
- NIEHS representative for US congressional staff briefings, and scientific peer review meetings for the US EPA’s Health Assessment of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and related compounds, June-November 2000.

### **National Toxicology Program and NIEHS Scientific Activities**

- Project Officer. Interagency Agreement between NIEHS and FDA/NCTR. This IAA supports toxicology studies on FDA-regulated agents nominated to the NTP, and conducted at the FDA’s National Center for Toxicological Research. 2007-2019
- NIEHS representative Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM); 2014-2017
- Steering committee member: NIEHS/FDA Consortium Linking Academic and Regulatory Insights on Toxicity of BPA (CLARITY-BPA) 2012-2018
- Workshop Organizing committee: Integrated Testing Strategies for Developmental Neurotoxicity, NIEHS, RTP (2017)
- NTP Nominations Discussion and Review Group (2007-2016)
- NTP Project Concept Reviews-Chairperson (2008-2016)
- Creator and coordinator; NTP Project Development Forum (2016-2019) (forum for discussion of new DNTP projects)
- Creator and coordinator; NTP Forum (2009-2019) (seminar and discussion forum)
- NIH Project Scientist for one of the U01 centers involved in the NIEHS Centers for Nanotechnology Health Implications Research (NCNHIR) consortium. Responsible for periodic reviews of progress, participating with steering committee in the setting research priorities, deciding optimal research approaches and designs. 2010-2015,
- NIEHS Workshop Organizing committee; “Advancing Research on Mixtures; New Perspectives and Approaches for Predicting Adverse Human Health Effects” Chapel Hill, NC, 2011
- Chairperson, National Toxicology Program Toxicogenomics faculty, 2003-2011.
- Chairperson, NTP Management Committee 2007-2009.
- Member of Pharmacokinetic Modeling Oversight Group that coordinates NTP PBPK modeling activities. 2005-2007
- NTP workshop Rapporteur: “Hormonally-induced reproductive tumors: relevance of rodent bioassays”, Raleigh, NC, 2006.
- NTP Workshop Organizing committee and session chair; “Developing Experimental Approaches for the Evaluation of Toxicological Interactions of Nanoscale Materials” University of Florida, 2004
- NIEHS Working Group member for development of the NTP vision for the 21st Century, 2004.

### **NIH, NIEHS and DNTP Service Activities**

- DNTP/NIEHS Information Technology Resources Advisory Committee (ITRAC), 2013-2019

- Invited Master of Ceremonies, “Music and Your Health”-NIEHS Earth Day event, Durham Convention Center NC, April 2018
- NIEHS Committee on Promotions II: Chairperson, 2012-2017.
- NIEHS Committee on Promotions II: Member, 2006-2011; Chairperson, 2012-2017.
- NIEHS Risk Management Committee Member, DNTP representative; 2013-2017
- NIEHS Leadership Development Program for Non-Supervisors: Candidate Review committee 2013
- Invited Master of Ceremonies, NIEHS 3-minute science Talk Competition, (December 2016), EHS-Fest, Durham NC
- NIEHS Annual Awards Ceremony emcee; 2009, 2011
- NIEHS Technology Evaluation Advisory Committee (TEAC) 2008-2013
- NIEHS Search committee member for recruitment of:
  - NIEHS Deputy Executive Officer (2018)
  - NTP Biostatistician (2016, 2018)
  - DNTP Deputy Director for Analysis (2015)
  - NIEHS Chief Information Officer (2013)
  - Branch Chief, Toxicology Branch (2009)
- Subject Matter Expert for review of candidates for recruitment of GS-15 Toxicologist, Toxicology Branch, 2009.
- Subject Matter Expert for review of candidates for recruitment of GS-14 Computational Toxicologist, Program Operations Branch, 2009
- Member of NIEHS OMA organizational climate committee, 2008
- NIEHS Human studies Institutional Review Board (IRB), 2003-2007.
- NIEHS Animal Care and Use Committee, 2003-2007.
- NIEHS Quality Council; Chairperson, 2003-2004.
- NIEHS Assembly of Scientists, Councilor, 2001-2003.
- National Center for Toxicogenomics ToxPath team, 1999-2005.
- Member of Concept Review Group for ILS contract study of quantum dots (2005).
- Contract Peer reviewer: Whole Genome Sequencing of Inbred Mouse Strains (December 2003).

### **Scientific journal activities**

#### **Editorial Board:**

- Toxicology and Applied Pharmacology (2007-2011)
- Environmental Health Perspectives (2008-2012)

#### **Ad hoc peer-reviewer:**

- Advanced Functional Materials
- Carcinogenesis
- Chemosphere
- Critical Reviews in Toxicology
- Environmental Health Perspectives
- Journal of Biochemical and Molecular Toxicology

- Journal of Exposure Analysis and Environmental Epidemiology
- Mechanisms of Ageing and Development
- Nanoletters
- Nanomedicine
- Nanotechnology
- Particle Fibre and Toxicology
- Regulatory Toxicology and Pharmacology
- Toxicology
- Toxicology Letters
- Toxicologic Pathology
- Toxicological Sciences
- Toxicology and Applied Pharmacology

**Professional Society memberships:**

- Society of Toxicology.
- Society of Toxicology, North Carolina Chapter.

**Leadership courses**

- NIEHS Leadership Development Program (Inaugural cohort) 2010-2012

**Professional skills training**

- NIH Best Practices for Creating Individual Development (April 2023)
- Forging the Hybrid Workplace (Dec 2022)
- The New IQ – The Power of Inclusive Leadership” (August 2022)
- Supervisory Refresher Training; Managing Change (2018)
- Collaborative Negotiations Skills Course; 2016
- Effective Meetings; 2014
- NIEHS Good Laboratory Practices (GLP); 2013
- TSCA Confidential Business Information; 2009- 2012

**NIH/NIEHS Training**

- NIH Harassment Doesn't Work Here (current)
- NIH Annual Ethics Training (current)
- Responsible Conduct of Research (current)
- NIH Information Security and Privacy Awareness (current)
- NIH Mandatory Records Management (current)

- Securing Remote Computers (current)
- Veteran Employment (2020)
- Uniformed Services Employment and Reemployment Rights Act (USERRA) (2020)
- Supervisors Role in Performance/Conduct Accountability (May 2018)
- HHS Travel card (2015)
- FDCC Systems Administrator (2014)
- Green Purchasing (2013)
- NIH Environmental Management (2013)
- FAC-COTR Basic Project officer (2007; recertified 2011)



## Bibliography

Web of Science Researcher ID: D-6583-2012  
<https://www.webofscience.com/wos/author/record/751726>  
 ORCID ID 0000-0002-9111-6855

Metrics (6/1/2023)	
Publications in WoS	113
Sum of Times cited	8716
H-index:	36
Avg Citations/article	73

### ***Most highly cited articles***

van den Berg, M., Birnbaum, L., Denison, M., De Vito, M., Farland, W., Feeley, M., Fiedler, H., Hakansson, H., Hanberg, A., Haws, L., Rose, M., Safe, S., Schrenk, D., Tohyama, C., Tritscher, A., Tuomisto, J., Tysklind, M., **Walker, N.**, and Peterson, R.E. (2006). The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. *Toxicol Sci.* 93, 223-241 (Cited > 2500)

Maynard, A.D., Aitken, R.J., Butz, T., Colvin, V., Donaldson, K., Oberdorster, G., Philbert, M.A., Ryan, J., Seaton, A., Stone, V., Tinkle, S.S., Tran, L., **Walker, N.J.**, and Warheit, D.B. (2006). Safe handling of nanotechnology, *Nature* 444, 267-269 (cited >1000)

Hayes, C. L., Spink, D. C., Spink, B. C., Cao, J. Q., **Walker, N. J.** and Sutter, T. R. (1996). 17 beta-estradiol hydroxylation catalyzed by human cytochrome P450 1B1. *Proc. Natl. Acad. Sci. U. S. A.* 93, 9776-9781. (cited >500)

### **Peer Reviewed Publications**

#### **Peer-reviewed Journal Articles**

- 1) Ihrle MD, Taylor-Just AJ, **Walker NJ**, Stout MD, Gupta A, Richey JS, Hayden BK, Baker GL, Sparrow BR, Duke KS, Bonner JC. Inhalation exposure to multi-walled carbon nanotubes alters the pulmonary allergic response of mice to house dust mite allergen. *Inhal Toxicol.* 2019 Apr;31(5):192-202. doi: 10.1080/08958378.2019.1643955.
- 2) Galli CL, **Walker NJ**, Oberlies NH, Roe AL, Edwards J, Fitzpatrick S, Griffiths JC, Hayes AW, Mahony C, Marsman DS, O'Keefe L. (2019) Development of a Consensus Approach for Botanical Safety Evaluation - A Roundtable Report. *Toxicol Lett.* S0378-4274(19)30141-9. doi: 10.1016/j.toxlet.2019.05.008.
- 3) Hubbard TD, Hsieh JH, Rider CV, Sipes NS, Sedykh A, Collins BJ, Auerbach SS, Xia M, Huang R, **Walker NJ**, DeVito MJ. (2019) Using Tox21 High-Throughput Screening Assays for the Evaluation of Botanical and Dietary Supplements. *Appl In Vitro Toxicol.* 5(1):10-25. doi: 10.1089/aivt.2018.0020.
- 4) Behl M, Ryan K, Hsieh JH, Parham F, Shapiro AJ, Collins BJ, Sipes NS, Birnbaum LS, Bucher JR, Foster PMD, **Walker NJ**, Paules RS, Tice RR. (2019) Screening for Developmental Neurotoxicity at the National Toxicology Program: The Future is Here. *Toxicol Sci.* 2019 Jan 1;167(1):6-14. doi: 10.1093/toxsci/kfy278.
- 5) Hamm JT, P Ceger, D Allen, M Stout, EA Maull, G Baker, A Zmarowski, S Padilla, E Perkins, A Planchart, D Stedman, T Tal, RL Tanguay, DC Volz, MS Wilbanks and **NJ Walker** (2019) Characterizing sources of variability in zebrafish embryo screening protocols. *ALTEX.* 2019;36(1):103-120. doi: 10.14573/altex.1804162.
- 6) Shipkowski KA, Sanders JM, McDonald JD, **Walker NJ** and Waidyanatha S (2019) Disposition of fullerene C60 in rats following intratracheal or intravenous administration *Xenobiotica.* 2018 Sep 26:1-22. doi: 10.1080/00498254.2018.1528646. [Epub ahead of print]
- 7) Pettibone KG, Balshaw DM, Dilworth , Drew CH, Hall JE, Heacock M, Latoni AR, McAllister KA, O'Fallon LR, Thompson C, **Walker NJ**, Wolfe MS, Wright DS and Collman GW. (2018) Expanding the Concept of Translational Research: Making a Place for Environmental Health Sciences. *Environ Health Perspect* 126(7):074501. doi: 10.1289/EHP3657. PMID: 30024381

- 8) Rider CV, **Walker NJ**, Waidyanatha S. Getting to the Root of the Matter: Challenges and Recommendations for Assessing the Safety of Botanical Dietary Supplements. (2018) *Clin Pharmacol Ther.* 2018 104, 429-431. doi: 10.1002/cpt.1088. PMID: 29745419
- 9) Shipkowski KA, Betz JM, Birnbaum LS, Bucher JR, Coates PM, Hopp DC, MacKay D, Oketch-Rabah H, **Walker NJ**, Welch C, Rider CV. Naturally complex: Perspectives and challenges associated with Botanical Dietary Supplement Safety assessment. (2018) *Food Chem Toxicol.* 118, 963-971. doi: 10.1016/j.fct.2018.04.007 PMID: 29626579
- 10) Gao L, Mutlu E, Collins LB, **Walker NJ**, Hartwell HJ, Olson JR, Sun W, Gold A, Ball LM, Swenberg JA. (2017) DNA Product Formation in Female Sprague-Dawley Rats Following Polyhalogenated Aromatic Hydrocarbon (PHAH) Exposure. *Chem Res Toxicol.* 30(3), 794-803. PMID:28207250
- 11) Von Tungeln LS, Walker NJ, Olson GR, Mendoza MC, Felton RP, Thorn BT, Marquese MM, Pogribny IP, Doerge DR and Beland FA (2017) Low dose assessment of the carcinogenicity of furan in male F344/N Nctr rats in a 2-year gavage study. *Food Chem Toxicol.* 99; 170-181, PMID: 27871980
- 12) Sayers BC, Germolec DR, Walker NJ, Stout MD, Cesta MF, Roycroft JH, White KL, Baker GL, Dill JA and Smith MJ (2016) Respiratory toxicity and immunotoxicity evaluations of microparticle and nanoparticle C60 fullerene aggregates in mice and rats following nose-only inhalation for 13 weeks, *Nanotoxicology.* 10; 1458-1468. PMID: 27618498
- 13) Mutlu E, L Gao, LB Collins, **NJ Walker**, HJ Hartwell, JR Olson, W Sun, A Gold, LM Ball and JA Swenberg. (2016) Polychlorinated Biphenyls Induce Oxidative DNA Adducts in Female Sprague-Dawley Rats *Chem. Res. Toxicol. Chem Res Toxicol.* 29, 1335-44. PMID: 27436759
- 14) Sayers BC, **Walker NJ**, Roycroft JH, Germolec DR, Baker GL, Clark ML, Hayden BK, DeFord H, Dill JA, Gupta A and Stout MD. (2016) Lung deposition and clearance of microparticle and nanoparticle C60 fullerene aggregates in B6C3F1/N mice and Wistar Han rats following nose-only inhalation for 13 weeks. *Toxicology* 339, 87-96. PMID: 26612504
- 15) Dinse GE, Jusko TA, Whitt IZ, Co CA, Parks CG, Satoh M, Chan EK, Rose KM, **Walker NJ**, Birnbaum LS, Zeldin DC, Weinberg CR, Miller FW. (2016) Associations between Selected Xenobiotics and Antinuclear Antibodies in the National Health and Nutrition Examination Survey, 1999-2004. *Environ Health Perspect.* 124, 426-36. PMID: 26252071
- 16) Heindel JJ, Newbold RR, Bucher JR, Camacho L, Delclos KB, Lewis SM, Vanlandingham M, Churchwell MI, Twaddle NC, McLellen M, Chidambaram M, Bryant M, Woodling K, Costa GG, Ferguson SA, Flaws J, Howard PC, **Walker NJ**, Zoeller RT, Fostel J, Favaro C, Schug TT. (2015) NIEHS/FDA CLARITY-BPA Research Program Update. *Reprod Toxicol.* 58:33-44. PMID: 26232693
- 17) Frawley R, DeVito M, **Walker NJ**, Birnbaum L, White K Jr, Smith M, Maynor T, Recio L, Germolec D. (2014) Relative potency for altered humoral immunity induced by polybrominated and polychlorinated dioxins/furans in female B6C3F1/N mice. *Toxicol Sci.* 139, 488-500.
- 18) Smith MJ, Brown JM, Zamboni WC, and **Walker NJ.** (2014) Symposium Overview. From Immunotoxicity to Nanotherapy: The Effects of Nanomaterials on the Immune System. *Toxicol Sci.* 138, 249-255.
- 19) Levine KE, Han L, McWilliams AC, Essader AS, Amato KE, Fernando RA, Browning DB, Greene LC, Ensor DS, **Walker NJ**, Robinson VG and Collins BJ. (2014) Characterization of an assortment of commercially available multiwalled carbon nanotubes. *Microchim Acta* 181, 171-179
- 20) Budinsky RA, Schrenk D, Simon T, Van den Berg M, Reichard JF, Silkworth JB, Aylward LL, Brix A, Gasiewicz T, Kaminski N, Perdew G, Starr TB, **Walker NJ**, and Rowlands JC. (2014) Mode of action and dose-response framework analysis for receptor-mediated toxicity: the aryl hydrocarbon receptor as a case study. *Crit Rev Toxicol.* 44, 83-119, PMID: 24245878
- 21) Schug TT, Heindel JJ, Camacho L, Delclos KB, Howard P, Johnson AF, Aungst J, Keefe D, Newbold R, **Walker NJ**, Thomas Zoeller R, Bucher JR. (2013) A new approach to synergize academic and guideline-compliant research: The CLARITY-BPA research program. *Reprod Toxicol.* 40, 35-40. PMID: 23747832
- 22) Lauby-Secretan B, Loomis D, Grosse Y, El Ghissassi F, Bouvard V, Benbrahim-Tallaa L, Guha N, Baan R, Mattock H, Straif K; International Agency for Research on Cancer Monograph Working Group-Cogliano VJ, Aronson K, Tryphonas H, Guo YL, Machala M, Bonfeld-Jørgensen EC, Vorkamp K, Cravedi JP, Le Bizec B, Narbonne JF, Esch H, Cocco P, Merletti F, Vermeulen R, Agudo A, Johansson N, Fiedler H, Hopf N, Glauert HP, Herbert RA, James MO, Ludwig G, Robertson L, Ruder A, **Walker N**, and Carpenter DO. (2013) Carcinogenicity of polychlorinated biphenyls and polybrominated biphenyls. *Lancet Oncol.* 14, 287-8

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- 25) Hooth MJ, Nyska A, Fomby LM, Vasconcelos DY, Vallant M, Devito MJ, and **Walker NJ.** (2012) Repeated dose toxicity and relative potency of 1,2,3,4,6,7-hexachloronaphthalene (PCN 66) 1,2,3,5,6,7-hexachloronaphthalene (PCN 67) compared to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) for induction of CYP1A1, CYP1A2 and thymic atrophy in female Harlan Sprague-Dawley rats. *Toxicology* 301, 85-93; PMID: 22813907
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- 28) Satoh M, Chan EK, Ho LA, Rose KM, Parks CG, Cohn RD, Jusko TA, **Walker NJ**, Germolec DR, Whitt IZ, Crockett PW, Pauley BA, Chan JY, Ross SJ, Birnbaum LS, Zeldin DC, Miller FW. (2012) Prevalence and sociodemographic correlates of antinuclear antibodies in the United States. *Arthritis Rheum.* 64, 2319-27; PMID: 22237992
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