Curriculum Vitae

NAME: Bruce Alexander Merrick

ADDRESS: National Institute of Environmental Health Sciences
Division National Toxicology Program
Mechanistic Toxicology Branch
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P. O. Box 12233
Research Triangle Park, NC 27709

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PLACE OF BIRTH: USA, U.S. Citizen

EDUCATION:

Ph.D.	Toxicology, 1984	University of Nebraska Medical Center, Omaha, NE
M.S.	Pharmacology, 1980	University of Nebraska Medical Center, Omaha, NE
B.S.	Pharmacy, 1978	College of Pharmacy, University of New Mexico, Albuquerque, NM
B.S.	Biology, 1974	University of California, Davis, CA

EXPERIENCE:

National Institute of Environmental Health Sciences
Division National Toxicology Program
P.O. Box 12233, Mail Drop: E1-05
Research Triangle Park, NC 27709

2019 – 2023: Acting Branch Chief, Molecular Toxicology Branch (formerly NTP Laboratory)
2015 – 2019: Deputy Branch Chief, Biomolecular Screening Branch and Group Leader, Molecular Toxicology and Genomics Group, Division, National Toxicology Program, NIEHS.
2010 – 2014: Group Leader; Molecular Toxicology and Informatics Group, National Toxicology Program, NIEHS

National Toxicology Program and Division of Intramural Research
P.O. Box 12233
Research Triangle Park, NC 27709

2007 – 2010: Staff Scientist, Laboratory of Respiratory Biology, NIEHS
2000 – 2006: Proteomics Group Leader, National Center for Toxicogenomics program, NTP/NIEHS
1992 – 1999: Staff Scientist in Regulatory Proteins Group, NIEHS;
1989 – 1992: Staff Scientist, Carcinogenesis Mechanisms Group, NTP/NIEHS

United States Environmental Protection Agency
Health Effects Research Laboratory
26 W. Martin Luther King Drive
Cincinnati, OH 45268

1987 – 1988: Section Chief, Hepatotoxicology Section, Supervisory Pharmacologist

1985 – 1987: Group Leader, In Vitro Toxicology Group

Oak Ridge National Laboratory
Biology Division
P.O. Box 2008
Oak Ridge, TN 37831

1984 – 1985; NCI Training Grant Fellow at Biology Division, Oak Ridge National Laboratory, Oak Ridge, TN. Chemical carcinogenesis of PAH. James K. Selkirk, PhD, Principal Investigator

PATENTS:

U.S. Patent No. 5534121 Awarded July 9, 1996
Title: Preparative Two-Dimensional Gel Electrophoresis System
Inventor: B. Alex Merrick, Ph.D.

PRODUCT LICENSE:

Anti-Grp75 antibodies and standards; licensed to Oxford Biomedical Research, Inc., PO Box 522, Oxford, MI 48371, Catalog 6, 36.

Baculovirus Expression System, rH-p53 to Orbigen, Inc. San Diego, CA.

PROFESSIONAL LICENSE:

Registered Pharmacist, State of Nebraska and State of North Carolina, 2002 - current

COR and PROJECT OFFICER:

NIEHS, Division of the National Toxicology Program; 2017-2022
COR: Contract No. HHSN273201700001C
Bioinformatics Support for NIEHS in the DIR and the DNTP
Sciome, LLC Research Triangle Park, NC

NIEHS, Division of the National Toxicology Program; 2021-2026
Alternate COR: Contract No. 75N96021P00205
NextGen Sequencing Contract for DNTP
Azenta, South Plainfield, NJ

NIEHS, Division of the National Toxicology Program; 2015-2020
COR: Contract No. HHSN273201500005I
NextGen Sequencing and Omics Services - Station Support Contract for NTP with LabCorp, Inc., Seattle, WA

NIEHS, Division of the National Toxicology Program; 2011-2015
COR: Contract No. HHSN27310
NextGen Sequencing Station Support Contract for NTP with David H. Murdock Research Institute (DHMRI), Kannapolis, NC.

NIEHS, National Center for Toxicogenomics; 2002-2005
Project Officer: Contract No. NIEHS N01-ES25494
“Proteomics Resource for the National Center for Toxicogenomics” with Large Scale Biology, Germantown, MD

U.S. Environmental Protection Agency, 1985-1988
Project Officer: “Chemical Interactions in Toxicology”; Two Cooperative Agreements with University of Arizona and University of Mississippi

TEACHING EXPERIENCE:

2001 to 2022: NC State University Toxicology Program; Biochemical Toxicology lecture series.
1978 to 1980: Teaching Assistant: Pharmaceutics I, II; Pharmacy and Dispensing and Compounding. UNMC College of Pharmacy

ADJUCT FACULTY POSITION:

Rank: Associate Professor at North Carolina State University
Adjunct Faculty Appointment: 2001 to 2022
Department of Environmental and Molecular Toxicology
Lecture on Proteomics; Lecture on Transcriptomics in Tox710 Course

MENTORING:

Post-doctoral Fellows:

Jui-Hua Hsieh, Ph.D. University North Carolina, Chapel Hill, Chemical Biology and Medicinal Chemistry; 2011-2015

Charlesene McNeil-Blue, Ph.D., Clark Atlanta University, Atlanta, GA, Dept. of Biology 2003-2006; Project Title: Role of p53 in apoptosis in Parkinson’s disease and neurodegenerative disorders

Barbara A. Wetmore, Ph.D.
2000-2005; NC State University, Raleigh, NC Dept of Environmental and Molecular Toxicology
Project Title: P53 phosphorylation in Growth Arrest and Apoptosis
Employed as Senior Scientist at Hamner Research Institute, RTP, NC

PhD:

Christopher Brynczka, NC State University, Raleigh, NC Dept. of Environmental and Molecular Toxicology; 2003-2007; PhD Awarded, April 2007
Project Title: p53 transcriptional regulation in apoptosis of neurodegenerative disease
Employed as Senior Toxicologist at Merck & Co.

STEP Undergraduate Student Trainees:

Kevin Gao, 2014
Justin S. Chang, 2013-2014
Lora Long Witcher, 1990-1993
Miki Pence-Pawlowski 1993-1995
Vicky R. Walker 1995-1996
Jennifer Hartis 1999-2001

Ph.D. Committee Member:

NC State University; Department of Environmental and Molecular Toxicology
Minsub Shim; 2003, Ph.D. Degree
Elizabeth McKenzie, Ph.D. Committee; 2002 to 2005
Sherry Grissom, M.S. Committee; 2004
Jennifer H. Madenspacher, M.S. Committee; 2005

PROFESSIONAL SOCIETIES:

Society of Toxicology, Full Member, 1984 to present
Stem Cell Specialty Section, 2011 to present

NC Society of Toxicology, Member 2018 to present
American Association of Cancer Research, Full Member 1990 to 2007
Society for Neuroscience, 2002 to 2007

EDITORIAL BOARD:

Journal of Applied Toxicology 2012 to present
Mutation Research/Reviews in Mutation Research 2004 to present
BMC Genomics 2021 to present
Environmental Health Perspectives 2004 to 2015
Briefings in Functional Genomics and Proteomics 2003 to 2009
BioMolecular Engineering 2004 to 2006
Fundamental and Applied Toxicology 1990 to 1996

AD HOC JOURNAL REVIEWER:

Biochemical Pharmacology
Biochimie
Cancer Research
Electrophoresis
FASEB Journal
In Vitro Toxicology
Journal of Pharmacology and Experimental Therapeutics
Journal of Proteomics Research
Molecular Pharmacology
Oncogene
Proteomics
Toxicology In Vitro
Toxicological Sciences
Toxicology and Applied Pharmacology

INVITED SPEAKER:

EPA-RTP Epigenetics Workgroup Meeting
Speaker Title: "Arsenic-induced cancer in a dish: Role of epigenetics in In Vitro transformation of human cells"
Organizing Chair: Brian Chorley, PhD, USEPA
April 13, 2020; Virtual Zoom Meeting

UNMC Graduate Studies Convocation Ceremony: Keynote Speaker
Speaker Title: 'Using the 3 'P's in a Career Path – Project a Philosophy to your People'
Organizing Chair: H. Dele Davies, MD, PhD; Senior Vice Chancellor for Academic Affairs
May 4, 2018; Omaha, NE

SOT 2018 CE Course: NGS Technologies Enable Biomarker Development and Discovery in Toxicology;
Seminar Title: NGS Platforms and Biomarker Development in Toxicology
Organizing Chair: BA Merrick and A Nixon
March 11, 2018, San Antonio, TX

Teratology Society: Epigenetics CE Course:
Seminar Title: 'Beneficial and Adverse Effects of Epigenetic Changes', June 24, 2017
Organizing Chair: Kimberly Brannen, Merck
June 24, 2017; Denver, CO

Sixth Multidisciplinary Science Forum (MSF) at UC Davis Medical Center
Seminar Title: "Tox21: A Strategy for Toxicology in the 21st Century"
Organizing Chair: Melissa C. Chan, PhD
November 6, 2015; Sacramento, CA

American Public Health Association Annual Meeting; Session 4122: Why Neighborhood Matters in Assessing Environmental Health Risks.
Seminar Title: "NIEHS Mouse Methylome Project: What We Can Learn from the Epigenomic Landscape".
Organizing Chair: Kenneth Olden, Ph.D.
November 18, 2014; New Orleans, LA

Toxicogenomics Workshop: the emergence of a new research and regulatory paradigm.
Seminar Title: "Intersection of Toxicogenomics and High Throughput Screening in the Tox21 Program: An NIEHS Perspective"
Organizing Chair: Victor Pelaez, Ph.D.
September 15-16, 2014; Curitiba, Brazil

NC Biotechnology Center Seminar Series
Seminar Title: Mapping the Rat Liver Transcriptome by RNASeq: Chemical Exposure Reveals Novel Transcripts and Exons"
Sponsor: Xinguo Wang, Ph.D., Genomic Sciences, David H. Murdock Research Institute
February 6, 2014; Kannapolis, NC

Ohio Valley Regional SOT Chapter Meeting, Invited Keynote Speaker
Seminar Title: "High throughput screening for chemical toxicity assessment"
Organizing Chair: Christopher States, PhD
September 23, 2013; Louisville, KY

Experimental Biology 2008 Meeting, ASPET/FASEB sponsor; Invited Speaker to Symposium on Inflammation: Early Disease Marker, Drug Response Modifier, Therapeutic Target
Chair(s): Donald Miller/Daniel Sitar
Seminar Title: "Omics-based discovery of inflammation markers as diagnostic tools in drug discovery and disease"
April 5-9, 2008; San Diego CA

HUPO 2007, 6th International Congress; Invited Speaker and Session Chair of Symposium 19: Nutri- and Toxicoproteomics
Seminar Title: "Toxicoproteomics and target discovery tools in tissue injury and inflammation"
Seoul, South Korea; October 6-10, 2007

Collegium Ramazzini: 3rd International Scientific Conference: Framing the Future in Light of the Past: Living in a Chemical World
Seminar Title: "Gene and Protein Protein Profiling in Experimental Liver Injury and Inflammation"
September 18-21, 2005, Bologna, Italy

9th ICEM –International Conference on Environmental Mutagens - Satellite Meeting on Toxicogenomics
Seminar Title: "Toxicoproteomic Biomarkers and Signatures of Hepatic Injury"
August 30-September 2, 2005, Kauai, Hawaii

West Virginia University Systems Biology Initiative and CIIT Centers for Health Research: "2005 Conference on: The Application of Systems Biology Methodologies to Environmental Research"
Seminar Title: "Effect of TCDD on the rat microsomal proteome"

Seminar Title: “Building toxicogenomics knowledge with the chemical effect in biological systems (CEBS) knowledgebase”
August 1-3, 2005; West Virginia University

American Association for the Study of Liver Diseases (AASLD) 2005 Basic Research Single Topic Conference: “Exploring the Functional Genomics and Proteomics of Liver in Health and Diseases”
Seminar Title: “Proteomic Profiling of Serum and Liver in Experimental Animals and Humans After Acetaminophen Exposure”
June 3-5, 2005; Airlie Center, Warrenton, VA

SOT 2005 Annual Meeting
Minisymposium: "Proteomics and Antibody Microarrays: Applications in Toxicology". Seminar Title: "Proteomic analysis of serum proteins during acute acetaminophen toxicity in rats reveals acute phase and antioxidant response”
March 6-10, 2005; New Orleans, LA

University of Florida, Gainesville
Invited Seminar sponsored by the Genetics Institute and Interdisciplinary Toxicology Program. Host: Nancy Denslow
Seminar Title: “Toxicoproteomic profiling of serum proteins in animals and humans after acetaminophen exposure”
February 1, 2005

Society for Risk Analysis 2004 Annual Meeting
Symposium: Recent Developments in Risk Assessment Science and Technology, Chaired by Susan Poulter, Risk Science and Law Speciaty Group
Seminar Title: “The impact of toxicogenomics on public policy, risk assessment and regulation”
December 5-8, 2004; Palm Springs, CA

Merck Distinguished Research Seminar
Merck Research Center,
Host: George N. Nikov, Ph.D.
Seminar Title: p53 in growth regulation and apoptosis.
October 12-13, 2004; San Diego, CA

“Toxicogenomics International Forum 2004” sponsored by Center for Biological Safety and Research National Institute of Health Science, Japan
Seminar Title: “Toxicoproteomics of Liver Injury and Inflammation”
October 11-13, 2004; Kyoto, Japan

SELDI User’s Group Meeting at Duke University
Seminar Title: “Use of SELDI Analysis in Classifying Acute Inflammation in Experimental Animals as a Prelude to Clinical Studies”
October 7, 2004, Duke University, Durham, NC

ISSX 2004 Symposium, Organizer and Speaker
Symposium Title: “High Throughput Proteomics in Xenobiotic Toxicity”
Seminar Title: “Toxicoproteomic analysis of hepatotoxicants in necrosis and inflammation”
August 28-Sept 2, 2004; Vancouver, BC, Canada

10th International Congress of Toxicology – ICTX 2004
Session S15: “Toxicogenomics and Proteomics of the Liver” Session Co-Chairman and Speaker. Co-Chair: Jos Kleinjans, The Netherlands National Toxicogenomics Centre (NTC)
Seminar Title: “Gene and protein expression profiling of rat liver and subcellular fractions after subacute exposure to metabolic inducers, phenobarbital, oxazepam and Wyeth 14,643”
July 11-15, 2004; Tampere, Finland

University of Arizona, Department of Pharmacology and Toxicology and Chemical/Chromatin Interactions Research Core. Hosts: TJ Monks and D Rompagnolo
Seminar Title: “Toxicoproteomic Studies in Hepatic Injury and Inflammation”
April 27, 2004; Tucson, AZ

U.S. – Japan Cooperative Medical Science Program:
Environmental Genomics and Carcinogenesis Panel
Session I. Gene Expression, Proteins, Chemicals and Cancer
Seminar Title: “Toxicoproteomic Analysis of Liver and Serum during Hepatotoxicity”
January 22 – January 24, 2004; Oahu, Hawaii

American Industrial Hygiene Association, Annual Meeting
Roundtable: “New Venues for industrial hygienists: Using Biological Monitoring to Uncover the Health Impact of Environmental Toxicants”
Seminar Title: “Toxicoproteomic Analysis of Liver Toxicity after Chemical Exposure”
May 11, 2004; Atlanta, GA

Pacific Northwest National Laboratory (PNNL)
Seminar Title: “Toxicoproteomics of liver and serum in hepatotoxicity”
February 19-21, 2004; Richland, WA

“IPCS Workshop on Toxicogenomics and the Risk Assessment of Chemicals For the Protection of Human Health” sponsored by WHO-IPCS (World Health Organization - International Programme on Chemical Safety
University of Berlin School of Public Health
Seminar Title: “The National Center for Toxicogenomics: Program Update and Development of the CEBS Database for Toxicogenomics Research”
November 17-19, 2003; Berlin, Germany

Federazione Italiana Scienze della Vita Meeting, Invited speaker to Minisymposium “Gene-environment interactions”
Seminar Title: "Toxicogenomics of Hepatotoxicity: Gene and Protein Expression Studies”
October 10-13, 2003, Rimini, Italy

Toxicology of Natural Products Symposium, sponsored by US FDA
Seminar Title: “Toxicoproteomics of Hepatotoxicants”
September, 8-9, 2003; NIH Bethesda, MD

Gordon Conference: “Toxicogenomics” Bates College, ME,
Seminar Title: “Proteomic Analysis of Hepatotoxic Agents: Investigation of Subcellular and Serum Proteomes”
June 22-27, 2003; Lewiston, ME

Human Proteome Organization (HUPO) Workshop on the Human Liver Proteome
Seminar Title: “Standards and Technologies in Proteomics”
July 17-18, 2003; NIH Bethesda, MD

Society of Toxicology Symposium: Invited speaker
Seminar Title: “Conducting Parallel Genomics and Proteomics Studies: Comparative Responses in Gene Expression.” at the 42nd Annual Meeting of the
March 9-13, 2003; SOT, Nashville, TN

Society of Toxicology Workshop: Organizer
Course Title: “Toxicity Profiling of Genes and Proteins by Toxicologists: Advanced Topic in Toxicogenomics” PM12 Advanced.
March 17-21, 2002 Nashville, TN at SOT Annual meeting

Human Proteome Organization (HUPO) Workshop on the Human Liver Proteome
Seminar Title: “Liver Response to Environmental Toxicants Analyzed by Proteomics at NIEHS”
October 21-24, 2002, Beijing, China

UNC Chapel Hill Department of Biochemistry Seminar Series:
Seminar Title: "Proteomics as a Tool for Discovery: Metabolic Enzyme Inducers and Subcellular Localization"
Host: C Borchers
October 9, 2001, UNC Chapel Hill, NC

American Association Advancement of Science, 2001 Meeting
Symposium: Approaches in Functional Genomics: Rewards and Challenges. Organizer: Francoise Seillier-Moiseiwitsch, UNC, Chapel Hill, NC
Seminar Title: Proteomic Analysis as a Tool for Pathway Discovery.
March 15-20, 2001; San Francisco, CA

International Society for Study of Xenobiotics Annual Meeting, ISSX 2000; Symposium: Pharmacodynamics and Biomarkers. Organizer: JM Collins, FDA; Rockville, MD
Seminar Title: “National Center for Toxicogenomics: A New NIEHS Initiative for Toxicology and Biomarker Research”
October 24-28, 2000; Indianapolis, IN

U.S. EPA, NHEERL, Research Triangle Park, NC
Seminar Title: “Proteomics at NIEHS: Hepatic Effects of TCDD as a Pilot Study"
Host: K. Dreher, Experimental Toxicology Division
September 28, 2000; Research Triangle Park, NC

U.S. EPA, NHEERL, Research Triangle Park, NC
Seminar Title: “Proteomics in a Gene Expression Center: Applications to Environmental Toxicology”
Host: D. Dix, Reproductive Toxicology Division
February 24, 2000, Research Triangle Park, NC

Professional Program Activities:

NIEHS Workshop on Circulating Cell Free DNA – Applications in the Clinical and Toxicology Setting; Sept 24-25, 2018 https://ntp.niehs.nih.gov/update/2018/8/cell-free-dna/index.html ; participation as speaker and discussion moderator.

NTP, Board of Scientific Councilors: Contract Concept Review – Bioinformatics Contract for DNTP and DIR,
December 2, 2015

Reviewer: NC Biotechnology Center, Biotechnology Research Grant Review Panel.
November 12, 2014

SBIR – NTP Liaison to DERT – SBIR on Archived Tissues,
2013 to present

Reviewer: NC Biotechnology Center, Biotechnology Research Grant Review Panel.
November 13, 2012

Reviewer: NIH Microphysiological Systems Grant Review Panel ZRG1 BST-N (50),
April 19-20, 2012; Bethesda, Maryland

Reviewer: NC Biotechnology Center, Biotechnology Research Grant Review Panel.
November 2, 2011

Reviewer: NC Biotechnology Center, Biotechnology Research Grant Review Panel.
November 3, 2010

Reviewer: Proteomics Program in Molecular Profiling; Pfizer Pharmaceutical Company, Ann Arbor, MI;
September 24-25, 2006.

Reviewer for: NIH National Cancer Institute Grant Study Section: NCI RFA-CA-07-012 "Clinical Proteomic Technology Assessment for Cancer." Silver Springs, MD;
July 19-20, 2006

Reviewer for: Pacific Northwest National Laboratories Proposals
PNNL LDRD Proposal Title: "Signatures of Oxidative Stress Associated with Inhaled Particulate Matter" Contact: Flor Cuevas, PNNL, Richmond, OR; September 2005.

Reviewer for: Genome Canada Competition III; External Reviewer of Large Scale Project
Project Title: "Proteomics of Hepatitis C Models" by J Bergeron and M Tremblay; JoAnn J. Crichlow
April 15, 2005

Reviewer for: The Dutch Technology STW Foundation; the Netherlands Organisation for Scientific Research, NWO, and the Dutch Ministry of Economic Affairs
Project Title: "WPB.6718: Cell-type specific proteomics; a general strategy for high throughput protein discovery" by Dr. A.R. van der Krol; Wageningen, Netherlands;
November 2004

Reviewer for: Pennsylvania Department of Health Performance Reviews of Genomics and Proteomics Initiatives
April 23, 2004

"The Human Proteome Roadmap" HUPO Workshop; participant
Sponsored by NIH, FDA and HUPO
April 22, 2004; Bethesda, MD

USEPA Science Advisory Board
"Consultation on Computational Toxicology Framework (CTF)"
US EPA; Wash DC; Consultant
Washington, DC;
September 5, 2003

Reviewer for: European Science Foundation: Exploratory Workshop
Workshop Title: "Microarray and Proteomic application to the Ecotoxicology" Contact: Jane Swift; Life and Environmental Sciences Unit, ESF 1 quai Lezoy-Marnesia 67080 Strasbourg cedex France;
September 2003

Reviewer for: Pacific Northwest National Laboratories Proposals
PNNL LDRD Proposal Title: "Array Technologies for Quantification of Proteins" by R Zangar, Contact: Marla J. Sequin, PNNL, Richmond, OR;
August 2003

HUPO, Human Proteome Organization
Human Liver Proteome Project (HLPP) Workshop; Plan and participate in international Liver Proteomics studies and initiatives
Workshop Meeting at NIH, Bethesda, MD;
July 17-18, 2003

ILSI-HESI (International Life Sciences Institute – Health Environmental Science Institute)
Member of Biomarkers and Proteomics Leadership Subcommittee; Participate in planning for national cooperative studies on Biomarkers and Proteomics in Toxicology Washington, DC;
2001 to 2003

HUPO, Human Proteome Organization
Cell Models Subcommittee: Human Liver Proteome Leadership Group. Plan and participate in international Liver Proteomics studies and initiatives
Seminar: “Toxicogenomic studies if liver toxicants”
Workshop Meeting in Beijing, China;
November 21-24, 2002

HUPO, Human Proteome Organization
Plasma Proteome Group; Plan and participate in international studies and initiatives on the Plasma Proteome.
Workshop Meeting, Ann Arbor, MI;
September 5-6, 2002

SOT 2002, Annual Meeting Course Organizer for SOT Continuing Education Series: CE Course Title: PM#12: "Toxicity Profiling of Genes and Proteins by Toxicologists: Advanced Topics in Toxicogenomics"
Nashville, TN;
March 17-21, 2002

TECHNICAL REPORT:

TR 589: Toxicology Studies of a Pentabromodiphenyl Oxide Mixture (DE-71) in F344/N Rats and B6C3F1/N Mice and Toxicology and Carcinogenesis Studies of a Pentabromodipheynyl Oxide Mixture (DE-71) in Wistar Han [Crl:WI(Han)] Rats and B6C3F1/N Mice. Appendix M. Study on the relationship of the AhR to DE-71 liver tumor formation in Wistar Han Rats. BA Merrick, JK Dunnick, T Maynor, AE Brix, GE Kissling and MJ Devito. ppM1-M6, 2015.

NIEHS COMMITTEES:

NIEHS Opportunity Innovation Award Committee, 2020
Science Day Organizing Committee, 2011-2015; 2017-present
EIR Invention Review Panel: 2010 - present
NTP Toxicogenomics Faculty Chair 2011 - 2019
Digital Assets Inventory (DAI) Committee – 2015 to 2016
Information Technology Management Committee (ITMC), 2013-2016
DNTP Information Technology Resources Advisory Committee (ITRAC), 2013-2018
NIEHS Epigenomics and NextGen Review Committee, 2013 - present
NIEHS Commercial Software Evaluation Committee, 2016
NIEHS Computer Life Cycle Committee, 2016-2017
Committee on Promotion Board II, 2012-2015
Pulse Survey Point of Contact for BSB Branch and NTP, 2011-2012
BSB Branch Journal Club Chair 2011-2015
Assembly of Scientists: Elected Board Member, 2003-2005; 2015 - 2018
Animal Care and Use Committee Member; 1999-2005
MOATS: Media and Glassware Advisory Committee, Head 1996-2000, Led committee to develop MOATS automated ordering system for media and glassware
NIEHS Property Committee; 1999-2000; develop PMIS automated property management system
Chairman, Property Disposal Committee, 2004 - 2006

NIEHS Focus Group for Heath and Radiation Safety; 1995

NIEHS AWARDS:

DNTP Special Act Award 2021, #10799022021, Divisional Service
DNTP Special Act Award 2021 – HEI, PMT Members

NIEHS Merit Group Award, January 31, 2018 – NTP Website Redesign Team
NIEHS Intramural Paper of the Month: March, 2018
https://factor.niehs.nih.gov/2018/3/papers/dir/index.htm?WT.mc_id=efactoremail_redesign#a1

NIEHS Top 25 Papers of 2018 selected by NIEHS Leadership from 2,900 researchers and grantees; paper by Foley et al 2018, BMC Genomics Rat exome-seq platform; Mav et al 2018, PlosOne S1500+ HTT platform
https://factor.niehs.nih.gov/2019/1/feature/2-feature-papers-of-the-year/index.htm?utm_source=efactor-newsletter&utm_medium=email&utm_campaign=efactor-newsletter-2019-January

NIEHS Intramural Paper of the Month – June 2019
Merrick BA, Phadke DP, Bostrom MA, Shah RR, Wright GM, Wang X, Gordon O, Pelch KE, Auerbach SS, Paules RS, DeVito MJ, Waalkes MP, Tokar EJ. 2019. Arsenite malignantly transforms human prostate epithelial cells in vitro by gene amplification of mutated KRAS. PLoS One 14(4):e0215504.
https://factor.niehs.nih.gov/2019/6/papers/dir/index.htm#a1

NIH Merit Cross-Divisional Group Award, December 6, 2011 – Pulse Survey

PUBLICATIONS:

132. Foley JF, Elgart B, Phadke D, Mav D, Tripodi I, Clausen N, Weick M, Gladwell W, Gerrish K, Shah R, **Merrick BA.** Whole exome and transcript profiling of liver following AFB1 exposure in rats. J Appl Toxicol (In Press, 2023). doi: 10.1002/jat.4463.

131. Qu W, Yan Y, Gerrish K, Scappini E, Tucker CJ, Dixon D, **Merrick BA.** Chronic PFOA exposure in vitro causes acquisition of multiple tumor cell characteristics in rat liver cells. Toxicol In Vitro 2023, 89:105577 doi: 10.1016/j.tiv.2023.105577

130. Dunnick JK, Pandiri AR, Herbert R, Shockley KR, Mav D, Shah RR, **Merrick BA**. Single nucleotide polymorphism patterns associated with a cancer resistant phenotype. 2022 *Exptl Molec Pathol* 128:104812. doi: 10.1016/j.yexmp.2022.104812

129. Tandon A, Howard B, Ramaiahgari S, Maharana A, Ferguson S, Shah R, **Merrick BA**. Deep learning image analysis of high-throughput toxicology assay images. *SLAS Discovery* (Society for Laboratory Automatic and Screening) 27(1):29-38. doi: 10.1016/j.slasd.2021.10.014.

128. Foley JF, Elgart B, **Merrick BA**, Phadke DP, Shah RR, Cook ME, Malphurs JA, Solomon GG, Fessler MB, Humble MC, Miller FW and Gerrish KE. (2021) Whole genome sequencing from low input circulating cell-free DNA in normal human subjects. *Physiol Reports* 9(15): e14993; doi: 10.14814/phy2.14993.

127. Crizer DM, Ramaiahgari SC, Ferguson SS, Rice JR, Dunlap PE, Sipes NS, Auerbach SS, **Merrick BA,** DeVito MJ. (2021) Benchmark concentrations for untargeted metabolomics vs. transcriptomics for liver injury compounds in in vitro liver models. *Toxicol Sci* 181(2):175-186.

126. Mav D, Phadke D, Balik-Meisner M, **Merrick BA**, Auerbach SS, Niemeijer MC, Huppelschoten S, Van De Water B, Shah, R and Paules RS. (2020) Utility of extrapolating human S1500+ genes to the whole transcriptome: Tunicamycin case study. *Bioinformatics and Biology Insights* 14:1-14.

125. Gwinn WM, Auerbach SS, Parham, F, Stout MD, Waidyanatha S, Mutlu E, Collins B, Paules RS, **Merrick BA**, Ferguson S, Ramaiahgari S, Bucher JR, Sparrow B, Toy H, Gorospe J, Machesky N, Shah RR, Balik-Meisner MR, Mav D, Phadke DP, Roberts G and DeVito MJ. (2020) Evaluation of 5-Day In Vivo Rat Liver and Kidney with High-Throughput Transcriptomics for Estimating Benchmark Doses of Apical Outcomes. *Toxicol Sci,* 176:343-354

124. Wei Z, Zhao J, Niebler J, Hao JJ, **Merrick BA** and Xia M. Quantitative proteomic profiling of mitochondrial toxicants in human cardiomyocyte cell line. (2020) *Frontiers in Genetics,* section Systems Biology 11:719

123. **Merrick BA**, Phadke DP, Bostrom MA, Shah RR, Wright GM, Wang X, Gordon O, Pelch KE, Auerbach SS, Paules RS, DeVito MJ, Waalkes MP and Tokar EJ. (2020) KRAS-retroviral fusion transcripts and gene amplification in arsenic-transformed, human prostate CAsE-PE cancer cells. *Toxicol Appl Pharmacol* 397:115017.

122. Howard BE, Phillips J, Tandon A, Maharana A, Elmore R, Mav D Sedykh A, Thayer K, **Merrick BA**, Walker V, Rooney A and Shah RR. (2020) SWIFT-Active Screener: Accelerated document screening through active learning and integrated recall estimation. 2020, *Environ Int* May;138:105623. doi: 10.1016/j.envint.2020.105623. Epub 2020 Mar 20

121. Panzacchi S, Gnudi F, Mandrioli D, Montella R, Strollo V, **Merrick BA**, Belpoggi F, Tibaldi E. (2019) Effects of short and long-term alcohol-based fixation on Sprague-Dawley rat tissue morphology, protein and nucleic acid preservation. *Acta Histochem.* 121(6):750-760.

120. Hsieh J-H, Smith-Roe SL, Huang R, Sedykh A, Shockley KR, Auerbach SS, **Merrick BA**, Xia M, Tice RR and Witt KL. (2019) Identifying compounds with genotoxicity potential using Tox21 high-throughput screening assays. *Chem Res Toxicol* 32(7):1384-1401.

119. Balik-Meisner MR, Phadke DP, Mav D, Everett LJ, Shah RR, **Merrick BA** and Paules RS. (2019) Development of a zebrafish S1500+ sentinel gene set for high throughput transcriptomics. *Zebrafish* 16(4):331-347.

118. Brown P, RELISH consortium, Zhou Y. (2019). Large expert-curated database for benchmarking document similarity detection in biomedical literature search. *Database (Oxford)*; 2019:baz085, doi: 10.1093/database/baz085.

117. Ramaiahgari SC, Auerbach SS, Saddler TO, Rice JR, Dunlap PD, Sipes NS, DeVito MJ, Shah RR, Bushel PR, **Merrick BA**, Paules RS and Ferguson SS. (2019) The Power of Resolution: Contextualized Understanding of Biological Responses to Liver Injury Chemicals using High-throughput Transcriptomics and Benchmark Concentration Modeling. *Toxicol Sci* 169:553-566.

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