

CURRICULUM VITAE

DATE: June 30, 2017

NAME: Jeffrey D. Laskin, Ph.D.

PRESENT TITLE: Professor & Chief
Environmental and Occupational Health
Rutgers University School of Public Health

Director
Division of Toxicology
Environmental & Occupational Health Sciences Institute (EOHSI)

OFFICE ADDRESS: Department of Environmental & Occupational Health
Rutgers University School of Public Health
Rutgers Biomedical Health Sciences
170 Frelinghuysen Road
Piscataway, NJ 08854

PHONE/FAX/email

PHONE: (848) 445-0170
FAX: (732) 445-0119
E-MAIL: jlaskin@eohsi.rutgers.edu

EDUCATION:

Undergraduate Graduate and Professional
New York University, University College of Arts and Science
New York, New York
B.A. (Chemistry and Biology) June, 1973

Graduate and Professional
State University of New York at Buffalo, Roswell Park Memorial Institute,
Dept. of Experimental Therapeutics
Buffalo, New York
Ph.D. (Pharmacology) September, 1977

POSTGRADUATE TRAINING:

Postdoctoral Appointments
College of Physicians and Surgeons of Columbia University, Cancer
Center/Institute of Cancer Research, Division of Environmental Sciences
New York, New York
Post-doctoral Fellow, Staff Associate
1977-1981

ACADEMIC APPOINTMENTS:

Department of Environmental & Occupational Health
Rutgers University School of Public Health, Piscataway, New Jersey
Professor
7/1/15 – present

Department of Environmental & Occupational Medicine
Robert Wood Johnson Medical School, Piscataway, New Jersey
Professor
7/1/93-6/30/14

Department of Environmental & Occupational Medicine
Robert Wood Johnson Medical School, Piscataway, New Jersey
Professor & Chief, Division of Toxicology
7/1/03-6/30/14

Department of Environmental & Occupational Medicine
Robert Wood Johnson Medical School, Piscataway, New Jersey
Associate Professor
7/1/87-6/30/93

Department of Environmental & Occupational Medicine
Robert Wood Johnson Medical School, Piscataway, New Jersey
Assistant Professor
5/1/81-6/30/87

Graduate Programs in Toxicology, Pharmacology, Biochemistry, Microbiology
Rutgers, The State University of New Jersey
Member of the Graduate Faculty
1/15/82-present

Joint Graduate Program in Toxicology
RBHS-Rutgers University
Deputy Director
2003-present

Environmental and Occupational Health Sciences Institute (EOHSI)
RBHS-Rutgers University
Member
1986-present

Division of Toxicology
Environmental and Occupational Health Sciences Institute (EOHSI)
Director
2005-present

Rutgers University CounterACT Research Center of Excellence Center
Center Director
2006-present

The Cancer Institute of New Jersey
Member
1995-present

Adjunct Professor, New York Medical College, Valhalla, NY
2016-present

HONORS AND AWARDS

1999 Gallo Award, Cancer Institute of New Jersey, Robert Wood Johnson Medical School
2011 Foundation of UMDNJ Excellence in Research Award, UMDNJ School of Biomedical Sciences
2015 Rutgers University Faculty Recognition Award, Highpoint Stadium, Piscataway, NJ

2015 Paper highlighted as cover issue in Journal of Pharmacology & Experimental Therapeutics
 "Sulfa drugs inhibit sepiapterin reduction and chemical redox cycling by sepiapterin reductase. J Pharmacol Exp Ther. 2015;352(3):529-540"
 2017 Editors Highlight for paper published in the journal Toxicological Sciences, "Role of spleen-derived macrophages in ozone-induced lung inflammation and injury". Toxicol Sci. 2017 155(1):182-195.
 2017 Editor's Highlight for paper published in the journal Toxicological Sciences, "CCR2 regulates inflammatory cell accumulation in the lung and tissue injury following ozone exposure". Toxicol Sci. 2017 155:474-484.
 2017 The Board of Trustees Award for Excellence in Research, Rutgers University
 2017 Excellence in Research Award from the Board of Directors of the New Jersey Health Foundation
 2017 Rutgers University Faculty Recognition Award for Patents

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

American Association for Cancer Research, Member
 Society of Toxicology, Member
 Society of Toxicology, Dermatology Specialty Section, Member
 Society of Toxicology, Dermatology Specialty Section, Secretary/Treasurer, 2000, 2001
 New Jersey Skin Club, Founder and Organizer, 1994 – present
 Basic & Applied Dermatology Forum, Founder and Organizer, 2008 – present
 Basic & Applied Dermatology Forum, Program Committee, Chairman, 2008 – present
 New Jersey Skin Workshop, Organizing Committee, Member, 2007 – present

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

SERVICE ON MAJOR COMMITTEES:

Federal (Since 2004)

NIH Study Section, XES1 LWJ-B (MM)	10/18/04-10/19/04
NIH National Institute of Arthritis and Musculoskeletal and Skin Diseases Roundtable on Wound Healing	1/16/07-1/17/07
Department of Defense, DTRA FY08 Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) Scientific Review; Respiratory and Systemic Therapeutics	4/04/07-4/05/07
NIH, Allergy, Immunology & Transplantation Research Review Committee (AITRC)	3/03/08-3/04/08
Department of Defense, DTRA FY09 Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) Scientific Review	4/07/08-4/08/08
NIH Study Section, CounterACT review ZNS1 SRB-R (33)	4/22/08-4/23/08
NIH Study Section, NIEHS ONES ZES1 JAB-G-R3	2/10/09-2/11/09
NIH Study Section, NIEHS ONES ZES1 TN G T1 C	2/10/09
NASA Technical Instrumentation Review, Houston, TX	2/10/09-1/31/10
NASA Advanced Environmental Health/Advanced Food Technology Committee, Houston, TX	11/8/09-11/7/12
NIH Study Section, ZRG1 IMST-A	11/12/09-11/13/09
NIH Study Section, MDCN-B(55)	7/15/10
NASA International Space Station Air Quality and Analytical Instrumentation Review	9/15/11-3/15/12
NIH Study Section, Microphysiological Systems Review, ZRG1 BST-N (50)	3/15/12
NIH Study Section, CounterACT review ZNS1 SRB-R	3/12/15
NIH Study Section (Chair), CounterACT Special Emphasis Panel/Scientific Review Group 2015/08 ZRG1 MDCN-B (55)	7/16/15
NIH Study Section, Countermeasures Against Chemical Threats (CounterACT) Cooperative Research Projects (U01), ZRG1 MDCN-55	3/24/16
NIH Study Section (Chair), PAR-15-315: CounterACT Exploratory Grants, ZRG1 MDCN-B-55	7/8/16

State

NJ Department of Homeland Security Preparedness College 2008 - 2012
Advisory Committee, NJ Universities Homeland Security Research Consortium 2008 - 2012
Executive Committee, NJ Universities Homeland Security Research Consortium 2008 - 2012

School of Public Health/Medical School/Rutgers University

Appointments and Promotions, Dept. Environmental & Occupational Medicine 9/1/93 – 6/30/14
Appointments and Promotions, Dept. Environmental & Occupational Health 7/1/14 – present
Committee of Review 7/1/97 – 6/30/00
Space Allocation Committee 9/1/97 – 8/31/99
Cancer Institute of New Jersey Instrument Committee 9/1/97 – 8/30/99
Institutional Core Facility Committee 9/1/04 – 8/31/07
IACUC Animal Care Committee 9/1/96 – 1/1/17
School of Public Health Building Committee 9/1/00 – 8/31/02
Research Day Organizing Committee 9/16/03 – 9/15/10
UCDPER Executive Committee 1/15/08 – present
EOHSI Director Search Committee 10/15/11 – 4/15/12
UMDNJ Faculty Senate 9/01/12 – 6/30/13
Rutgers Institute for Emergency Preparedness and Homeland Security 9/14/14 – present
SPH/Dept. Environmental & Occ. Health Branding and Marketing Committee 3/1/16 – present
Rutgers Personalized Medicine Initiative 9/13/16 – present

Department

EOHSI Directors Cabinet 2003 – present
EOHSI Space Committee 2003 – present
EOHSI Faculty Recruitment Committee 2008 – present
Student Affairs 2008 – present

Rutgers University

University Center for Disaster Preparedness and Emergency Responses (UCDPER)
Founding Member and Executive Committee Member 2007-present
J. Laskin represents the Rutgers University Interest in Department of Defense
Information Analysis Center (DOD-IAC), Homeland Security and Defense
Technical Area Tasks (HDTAT). 2014 – present
Rutgers Institute for Emergency Preparedness and Homeland Security
Internal Advisory Board 2014 – present

Other

Member, Corporation of the Marine Biological Laboratory, Woods Hole, MA 1997-2013
Advisory Committee, Maria Ferrari Westchester Children's Environmental Health Center 2009-present
Woods Hole Toxicology Forum, Woods Hole, MA , Founding member & Associate Director 2007-present

MEETINGS ORGANIZED:

International

Symposium, "Nitric Oxide in Health and Disease", Piscataway, NJ 6/23/93-6/26/93
Symposium, "Advances in the Biology of the Skin: Pharmacology and
Toxicology", Piscataway, NJ 6/24/96-6/27/96
Symposium, "Advances in the Biology & Treatment of the Skin",
Piscataway, NJ 6/23/99-6/25/99
"4th International Conference on Nitrosative and Oxidative Stress in Disease"
New York, NY (sponsored by the New York Academy of Sciences) 10/28/09-10/30/09
9th Annual CounterACT Research Program Symposium (sponsored by the
New York Academy of Sciences) 6/15/15-6/17/15
United Nations UNAI Start Conference, In Observance of World Environment Day
"Our Environment and Our Health: Science and Solutions", New York, NY 6/6/16

Local

NJ Spotlight on Skin Research, Minisymposium, Biomaterials Research Center, Rutgers University	6/25/07
Basic and Applied Dermatology Research Forum, "Wound Healing and Positive Deviance", EOHSI-Rutgers University/UMDNJ-Robert Wood Johnson Medical School	11/04/09
Countering Agents of Chemical Terrorism, Ernest Mario School of Pharmacy, Rutgers University	9/16/13

SERVICE ON GRADUATE SCHOOL COMMITTEES:

Active member of Rutgers University graduate programs in Toxicology, Molecular Biosciences, Biochemistry, Cell and Molecular Biology, and Nutrition. Involved in teaching and serving on various program and student committees including qualifying examination committees and doctoral defense committees.

TEACHING RESPONSIBILITIES:

Lectures or Course Directorship

RWJ Medical School, "Environmental Medicine"	1981 – 2015
Rutgers University-School of Public Health, "Environmental Toxicology"	2003 – present
Rutgers University Joint Graduate Program in Toxicology, "Skin and Ocular Toxicology"	1986 – present
Rutgers University-School of Public Health, "Mechanisms of Toxicity"	2002 – present
Lehigh University Satellite Education Network, Distance Education Program, "Mechanism in Drug Toxicity"	2006 – 2014
New York Medical College School of Public Health, "Environmental Toxicology"	2008 – 2016

Research Training (doctoral students/post-docs/Assistant Professors/Sabbatical Researchers

Sabbatical Researchers

Haken Yaren, MD, Ph.D. (2011-2013)	Gulhane Military Medical Academy, Department of Medical CBRN Defense, Ankara, Turkey
Halil Yaman, MD (2012-2013)	Department of Biochemistry, Gulhane Medical School Ankara, Turkey

Research Assistant Professors

Diane Heck, Ph.D. (1996-2004)
Thomas Mariano, Ph.D. (1997-2003)
Michael Shakarjian, Ph.D. (2005-2008)
Joshua Gray, Ph.D. (2006-2008)
Yi-Hua Jan, Ph.D. (2014-present)

Current Position

New York Medical College (Professor and Chair)
UMDNJ-CABM (Research faculty)
New York Medical College (Assistant Professor)
US Coast Guard Academy (Assistant Professor)
Assistant Professor, Rutgers University

Research Associate

Vladimir Mishin, Ph.D. (2008-present)
Shaojun Yang, Ph.D. (2012-present)

Current Position

Pharmacology and Toxicology, Rutgers University
Environmental and Occupational Health, Rutgers

Post Doctoral Fellows

Tanveer Abidi, Ph.D. (1987-1989)
Leslie Helyer, Ph.D. (1990-1993)
Chitra Punjabi, Ph.D. (1991-1993)
Randy Shuler, Ph.D. (1991-1994)

Runa Sur, Ph.D. (2000-2001)

Current Position

Kean University, Assistant Professor
Consultant in Nutrition Science
Consultant in Toxicology
Environmental Resources Management (Senior Toxicologist)
Johnson and Johnson (Staff Scientist)

Rupa Mukhopadhyay, Ph.D. (2003-2005)
 Anna Vetrano, Ph.D. (2003-2005)

Joshua Gray, Ph.D. (2003-2006)
 Adrienne Black, Ph.D., DABT (2009-2011)
 Vladimir Mishin, Ph.D. (2005-2007)
 Yun Wang, MD, Ph.D. (2006-2016)
 Yi-Hua Jan, Ph.D. (2007-2014)
 Shaojun Yang, Ph.D. (2007-2011)
 Ruijin Zheng, Ph.D. (2014-2016)

Johnson and Johnson (Staff Scientist)
 Robert Wood Johnson Medical School,
 Assistant Professor
 US Coast Guard Academy, Associate Professor
 Toxicologist, 3E Company
 Research Associate, Rutgers University
 Valhalla Medical Center
 Rutgers University, Assistant Professor
 Research Associate, Rutgers University

Pre Doctoral Students

Linda Piccinini (Microbiology, Ph.D., 1985)
 Christopher Molloy (Toxicology, Ph.D., 1986)

Edmund Lee (Toxicology, MD/Ph.D., 1987)
 Edward Yurkow (Toxicology, Ph.D., 1988)
 Fred Mermelstein (Toxicology, Ph.D., 1990)
 Adrienne Garcia-Welsh (Nutrition, Ph.D., 1993)
 Diane E. Heck (Toxicology, Ph.D., 1994)

Anthea Dokidis (Biochemistry, Ph.D., 1995)
 Carol Faaland (Biochemistry, Ph.D., 1997)
 John Mitchell (Toxicology, Ph.D., 1997)
 Yang Jin (Toxicology, MD/Ph.D., 1997)
 George DeGeorge (Pharmacology, Ph.D., 1999)
 Blase Billack (Toxicology, Ph.D., 2001)

Anna Vetrano (Biochemistry, Ph.D., 2002)
 Valescia John (Toxicology, M.S., 2003)
 Adrienne Black (Toxicology, Ph.D., 2007)
 Karma Fussell (Toxicology, Ph.D., 2007-2011)
 Ruijin Zheng (Toxicology, 2005-2013)
 Ronald Udasin (Toxicology, 2009-2015)
 Irene Wolman (Toxicology, 2008-2016)
 John Szilagyi (Toxicology, 2013-present)
 Melody Wren (Exposure Ass., 2015-present)
 Gabriella Composto (Toxicology, 2016-present)

Current Position

Medical Scientist, Biogen Idec
 Rutgers University, Distinguished Professor and Senior
 Vice President
 Rockefeller University (Chief of Dermatology)
 Johnson & Johnson (Principal Scientist)
 Javelin Pharmaceuticals (President and CEO)
 Consultant in Nutritional Sciences
 New York Medical College (Professor and
 Associate Dean for Research)
 Affymetrix, Inc. (Staff Scientist)
 Consultant in Toxicology
 Hurley Consulting (Consultant in Toxicology)
 Harvard Medical School (Assistant Professor)
 M & B Laboratories (President and CEO)
 St. Johns University (Associate Professor)
 Fulbright Scholar
 Robert W Johnson Medical School (Ass't Professor)
 Johnson & Johnson (Scientist I)
 Toxicologist, 3E Company
 Senior Scientist, Nestlé S.A., Switzerland
 Rutgers University post-doctoral fellow
 Fulbright Scholar (Technion, Israel)
 Teaching Fellow (New York Medical College)

Undergraduate Students (2009-present)

Non-Rutgers students

Colette Gabler Summer 2009, 2010, Ursinus College
 Kajal Shah Spring, Summer, 2014, The College of New Jersey
 Teresa Coren Summer 2015, University of Ferrara, Italy

Rutgers students

Daniel Greenberg	Cell Biology and Neuroscience	Spring 2012
Neil Jerome Lopez	Biochemistry and Molecular Biology	Fall 2012, Spring 2013
Amr Tarfik	Cell Biology and Neuroscience	Summer 2014, Fall 2015, Spring 2016
Joanne Bae	Pharmacy	Summer 2015, Fall 2016
Jennifer Tao	Molecular Biology	Summer 2016, Fall 2016, Spring 2017
Nahomie Possible	Molecular Biology and Biochemistry	Spring, Fall 2017
Josephine Alegun	Biotechnology	Spring, Fall, 2017
Gloria Ho	Pharmacy	Spring 2016, Fall 2017
Jane Song	Pharmacy	Spring 2016, Fall 2017
Drym Oh	Pharmacy	Spring 2016, Fall 2017

Summer Undergraduate Research Fellow (Ernest Mario School of Pharmacy)

Amr Tarfik

Cell Biology and Neuroscience

Summer 2015

Liberty Science Center Program (Interns)

Christine O'Sullivan Summer 2009

Rachel K. Kaufman Summer 2014

Thilaka Arunachalam Summer 2014, 2015

GRANT SUPPORT:**Principal Investigator**

NIH NIAMS U54 AR055073 (Center Grant), JD Laskin, P.I. and Center Director, "Rutgers University CounterACT Research Center of Excellence", 9/28/06-6/30/21; direct costs for fiscal year = \$4,421,910, (total cost 7/1/16-6/30/21 = \$19,400,000)

NIH U01 NS079249, JD Laskin, P.I., "Developing Drugs to Mitigate Parathion Intoxication, 9/16/2013-8/31/18, direct costs for fiscal year, \$495,995

NIH NIAMS U54 AR055073 10S1, JD Laskin, P.I. and Center Director, "UMDNJ/Rutgers University CounterACT Research Center of Excellence", 7/1/15-6/30/16, total cost, \$1,421,485

NIH NIAMS U54 AR055073 09S1, JD Laskin, P.I. and Center Director, "UMDNJ/Rutgers University CounterACT Research Center of Excellence", 5/12/15-6/30/15, total cost, \$91,770

NIH NCI P30 CA072720, J Bertino, P.I., JD Laskin, investigator, "Cancer Center Support Grant", 3/1/97-2/28/17

NIH NIAMS U54 AR055073 04S1, JD Laskin, P.I. and Center Director, "UMDNJ/Rutgers University CounterACT Research Center of Excellence", 9/18/09-5/31/10, total cost, \$68,127

NIH NIAMS U54 AR055073 03S1, JD Laskin, P.I. and Center Director, "UMDNJ/Rutgers University CounterACT Research Center of Excellence", 9/1/08-5/31/09, total cost, \$198,500

NIH R21 NS072097, JD Laskin, P.I., "Development of Drugs to Mitigate Parathion Intoxication", 09/30/10-8/31/13

NIH R01 CA100994, JD Laskin, P.I., "A Molecular Target for Nutrients in the Prostate", 07/01/03-4/30/2010

NIH NIEHS PO1 ES06897 (Program Project), JD Laskin, P.I. and Program Project Director, "A Role of Nitric Oxide in Chemical-induced Toxicity", 9/15/97-8/30/04 (direct costs, final fiscal year = \$820,455)

NIH NIEHS PO1 ES06897, JD Laskin, P.I., "Novel Mechanisms Regulating Nitric Oxide in the Skin", 9/15/97-8/30/04

NIH NIEHS R01 ES003647, JD Laskin, P.I., "Phototoxicity of Environmental Chemicals" 12/6/85-6/30/2000 (direct costs, final fiscal year = \$134,535)

NIH NCI R01 CA033212, JD Laskin, P.I. "Control of Melanogenesis by Chemotherapeutic Agents" 7/1/82-6/30/85

Co-Investigator/mentor

NIH NIEHS RO1 ES04738, DL Laskin, P.I., JD Laskin, co-PI, "Activated Macrophages and Ozone Toxicity"; 9/30/08-6/30/19

NIH K99 CA177868, J. Bernard, PI, JD Laskin, mentor, "The Role of Fat in Tumor Formation", 7/01/14-6/30/16

NIH T32 ES007148, L. Alexsunes, P.I., JD Laskin, investigator, "Training in Environmental Toxicology", 9/1/87-6/30/17

NIH NIEHS P30 ES005022, JD Laskin, Core Director, H Zarbl, P.I., "Environmental Effects on Signal Transduction", 4/1/98-3/31/19

NIH R25 ES020721, L Alexsunes, P.I., JD Laskin, mentor, "Summer Research Experience Programs", 8/9/11-4/30/21

NIH R21ES021170, "Protective Effects of Fatty Acids in Phthalate-induced Inflammation in Neonates", A Vetrano, PI, J Laskin, co-investigator, 6/6/12-5/31/15

NIH S10 OD016400, "A Mass Spectrometry System for Quantitative Proteomics", P Lobel, PI, JD Laskin, investigator, 7/1/14-6/30/15

NIH R21HD058019, "Project Title: Mechanisms of Inflammatory Lung Disease in Neonates", B. Weinberger, PI, J. Laskin, co-investigator, 08/17/09-7/31/11

NIH P41 RR001395, "Biocurrents Research Center", P Smith, PI, JD Laskin PI of Toxicology Module, 12/1/04-11/30/09

NIH S10 OD012060 High Speed 10-Color Flow Cytometer, D Laskin, P.I., JD Laskin, investigator, 5/1/12-4/30/13

NIH NIEHS F32 ES017389, Yi-Hua Jan, P.I., JD Laskin, mentor, "Mechanisms of Sulfur Mustard Toxicology", Ruth L. Kirschstein (National Research Service Award), 6/01/09-5/31/11

NIH R13 HL097539, D Laskin, P.I., JD Laskin, investigator, "Fourth International Conference on Oxidative and Nitrosative Stress in Disease, 7/1/09-6/30/10

NIH NCI K08HD042036 Altered Neutrophil Apoptosis/Bronchopulmonary Dysplasia; B Weinberger, P.I., JD Laskin, mentor; 3/15/02-2/28/07

NIH RO1 GM34310, "Role of Kupffer Cells in Chemical Toxicity", DL Laskin, P.I., JD Laskin, co-PI, 9/28/06-12/31/12

NIH RO1 CA132624, DL Laskin, PI, JD Laskin, co-PI, "Macrophages and Inflammatory Mediators in Silica Induced Carcinogenesis", 5/1/08-4/30/13

NIH NIEHS F32 ES005568, "Mechanisms of Chemical-induced Skin Toxicity", R Schuler, PI, JD Laskin, mentor, 3/26/92-5/28/94

NIH NCI R01CA032485, RA Mufson, PI, JD Laskin, co-PI, "Effects of Retinoids on Human Epidermal Keratinocytes", 8/1/82-7/31/85

ISSUED PATENTS HELD BY JEFFREY D LASKIN

1. US patent #5,216,176 (June 1, 1993) "7-Alkoxy coumarins, dihydropsoalens and benzodipyrans as photoactivated therapeutics"
2. US patent #5,356,929 (October 18, 1994) "Reduced and quaternized psoralens as photoactivated therapeutics"
3. US patent #5,473,083 (December 5, 1995) "Reduced and quaternized psoralens as photoactivated therapeutics"
4. US patent #5,695,761 (December 9, 1997) "Suppression of nitric oxide production by osteopontin"

5. US patent #6,177,424 (January 23, 2001) "4'-substituted-4',5'-dihydropsoresalens and therapeutic uses thereof"
6. European/Swedish patent #2002-50 (September 4, 2002) "4-substituerade-4,5-dihydropsoresalener och terapeutisk användning därav"
7. US patent #6,255,324 (July 3, 2001) "Amino- and mercurio-substituted 4',5'-dihydropsoresalens and therapeutical uses thereof"
8. US patent #7,015,022 (March 21, 2006) "Mammalian catalase-dependent oxidation processes and methods for stimulating oxidative activities"
9. US patent #7,105,511 (September 12, 2006) "Fluorescent fused-ring triazoles that inhibit cell proliferation and uses thereof"
10. US Patent #7,150,967 (December 19, 2006) "Fluorescent tags for amino acid and nucleic acid analysis"
11. US Patent #7,598,238 (October 6, 2009) "Fluorescent fused-ring triazoles that inhibit cell proliferation and uses thereof"
12. US patent #8,071,642 (December 6, 2011) "Dimethyl amino ethyl ether psoralens and methods for their production and use"
13. US patent #8,343,971 (January 1, 2013) "Pharmacologically-active vanilloid carbamates"
14. US patent # 8,927,463 (January 6, 2015) "Sensitive high throughput method for DNA damage and repair"
15. US patent # 9,290,484 (March 22, 2016) "Furyl and thienyl triazole derivatives and therapeutic uses thereof"
16. US patent #9,422,233 (August 23, 2016) "Vanilloid fatty hydroxamates as therapeutic anti-inflammatory pharmaceuticals"
17. US patent #9,512,068 (December 6, 2016) "Augmenting moieties for anti-inflammatory compounds"
18. European/Swedish patent (June 6, 2017), "Känsligt högeffektivt förfarande för DNA-skada"

PATENT PUBLICATIONS

1. US patent publication (March 14, 2002), number 20020032325, "4-amino-3-mercapto-1,2,4-triazoles"
2. US patent publication (December 4, 2003), number 20030225148, "Biological methods of use of 4-amino-3-mercapto-triazoles"
3. US patent publication (November 11, 2004), number 20040225000, "Methods of producing 4-amino-3-mercapto-triazoles"
4. US patent pending (May 25, 2017), publication number 20120010168, "Unique dual action therapeutics"

PUBLICATIONS:

1. Laskin JD, Evans RM, Slocum HK, Burke D, Hakala MT. Basis for natural variation in sensitivity to 5-fluorouracil in mouse and human cells in culture. *Cancer Res.* 1979;39(2 Pt 1):383-390. PMID: 761209; PMCID:
2. Mufson RA, Laskin JD, Fisher PB, Weinstein IB. Melittin shares certain cellular effects with phorbol ester tumour promoters. *Nature.* 1979;280(5717):72-74. PMID: 15305583; PMCID:

3. Evans RM, Laskin JD, Hakala MT. Assessment of growth-limiting events caused by 5-fluorouracil in mouse cells and in human cells. *Cancer Res.* 1980;40(11):4113-4122. PMID: 6162543; PMCID:
4. Laskin DL, Laskin JD, Weinstein IB, Carchman RA. Modulation of phagocytosis by tumor promoters and epidermal growth factor in normal and transformed macrophages. *Cancer Res.* 1980;40(4):1028-1035. PMID: 6965609; PMCID:
5. Laskin JD, Mufson RA, Weinstein IB, Engelhardt DL. Identification of a distinct phase during melanogenesis that is sensitive to extracellular pH and ionic strength. *J Cell Physiol.* 1980;103(3):467-474. PMID: 7400227; PMCID:
6. Matthew E, Engelhardt DL, Laskin JD, Zimmerman EA. Melanotropic effects of benzodiazepines: Correlation with high-affinity receptors. *Trans Am Neurol Assoc.* 1980;105:38-39. PMID: 6294947; PMCID:
7. Evans RM, Laskin JD, Hakala MT. Effect of excess folates and deoxyinosine on the activity and site of action of 5-fluorouracil. *Cancer Res.* 1981;41(9 Pt 1):3288-3295. PMID: 6973389; PMCID:
8. Laskin DL, Laskin JD, Kessler FK, Weinstein IB, Carchman RA. Enhancement of macrophage-induced cytotoxicity by phorbol ester tumor promoters. *Cancer Res.* 1981;41(11 Pt 1):4523-4528. PMID: 7306973; PMCID:
9. Laskin DL, Laskin JD, Weinstein IB, Carchman RA. Induction of chemotaxis in mouse peritoneal macrophages by phorbol ester tumor promoters. *Cancer Res.* 1981;41(5):1923-1928. PMID: 7214360; PMCID:
10. Laskin JD, Mufson RA, Piccinini L, Engelhardt DL, Weinstein IB. Effects of the tumor promoter 12-O-tetradecanoyl-phorbol-13-acetate on newly synthesized proteins in mouse epidermis. *Cell.* 1981;25(2):441-449. PMID: 6169440; PMCID:
11. Matthew E, Laskin JD, Zimmerman EA, Weinstein IB, Hsu KC, Engelhardt DL. Benzodiazepines have high-affinity binding sites and induce melanogenesis in b16/c3 melanoma cells. *Proc Natl Acad Sci U S A.* 1981;78(6):3935-3939. PMID: 6267610; PMCID: 319688
12. Pietropaolo C, Laskin JD, Weinstein IB. Effect of tumor promoters on sarc gene expression in normal and transformed chick embryo fibroblasts. *Cancer Res.* 1981;41(4):1565-1571. PMID: 6260344; PMCID:
13. Laskin JD, Piccinini L, Engelhardt DL, Weinstein IB. Control of melanin synthesis and secretion by b16/c3 melanoma cells. *J Cell Physiol.* 1982;113(3):481-486. PMID: 6294130; PMCID:
14. Laskin JD, Piccinini L, Engelhardt DL, Weinstein IB. Specific protein production during melanogenesis in b16/c3 melanoma cells. *J Cell Physiol.* 1983;114(1):68-72. PMID: 6826662; PMCID:
15. Hsu L, Natyzak D, Laskin JD. Effects of the tumor promoter 12-O-tetradecanoylphorbol-13-acetate on neurite outgrowth from chick embryo sensory ganglia. *Cancer Res.* 1984;44(10):4607-4614. PMID: 6467216; PMCID:
16. Laskin JD, Lee E, Yurkow EJ, Laskin DL, Gallo MA. A possible mechanism of psoralen phototoxicity not involving direct interaction with DNA. *Proc Natl Acad Sci U S A.* 1985;82(18):6158-6162. PMID: 3862124; PMCID: 391011
17. Laskin JD, Lee E, Laskin DL, Gallo MA. Psoralens potentiate ultraviolet light-induced inhibition of epidermal growth factor binding. *Proc Natl Acad Sci U S A.* 1986;83(21):8211-8215. PMID: 3490664; PMCID: 386897
18. Laskin JD, Piccinini LA. Tyrosinase isozyme heterogeneity in differentiating b16/c3 melanoma. *J Biol Chem.* 1986;261(35):16626-16635. PMID: 3097004; PMCID:

19. Laskin DL, Gardner CR, Laskin JD. Induction of chemotaxis in mouse peritoneal macrophages by activators of protein kinase c. *J Leukoc Biol.* 1987;41(6):474-480. PMID: 3036983; PMCID:
20. Molloy CJ, Gallo MA, Laskin JD. Alterations in the expression of specific epidermal keratin markers in the hairless mouse by the topical application of the tumor promoters 2,3,7,8-tetrachlorodibenzo-p-dioxin and the phorbol ester 12-O-tetradecanoylphorbol-13-acetate. *Carcinogenesis.* 1987;8(9):1193-1199. PMID: 2441885; PMCID:
21. Molloy CJ, Laskin JD. Specific alterations in keratin biosynthesis in mouse epidermis in vivo and in explant culture following a single exposure to the tumor promoter 12-O-tetradecanoylphorbol-13-acetate. *Cancer Res.* 1987;47(17):4674-4680. PMID: 2441853; PMCID:
22. Yurkow EJ, Laskin JD. Characterization of a photoalkylated psoralen receptor in hela cells. *J Biol Chem.* 1987;262(18):8439-8442. PMID: 3036814; PMCID:
23. Geller HM, Adinolfi A, Laskin JD, Freed WD. Implantation of catecholamine-secreting cell lines into the rat and mouse brain. *Prog Brain Res.* 1988;78:643-646. PMID: 3247462; PMCID:
24. Laskin DL, Robertson FM, Pilaro AM, Laskin JD. Activation of liver macrophages following phenobarbital treatment of rats. *Hepatology.* 1988;8(5):1051-1055. PMID: 2971014; PMCID:
25. Laskin DL, Sirak AA, Pilaro AM, Laskin JD. Functional and biochemical properties of rat kupffer cells and peritoneal macrophages. *J Leukoc Biol.* 1988;44(2):71-78. PMID: 2841398; PMCID:
26. Molloy CJ, Laskin JD. Effect of retinoid deficiency on keratin expression in mouse bladder. *Exp Mol Pathol.* 1988;49(1):128-140. PMID: 2456226; PMCID:
27. Molloy CJ, Laskin JD. Keratin polypeptide expression in mouse epidermis and cultured epidermal cells. *Differentiation.* 1988;37(2):86-97. PMID: 2456240; PMCID:
28. Abidi TF, Faaland CA, Scala DD, Rhein LD, Laskin JD. Ethoxylated alcohol (neodol-12) and other surfactants in the assay of protein kinase c. *Biochim Biophys Acta.* 1989;992(3):362-368. PMID: 2775791; PMCID:
29. Freed WJ, Adinolfi AM, Laskin JD, Geller HM. Transplantation of b16/c3 melanoma cells into the brains of rats and mice. *Brain Res.* 1989;485(2):349-362. PMID: 2470473; PMCID:
30. Laskin J. Role of psoralen receptors in cell growth regulation. *J Amer Coll. Toxicol.* 1989;8:797. PMCID:
31. Laskin J. Keratinization and tumor promotion. *International Journal of Toxicology.* 1989;8:245-251. PMCID:
32. Mermelstein FH, Abidi TF, Laskin JD. Inhibition of epidermal growth factor receptor tyrosine kinase activity in a431 human epidermoid cells following psoralen/ultraviolet light treatment. *Mol Pharmacol.* 1989;36(6):848-855. PMID: 2557535; PMCID:
33. Yurkow EJ, Laskin JD. Purification of tyrosinase to homogeneity based on its resistance to sodium dodecyl sulfate-proteinase k digestion. *Arch Biochem Biophys.* 1989;275(1):122-129. PMID: 2510599; PMCID:
34. Laskin J. Mechanisms of psoralen action in the skin. *International Journal of Toxicology.* 1989 8(5):797-800. PMCID:
35. Jetter MM, Heindel ND, Laskin JD. Novel syntheses of dihydroxanthyletin and dihydroseselin derivatives. *Journal of Heterocyclic Chemistry.* 1990;27(4):995-997. PMCID:

36. Laskin DL, Beavis AJ, Sirak AA, O'Connell SM, Laskin JD. Differentiation of U-937 histiocytic lymphoma cells towards mature neutrophilic granulocytes by dibutyl cyclic adenosine-3',5'-monophosphate. *Cancer Res.* 1990;50(1):20-25. PMID: 2152772; PMCID:
37. Robertson FM, Beavis AJ, Oberyzyz TM, O'Connell SM, Dokidos A, Laskin DL, Laskin JD, Reiners JJ, Jr. Production of hydrogen peroxide by murine epidermal keratinocytes following treatment with the tumor promoter 12-O-tetradecanoylphorbol-13-acetate. *Cancer Res.* 1990;50(18):6062-6067. PMID: 2393871; PMCID:
38. Robertson FM, Gilmour SK, Beavis AJ, O'Connell SM, Conney AH, Huang MT, Laskin JD, Hietala OA, O'Brien TG. Flow cytometric detection of ornithine decarboxylase activity in epidermal cell subpopulations. *Cytometry.* 1990;11(7):832-836. PMID: 2272247; PMCID:
39. Robertson FM, Gilmour SK, Conney AH, Huang MT, Beavis AJ, Laskin JD, Hietala OA, O'Brien TG. Identification of epidermal cell subpopulations with increased ornithine decarboxylase activity following treatment of murine epidermis with 12-o-tetradecanoylphorbol-13-acetate. *Cancer Res.* 1990;50(15):4741-4746. PMID: 2369749; PMCID:
40. Sirak AA, Laskin JD, Robertson FM, Laskin DL. Failure of f-met-leu-phe to induce chemotaxis in differentiated promyelocytic (hl-60) leukemia cells. *J Leukoc Biol.* 1990;48(4):333-342. PMID: 2168465; PMCID:
41. Conney AH, Lysz T, Ferraro T, Abidi TF, Manchand PS, Laskin JD, Huang MT. Inhibitory effect of curcumin and some related dietary compounds on tumor promotion and arachidonic acid metabolism in mouse skin. *Adv Enzyme Regul.* 1991;31:385-396. PMID: 1908616; PMCID:
42. Faaland CA, Mermelstein FH, Hayashi J, Laskin JD. Rapid uptake of tyrphostin into a431 human epidermoid cells is followed by delayed inhibition of epidermal growth factor (EGF)-stimulated egf receptor tyrosine kinase activity. *Mol Cell Biol.* 1991;11(5):2697-2703. PMID: 1850101; PMCID: 360039
43. Georgiadis C, Laskin JD. Differential inhibition of epidermal growth factor binding by photoactivated psoralens and the tumor promoter 12-o-tetradecanoyl phorbol-13-acetate in cells overexpressing protein kinase c. *Biochem Pharmacol.* 1991;42(10):2003-2009. PMID: 1741777; PMCID:
44. Heck DE, Bisaccia E, Armus S, Laskin JD. Production of hydrogen peroxide by cutaneous T-cell lymphoma following photopheresis with psoralens and ultraviolet light. *Cancer Chemother Pharmacol.* 1991;28(5):344-350. PMID: 1914077; PMCID:
45. Heindel ND, Van Dongen JM, Sachais BS, Phillips JH, Gallo MA, Laskin JD. Syntheses of psoralen analogues and evaluation of their inhibition of epidermal growth factor binding. *J Pharm Sci.* 1991;80(7):686-689. PMID: 1941569; PMCID:
46. Huang MT, Lysz T, Ferraro T, Abidi TF, Laskin JD, Conney AH. Inhibitory effects of curcumin on in vitro lipoxygenase and cyclooxygenase activities in mouse epidermis. *Cancer Res.* 1991;51(3):813-819. PMID: 1899046; PMCID:
47. Laskin DL, Sirak AA, Laskin JD. Differentiation of HL-60 myeloid leukaemia cells is associated with a transient block in the G2 phase of the cell cycle. *Cell Prolif.* 1991;24(4):341-353. PMID: 1650609; PMCID:
48. Laskin DL, Sirak AA, Robertson FM, Laskin JD. Distinct patterns of chemotactic peptide-induced calcium mobilization in differentiated myeloid leukemia cells and peripheral blood neutrophils. *J Leukoc Biol.* 1991;49(4):369-379. PMID: 1848272; PMCID:
49. Laskin JD, Dokidos A, Gardner CR, Laskin DL. Changes in sulfated proteoglycan production after activation of rat liver macrophages. *Hepatology.* 1991;14(2):306-312. PMID: 1860687; PMCID:

50. Laskin JD, Dokidis A, Laskin DL. Alterations in epidermal sulfated proteoglycan production following topical application of the tumor promoter 12-O-tetradecanoyl phorbol-13-acetate to mouse skin. *Cancer Biochem Biophys.* 1991;12(2):69-79. PMID: 1769011; PMCID:
51. Laskin JD, Dokidis A, Sirak AA, Laskin DL. Distinct patterns of sulfated proteoglycan biosynthesis in human monocytes, granulocytes and myeloid leukemic cells. *Leuk Res.* 1991;15(6):515-523. PMID: 1861534; PMCID:
52. Laskin JD, Lee E. Psoralen binding and inhibition of epidermal growth factor binding by psoralen/ultraviolet light (PUVA) in human epithelial cells. *Biochem Pharmacol.* 1991;41(1):125-132. PMID: 1846071; PMCID:
53. Yurkow EJ, Laskin JD. Mechanism of action of psoralens: Isobologram analysis reveals that ultraviolet light potentiation of psoralen action is not additive but synergistic. *Cancer Chemother Pharmacol.* 1991;27(4):315-319. PMID: 1998988; PMCID:
54. Heck DE, Laskin DL, Gardner CR, Laskin JD. Epidermal growth factor suppresses nitric oxide and hydrogen peroxide production by keratinocytes. Potential role for nitric oxide in the regulation of wound healing. *J Biol Chem.* 1992;267(30):21277-21280. PMID: 1383221; PMCID:
55. Huang MT, Ho CT, Wang ZY, Ferraro T, Finnegan-Olive T, Lou YR, Mitchell JM, Laskin JD, Newmark H, Yang CS, et al. Inhibitory effect of topical application of a green tea polyphenol fraction on tumor initiation and promotion in mouse skin. *Carcinogenesis.* 1992;13(6):947-954. PMID: 1600615; PMCID:
56. Huang MT, Wang ZY, Georgiadis CA, Laskin JD, Conney AH. Inhibitory effects of curcumin on tumor initiation by benzo[a]pyrene and 7,12-dimethylbenz[a]anthracene. *Carcinogenesis.* 1992;13(11):2183-2186. PMID: 1423891; PMCID:
57. Molloy CJ, Laskin JD. Altered expression of a mouse epidermal cytoskeletal protein is a sensitive marker for proliferation induced by tumor promoters. *Carcinogenesis.* 1992;13(6):963-968. PMID: 1600617; PMCID:
58. Punjabi CJ, Laskin DL, Heck DE, Laskin JD. Production of nitric oxide by murine bone marrow cells. Inverse correlation with cellular proliferation. *J Immunol.* 1992;149(6):2179-2184. PMID: 1517578; PMCID:
59. Gardner CR, Laskin JD, Laskin DL. Platelet-activating factor-induced calcium mobilization and oxidative metabolism in hepatic macrophages and endothelial cells. *J Leukoc Biol.* 1993;53(2):190-196. PMID: 8383168; PMCID:
60. Laskin JD, Mermelstein FH, Heindel ND, Ron Y. Selective inactivation of lymphocytes after psoralen/ultraviolet light (puva) treatment without affecting systemic immune responses. *J Leukoc Biol.* 1993;54(2):138-144. PMID: 7689628; PMCID:
61. Pendino KJ, Gardner CR, Laskin JD, Laskin DL. Induction of functionally active platelet-activating factor receptors in rat alveolar macrophages. *J Biol Chem.* 1993;268(26):19165-19168. PMID: 8396125; PMCID:
62. Pendino KJ, Laskin JD, Shuler RL, Punjabi CJ, Laskin DL. Enhanced production of nitric oxide by rat alveolar macrophages after inhalation of a pulmonary irritant is associated with increased expression of nitric oxide synthase. *J Immunol.* 1993;151(12):7196-7205. PMID: 7505023; PMCID:
63. Garcia-Welsh A, Laskin DL, Hwang SM, Denhardt DT, Laskin JD. Production of nitric oxide by differentiated Istra cells is associated with expression of macrophage-inducible nitric oxide synthase. *J Leukoc Biol.* 1994;56(4):488-494. PMID: 7523558; PMCID:

64. Garcia-Welsh A, Laskin DL, Molloy CJ, Laskin JD. Alterations in expression of p56lck during myeloid differentiation of Istra cells. *Cell Growth Differ.* 1994;5(11):1215-1223. PMID: 7531490; PMCID:
65. Garcia-Welsh A, Laskin DL, Shuler RL, Laskin JD. Cellular depletion of p56lck during thymocyte apoptosis. *J Leukoc Biol.* 1994;56(4):528-532. PMID: 7930951; PMCID:
66. Heck DE, Laskin JD, Zigman S, Troll W. Ng-monomethyl-L-arginine inhibits arbacia fertilization and differentiation. *Biol Bull.* 1994;187(2):248-249. PMID: 7811803; PMCID:
67. Helyar L, Bundschuh DS, Laskin JD, Laskin DL. Induction of hepatic ito cell nitric oxide production after acute endotoxemia. *Hepatology.* 1994;20(6):1509-1515. PMID: 7527004; PMCID:
68. Huang MT, Ho CT, Wang ZY, Ferraro T, Lou YR, Stauber K, Ma W, Georgiadis C, Laskin JD, Conney AH. Inhibition of skin tumorigenesis by rosemary and its constituents carnosol and ursolic acid. *Cancer Res.* 1994;54(3):701-708. PMID: 8306331; PMCID:
69. Hwang SM, Lopez CA, Heck DE, Gardner CR, Laskin DL, Laskin JD, Denhardt DT. Osteopontin inhibits induction of nitric oxide synthase gene expression by inflammatory mediators in mouse kidney epithelial cells. *J Biol Chem.* 1994;269(1):711-715. PMID: 7506262; PMCID:
70. Hwang SM, Wilson PD, Laskin JD, Denhardt DT. Age and development-related changes in osteopontin and nitric oxide synthase mrna levels in human kidney proximal tubule epithelial cells: Contrasting responses to hypoxia and reoxygenation. *J Cell Physiol.* 1994;160(1):61-68. PMID: 7517407; PMCID:
71. Laskin DL, Heck DE, Gardner CR, Feder LS, Laskin JD. Distinct patterns of nitric oxide production in hepatic macrophages and endothelial cells following acute exposure of rats to endotoxin. *J Leukoc Biol.* 1994;56(6):751-758. PMID: 7527831; PMCID:
72. Laskin DL, Pendino KJ, Punjabi CJ, Rodriguez del Valle M, Laskin JD. Pulmonary and hepatic effects of inhaled ozone in rats. *Environ Health Perspect.* 1994;102 Suppl 10:61-64. PMID: 7705308; PMCID: 1566968
73. Laskin JD. Cellular and molecular mechanisms in photochemical sensitization: Studies on the mechanism of action of psoralens. *Food Chem Toxicol.* 1994;32(2):119-127. PMID: 8132171; PMCID:
74. Laskin JD, Heck DE, Laskin DL. Multifunctional role of nitric oxide in inflammation. *Trends Endocrinol Metab.* 1994;5(9):377-382. PMID: 18407233; PMCID:
75. Pendino KJ, Shuler RL, Laskin JD, Laskin DL. Enhanced production of interleukin-1, tumor necrosis factor-alpha, and fibronectin by rat lung phagocytes following inhalation of a pulmonary irritant. *Am J Respir Cell Mol Biol.* 1994;11(3):279-286. PMID: 8086166; PMCID:
76. Punjabi CJ, Laskin JD, Hwang SM, MacEachern L, Laskin DL. Enhanced production of nitric oxide by bone marrow cells and increased sensitivity to macrophage colony-stimulating factor (csf) and granulocyte-macrophage csf after benzene treatment of mice. *Blood.* 1994;83(11):3255-3263. PMID: 8193360; PMCID:
77. Punjabi CJ, Laskin JD, Pendino KJ, Goller NL, Durham SK, Laskin DL. Production of nitric oxide by rat type ii pneumocytes: Increased expression of inducible nitric oxide synthase following inhalation of a pulmonary irritant. *Am J Respir Cell Mol Biol.* 1994;11(2):165-172. PMID: 7519435; PMCID:
78. Rodriguez del Valle M, Hwang SM, Heck DE, Laskin JD, Laskin DL. Role of nitric oxide in hepatic injury following acute endotoxemia. *Ann N Y Acad Sci.* 1994;730:329-331. PMID: 8080202; PMCID:
79. Wizemann TM, Gardner CR, Laskin JD, Quinones S, Durham SK, Goller NL, Ohnishi ST, Laskin DL. Production of nitric oxide and peroxyxynitrite in the lung during acute endotoxemia. *J Leukoc Biol.* 1994;56(6):759-768. PMID: 7527832; PMCID:

80. Faaland CA, Laskin JD, Thomas TJ. Inhibition of epidermal growth factor-stimulated egf receptor tyrosine kinase activity in a431 human epidermoid carcinoma cells by polyamines. *Cell Growth Differ.* 1995;6(2):115-121. PMID: 7756170; PMCID:
81. Gardner CR, Laskin JD, Laskin DL. Distinct biochemical responses of hepatic macrophages and endothelial cells to platelet-activating factor during endotoxemia. *J Leukoc Biol.* 1995;57(2):269-274. PMID: 7852841; PMCID:
82. Laskin DL, Rodriguez del Valle M, Heck DE, Hwang SM, Ohnishi ST, Durham SK, Goller NL, Laskin JD. Hepatic nitric oxide production following acute endotoxemia in rats is mediated by increased inducible nitric oxide synthase gene expression. *Hepatology.* 1995;22(1):223-234. PMID: 7541386; PMCID:
83. Laskin JD, Rao NR, Punjabi CJ, Laskin DL, Synder R. Distinct actions of benzene and its metabolites on nitric oxide production by bone marrow leukocytes. *J Leukoc Biol.* 1995;57(3):422-426. PMID: 7884313; PMCID:
84. Pendino KJ, Meidhof TM, Heck DE, Laskin JD, Laskin DL. Inhibition of macrophages with gadolinium chloride abrogates ozone-induced pulmonary injury and inflammatory mediator production. *Am J Respir Cell Mol Biol.* 1995;13(2):125-132. PMID: 7542894; PMCID:
85. Shuler RL, Laskin DL, Gardner CR, Feder LS, Laskin JD. Lymphocyte-mediated nitric oxide production by rat endothelial cells. *J Leukoc Biol.* 1995;57(1):116-121. PMID: 7530277; PMCID:
86. Stauber KL, Laskin JD, Yurkow EJ, Thomas PE, Laskin DL, Conney AH. Flow cytometry reveals subpopulations of murine epidermal cells that are refractory to induction of cytochrome p-4501a1 by beta-naphthoflavone. *J Pharmacol Exp Ther.* 1995;273(2):967-976. PMID: 7752102; PMCID:
87. Troll W, Sueoka N, Sueoka E, Laskin JD, Heck DE. Inhibitors of protein phosphatases (okadaic acid and tautomycin) block sea urchin development. *Biol Bull.* 1995;189(2):201. PMID: 8541399; PMCID:
88. Jin Y, Heck DE, DeGeorge G, Tian Y, Laskin JD. 5-fluorouracil suppresses nitric oxide biosynthesis in colon carcinoma cells. *Cancer Res.* 1996;56(9):1978-1982. PMID: 8616835; PMCID:
89. Laskin DL, Heck DE, Punjabi CJ, Laskin JD. Role of nitric oxide in hematosuppression and benzene-induced toxicity. *Environ Health Perspect.* 1996;104 Suppl 6:1283-1287. PMID: 9118907; PMCID: 1469759
90. Laskin DL, Laskin JD. Macrophages, inflammatory mediators, and lung injury. *Methods.* 1996;10(1):61-70. PMID: 8812646; PMCID:
91. Laskin JD, Heck DE, Laskin DL. Nitric oxide production in the lung and liver following inhalation of the pulmonary irritant ozone. *Adv Exp Med Biol.* 1996;387:141-146. PMID: 8794206; PMCID:
92. Pendino KJ, Gardner CR, Shuler RL, Laskin JD, Durham SK, Barton DS, Ohnishi ST, Ohnishi T, Laskin DL. Inhibition of ozone-induced nitric oxide synthase expression in the lung by endotoxin. *Am J Respir Cell Mol Biol.* 1996;14(6):516-525. PMID: 8652180; PMCID:
93. DeGeorge GL, Heck DE, Laskin JD. Arginine metabolism in keratinocytes and macrophages during nitric oxide biosynthesis: Multiple modes of action of nitric oxide synthase inhibitors. *Biochem Pharmacol.* 1997;54(1):103-112. PMID: 9296356; PMCID:
94. Billack B, Laskin JD, Heck PT, Troll W, Gallo MA, Heck DE. Alterations in cholinergic signaling modulate contraction of isolated sea urchin tube feet: Potential role of nitric oxide. *Biol Bull.* 1998;195(2):196-197. PMID: 9818366; PMCID:

95. Gardner CR, Heck DE, Yang CS, Thomas PE, Zhang XJ, DeGeorge GL, Laskin JD, Laskin DL. Role of nitric oxide in acetaminophen-induced hepatotoxicity in the rat. *Hepatology*. 1998;27(3):748-754. PMID: 9500703; PMCID:
96. Laskin DL, Heck DE, Laskin JD. Role of inflammatory cytokines and nitric oxide in hepatic and pulmonary toxicity. *Toxicol Lett*. 1998;102-103:289-293. PMID: 10022268; PMCID:
97. Laskin DL, Sunil V, Guo Y, Heck DE, Laskin JD. Increased nitric oxide synthase in the lung after ozone inhalation is associated with activation of nf-kappa b. *Environ Health Perspect*. 1998;106 Suppl 5:1175-1178. PMID: 9788894; PMCID: 1533360
98. Weinberger B, Fakhrzadeh L, Heck DE, Laskin JD, Gardner CR, Laskin DL. Inhaled nitric oxide primes lung macrophages to produce reactive oxygen and nitrogen intermediates. *Am J Respir Crit Care Med*. 1998;158(3):931-938. PMID: 9731028; PMCID:
99. Billack B, Laskin JD, Gallo MA, Heck DE. Effects of alpha-bungarotoxin on development of the sea urchin *arbacia punctulata*. *Biol Bull*. 1999;197(2):267-268. PMID: 10573848; PMCID:
100. Weinberger B, Heck DE, Laskin DL, Laskin JD. Nitric oxide in the lung: Therapeutic and cellular mechanisms of action. *Pharmacol Ther*. 1999;84(3):401-411. PMID: 10665837; PMCID:
101. Heck DE, Louis L, Gallo MA, Laskin JD. Modulation of the development of plutei by nitric oxide in the sea urchin *arbacia punctulata*. *Biol Bull*. 2000;199(2):195-197. PMID: 11081732; PMCID:
102. Laskin DL, Heck DE, Punjabi CJ, Laskin JD. Nitric oxide as a mediator of benzene-induced hematosuppression and toxicity. *J Toxicol Environ Health A*. 2000;61(5-6):413-417. PMID: 11086947; PMCID:
103. Jabin I, Heindel ND, Rapp RD, Laskin JD. Synthetic approaches to 3-substituted-5'-(N-pyridiniummethyl)-4',5'-dihydropsoresalen. *J Heterocyclic Chem*, 2000; 37, 31-39.
104. Billack B, Heck DE, Porterfield DM, Malchow RP, Smith PJ, Gardner CR, Laskin DL, Laskin JD. Minimal amidine structure for inhibition of nitric oxide biosynthesis. *Biochem Pharmacol*. 2001;61(12):1581-1586. PMID: 11377388; PMCID:
105. Cox RL, Mariano T, Heck DE, Laskin JD, Stegeman JJ. Nitric oxide synthase sequences in the marine fish *stenotomus chrysops* and the sea urchin *arbacia punctulata*, and phylogenetic analysis of nitric oxide synthase calmodulin-binding domains. *Comp Biochem Physiol B Biochem Mol Biol*. 2001;130(4):479-491. PMID: 11691625; PMCID:
106. Heck DE, Roy A, Laskin JD. Nucleic acid microarray technology for toxicology: Promise and practicalities. *Adv Exp Med Biol*. 2001;500:709-714. PMID: 11765017; PMCID:
107. Kagan VE, Laskin JD. Direct and indirect antioxidant effects of nitric oxide: Radically unsettled issues. *Antioxid Redox Signal*. 2001;3(2):173-175. PMID: 11396473; PMCID:
108. Laskin DL, Fakhrzadeh L, Laskin JD. Nitric oxide and peroxynitrite in ozone-induced lung injury. *Adv Exp Med Biol*. 2001;500:183-190. PMID: 11764933; PMCID:
109. Laskin DL, Laskin JD. Role of macrophages and inflammatory mediators in chemically induced toxicity. *Toxicology*. 2001;160(1-3):111-118. PMID: 11246131; PMCID:
110. Laskin DL, Weinberger B, Laskin JD. Functional heterogeneity in liver and lung macrophages. *J Leukoc Biol*. 2001;70(2):163-170. PMID: 11493607; PMCID:

111. Whittemore MS, Heindel ND, Jabin I, Guillon C, McNeill TE, Rapp RD, Heck DE, Laskin JD. Synthetic approaches to 4,8-dimethyl-4'-(N-pyridinium-methyl)-4',5'-dihydropsoresalens and 4,8-dimethyl-5'-(N-aminomethyl)-4',5'-dihydropsoresalens. *J. Heterocyclic Chem.* 2001; 38,909-916.
112. Laskin JD, Heck DE, Gardner CR, Laskin DL. Prooxidant and antioxidant functions of nitric oxide in liver toxicity. *Antioxid Redox Signal.* 2001;3(2):261-271. PMID: 11396480; PMCID:
113. Porterfield DM, Laskin JD, Jung SK, Malchow RP, Billack B, Smith PJ, Heck DE. Proteins and lipids define the diffusional field of nitric oxide. *Am J Physiol Lung Cell Mol Physiol.* 2001;281(4):L904-912. PMID: 11557594; PMCID:
114. Weinberger B, Laskin DL, Heck DE, Laskin JD. The toxicology of inhaled nitric oxide. *Toxicol Sci.* 2001;59(1):5-16. PMID: 11134540; PMCID:
115. Weinberger B, Laskin DL, Mariano TM, Sunil VR, DeCoste CJ, Heck DE, Gardner CR, Laskin JD. Mechanisms underlying reduced responsiveness of neonatal neutrophils to distinct chemoattractants. *J Leukoc Biol.* 2001;70(6):969-976. PMID: 11739560; PMCID: 4027972
116. Weinberger B, Weiss K, Heck DE, Laskin DL, Laskin JD. Pharmacologic therapy of persistent pulmonary hypertension of the newborn. *Pharmacol Ther.* 2001;89(1):67-79. PMID: 11316514; PMCID:
117. Whittemore M, Heindel N, Guillon C, McNeel T, Rapp R, Mariano T, Heck D, Laskin J. Synthetic approaches to 4,8-dimethyl-4'-(n-pyridinium-methyl)-4',5'-dihydropsoresalens and their activity against pam 212 keratinocytes. *Heterocycles.* 2001;55:1081-1093. PMCID:
118. Ahmad N, Chen LC, Gordon MA, Laskin JD, Laskin DL. Regulation of cyclooxygenase-2 by nitric oxide in activated hepatic macrophages during acute endotoxemia. *J Leukoc Biol.* 2002;71(6):1005-1011. PMID: 12050186; PMCID:
119. Billack B, Heck DE, Mariano TM, Gardner CR, Sur R, Laskin DL, Laskin JD. Induction of cyclooxygenase-2 by heat shock protein 60 in macrophages and endothelial cells. *Am J Physiol Cell Physiol.* 2002;283(4):C1267-1277. PMID: 12225989; PMCID:
120. Fakhrzadeh L, Laskin JD, Laskin DL. Deficiency in inducible nitric oxide synthase protects mice from ozone-induced lung inflammation and tissue injury. *Am J Respir Cell Mol Biol.* 2002;26(4):413-419. PMID: 11919077; PMCID:
121. Gardner CR, Laskin JD, Dambach DM, Sacco M, Durham SK, Bruno MK, Cohen SD, Gordon MK, Gerecke DR, Zhou P, Laskin DL. Reduced hepatotoxicity of acetaminophen in mice lacking inducible nitric oxide synthase: Potential role of tumor necrosis factor-alpha and interleukin-10. *Toxicol Appl Pharmacol.* 2002;184(1):27-36. PMID: 12392966; PMCID:
122. Laskin DL, Fakhrzadeh L, Heck DE, Gerecke D, Laskin JD. Upregulation of phosphoinositide 3-kinase and protein kinase b in alveolar macrophages following ozone inhalation. Role of nf-kappab and stat-1 in ozone-induced nitric oxide production and toxicity. *Mol Cell Biochem.* 2002;234-235(1-2):91-98. PMID: 12162464; PMCID:
123. Laskin JD, Heck DE, Laskin DL. The ribotoxic stress response as a potential mechanism for map kinase activation in xenobiotic toxicity. *Toxicol Sci.* 2002;69(2):289-291. PMID: 12377976; PMCID:
124. Mariano TM, Vetrano AM, Gentile SL, Heck DE, Whittemore MS, Guillon CD, Jabin I, Rapp RD, Heindel ND, Laskin JD. Cell-impermeant pyridinium derivatives of psoralens as inhibitors of keratinocyte growth. *Biochem Pharmacol.* 2002;63(1):31-39. PMID: 11754871; PMCID:
125. Martey CA, Vetrano AM, Whittemore MS, Mariano TM, Gentile SL, Heck DE, Laskin DL, Heindel ND, Laskin JD. Mechanisms of growth inhibition in keratinocytes by mercurio-substituted 4',5'-dihydropsoresalens. *Biochem Pharmacol.* 2002;63(11):2001-2009. PMID: 12093477; PMCID:

126. Sunil VR, Connor AJ, Guo Y, Laskin JD, Laskin DL. Activation of type ii alveolar epithelial cells during acute endotoxemia. *Am J Physiol Lung Cell Mol Physiol.* 2002;282(4):L872-880. PMID: 11880315; PMCID: 4015347
127. Sunil VR, Connor AJ, Lavnikova N, Gardner CR, Laskin JD, Laskin DL. Acute endotoxemia prolongs the survival of rat lung neutrophils in response to 12-O-tetradecanoyl-phorbol 13-acetate. *J Cell Physiol.* 2002;190(3):382-389. PMID: 11857454; PMCID: 4023474
128. Sunil VR, Connor AJ, Zhou P, Gordon MK, Laskin JD, Laskin DL. Activation of adherent vascular neutrophils in the lung during acute endotoxemia. *Respir Res.* 2002;3:21. PMID: 12204102; PMCID: 150507
129. Sur R, Heck DE, Mariano TM, Jin Y, Murphy WJ, Laskin JD. Uvb light suppresses nitric oxide production by murine keratinocytes and macrophages. *Biochem Pharmacol.* 2002;64(10):1469-1481. PMID: 12417260; PMCID:
130. Weinberger B, Laskin DL, Heck DE, Laskin JD. Oxygen toxicity in premature infants. *Toxicol Appl Pharmacol.* 2002;181(1):60-67. PMID: 12030843; PMCID:
131. Xu X, Mariano TM, Laskin JD, Weisel CP. Percutaneous absorption of trihalomethanes, haloacetic acids, and haloketones. *Toxicol Appl Pharmacol.* 2002;184(1):19-26. PMID: 12392965; PMCID:
132. Chiu H, Gardner CR, Dambach DM, Brittingham JA, Durham SK, Laskin JD, Laskin DL. Role of p55 tumor necrosis factor receptor 1 in acetaminophen-induced antioxidant defense. *Am J Physiol Gastrointest Liver Physiol.* 2003;285(5):G959-966. PMID: 12842828; PMCID:
133. Chiu H, Gardner CR, Dambach DM, Durham SK, Brittingham JA, Laskin JD, Laskin DL. Role of tumor necrosis factor receptor 1 (p55) in hepatocyte proliferation during acetaminophen-induced toxicity in mice. *Toxicol Appl Pharmacol.* 2003;193(2):218-227. PMID: 14644624; PMCID:
134. Gardner CR, Laskin JD, Dambach DM, Chiu H, Durham SK, Zhou P, Bruno M, Gerecke DR, Gordon MK, Laskin DL. Exaggerated hepatotoxicity of acetaminophen in mice lacking tumor necrosis factor receptor-1. Potential role of inflammatory mediators. *Toxicol Appl Pharmacol.* 2003;192(2):119-130. PMID: 14550746; PMCID:
135. Heck DE, Laskin JD. Ryanodine-sensitive calcium flux regulates motility of *arbacia punctulata* sperm. *Biol Bull.* 2003;205(2):185-186. PMID: 14583520; PMCID:
136. Heck DE, Vetrano AM, Mariano TM, Laskin JD. Uvb light stimulates production of reactive oxygen species: Unexpected role for catalase. *J Biol Chem.* 2003;278(25):22432-22436. PMID: 12730222; PMCID:
137. Laskin D, Fakhrzadeh L, Gerecke D, Heck D, Laskin J. Macrophages and inflammatory mediators in chemically-induced toxicity. *Journal UOEH.* 2003;25:191-195. PMCID:
138. Fakhrzadeh L, Laskin JD, Gardner CR, Laskin DL. Superoxide dismutase-overexpressing mice are resistant to ozone-induced tissue injury and increases in nitric oxide and tumor necrosis factor-alpha. *Am J Respir Cell Mol Biol.* 2004;30(3):280-287. PMID: 12855403; PMCID:
139. Fakhrzadeh L, Laskin JD, Laskin DL. Ozone-induced production of nitric oxide and tnf-alpha and tissue injury are dependent on nf-kappab p50. *Am J Physiol Lung Cell Mol Physiol.* 2004;287(2):L279-285. PMID: 15064226; PMCID:
140. Heck DE, Gerecke DR, Vetrano AM, Laskin JD. Solar ultraviolet radiation as a trigger of cell signal transduction. *Toxicol Appl Pharmacol.* 2004;195(3):288-297. PMID: 15020191; PMCID:

141. Hanna N, Vasquez P, Pham P, Heck DE, Laskin JD, Laskin DL, Weinberger B. Mechanisms underlying reduced apoptosis in neonatal neutrophils. *Pediatr Res.* 2005;57(1):56-62. PMID: 15557111; PMCID:
142. Heck DE, Kagan VE, Shvedova AA, Laskin JD. An epigrammatic (abridged) recounting of the myriad tales of astonishing deeds and dire consequences pertaining to nitric oxide and reactive oxygen species in mitochondria with an ancillary missive concerning the origins of apoptosis. *Toxicology.* 2005;208(2):259-271. PMID: 15691590; PMCID:
143. Martey CA, Vetrano AM, Whittemore MS, Mariano TM, Heck DE, Laskin DL, Heindel ND, Laskin JD. Inhibition of interferon-gamma signaling by a mercurio-substituted dihydropyridone in murine keratinocytes. *Biochem Pharmacol.* 2005;70(12):1726-1734. PMID: 16259964; PMCID:
144. Vetrano AM, Heck DE, Mariano TM, Mishin V, Laskin DL, Laskin JD. Characterization of the oxidase activity in mammalian catalase. *J Biol Chem.* 2005;280(42):35372-35381. PMID: 16079130; PMCID:
145. Weinberger B, Hanna N, Laskin JD, Heck DE, Gardner CR, Gerecke DR, Laskin DL. Mechanisms mediating the biologic activity of synthetic proline, glycine, and hydroxyproline polypeptides in human neutrophils. *Mediators Inflamm.* 2005;2005(1):31-38. PMID: 15770064; PMCID: 1513057
146. Dambach DM, Durham SK, Laskin JD, Laskin DL. Distinct roles of nf-kappab p50 in the regulation of acetaminophen-induced inflammatory mediator production and hepatotoxicity. *Toxicol Appl Pharmacol.* 2006;211(2):157-165. PMID: 16081117; PMCID:
147. Chen LC, Gordon RE, Laskin JD, Laskin DL. Role of tlr-4 in liver macrophage and endothelial cell responsiveness during acute endotoxemia. *Exp Mol Pathol.* 2007;83(3):311-326. PMID: 17996232; PMCID: 2707258
148. Gray JP, Heck DE, Mishin V, Smith PJ, Hong JY, Thiruchelvam M, Cory-Slechta DA, Laskin DL, Laskin JD. Paraquat increases cyanide-insensitive respiration in murine lung epithelial cells by activating an nad(p)h:Paraquat oxidoreductase: Identification of the enzyme as thioredoxin reductase. *J Biol Chem.* 2007;282(11):7939-7949. PMID: 17229725; PMCID:
149. Sunil VR, Laumbach RJ, Patel KJ, Turpin BJ, Lim HJ, Kipen HM, Laskin JD, Laskin DL. Pulmonary effects of inhaled limonene ozone reaction products in elderly rats. *Toxicol Appl Pharmacol.* 2007;222(2):211-220. PMID: 17610924; PMCID: 2772190
150. Sunil VR, Patel KJ, Nilsen-Hamilton M, Heck DE, Laskin JD, Laskin DL. Acute endotoxemia is associated with upregulation of lipocalin 24p3/lcn2 in lung and liver. *Exp Mol Pathol.* 2007;83(2):177-187. PMID: 17490638; PMCID: 3954125
151. Weinberger B, Vetrano AM, Syed K, Murthy S, Hanna N, Laskin JD, Laskin DL. Influence of labor on neonatal neutrophil apoptosis, and inflammatory activity. *Pediatr Res.* 2007;61(5 Pt 1):572-577. PMID: 17413861; PMCID:
152. Black AT, Gray JP, Shakarjian MP, Laskin DL, Heck DE, Laskin JD. Increased oxidative stress and antioxidant expression in mouse keratinocytes following exposure to paraquat. *Toxicol Appl Pharmacol.* 2008;231(3):384-392. PMID: 18620719; PMCID: 2583403
153. Black AT, Gray JP, Shakarjian MP, Laskin DL, Heck DE, Laskin JD. Distinct effects of ultraviolet b light on antioxidant expression in undifferentiated and differentiated mouse keratinocytes. *Carcinogenesis.* 2008;29(1):219-225. PMID: 17984112; PMCID: 3520443
154. Black AT, Gray JP, Shakarjian MP, Mishin V, Laskin DL, Heck DE, Laskin JD. Uvb light upregulates prostaglandin synthases and prostaglandin receptors in mouse keratinocytes. *Toxicol Appl Pharmacol.* 2008;232(1):14-24. PMID: 18597804; PMCID: 2633299

155. Chen LC, Laskin JD, Gordon MK, Laskin DL. Regulation of trem expression in hepatic macrophages and endothelial cells during acute endotoxemia. *Exp Mol Pathol.* 2008;84(2):145-155. PMID: 18222421; PMCID: 2752215
156. Fakhrzadeh L, Laskin JD, Laskin DL. Regulation of caveolin-1 expression, nitric oxide production and tissue injury by tumor necrosis factor-alpha following ozone inhalation. *Toxicol Appl Pharmacol.* 2008;227(3):380-389. PMID: 18207479; PMCID: 3507418
157. Wang Y, Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Role of cytochrome p450 reductase in nitrofurantoin-induced redox cycling and cytotoxicity. *Free Radic Biol Med.* 2008;44(6):1169-1179. PMID: 18206659; PMCID: PMC3781016
158. Weinberger B, Quizon C, Vetrano AM, Archer F, Laskin JD, Laskin DL. Mechanisms mediating reduced responsiveness of neonatal neutrophils to lipoxin a4. *Pediatr Res.* 2008;64(4):393-398. PMID: 18535486; PMCID: 2651411
159. Sunil VR, Patel KJ, Mainelis G, Turpin BJ, Ridgely S, Laumbach RJ, Kipen HM, Nazarenko Y, Veleparambil M, Gow AJ, Laskin JD, Laskin DL. Pulmonary effects of inhaled diesel exhaust in aged mice. *Toxicol Appl Pharmacol.* 2009;241(3):283-293. PMID: 19729031; PMCID: 3102559
160. Black AT, Hayden PJ, Casillas RP, Heck DE, Gerecke DR, Sinko PJ, Laskin DL, Laskin JD. Expression of proliferative and inflammatory markers in a full-thickness human skin equivalent following exposure to the model sulfur mustard vesicant, 2-chloroethyl ethyl sulfide. *Toxicol Appl Pharmacol.* 2010;249(2):178-187. PMID: 20840853; PMCID: 2996832
161. Black AT, Joseph LB, Casillas RP, Heck DE, Gerecke DR, Sinko PJ, Laskin DL, Laskin JD. Role of map kinases in regulating expression of antioxidants and inflammatory mediators in mouse keratinocytes following exposure to the half mustard, 2-chloroethyl ethyl sulfide. *Toxicol Appl Pharmacol.* 2010;245(3):352-360. PMID: 20382172; PMCID: 3582385
162. Gardner CR, Gray JP, Joseph LB, Cervelli J, Bremer N, Kim Y, Mishin V, Laskin JD, Laskin DL. Potential role of caveolin-1 in acetaminophen-induced hepatotoxicity. *Toxicol Appl Pharmacol.* 2010;245(1):36-46. PMID: 20100502; PMCID: 2862893
163. Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Inhibition of NADPH cytochrome p450 reductase by the model sulfur mustard vesicant 2-chloroethyl ethyl sulfide is associated with increased production of reactive oxygen species. *Toxicol Appl Pharmacol.* 2010;247(2):76-82. PMID: 20561902; PMCID:
164. Heck DE, Shakarjian M, Kim HD, Laskin JD, Vetrano AM. Mechanisms of oxidant generation by catalase. *Ann N Y Acad Sci.* 2010;1203:120-125. PMID: 20716293; PMCID:
165. Jan YH, Heck DE, Gray JP, Zheng H, Casillas RP, Laskin DL, Laskin JD. Selective targeting of selenocysteine in thioredoxin reductase by the half mustard 2-chloroethyl ethyl sulfide in lung epithelial cells. *Chem Res Toxicol.* 2010;23(6):1045-1053. PMID: 20345183; PMCID: 2891120
166. Laskin DL, Chen L, Hankey PA, Laskin JD. Role of stk in mouse liver macrophage and endothelial cell responsiveness during acute endotoxemia. *J Leukoc Biol.* 2010;88(2):373-382. PMID: 20453108; PMCID: 2908941
167. Laskin DL, Sunil VR, Fakhrzadeh L, Groves A, Gow AJ, Laskin JD. Macrophages, reactive nitrogen species, and lung injury. *Ann N Y Acad Sci.* 2010;1203:60-65. PMID: 20716284; PMCID: 3797654
168. Laskin JD, Black AT, Jan YH, Sinko PJ, Heindel ND, Sunil V, Heck DE, Laskin DL. Oxidants and antioxidants in sulfur mustard-induced injury. *Ann N Y Acad Sci.* 2010;1203:92-100. PMID: 20716289; PMCID: 4023473

169. Malaviya R, Sunil VR, Cervelli J, Anderson DR, Holmes WW, Conti ML, Gordon RE, Laskin JD, Laskin DL. Inflammatory effects of inhaled sulfur mustard in rat lung. *Toxicol Appl Pharmacol.* 2010;248(2):89-99. PMID: 20659490; PMCID: 3954123
170. Mishin V, Gray JP, Heck DE, Laskin DL, Laskin JD. Application of the amplex red/horseradish peroxidase assay to measure hydrogen peroxide generation by recombinant microsomal enzymes. *Free Radic Biol Med.* 2010;48(11):1485-1491. PMID: 20188819; PMCID: 3643635
171. Shakarjian MP, Heck DE, Gray JP, Sinko PJ, Gordon MK, Casillas RP, Heindel ND, Gerecke DR, Laskin DL, Laskin JD. Mechanisms mediating the vesicant actions of sulfur mustard after cutaneous exposure. *Toxicol Sci.* 2010;114(1):5-19. PMID: 19833738; PMCID: 2819970
172. Vetrano AM, Laskin DL, Archer F, Syed K, Gray JP, Laskin JD, Nwebube N, Weinberger B. Inflammatory effects of phthalates in neonatal neutrophils. *Pediatr Res.* 2010;68(2):134-139. PMID: 20453712; PMCID: 2908957
173. Wang Y, Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Distinct roles of cytochrome p450 reductase in mitomycin c redox cycling and cytotoxicity. *Mol Cancer Ther.* 2010;9(6):1852-1863. PMID: 20501808; PMCID: 3781016
174. Young S, Fabio K, Guillon C, Mohanta P, Halton TA, Heck DE, Flowers RA, 2nd, Laskin JD, Heindel ND. Peripheral site acetylcholinesterase inhibitors targeting both inflammation and cholinergic dysfunction. *Bioorg Med Chem Lett.* 2010;20(9):2987-2990. PMID: 20347302; PMCID: 2864113
175. Black AT, Gordon MK, Heck DE, Gallo MA, Laskin DL, Laskin JD. Uvb light regulates expression of antioxidants and inflammatory mediators in human corneal epithelial cells. *Biochem Pharmacol.* 2011;81(7):873-880. PMID: 21300015; PMCID: 3345282
176. Black AT, Hayden PJ, Casillas RP, Heck DE, Gerecke DR, Sinko PJ, Laskin DL, Laskin JD. Regulation of hsp27 and hsp70 expression in human and mouse skin construct models by caveolae following exposure to the model sulfur mustard vesicant, 2-chloroethyl ethyl sulfide. *Toxicol Appl Pharmacol.* 2011;253(2):112-120. PMID: 21457723; PMCID: 3582383
177. Dragomir AC, Laskin JD, Laskin DL. Macrophage activation by factors released from acetaminophen-injured hepatocytes: Potential role of hmgb1. *Toxicol Appl Pharmacol.* 2011;253(3):170-177. PMID: 21513726; PMCID: 3507385
178. Fussell KC, Udasin RG, Gray JP, Mishin V, Smith PJ, Heck DE, Laskin JD. Redox cycling and increased oxygen utilization contribute to diquat-induced oxidative stress and cytotoxicity in chinese hamster ovary cells overexpressing nadph-cytochrome p450 reductase. *Free Radic Biol Med.* 2011;50(7):874-882. PMID: 21215309; PMCID: 3647689
179. Fussell KC, Udasin RG, Smith PJ, Gallo MA, Laskin JD. Catechol metabolites of endogenous estrogens induce redox cycling and generate reactive oxygen species in breast epithelial cells. *Carcinogenesis.* 2011;32(8):1285-1293. PMID: 21665890; PMCID: 3149209
180. Joseph LB, Gerecke DR, Heck DE, Black AT, Sinko PJ, Cervelli JA, Casillas RP, Babin MC, Laskin DL, Laskin JD. Structural changes in the skin of hairless mice following exposure to sulfur mustard correlate with inflammation and DNA damage. *Exp Mol Pathol.* 2011;91(2):515-527. PMID: 21672537; PMCID: 3630073
181. Laskin DL, Sunil VR, Gardner CR, Laskin JD. Macrophages and tissue injury: Agents of defense or destruction? *Annu Rev Pharmacol Toxicol.* 2011;51:267-288. PMID: 20887196; PMCID: 3670679
182. Sunil VR, Patel KJ, Shen J, Reimer D, Gow AJ, Laskin JD, Laskin DL. Functional and inflammatory alterations in the lung following exposure of rats to nitrogen mustard. *Toxicol Appl Pharmacol.* 2011;250(1):10-18. PMID: 20883710; PMCID: 3954122

183. Sunil VR, Patel-Vayas K, Shen J, Gow AJ, Laskin JD, Laskin DL. Role of tnfr1 in lung injury and altered lung function induced by the model sulfur mustard vesicant, 2-chloroethyl ethyl sulfide. *Toxicol Appl Pharmacol.* 2011;250(3):245-255. PMID: 21070800; PMCID: 3520488
184. Weinberger B, Laskin JD, Sunil VR, Sinko PJ, Heck DE, Laskin DL. Sulfur mustard-induced pulmonary injury: Therapeutic approaches to mitigating toxicity. *Pulm Pharmacol Ther.* 2011;24(1):92-99. PMID: 20851203; PMCID: 3034290
185. Connor AJ, Laskin JD, Laskin DL. Ozone-induced lung injury and sterile inflammation. Role of toll-like receptor 4. *Exp Mol Pathol.* 2012;92(2):229-235. PMID: 22300504; PMCID: 3507381
186. Deshmukh M, Kutscher HL, Gao D, Sunil VR, Malaviya R, Vayas K, Stein S, Laskin JD, Laskin DL, Sinko PJ. Biodistribution and renal clearance of biocompatible lung targeted poly(ethylene glycol) (peg) nanogel aggregates. *J Control Release.* 2012;164(1):65-73. PMID: 23041417; PMCID: 3858961
187. Dragomir AC, Sun R, Choi H, Laskin JD, Laskin DL. Role of galectin-3 in classical and alternative macrophage activation in the liver following acetaminophen intoxication. *J Immunol.* 2012;189(12):5934-5941. PMID: 23175698; PMCID: 3518653
188. Dragomir AC, Sun R, Mishin V, Hall LB, Laskin JD, Laskin DL. Role of galectin-3 in acetaminophen-induced hepatotoxicity and inflammatory mediator production. *Toxicol Sci.* 2012;127(2):609-619. PMID: 22461450; PMCID: 3355315
189. Gardner CR, Hankey P, Mishin V, Francis M, Yu S, Laskin JD, Laskin DL. Regulation of alternative macrophage activation in the liver following acetaminophen intoxication by stem cell-derived tyrosine kinase. *Toxicol Appl Pharmacol.* 2012;262(2):139-148. PMID: 22575169; PMCID: 3377817
190. Gardner CR, Mishin V, Laskin JD, Laskin DL. Exacerbation of acetaminophen hepatotoxicity by the anthelmintic drug fenbendazole. *Toxicol Sci.* 2012;125(2):607-612. PMID: 22048645; PMCID: 3262853
191. Groves AM, Gow AJ, Massa CB, Laskin JD, Laskin DL. Prolonged injury and altered lung function after ozone inhalation in mice with chronic lung inflammation. *Am J Respir Cell Mol Biol.* 2012;47(6):776-783. PMID: 22878412; PMCID: 3547091
192. Malaviya R, Venosa A, Hall L, Gow AJ, Sinko PJ, Laskin JD, Laskin DL. Attenuation of acute nitrogen mustard-induced lung injury, inflammation and fibrogenesis by a nitric oxide synthase inhibitor. *Toxicol Appl Pharmacol.* 2012;265(3):279-291. PMID: 22981630; PMCID: 3516137
193. Sunil VR, Patel-Vayas K, Shen J, Laskin JD, Laskin DL. Classical and alternative macrophage activation in the lung following ozone-induced oxidative stress. *Toxicol Appl Pharmacol.* 2012;263(2):195-202. PMID: 22727909; PMCID: 3670689
194. Sunil VR, Shen J, Patel-Vayas K, Gow AJ, Laskin JD, Laskin DL. Role of reactive nitrogen species generated via inducible nitric oxide synthase in vesicant-induced lung injury, inflammation and altered lung functioning. *Toxicol Appl Pharmacol.* 2012;261(1):22-30. PMID: 22446026; PMCID: 3348344
195. Trabaris M, Laskin JD, Weisel CP. Effects of temperature, surfactants and skin location on the dermal penetration of haloacetonitriles and chloral hydrate. *J Expo Sci Environ Epidemiol.* 2012;22(4):393-397. PMID: 22549718; PMCID: 4043153
196. Trabaris M, Laskin JD, Weisel CP. Percutaneous absorption of haloacetonitriles and chloral hydrate and simulated human exposures. *J Appl Toxicol.* 2012;32(6):387-394. PMID: 21365670; PMCID: 3199364
197. Young SC, Fabio KM, Huang MT, Saxena J, Harman MP, Guillon CD, Vetrano AM, Heck DE, Flowers RA, 2nd, Heindel ND, Laskin JD. Investigation of anticholinergic and non-steroidal anti-inflammatory prodrugs which reduce chemically induced skin inflammation. *J Appl Toxicol.* 2012;32(2):135-141. PMID: 21319177; PMCID: 3770525

198. Chang YC, Wang JD, Svoboda KK, Casillas RP, Laskin JD, Gordon MK, Gerecke DR. Sulfur mustard induces an endoplasmic reticulum stress response in the mouse ear vesicant model. *Toxicol Appl Pharmacol.* 2013;268(2):178-187. PMID: 23357548; PMCID: 3768256
199. Connor AJ, Chen LC, Joseph LB, Laskin JD, Laskin DL. Distinct responses of lung and liver macrophages to acute endotoxemia: Role of toll-like receptor 4. *Exp Mol Pathol.* 2013;94(1):216-227. PMID: 23000425; PMCID: 3562389
200. Groves AM, Gow AJ, Massa CB, Hall L, Laskin JD, Laskin DL. Age-related increases in ozone-induced injury and altered pulmonary mechanics in mice with progressive lung inflammation. *Am J Physiol Lung Cell Mol Physiol.* 2013;305(8):L555-568. PMID: 23997172; PMCID: 3798776
201. Liu Y, Gardner CR, Laskin JD, Laskin DL. Classical and alternative activation of rat hepatic sinusoidal endothelial cells by inflammatory stimuli. *Exp Mol Pathol.* 2013;94(1):160-167. PMID: 23103612; PMCID: 3562401
202. Sunil VR, Vayas KN, Massa CB, Gow AJ, Laskin JD, Laskin DL. Ozone-induced injury and oxidative stress in bronchiolar epithelium are associated with altered pulmonary mechanics. *Toxicol Sci.* 2013;133(2):309-319. PMID: 23492811; PMCID: 3663562
203. Yang S, Jan YH, Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Sepiapterin reductase mediates chemical redox cycling in lung epithelial cells. *J Biol Chem.* 2013;288(26):19221-19237. PMID: 23640889; PMCID: 3696693
204. Zheng R, Po I, Mishin V, Black AT, Heck DE, Laskin DL, Sinko PJ, Gerecke DR, Gordon MK, Laskin JD. The generation of 4-hydroxynonenal, an electrophilic lipid peroxidation end product, in rabbit cornea organ cultures treated with uvb light and nitrogen mustard. *Toxicol Appl Pharmacol.* 2013;272(2):345-355. PMID: 23845594; PMCID: 4167050
205. Bernard JJ, Lou YR, Peng QY, Li T, Vakil PR, Ding N, Laskin JD, Dong Z, Conney AH, Lu YP. Parametrial fat tissue from high fat diet-treated skh-1 mice stimulates transformation of mouse epidermal j6 cells. *J Carcinog Mutagen.* 2014;5(183):2157-2518. PMID: 25821644; PMCID: 4376014
206. Chang YC, Wang JD, Hahn RA, Gordon MK, Joseph LB, Heck DE, Heindel ND, Young SC, Sinko PJ, Casillas RP, Laskin JD, Laskin DL, Gerecke DR. Therapeutic potential of a non-steroidal bifunctional anti-inflammatory and anti-cholinergic agent against skin injury induced by sulfur mustard. *Toxicol Appl Pharmacol.* 2014;280(2):236-244. PMID: 25127551; PMCID: 4254337
207. Guillon CD, Wisnoski DD, Saxena J, Heindel ND, Heck DE, Wolff DJ, Laskin JD. -nitro- -substituted guanidines: A simple class of nitric oxide synthase inhibitors. *Mod Res Inflamm.* 2014;3(2):48-58. PMID: 25360396; PMCID: 4209729
208. Jamie B, Lou Y, Peng Q, Li T, Vakil P, Ding N, Laskin J, Dong Z, Conney A, Lu Y. Parametrial fat tissue from high fat diet-treated skh-1 mice stimulates transformation of mouse epidermal j6 cells. *J Carcinog Mutagen* 5:183 doi: 104172/2157-25181000183. 2014. PMCID:
209. Jan YH, Heck DE, Dragomir AC, Gardner CR, Laskin DL, Laskin JD. Acetaminophen reactive intermediates target hepatic thioredoxin reductase. *Chem Res Toxicol.* 2014;27(5):882-894. PMID: 24661219; PMCID: 4033643
210. Jan YH, Heck DE, Malaviya R, Casillas RP, Laskin DL, Laskin JD. Cross-linking of thioredoxin reductase by the sulfur mustard analogue mechlorethamine (methylbis(2-chloroethyl)amine) in human lung epithelial cells and rat lung: Selective inhibition of disulfide reduction but not redox cycling. *Chem Res Toxicol.* 2014;27(1):61-75. PMID: 24274902; PMCID: 4070429

211. Joseph LB, Heck DE, Cervelli JA, Composto GM, Babin MC, Casillas RP, Sinko PJ, Gerecke DR, Laskin DL, Laskin JD. Structural changes in hair follicles and sebaceous glands of hairless mice following exposure to sulfur mustard. *Exp Mol Pathol.* 2014;96(3):316-327. PMID: 24662110; PMCID: 4120277
212. Malaviya R, Gow AJ, Francis M, Abramova EV, Laskin JD, Laskin DL. Radiation-induced lung injury and inflammation in mice: Role of inducible nitric oxide synthase and surfactant protein d. *Toxicol Sci.* 2014. PMID: 25552309; PMCID:
213. Malaviya R, Laskin JD, Laskin DL. Oxidative stress-induced autophagy: Role in pulmonary toxicity. *Toxicol Appl Pharmacol.* 2014;275(2):145-151. PMID: 24398106; PMCID:
214. Mishin V, Heck DE, Laskin DL, Laskin JD. Human recombinant cytochrome p450 enzymes display distinct hydrogen peroxide generating activities during substrate independent nadph oxidase reactions. *Toxicol Sci.* 2014;141(2):344-352. PMID: 25061110; PMCID: 4271041
215. Sunil VR, Vayas KN, Cervelli JA, Malaviya R, Hall L, Massa CB, Gow AJ, Laskin JD, Laskin DL. Pentoxifylline attenuates nitrogen mustard-induced acute lung injury, oxidative stress and inflammation. *Exp Mol Pathol.* 2014;97(1):89-98. PMID: 24886962; PMCID: 4271840
216. Zheng R, Dragomir AC, Mishin V, Richardson JR, Heck DE, Laskin DL, Laskin JD. Differential metabolism of 4-hydroxynonenal in liver, lung and brain of mice and rats. *Toxicol Appl Pharmacol.* 2014;279(1):43-52. PMID: 24832492; PMCID: 4167069
217. Zheng R, Heck DE, Black AT, Gow A, Laskin DL, Laskin JD. Regulation of keratinocyte expression of stress proteins and antioxidants by the electrophilic nitrofatty acids 9- and 10-nitrooleic acid. *Free Radic Biol Med.* 2014;67:1-9. PMID: 24140437; PMCID:
218. Zheng R, Heck DE, Mishin V, Black AT, Shakarjian MP, Kong AN, Laskin DL, Laskin JD. Modulation of keratinocyte expression of antioxidants by 4-hydroxynonenal, a lipid peroxidation end product. *Toxicol Appl Pharmacol.* 2014;275(2):113-121. PMID: 24423726; PMCID: 4167054
219. Jan YH, Heck DE, Casillas RP, Laskin DL, Laskin JD. Thioredoxin cross-linking by nitrogen mustard in lung epithelial cells: Formation of multimeric thioredoxin/thioredoxin reductase complexes and inhibition of disulfide reduction. *Chem Res Toxicol.* 2015;28(11):2091-2103. PMID: 26451472; PMCID: 4877171
220. Jan YH, Richardson JR, Baker AA, Mishin V, Heck DE, Laskin DL, Laskin JD. Vitamin k3 (menadione) redox cycling inhibits cytochrome p450-mediated metabolism and inhibits parathion intoxication. *Toxicol Appl Pharmacol.* 2015;288(1):114-120. PMID: 26212258; PMCID: 4579064
221. Malaviya R, Gow AJ, Francis M, Abramova EV, Laskin JD, Laskin DL. Radiation-induced lung injury and inflammation in mice: Role of inducible nitric oxide synthase and surfactant protein d. *Toxicol Sci.* 2015;144(1):27-38. PMID: 25552309; PMCID: 4349136
222. Malaviya R, Sunil VR, Venosa A, Verissimo VL, Cervelli JA, Vayas KN, Hall L, Laskin JD, Laskin DL. Attenuation of nitrogen mustard-induced pulmonary injury and fibrosis by anti-tumor necrosis factor-alpha antibody. *Toxicol Sci.* 2015;148(1):71-88. PMID: 26243812; PMCID: 4659692
223. Saxena J, Meloni D, Huang MT, Heck DE, Laskin JD, Heindel ND, Young SC. Ethynylphenyl carbonates and carbamates as dual-action acetylcholinesterase inhibitors and anti-inflammatory agents. *Bioorg Med Chem Lett.* 2015;25(23):5609-5612. PMID: 26510670; PMCID: 4700827
224. Son Y, Mishin V, Welsh W, Lu SE, Laskin JD, Kipen H, Meng Q. A novel high-throughput approach to measure hydroxyl radicals induced by airborne particulate matter. *Int J Environ Res Public Health.* 2015;12(11):13678-13695. PMID: 26516887; PMCID: 4661607

225. Sunil VR, Francis M, Vayas KN, Cervelli JA, Choi H, Laskin JD, Laskin DL. Regulation of ozone-induced lung inflammation and injury by the beta-galactoside-binding lectin galectin-3. *Toxicol Appl Pharmacol*. 2015; 284(2):236-245. PMID: 25724551; PMCID: 4408237
226. Venosa A, Malaviya R, Gow AJ, Hall L, Laskin JD, Laskin DL. Protective role of spleen-derived macrophages in lung inflammation, injury, and fibrosis induced by nitrogen mustard. *Am J Physiol Lung Cell Mol Physiol*. 2015;309(12):L1487-1498. PMID: 26475734; PMCID: 4683320
227. Yang S, Jan YH, Mishin V, Richardson JR, Hossain MM, Heindel ND, Heck DE, Laskin DL, Laskin JD. Sulfa drugs inhibit sepiapterin reduction and chemical redox cycling by sepiapterin reductase. *J Pharmacol Exp Ther*. 2015;352(3):529-540. PMID: 25550200; PMCID: 4352594
228. Composto GM, Laskin JD, Laskin DL, Gerecke DR, Casillas RP, Heindel ND, Joseph LB, Heck DE. Mitigation of nitrogen mustard mediated skin injury by a novel indomethacin bifunctional prodrug. *Exp Mol Pathol*. 2016;100(3):522-531. PMID: 27189522; PMCID:
229. DeSantis-Rodrigues A, Chang YC, Hahn RA, Po IP, Zhou P, Lacey CJ, Pillai A, Young SC, Flowers RA 2nd, Gallo MA, Laskin JD, Gerecke DR, Svoboda KK, Heindel ND, Gordon MK. Adam17 inhibitors attenuate corneal epithelial detachment induced by mustard exposure. *Invest Ophthalmol Vis Sci*. 2016;57(4):1687-1698. PMID: 27058125; PMCID: 4829087
230. Malaviya R, Sunil VR, Venosa A, Vayas KN, Businaro R, Heck DE, Laskin JD, Laskin DL. Macrophages and inflammatory mediators in pulmonary injury induced by mustard vesicants. *Ann N Y Acad Sci*. 2016. PMID: 27351588; PMCID:
231. Malaviya R, Sunil VR, Venosa A, Vayas KN, Heck DE, Laskin JD, Laskin DL. Inflammatory mechanisms of pulmonary injury induced by mustards. *Toxicol Lett*. 2016;244:2-7. PMID: 26478570; PMCID: 4753082
232. Mandal M, Gardner CR, Sun R, Choi H, Lad S, Mishin V, Laskin JD, Laskin DL. The spleen as an extramedullary source of inflammatory cells responding to acetaminophen-induced liver injury. *Toxicol Appl Pharmacol*. 2016;304:110-120. Epub 2016/05/11. PMID: 27163765; PMCID:
233. Udasin RG, Wen X, Bircsak KM, Aleksunes LM, Shakarjian MP, Kong AN, Heck DE, Laskin DL, Laskin JD. Nrf2 regulates the sensitivity of mouse keratinocytes to nitrogen mustard via multidrug resistance-associated protein 1 (mrp1). *Toxicol Sci*. 2016;149(1):202-212. PMID: 26454883; PMCID: 4715259
234. Venosa A, Malaviya R, Choi H, Gow AJ, Laskin JD, Laskin DL. Characterization of distinct macrophage subpopulations during nitrogen mustard-induced lung injury and fibrosis. *Am J Respir Cell Mol Biol*. 2016;54(3):436-446. PMID: 26273949; PMCID: 4821033
235. Weinberger B, Malaviya R, Sunil VR, Venosa A, Heck DE, Laskin JD, Laskin DL. Mustard vesicant-induced lung injury: Advances in therapy. *Toxicol Appl Pharmacol*. 2016;305:1-11. PMID: 27212445; PMCID:
236. Wohlman IM, Composto GM, Heck DE, Heindel ND, Lacey CJ, Guillon CD, Casillas RP, Crutch CR, Gerecke DR, Laskin DL, Joseph LB, Laskin JD. Mustard vesicants alter expression of the endocannabinoid system in mouse skin. *Toxicol Appl Pharmacol*. 2016;303:30-44. PMID: 27125198; PMCID:
237. Lacey CJ, Wohlman I, Guillon C, Saxena J, Fianu-Velgus C, Aponte E, Young SC, Heck DE, Joseph LB, Laskin JD, Heindel ND. Multi-inhibitor prodrug constructs for simultaneous delivery of anti-inflammatory agents to mustard-induced skin injury. *Ann N Y Acad Sci*. 2016; 1-7. PMID: 27505078
238. Liou PJ, Laskin JD, Georgopoulos PG. Preparedness and response to chemical and biological threats: the role of exposure science. *Ann N Y Acad Sci*. 2016 PMID: 27479653

239. Jan YH, Richardson JR, Baker AA, Mishin V, Heck DE, Laskin DL, Laskin JD. Novel approaches to mitigating parathion toxicity: targeting cytochrome P450-mediated metabolism with menadione. *Ann N Y Acad Sci.* 2016 PMID: 27441453
240. Francis M, Sun R, Cervelli JA, Choi H, Mandal M, Abramova EV, Gow AJ, Laskin JD, Laskin DL. Role of spleen-derived macrophages in ozone-induced lung inflammation and injury, *Toxicol. Sci.*, 2017, 155(1):182-195, PMID: 27708193.
241. Sunil VR, Vayas KN, Fang M, Zarbl H, Massa C, Gow AJ, Cervelli JA, Kipen H, Laumbach R, Lioy PJ, Laskin JD, Laskin DL. World Trade Center (WTC) dust exposure in mice is associated with inflammation, oxidative stress and epigenetic changes in the lung. *Exp Mol Pathol.*, 2017, 102(1):50-58, PMID: 27986442
242. Yang S, Jan YH, Mishin V, Heck DE, Laskin DL, Laskin JD. Diacetyl/L-xylulose reductase (DCXR) is a mediator of chemical redox cycling in lung epithelial Cells: Redox active quinones as inhibitors of α -dicarbonyl and xylulose metabolism. *Chem Res Toxicol.*, 2017, 30(7):1406-1418, PMID: 28595002
243. Szilagyi JT, Vetrano AM, Laskin JD, Aleksunes LM. Localization of the placental BCRP/ABCG2 transporter to lipid rafts: role for cholesterol in mediating of efflux activity, *Placenta*, 2017, 55:29-36, PMID: 28623970
244. Venosa A, Gow JG, Hall L, Malaviya R, Gow AJ, Laskin JD, Laskin DL. Regulation of nitrogen mustard-induced lung macrophage activation by valproic acid, a histone deacetylase inhibitor. *Toxicol Sci.* 2017 157(1):222-234, PMID: 28184907
245. Francis M, Groves A, Sun R, Cervelli JA, Choi H, Laskin JD. CCR2 regulates inflammatory cell accumulation in the lung and tissue injury following ozone exposure. *Toxicol Sci.* 2016, in press. PMID: 27837169
246. Malaviya R, Laskin JD, Laskin DL. Anti-TNF α therapy in inflammatory lung diseases. *Pharmacol Ther.* 2017 Jun 19. pii: S0163-7258(17)30156-0, in press. PMID: 28642115

Books

1. Laskin, JD and Laskin, DL. (eds.). *Cell and Molecular Biology of Nitric Oxide*. Marcel Dekker, Inc., NY, 1999.
2. Laskin JD (ed.) *Countermeasures Against Chemical Threat*, New York Academy of Sciences (volume 1), New York, NY, 2016
3. Laskin JD (ed.) *Countermeasures Against Chemical Threat*, New York Academy of Sciences (volume 2), New York, NY, 2016

Monographs and Chapters

1. Weinstein IB, Mufson RA, Lee LS, Laskin JD, Horowitz A, Ivanovic V. Membrane and other biochemical effects of the phorbol esters and their relevance to tumor promotion. In "*Carcinogenesis: Fundamental Mechanisms and Environmental Effects*", R. Reidel Publishing, New York, 1980.
2. Weinstein IB, Horowitz AD, Mufson RA, Fisher PB, Ivanovic V, Laskin JD, Greenebaum E. Biochemical effects of the phorbol ester tumor promoters and their implications with respect to polycyclic aromatic hydrocarbon carcinogenesis. In "*Polycyclic Hydrocarbons and Cancer*" (H. Gelboin and P.O.P. Ts'ao, eds.), Academic Press, New York, 1981.
3. Pietropaolo C, Laskin JD, Weinstein IB. Effect of tumor promoters on sarc gene expression in normal and transformed chick embryo fibroblasts. 1982 Year Book of Cancer (R.L. Clark, Cumley, R.W. and Hickey,

- R.C., eds.), Year Book Medical Publishers, Inc., Chicago, 1982.
4. Hargraves RW, Geller HM, Laskin JD, Patel-Vaidya U, Adinolfi AM, Freed WJ. Transplantation of PC12 pheochromocytoma and B-16/C melanoma cells to the rat brain. *Annals of the New York Academy of Sciences* 495, pp. 715-717, 1987.
 5. Laskin JD, Laskin D. Role of psoralen receptors in cell growth regulation. In: *Psoralen DNA Photobiology*, F. Gasparro, ed., CRC Press, Boca Raton, FL, pp. 135-158, 1988.
 6. Laskin JD, Dokidis A, Gardner CR, Laskin DL. Role of sulfated proteoglycans in Kupffer cell function. In: *Cells of the Hepatic Sinusoids*. Knook D and Wisse E, eds., Netherlands: Kupffer Cell Foundation, 83-84, 1989.
 7. Laskin JD, Dokidas A, Gardner CR, Robertson FM, Laskin DL. Role of sulfated proteoglycans in Kupffer cell function. In: *Cells of the Hepatic Sinusoid*. Vol. 2. D. Knook and E. Wisse, Eds., Netherlands: Kupffer Cell Foundation, 83-84, 1989.
 8. Gardner CR, Laskin JD, Faaland CA, Laskin DL. Role of protein kinases in liver macrophage function. In: *Cells of the Hepatic Sinusoid*, Vol. 3. E. Wisse, D.L. Knook, R.S. McCuskey, Eds., Netherlands: Kupffer Cell Foundation, 115-117, 1991.
 9. Gardner CR, Heck DE, Feder LS, McCloskey TW, Laskin JD, Laskin DL. Differential regulation of reactive nitrogen and reactive oxygen intermediate production by hepatic macrophages and endothelial cells. In: *The Molecular Basis of Oxidative Damage by Leukocytes*. A. Jesaitis and E. Dratz, Eds., Florida, CRC Press, 267-272, 1992.
 10. Huang MT, Robertson FM, Lysz T, Ferraro T, Wang ZY, Georgiadis CA, Laskin JD, Conney AH. Inhibitory Effects of Curcumin on Carcinogenesis in Mouse Epidermis Phenolic Compounds. In: *Food and Their Effects on Health II*, Chapter 27, pp 338-349, ACS Symposium Series, Volume 507, 1992.
 11. Laskin JD, Heck DE, Laskin DL, Mitchell JM, Huang MT, Zhi Yuan Wang ZY, Yang CS, Ho CT, Conney AH. Inhibitory Effect of a Green Tea Polyphenol Fraction on 12-O Tetradecanoylphorbol-13-acetate-Induced Hydrogen Peroxide Formation in Mouse Epidermis Phenolic Compounds. In: *Food and Their Effects on Health II*, Chapter 24, pp 308-314, ACS Symposium Series, Volume 507, 1992.
 12. Gardner CR, Laskin JD, Laskin DL. Platelet activating factor (PAF) induced activation of hepatic macrophages and endothelial cells: Role of intracellular calcium. *Cells of the Hepatic Sinusoid*, Vol. 4, E. Wisse, D.L. Knook, and R.S. McCuskey, eds., Kupffer Cell Foundation, Leiden. pp. 60-62, 1993.
 13. Laskin DL, Heck DE, Feder LS, Gardner CR, Laskin JD. Regulation of nitric oxide production by hepatic macrophages and endothelial cells. *Cells of the Hepatic Sinusoid*, Vol. 4, D.L. Knook, and E. Wisse, eds., Kupffer Cell Foundation, Leiden. pp. 26-28, 1993.
 14. Helyar L, Laskin JD, Thomas PE, Bundschuh DS, Laskin DL. Modulation of cytochrome P450 expression in liver macrophages and endothelial cells. *Cells of the Hepatic Sinusoid*, Vol. 4, D.L. Knook, and E. Wisse, eds., Kupffer Cell Foundation, Leiden. pp. 394-396, 1993.
 15. Helyar L, Bundschuh DS, Laskin JD, Laskin DL. Hepatic fat storing cells produce nitric oxide and hydrogen peroxide in response to bacterially-derived lipopolysaccharide (LPS). *Cells of the Hepatic Sinusoid*, Vol. 4, D.L. Knook, and E. Wisse, eds., Kupffer Cell Foundation, Leiden. pp. 67-69, 1993.
 16. Rodriguez del Valle M, Hwang SM, Heck DE, Laskin JD, Laskin DL. Role of nitric oxide in hepatic injury following acute endotoxemia. *Ann N Y Acad Sci.* 730:329-331, 1994.
 17. Laskin JD, Heck DE. Xenobiotic-induced Skin Toxicity, in: Schook, L. and Laskin, D.L. (eds.). *Xenobiotic-induced Inflammation*. Academic Press, 1994.

18. Laskin JD, Laskin DL. Flow Cytometry. In: *In Vitro Toxicity Indicators*. C.A. Tyson and J.M. Frazier, Eds., Academic Press, N.Y., 431-437, 1994.
19. Laskin DL, Heck DE, Gardner CR, Durham SK, Goller NL, Ohnishi ST, Laskin JD. Enhanced production of nitric oxide by hepatic macrophages (MP), endothelial cells (EC) and fat storing cells (FSC) following acute endotoxemia. *Cells of the Hepatic Sinusoid*, Vol. 5, E. Wisse, D.L. Knook, and K. Wake, eds., Kupffer Cell Foundation, Leiden. pp. 53-55, 1995.
20. Shuler RL, Laskin JD. Natural carcinogens and anticarcinogens. In: *Environmental Medicine* (eds, S., Brooks, Gochfeld, M., Herzstein, J., Schenker, M., and Jackson, R.), Mosby, St Louis, pp. 512-514, 1995.
21. Laskin DL, Laskin JD. Macrophages, Inflammatory Mediators, and Lung Injury. *Methods* 10(1):61-70, 1996.
22. Gardner CR, Durham SK, Barton D, Heck DE, Laskin JD, Laskin DL. Role of nitric oxide in hepatotoxicity. *Cells of the Hepatic Sinusoid*, Vol. 6, E. Wisse, D.L. Knook, and C. Balabaud, eds., Kupffer Cell Foundation, Leiden. pp. 268-271, 1997.
23. Laskin DL, Laskin JD. Phagocytes. In: *Comprehensive Toxicology*, Vol. 5. Toxicology of the Immune System. D.A. Lawrence, ed., Pergamon, N.Y., pp. 97-112, 1997.
24. Gardner CR, Heck DE, Chiu H, Laskin JD, Durham SK, Laskin DL. Decreased hepatotoxicity of acetaminophen in mice lacking inducible nitric oxide synthase. *Cells of the Hepatic Sinusoid*, Vol. 7, E. Wisse, D.L. Knook, R. DeZanger, and R. Fraser, eds., Kupffer Cell Foundation, Leiden. pp. 104-105, 1999.
25. Laskin JD, Mariano TM. Nitric oxide as a cellular mediator of apoptosis. In: Laskin, J.D. and Laskin, D.L. (eds.). *Cell and Molecular Biology of Nitric Oxide*. Marcel Dekker, Inc., NY, pp. 269-292, 1999.
26. Laskin DL, Fakhrzadeh L, Laskin JD. Nitric oxide and peroxynitrite in ozone-induced lung injury, In: *Biological Reactive Intermediates VI, Chemical and Biological Mechanisms of Susceptibility to and Prevention of Environmental Diseases*, P. Dansette, R. Snyder, M. Delaforge, G. Gibson, H. Greim, D.Jollow, T. Monks, and I. Sipes, eds., New York: Plenum Press, 183-190, 2001.
27. Laskin DL, Gardner CR, Gerecke DR, Laskin JD. Ozone-induced lung injury: role of macrophages and inflammatory mediators. In: *Reactive Oxygen/Nitrogen Species: Lung Injury and Disease*. V. Vallyathan, X. Shi, and V. Castranova, eds., New York: Marcel Dekker. pp. 289-316, 2003.
28. Gerecke DR, Sabourin CLK, Chang YC, Laskin JD, Gordon MK, Casillas, RP. Gene expression profiles of vesicant-induced skin injury; NATO conference on "Defense Against the Effects of Chemical Hazards", Edinburgh, Scotland, 2008.
29. Laskin JD, Heck DE, Laskin DL. Nitric oxide pathways in toxic responses, *Molecular and Cellular Aspects of Toxicology, General, Applied and Systems Toxicology*, third edition. B. Ballantyne, T. Marrs, T. Syversen, eds. UK: Wiley-Blackwell, Chapter 17, pp. 425-438, 2010.
30. Laskin DL, Laskin JD. Inflammation and Cancer, *Holland-Frei's- Cancer Medicine*, 8th edition, W.K. Hong, R.C. Bast, W.N. Hait, D.W. Kufe, R.E. Pollock, R.R. Weichselbaum, J.F. Holland, E. Frei, eds., New York: PMPH Publishing House, chapter 19, pp. 270-278, 2010.
31. Laskin DL, Gardner CR, Laskin JD, "Phagocytes", in: *Comprehensive Toxicology, Volume 5, Toxicology of the Immune System*. C. McQueen, ed., Elsevier, pp. 133-153, 2010.
32. Laskin DL, Sunil VR, Fakhrzadeh L, Groves A, Gow AJ, and Laskin JD. Macrophages, reactive nitrogen species and lung injury. *Annals of the New York Academy of Sciences*, 1203: 60-65, 2010.
33. Laskin JD, Black AT, Jan YH, Sinko PJ, Heindel ND, Sunil V, Heck DE, Laskin DE. Oxidants and antioxidants in sulfur mustard-induced injury, *Annals New York Academy Sciences*, 1203:92-100, 2010.

34. Weinberger, B, Laskin, JD, Sunil, V, Sinko, PJ, Heck, DE, Laskin, DL. Sulfur mustard-induced pulmonary injury: therapeutic approaches to mitigating toxicity. *Pulmonary Pharmacology and Therapeutics*, 24: 92-99, 2011.
35. Malaviya, R, Laskin, JD, Laskin DL. Oxidative stress-induced autophagy: role in pulmonary toxicity. *Toxicology and Applied Pharmacology*, 275: 145-151, 2014.
36. Weinberger B, Sinko PJ, Laskin JD, Laskin DL. Interaction of Nanoparticles with Lung Macrophages, in *Nanoparticles in the Lung: Environmental Exposure and Drug Delivery*, 81-99, 2014.
37. Laskin, DL, Malaviya, R, Laskin, JD. Pulmonary Macrophages. In: *Comparative Biology of the Normal Lung*, 2nd edition. R. Parent, ed., Academic Press, NY, 2015.
38. Gardner, C.R., Laskin, J.D., Laskin, D.L. (2017). Hepatic sinusoidal cells and liver associated lymphocytes. In: *Comprehensive Toxicology*, 3rd edition, Hepatic and Gastrointestinal Toxicology. J. Luyendyk, R. Roth, eds., UK: Elsevier, in press.
39. Malaviya, R., Laskin, J.D., Laskin, D.L. (2017). Monocytes. In: *Comprehensive Toxicology*, 3rd edition, Hematopoietic Systems Toxicology. C. McQueen, L. Burns, eds., UK: Elsevier, in press.

Other Articles

Abstracts and Presentations at Scientific Meetings (Since 2005)

1. MK Gordon; P Zhou; RA Hahn; CA Kistler; DR Gerecke; JD Laskin. Expression of Collagen IV Chain mRNAs by Immortalized Corneal Epithelial Cells Free. *Invest. Ophthalmol. Vis. Sci.* 2003; 44(13):1342.
2. Gray JP, Mishin V, Smith PJ, Heck DE, Laskin JD. Adriamycin increases cyanide-insensitive respiration in tumor cells via activation of NADPH oxidase. *Molecular Targets and Cancer Therapeutics (AACR) Meeting*, Philadelphia, PA, 2005.
3. Gray JP, Mishin V, Vetrano AM, Laskin JD, Heck DE. Hydroxyl radical formation and DNA damage induced by UVB light in the presence of transition metals is independent of endogenous photosensitizers. *Annual Meeting of the American Association for Cancer Research*, Anaheim, CA, 2005.
4. Gray JP, Laskin JD, Osbourn D, Smith PJ, Heck DE. Nitric oxide mediates mitochondrial dysfunction in neuroendocrine toxicity. *UMDNJ Research Day*, 2005, New Brunswick, NJ, 2005.
5. Gray JP, Mishin V, Heck DE, Laskin JD. Dietary tannic acid stimulates production of reactive oxygen intermediates and growth factor and inflammatory gene expression in human colon tumor cells. *2005 Annual Meeting of the American Association for Cancer Research*, Anaheim, CA, 2005.
6. Mishin V, Gray JP, Heck DE, Laskin JD. Cytochrome P450 reductases mediates enhanced hydroxyl radical formation and DNA damage by redox active chemicals in the presence of transition metals. *2005 Annual Meeting of the American Association for Cancer Research*, Anaheim, CA, 2005.
7. Gray JP, Mishin V, Heck DE, Laskin JD. Tannic acid is a prooxidant and induces cyclooxygenase-2 in human colon cells. *44th Annual Meeting of the Society of Toxicology*, 2005, at New Orleans, LA, 2005.
8. Mukhopadhyay R, Gray JP, Heck DE, Black AT, Mishin V, Thiruchelvam M, Cory-Slechta DA, Laskin JD. (Induction of inflammatory mediators and antioxidants following exposure of macrophages to paraquat. *44th Annual Meeting of the Society of Toxicology*, 2005, at New Orleans, LA, 2005.
9. Sunil VR, Patel KJ, Mansukhani MJ, Han S, Laskin JD, Laskin DL. Upregulation of 24p3 in lung and liver during acute endotoxemia: Potential role of Toll-like receptor 4. *Am. J. Resp. Crit. Care Med.* A91, 2005.

10. Mishin V, Gray JP, Heck DE, Laskin JD. Hydroxyl radical formation and DNA damage mediated by human NADPH-cytochrome P450 reductase. AACR Meeting Abstracts, 2006: 834.
11. Black AT, Gray JP, Shakarjian MP, Laskin JD, Heck DE. UVB light alters antioxidant enzyme gene expression in proliferating and calcium-differentiated primary mouse keratinocytes. AACR Meeting Abstracts, 2006: 89.
12. Gray JP, Liu Y, Laskin JD, Heck DE, Ho C-T and Huang M-T. Inhibitory effects of epigallocatechin gallate, (-)-theaflavins and caffeine on 12-O-tetradecanoylphorbol-13-acetate-induced mouse ear inflammation and expression of inflammatory cytokines. AACR Meeting Abstracts, 2006: 66.
13. Gray JP, Liu Y, Laskin JD, Heck DE, Ho CT, Huang MT. Inhibitory effects of (-)-epigallocatechin gallate, (-)-theaflavins and caffeine on 12-O-tetradecanoylphorbol-13-acetate-induced mouse ear inflammation and expression of inflammatory cytokines. 2006 Annual Meeting of the American Association for Cancer Research, Washington, DC, 2006.
14. Gray JP, Mishin VM, Smith PJ, Thiruchelvam M, Cory-Slechta D, Heck DE, Laskin JD. Paraquat stimulates cyanide-insensitive respiration and NADPH oxidase activity in murine lung epithelial cells. 2006 Society of Toxicology Meeting in San Diego, CA, 2006.
15. Connor A, Pierre N, Laskin JD, Gray JP, Laskin DL. Hypoxia-induced oxidative stress responses in macrophages and epithelial cells. 2006 Society of Toxicology Meeting in San Diego, CA, 2006.
16. Gardner CR, Gray JP, Dubois JM, Laskin JD, Laskin DL. Reduced hepatotoxicity of acetaminophen in Caveolin-1 (Cav-1) knockout mice is associated with increased tissue repair. 2006 Society of Toxicology Meeting in San Diego, CA, 2006.
17. Sunil VR, Patel KJ, Gray JP, Laskin JD, Laskin DL. Inflammatory responses of rat alveolar macrophages and type II epithelial cells to inhaled irritants. Inflammation Research Association, 2006.
18. Sunil VR, Laumbach RJ, Turpin BJ, Lim HJ, Patel KJ, Laskin JD, Laskin DL. Pulmonary effects of inhaled d-limonene oxidation products: Role of aging. Am. J. Resp. Crit. Care Med. A4814, 2006.
19. Laskin JD, Gray JP, Mishin V, Laskin DL, Heck DE. Role of redox cycling in chemical-induced lung toxicity. 2006 International Conference on Nanotoxicology: Biomedical Aspects meeting in Miami, FL, 2006.
20. Gray JP, Fussell K, Jamil S, Smith PJS, Heart E, Laskin JD. Intracellular acidification promotes alloxan-induced toxicity in pancreatic islets *in vitro*. Fall 2007 meeting of the Boston-Ithaca Islet Club, Burlington, VT, 2007.
21. Gray JP, Casillas RP, Sabourin CLK, Shakarjian M, Heindel ND, Gerecke DR, Heck DE, Laskin DL, Laskin JD. Role of antioxidant enzymes in regulating wound healing in vesicant-induced skin toxicity. HFM-149, NATO Symposium on Chemical Weapons, October 9-11, 2007.
22. Heck DE, Gray JP, Shakarjian MR, Gerecke DR, Casillas RP, Laskin JD. Evaluation of 2-chloroethyl ethyl sulfide (CEES)-mediated tissue injury using the mouse ear vesicant model. 2007 Annual Meeting of CounterACT, Washington DC, 2007.
23. Gray JP, Sabourin CLK, Laskin JD, Laskin DL. Lung inflammatory models for the development of countermeasures against sulfur mustard. 2007 Annual Meeting of CounterACT, Washington DC, 2007.
24. Gray JP, Laskin DL, Laskin JD. Chemical terrorism: the lung as a target. 2007 Annual Meeting of the New Jersey Thoracic Society, 2007.
25. Gray JP, Heart E, Smith PJS, Heck DE, Laskin JD. Alloxan redox cycling is not required for inhibition of glucose-stimulated oxygen flux in isolated pancreatic beta islets. 2007 Annual Meeting of the Society of

Toxicology in Charlotte, NC, 2007.

26. Gardner CR, Gray JP, Dubois J, Laskin JD, Laskin DL. Role of caveolin-1 and endothelial nitric oxide synthase (eNOS) in acetaminophen-induced hepatotoxicity. 2007 Annual Meeting of the Society of Toxicology in Charlotte, NC, 2007.
27. Gray JP, Liu Y, Laskin JD, Heck DE, Badmaev V, Huang MT. Effects of b-boswellic acids on 12-O-tetradecanoylphorbol-13 acetate-induced inflammation, arachidonic acid metabolism, and expression of antioxidant enzyme genes in mouse ears. 2007 Annual Meeting of the American Association for Cancer Research, Los Angeles, CA, 2007.
28. Gray JP, Mishin VM, Wang Y, Heck DE, Laskin JD. Structurally diverse phytochemicals block xenobiotic-induced oxidative stress in prostate tumor cells by inhibiting flavin-containing NADPH oxidases. 2007 annual meeting of the American Association for Cancer Research, Los Angeles, CA, 2007.
29. Wang Y, Gray JP, Mishin V, Heck DE, Laskin JD. Cytochrome P450 reductase is crucial for redox cycling of mitomycin c but does not mediate its cytotoxicity in Chinese hamster ovary cells. 2007 Annual meeting of the American Association for Cancer Research, Los Angeles CA, 2007.
30. Sunil VR, Patel KJ, Guo CJ, Gow AJ, Laskin JD, Laskin DL. Role of caveolin-1 in the acute pulmonary effects of endotoxin. *Am. J. Resp. Crit. Care Med.* A312, 2007.
31. Gordon RE, Sunil VR, Patel KJ, Laskin JD, Laskin DL. Effects of ozone inhalation on caveolin-1 expression in rodent lungs. *Am. J. Resp. Crit. Care Med.* A919, 2007.
32. Groves A, Sunil VR, Patel KJ, Powell E, Laskin JD, Laskin DL, Gow AJ, Guo CJ. Post-translational modification of surfactant protein D in ozone-induced lung injury: An inflammatory signal. *The Toxicologist.* A186, 2007.
33. Sunil VR, Patel KJ, Gray JP, Laskin JD, Laskin DL. Activation of rat alveolar macrophages and Type II epithelial cells following ozone inhalation. *The Toxicologist.* A490, 2007.
34. Shaojun Y, Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Identification of sepiapterin reductase as a cellular mediator of redox cycling in lung tumor cells. 2008 Annual Retreat on Cancer Research in New Jersey, 2008.
35. Gray JP, Mishin V, Laskin JD. The toxicity of adriamycin's derivate N-benzyl-adriamycin-14 valerate (AD198) is inhibited by dicoumarol. 2008 Annual Retreat on Cancer Research in New Jersey, 2008.
36. Yi-Hua J, Mishin V, Gray JP Heck DE, Laskin DL, Laskin JD. Mechanisms of menadione-induced inhibition of thioredoxin reductase in lung tumor cells. 2008 Annual Retreat on Cancer Research in New Jersey, 2008.
37. Wang Y, Gray JP, Mishin V, Heck DE, Laskin DL, Laskin JD. Role of cytochrome P450 reductase in mediating the antitumor activity of mitomycin c. 2008 Annual Retreat on Cancer Research in New Jersey, 2008.
38. Zheng R, Black AT, Shakarjian MP, Gray JP, Laskin JD. 4-hydroxynonenal, an electrophilic lipid peroxidation product, regulates heme oxygenase-1 through mitogen-activated protein kinases in phosphatidylinositol-3-kinase/akt in mouse tumor cells. 2008 Annual Retreat on Cancer Research in New Jersey, 2008.
39. Gray JP, Mishin VM, Casillas RP, Laskin DL, Laskin JD, Heck DE. Inhibition of cytochrome P450 reductase by the vesicant 2-chloroethyl ethyl sulfide in lung cells. 2008 2nd Annual CounterACT Network Research Symposium, 2008.
40. Laskin DL, Khan F, Gray JP, Joseph LB, Michael C, Guo CJ, Gow A, Sinko P, Kutcher H, Deshmukh M,

Laskin JD. Strategies for developing countermeasures to pulmonary injury induced by CEES. 2nd Annual CounterACT Network Research Symposium, 2008.

41. Jan Y-H, Gray JP, Black AT, Heck DE, Gerecke DR, Casillas RP, Laskin DL, Laskin JD. Mechanism of inhibition of thioredoxin reductase in lung epithelial cells by the vesicant 2-chloroethyl ethyl sulfide. 2008 2nd Annual CounterACT Network Research Symposium, 2008.
42. Gray JP, Heart E, Fussell K, Jamil S, Smith PJS, Laskin JD. Intracellular acidification promotes alloxan-induced toxicity in pancreatic islets in vitro. 2008 Annual Meeting of the Society of Toxicology in Seattle, WA, 2008.
43. Fussell KC, Gray JP, Smith PJS, Heck DE, Laskin JD. Increased oxygen utilization and oxidative stress in CHO cells during diquat redox cycling. 2008 Annual Meeting of the Society of Toxicology in Seattle, WA, 2008.
44. Jan Y-H, Gray JP, Black AT, Gerecke DR, Casillas RP, Laskin DL, Laskin JD. Mechanism of inhibition of thioredoxin reductase in lung epithelial cells by the vesicant 2-chloroethyl ethyl sulfide. 2008 Annual Meeting of the Society of Toxicology in Seattle, WA, 2008.
45. Black AT, Joseph LB, Gray JP, Gerecke DR, Casillas RP, Laskin DL, Laskin JD. Upregulation of the 5-lipoxygenase leukotriene biosynthetic pathway by the vesicant 2-chloroethyl ethyl sulfide in mouse keratinocytes. 2008 Annual Meeting of the Society of Toxicology in Seattle, WA, 2008.
46. Huang MT, Gray JP, Black AT, Gerecke DR, Gordon MK, Gallo MA, Heindel ND, Sinko PJ, Casillas RP, Hyer RB, Chung CS, Laskin DL, Laskin JD, Heck, DE. Vesicant injury increases expression of matrix degrading enzymes and inflammatory mediators in a mouse ear model. Presented at the 2008 Annual Meeting of the Society of Toxicology in Seattle, WA, 2008.
47. Gray JP, Black AT, Heck DE, Casillas RP, Mishin V, Gerecke DR, Laskin DL, Laskin JD. Cytochrome P450 reductase is a target of the vesicant 2-chloroethyl ethyl sulfide in lung epithelial cells. *Amer. J. Respir. Crit. Care Med.* 177:A313, 2008.
48. Sunil VR, Khan F, Malaviya R, Patel KJ, Bremer N, Laskin JD, Laskin DL. 2-Chloroethyl ethyl sulfide alters inflammatory mediator expression in mouse lung. *Toxicologist* 108 (1):438, 2009.
49. Black AT, Joseph LB, Gardner CR, Gray, JP, Casillas RP, Heck DE, Gerecke DR, Laskin DL, Laskin JD. MAP kinases regulate changes in antioxidant and inflammatory mediator expression in mouse keratinocytes induced by the vesicant 2-chloroethyl ethyl sulfide. *The Toxicologist* 108 (1):621, 2009.
50. Jan YH, Gray JP, Gerecke DR, Zheng H, Casillas RP, Heck DE, Laskin DL, Laskin JD. Identification of selenocysteine adducts in thioredoxin reductase by 2-chloroethyl ethyl sulfide (CEES), a model sulfur mustard vesicant. *The Toxicologist* 108 (1):128, 2009.
51. Mishin V, Gray JP, Heck DE, Casillas RP, Gerecke DR, Laskin DL, Laskin JD. Modification of NADPH cytochrome P450 reductase by 2-chloroethyl ethyl sulfide (CEES) stimulates production of reactive oxygen species. *The Toxicologist* 108 (1):129, 2009.
52. Fussell K, Gallo MA, Laskin JD. NADPH-cytochrome P450 oxidoreductase mediates redox cycling by 2- and 4-hydroxyestradiol catechol metabolites. Presentation at the 2009 Annual Meeting of the Society of Toxicology in Baltimore, MD, 2009.
53. Hahn RA, Schlager JJ, DeSantis AS, Gallo MA, Heck D, Sinko P, Laskin DL, Laskin JD, Heindel N, Casillas R, Gerecke DR, Babin MC, Gordon MK. Doxycycline and tobradex suppress rabbit corneal basement membrane zone damage induced by 2-chloroethyl ethyl sulfide. *The Toxicologist* A549, 115, 2009.
54. Fussell K, Gallo MA, Laskin JD, NADPH-cytochrome P450 oxidoreductase mediates redox cycling by 2- and 4-hydroxyestradiol catechol metabolites. Presentation at the 2009 Annual Meeting of the Society of

Toxicology, Baltimore, MD, 2009.

55. Heck DE, Jan Y, Black AT, Gray JP, Laskin DL, Laskin JD. Role of cellular redox balance in sulfur mustard-induced lung injury. *Am. J. Respir. Crit. Care Med.*, A5860, 179, 2009.
56. Sunil VR, Patel KJ, Malaviya R, Laskin JD, Laskin DL. Inflammatory mediator expression in the lung following exposure to the sulfur mustard analog, 2-chloroethyl ethyl sulfide; role of TNFR1. *Am. J. Respir. Crit. Care Med.*, A5863, 179, 2009.
57. Joseph LB, Cervelli J, Elzind DA, Zeidler-Erdely P, Gow AJ, Laskin JD. Castranova V, Laskin DL. Silica exposure alters mouse lung mechanics through inflammation and Type II cell hyperplasia. *Am. J. Respir. Crit. Care Med.*, A5906, 179, 2009.
58. Yang S, Gray JP, Mishin V, Wang Y, Heck DE, Laskin DL, Laskin JD. Selective chemical redox cycling by NADPH-cytochrome P450 reductase and sepiapterin reductase. *The Toxicologist* 108 (1):63, 2009.
59. Huang M, Gray JP, Kim H, Casillas RP, Gerecke DR, Laskin DL, Laskin JD, Heck DE. 2-dichloroethyl ethyl sulfide stimulates arachidonic acid metabolism in mouse skin. *The Toxicologist* 108 (1):110, 2009.
60. Groves A, Gow A, Guo C, Scott P, Veleparambil M, Laskin JD, Laskin DL. Role of surfactant protein-D in ozone-induced inflammation, injury and altered lung functioning. *The Toxicologist* 108 (1):393, 2009.
61. Connor AJ, Liu Y, Laskin JD, Laskin DL. Role of mitogen activated protein kinase-1 in hypoxia induced oxidative stress in macrophages. *The Toxicologist* 108(1):434, 2009.
62. Wang Y, Yang S, Mishin V, Gray JP, Heck DE, Laskin DL, Laskin JD. Selective chemical redox cycling by NADPH cytochrome P450 reductase and sepiapterin reductase. *The Toxicologist* 108 (1):64, 2009.
63. Fabio K, Young S, Mohanta P, Lacey CJ, Halton T, Guillon C, Heindel ND, Heck DE, Huang M-T, Laskin JD. Testing the cholinergic anti-inflammatory pathway in the design of pharmaceuticals for treating chemically-induced vesication. International Union of Pure & Applied Chemistry, Glasgow, UK, 2009.
64. Groves A, Gow AJ, Laskin JD, Laskin DL. Role of surfactant protein D in ozone-induced lung injury and inflammation. *The Toxicologist* 114 (S1): 157 (A738), 2010.
65. Sunil VR, Patel KJ, Shen J, Reimer D, Gow AJ, Laskin JD, Laskin DL. Role of reactive nitrogen species in vesicant-induced lung injury and altered lung functioning. *The Toxicologist* 114 (S1): 73 (A336), 2010.
66. Joseph LB, Elzind D, Cervelli JA, Bremer NM, Kim YJ, Castranova V, Laskin JD, Laskin DL. Activation of WNT/ β -catenin following exposure of mice to silica. *The Toxicologist*. 114 (S1): 354-355 (A1665), 2010.
67. Malaviya R, Sunil VR, Joseph LB, Patel KJ, Anderson D, Holmes W, Conti M, Laskin JD, Laskin DL. Exposure to sulfur mustard induces the expression of inflammatory proteins in rat lungs. *The Toxicologist* 114 (S1): 76 (A350), 2010.
68. Jan Y, Heck DE, Casillas RP, Laskin DL, Laskin JD. Selective cross-linking of thioredoxin reductase in lung epithelial cells by nitrogen mustard, a model sulfur mustard vesicant. *The Toxicologist* 114 (S1): 13 (A65), 2010.
69. Collins P, Heart E, Gerecke DR, Laskin DL, Laskin JD, Gray JP. Plasma membrane-bound oxidoreductases are an immediate target of nitrogen mustard in pulmonary epithelial cells. *The Toxicologist* 114 (S1): 14 (A67), 2010.
70. Laskin JD, Black AT, Joseph LB, Gardner CR, Gray J, Casillas RP, Heck DE, Gerecke D, Laskin DL. p38 MAP kinase regulates caveolin-1 and HSP27-mediated actin reorganization in mouse keratinocytes following exposure to 2-chloroethyl ethyl sulfide (CEES). *The Toxicologist* 114 (S1): 12-13 (A61), 2010.
71. Udasin RG, Fussell KC, Wang Y, Heck DE, Mishin V, Smith PJ, Laskin DL, Laskin JD. Role of

- cytochrome P450 reductase in mediating redox cycling of 9,10- phenanthrenquinone. *The Toxicologist* 114 (S1):163 (A765), 2010.
72. Sunil VR, Patel KJ, Shen J, Ridgely S, Gow AJ, Laskin JD, Laskin DL. Ozone inhalation is associated with inflammation, M1 macrophage polarization, and altered lung functioning. *Amer. J. Respir. Crit. Care Med.*, 181: A5503, 2010.
 73. Joseph LB, Cervelli JA, Bremer NM, Kim YK, Elzind DA, Castranova V, Gow A, Laskin JD, Laskin, D.L. Role of HMGB1 signaling in silica-Induced lung inflammation and fibrosis. *Amer. J. Respir. Crit. Care Med.*, 181: A2334, 2010.
 74. Malaviya R, Sunil VR, Joseph LB, Patel, KJ, Anderson D, Holmes W, Conti M, Heck DE, Gordon RE, Laskin JD, Laskin DL. Increased protease expression in rat lung following exposure to sulfur mustard. *Amer. J. Respir. Crit. Care Med.*, 181: A1745, 2010.
 75. Udasin RG, Fussell KC, Wang Y, Heck DE, Mishin V, Smith PJ, Laskin DL, Laskin JD. Role of cytochrome P450 reductase in mediating redox cycling of 9,10- phenanthrenquinone. *The Toxicologist* 114 (S1): 163 (A765), 2010.
 76. Sunil, VR, Patel, KJ, Shen, J, Ridgely, S, Gow, AJ, Laskin, JD, Laskin, DL. Ozone inhalation is associated with inflammation, M1 macrophage polarization, and altered lung functioning. *Amer. J. Respir Crit. Care Med.*, 181: A5503, 2010.
 77. Joseph, LB, Cervelli, JA, Bremer, NM, Kim, YK, Elzind, DA, Castranova, V, Gow, AJ, Laskin, JD, Laskin, DL. Role of HMGB1 signaling in silica-Induced lung inflammation and fibrosis. *Amer. J. Respir. Crit.Care Med.*, 181: A2334, 2010.
 78. Malaviya, R, Sunil, VR, Joseph, LB, Patel, KJ, Anderson, D, Holmes, W, Conti, M, Heck, DE, Gordon, RE, Laskin, JD, Laskin, DL. Increased protease expression in rat lung following exposure to sulfur mustard. *Amer. J. Respir. Crit. Care Med.*, 181: A1745, 2010.
 79. Po, I, DeSantis, AS, Hahn, RA, Gerecke, DR, Laskin, JD, Gordon, MK. Comparison of corneal healing after exposure to the blistering agents nitrogen mustard and UVB. *Invest. Ophthalmol. Vis. Sci.* 2011; 52(14):1993
 80. Groves, AM, Gow, AJ, Laskin, JD, Laskin, DL. Surfactant protein-D (SPD) regulates ozone-induced inflammation, macrophage phenotype, and lung function in elderly mice. *The Toxicologist* 126 (S1): 236, 2012.
 81. Gardner, GR; Mishin, V., Hankey, P., Laskin, JD, Laskin, DL. The Role of Serine/Threonine Kinase (STK) in Liver Macrophage Activation following Acetaminophen (APAP) Intoxication. *The Toxicologist* 126 (S1): 357, 2012.
 82. Laskin, DL, Mishin, V, Laskin, JD, Gardner, CR. Exacerbation of Acetaminophen-Induced Hepatotoxicity by the Anthelmintic Drug Fenbendazole. *The Toxicologist* 126 (S1): 359, 2012.
 83. Bernard, JJ, Laskin, JD, Yu, BD, Gallo, RL. TLR3 is critical for the inflammatory cytokine sunburn response by detecting ultraviolet light damage to a noncoding RNA. *The Toxicologist* 126 (S1): 562, 2012.
 84. Kim, HD, Paras, Z, Shakarjian, MP, Laskin, JD, Heck, DE. MAP kinases regulate nitrogen mustard-induced activation of damage-associated molecular patterns in murine keratinocytes. *The Toxicologist* 126 (S1): 572, 2012.
 85. Dragomir, AS, Sun, R, Laskin, JD, Laskin, DL. Regulation of classical and alternative macrophage activation by galectin-3 (Gal-3) following acetaminophen (APAP) intoxication. *The Toxicologist* 126 (S1): 700, 2012.

86. Jan, YH, Laskin, DL, Laskin, J.D. Protection against acetaminophen hepatotoxicity by selenocompounds: role of thioredoxin reductase. *The Toxicologist* 126 (S1): 920, 2012.
87. Udasin, RG, Jan YH, Wang, Y, Heck, DE, Guillon, C, Fabio, K, Heindel, ND, Laskin, DL, Laskin, J.D. Distinct alkylation signatures of nitrogen mustard and α -halo cinnamaldehydes on the active site of thioredoxin reductase. *The Toxicologist* 126 (S1): 1331, 2012.
88. Venosa A, Malaviya R, Hall L, Gow AJ, Laskin J.D., Laskin DL. Abrogation of nitrogen mustard-induced lung injury and inflammation by the inducible nitric oxide synthase (iNOS) inhibitor aminoguanidine (AG). *The Toxicologist* 126 (S1): 1340, 2012.
89. Wohlman I, Jan YH, Heck DE, Casillas RP, Laskin DL, Laskin J.D. Thioredoxin reductase mediates nitrogen mustard-induced activation of NF-kappa B/STAT3 signaling in lung epithelial cells. *The Toxicologist* 126 (S1): 1341, 2012.
90. Chang YC, Wang, JD, Hahn, RA, Gordon, MA, Babin, MC, Young, SC, Heindel, ND, Laskin, J.D., Gerecke, DR. Efficacy of bifunctional and nonSteroidal antiInflammatory compounds against vapor-induced sulfur mustard injury in a hairless mouse vesicant model (HMVM). *The Toxicologist* 126 (S1): 1800, 2012.
91. Kim HD, Paras Z, Shakarjian MP, Laskin J.D., Heck DE. MAP kinases regulate nitrogen mustard-induced activation of damage-associated molecular patterns in murine keratinocytes. *The Toxicologist* 126 (S1): 2147, 2012.
92. Deshmukh M, Kutscher H, Sunil V, Malaviya R, Laskin J.D., Laskin DL, Sinko PJ. Novel poly(ethyleneglycol) (PEG) nanogel aggregates for targeted lung delivery. *The Toxicologist* 126 (S1): 2905, 2012.
93. Sunil VR, Vayas K, Shen J, Gow A, Laskin J.D., Laskin DL. Oxidative stress, alternate macrophage activation and altered lung functioning following ozone inhalation in rats. *Am. J. Respir. Crit. Care Med.*, 185 (A2736), 2012.
94. Black AT, Zheng R, Heck DE, Laskin DL, Gerecke DR, Gordon MK, Laskin J.D. Formation 4-hydroxynonenal, an electrophilic lipid peroxidation end product, in rabbit corneal organ cultures treated with nitrogen mustard. *The Toxicologist* 132: 433 (A2030), 2013.
95. Gardner CR, Choi HM, Laskin, J.D., Laskin DL. Dual role of macrophages in injury and repair in acetaminophen-induced hepatotoxicity. *The Toxicologist* 132: 142 (A661), 2013.
96. Venosa A, Malaviya R, Laskin J.D., Laskin, DL. Nitrogen mustard (NM)-induced pulmonary injury and inflammation are associated with alterations in histone methylation and acetylation. *The Toxicologist* 132: 76 (A359), 2013.
97. Wohlman I, Jan Y, Heck DE, Casillas RP, Laskin DL, Laskin J.D. Differential inhibition of cytoplasmic and mitochondrial thioredoxin and thioredoxin reductase by nitrogen mustard in A549 lung epithelial cells. *The Toxicologist* 132: 75 (A358), 2013.
98. Joseph, L, Cervelli, JA, Composto, GM, Babin, MC, Casillas, RP, Sinko, PJ, Gerecke, D, Laskin, DL, Laskin, J.D., Heck, DE. Sulfur mustard induces cytotoxicity and apoptosis in mouse skin hair follicles. *The Toxicologist* 132: 74 (A353), 2013.
99. Udasin RG, Shakarjian M, Mishin V, Heck DE, Casillas RP, Laskin DL, Laskin J.D. Sulforaphane induces antioxidants and glutathione S-transferase A1 and protects against vesicant-induced toxicity in mouse keratinocytes. *The Toxicologist* 132: 72 (A341), 2013.
100. Jan Y, Wohlman I, Heck DE, Casillas RP, Laskin DL, Laskin J.D. Identification of thioredoxin as a

molecular target for sulfur mustard analog vesicants. *The Toxicologist* 132: 71 (A337).

101. Laskin JD, Jan Y, Heck DE, Casillas RP, Laskin DL. Ebselen as a countermeasure for nitrogen mustard vesicant-induced toxicity. *The Toxicologist* 132: 70 (A336), 2013.
102. Dragomir A, Sun R, Mili M, Laskin JD, Laskin DL. Exaggerated hepatotoxicity of acetaminophen (APAP) following administration of clodronate liposomes is associated with the persistence of classically-activated macrophages in the liver. *The Toxicologist* 132: 52 (A249), 2013.
103. Gardner CR, Choi HM, Laskin JD, Laskin DL. Dual role of macrophages in injury and repair in acetaminophen-induced hepatotoxicity. *The Toxicologist* 132: 142 (A661), 2013.
104. Malaviya R, Shen J, Francis M, Gow AJ, Laskin JD, Laskin DL. Radiation-induced Lung Injury: Potential role of surfactant protein D and inducible nitric oxide synthase. *Am J Respir Crit Care Med* 187 (A3845), 2013.
105. Sunil VR, Vayas K, Malaviya R, Heindel N, Young S, Saxena J, Lacey J, Fabio K, Sinko P, Heck DE, Laskin JD, Laskin DL. Role of tumor necrosis factor (TNF)alpha and cyclooxygenase (COX)-2 in nitrogen mustard induced lung injury. *Am J Respir Crit Care Med* 187 (A2705), 2013.
106. Sunil VR, Vayas K, Gow A, Massa C, Laskin J, Laskin DL. Acute ozone inhalation leads to oxidative stress in bronchiolar epithelium and altered lung functioning. *Am J Respir Crit Care Med* 187 (A2721), 2013.
107. Sunil VR, Vayas K, Hussain S, Kipen H, Liyo P, Fang M, Massa C, Gow A, Laskin JD, Laskin DL. Expression of markers of inflammation and oxidative stress following exposure to world trade center (WTC) dust is associated with histone modifications and altered lung functioning. *Am J Respir Crit Care Med* 187 (A1053), 2013.
108. Francis M, Mandal M, Choi H, Laskin JD, Laskin DL. Role of spleen monocytes (Mo) in ozone-induced lung inflammation and injury. *Tox. Sci*, 138S, 101 (A395), 2014.
109. Jan Y, Heck DE, Casillas RP, Laskin DL, Laskin JD. Identification of glutaredoxin as a molecular target for the sulfur mustard analog bis(2-chloroethyl)methylamine. *Tox. Sci*, 138S, 146 (A559), 2014.
110. Malaviya R, Sunil V, Venosa A, Vayas K, Sinko PJ, Shen J, Hall L, Shealy D, Heindel N, Lacey CJ, Laskin JD, Laskin DL. Attenuation of nitrogen mustard (NM)-induced pulmonary injury and inflammation by antitumor necrosis factor (TNF)alpha antibody and the inducible nitric oxide synthase (iNOS) inhibitor, N-(3-(aminomethyl)benzyl) acetamidine (1400W). *Tox. Sci*, 138S, 146 (A561), 2014.
111. Udasin RG, Bircsak KM, Mishin V, Heck DE, Aleksunes LM, Laskin DL, Laskin JD. Inhibition of multidrug resistance-associated protein (MRP) efflux transporters increases the sensitivity to vesicant-induced growth inhibition in lung epithelial cells. *Tox. Sci*, 138S, 146 (A562), 2014.
112. Heck DE, Joseph LB, Cervelli JA, Composto GM, Casillas RP, Gerecke DR, Sinko PJ, Laskin DL, Laskin JD. Sulfur mustard alters sebocyte differentiation in hairless mouse skin. *Tox. Sci*, 138S, 147 (A563), 2014.
113. Joseph LB, Composto GM, Cervelli JA, Gerecke DR, Casillas RP, Laskin DL, Laskin JD, Heck DE. The sulfur mustard analog bis(2-chloroethyl) methylamine induces oxidative damage in mouse skin. *Tox. Sci*, 138S, 147 (A565), 2014.
114. Venosa A, Malaviya R, Laskin JD, Laskin DL. Accumulation of distinct macrophage (MP) subpopulations in the lung following nitrogen mustard (NM) exposure; Contribution of splenic monocytes. *Tox. Sci*, 138S, 147 (A571), 2014.
115. Mandal M, Sun R, Lad S, Choi H, Laskin JD, Laskin DL. CCR2 regulates proinflammatory macrophage

- migration into the liver during acetaminophen (APAP)-induced hepatotoxicity. *Tox. Sci.*, 138S, 261 (A1005), 2014.
116. Son Y, Mishin V, Welsh W, Laskin JD, Meng Q. Characterization of OH radicals induced by particulate matter and associated species with a high-throughput approach. *Tox. Sci.*, 138S, 339 (A1275), 2014.
 117. Groves AM Francis M, Mandal M, Choi H, Laskin JD, Laskin DL. Ccr2 regulates inflammatory cell accumulation in the lung and tissue injury following ozone exposure. *Tox. Sci.*, 138S, 624 (A2327), 2014.
 118. Sunil VR, Francis M, Vayas K, Cervelli JA, Choi H, Laskin JD, Laskin DL. (2015). Regulation of ozone-induced lung inflammation by galectin-3, a β -galactoside-binding lectin. *The Toxicologist*, 144: 33 (A161).
 119. Szilagy JT, Mishin V, Heck DE, Jan Y, Richardson JR, Laskin DL, Laskin JD. (2015). Targeting heme in cytochrome P450 to inhibit mixed function oxidase reactions. *The Toxicologist*, 144: 217 (A1022).
 120. Venosa A, Gow J, Berman I, Malaviya R, Yaren H, Yaman H, Gow A, Laskin JD, Laskin DL. (2015). Regulation of macrophage activity by histone deacetylases during nitrogen mustard-induced lung injury. *The Toxicologist*, 144: 287 (A1342).
 121. Francis M, Mandal M, Laskin JD, Laskin DL. (2015). Tracking inflammatory macrophage accumulation in the lung during ozone-induced lung injury in mice. *The Toxicologist*, 144: 287. (A1343).
 122. Jan Y, Heck DE, Casillas RP, Laskin DL, Laskin JD. (2015). Thioredoxin cross-linking by the sulfur mustard analog mechlorethamine (methylbis(2-chloroethyl)amine) in lung epithelial cells. *The Toxicologist*, 144: 443 (A2066).
 123. Udasin R, Bircsak KM, Aleksunes LM, Shakarjian MP, Mishin V, Heck DE, Laskin DL, Laskin JD. (2015). Inhibition of efflux transporters suppresses Nrf2-mediated protection of mouse keratinocytes from vesicant-induced growth inhibition. *The Toxicologist*, 144: 444 (A2067).
 124. Joseph L, Composto GM, Kim S, Crutch CR, Casillas RP, Gerecke DR, Sinko PJ, Laskin DL, Laskin JD, Heck DE. (2015). Inflammatory cell accumulation in mouse skin following exposure to sulfur mustard. *The Toxicologist*, 144: 448 (A2085).
 125. Malaviya R, Venosa A, Sunil V, Vayas K, Hall L, Laskin JD, Laskin DL. (2015). Attenuation of nitrogen mustard (NM)-induced pulmonary injury, inflammation, and fibrosis by anti-tumor necrosis factor (TNF) alpha antibody. *The Toxicologist*, 144: 448 (A2086).
 126. Composto G, Kim S, Heck D, Laskin JD, Laskin DL, Joseph L. (2015). Nitrogen mustard induces DNA damage and structural changes in mouse skin hair follicles. *FASEB J.* 29:766.7.
 127. Venosa A, Gow A, Laskin JD, Laskin DL. (2015). Nitrogen mustard (NM)-induced lung fibrosis is associated with altered lipid metabolism and foam cell formation. *FASEB J.* 29:774.2.
 128. Zheng R, Wang Y, Heck DE, Laskin DL, Laskin JD. (2015). DNA damage initiated by the sulfur mustard analog mechlorethamine (methylbis(2-chloroethyl)amine) in mouse keratinocytes is associated with an oxidative stress response. *FASEB J.* 29:774.1.
 129. Francis M, Mandal M, Cervelli J, Choi H, Laskin JD, Laskin DL. (2015). Bone marrow and spleen as sources of inflammatory macrophages responding to ozone-induced lung injury. *FASEB J.* 29:775.3.
 130. Sun C, Francis M, Mandal M, Gardner C, Laskin JD, Laskin DL. (2015). Role of bone marrow derived macrophages in acetaminophen-induced injury. *FASEB J.* 29:937.4.
 131. Sunil VR, Vayas KN, Cervelli JA, Goedken M, Venosa A, Malaviya R, Laskin JD, Laskin DL. (2015). Role of surfactant protein (SP)-D in vesicant-induced lung toxicity. *FASEB J.* 29:774.3.

132. Kim S, Composto G, Crutch C, Casillas R, Gerecke D, Laskin J, Heck D, Joseph L, Laskin D. (2015). Characteristics of skin inflammatory cells following exposure of mice to sulfur mustard. *FASEB J*, 29:766.6.
133. Francis M, Guo G, Sun R, Cervelli J, Choi H, Kong, B, Laskin JD, Laskin DL. (2016) Regulation of macrophage accumulation and activation in the lung following ozone exposure by farnesoid x receptor. *The Toxicologist*, 150: 213 (A1910).
134. Venosa A, Gow AJ, Laskin JD, Laskin DL. Role of lipids in macrophage foam cell formation during nitrogen mustard-induced lung fibrosis. *The Toxicologist*, 150: 214 (A1915).
135. Joseph LB, Composto GM, Wohlman IM, Kim HD, Gerecke DR, Laskin DL, Laskin JD, Heck DE. (2016) Nitrogen mustard upregulates peroxisome proliferator activated receptor (PPAR)- α in mouse skin. *The Toxicologist*, 150: 257 (A2094).
136. Jan YH, Heck DE, Mishin V, Casillas RP, Laskin DL, Laskin JD. (2016) Peroxiredoxins are molecular targets for the sulfur mustard analog mechlorethamine in human keratinocytes. *The Toxicologist*, 150: 258 (A2097).
137. Heck DE, Jan YH, Casillas RP, Laskin DL, Laskin JD. (2016) Activation of thioredoxin-regulated signaling in human lung epithelial cells by nitrogen mustard vesicants. *The Toxicologist*, 150: 258 (A2099).
138. Malaviya R, Sunil V, Venosa A, Vayas K, Hall L, Heindel ND, Lacey CJ, Laskin JD, Laskin DL. (2016) Attenuation of nitrogen mustard (NM) induced pulmonary injury and fibrosis by inhibitors of tumor necrosis factor (TNF) α and reactive oxygen and nitrogen intermediates. *The Toxicologist*, 150: 262 (A2113).
139. Sunil V, Vayas K, Cervelli J, Goedken M, Malaviya R, Laskin JD, Laskin DL. (2016) Protective role of surfactant protein-D in nitrogen mustard induced lung toxicity. *The Toxicologist*, 150: 263 (A2118).
140. Szilagyi JT, Bircsak KM, Vetrano A, Laskin JD, Aleksunes LM. (2016) Cholesterol depletion by pravastatin inhibits the fetoprotective activity of the placental efflux transporter BCRP. *The Toxicologist*, 150: 524 (A3233).
141. Yang S, Jan YH, Mishin V, Heck DE, Laskin DL, Laskin JD. (2017). Inhibition of dicarbonyl/L-xylulose reductase by methylmercury in A549 lung epithelial cells blocks carbonyl metabolism. *The Toxicologist*, 156: 260 (A2101).
142. Composto GM, Ho GX, Casillas RP, Laskin DL, Heck DE, Laskin DL, Laskin JD, Joseph LB. (2017). Nitrogen mustard induces nuclear hypertrophy in mouse epidermis, *The Toxicologist*, 156: 394 (A2677).
143. Jan YH, Heck DE, Laskin DL, Laskin JD. (2017). Differential reactivity of the sulfur mustard analogs mechlorethamine and chlorambucil with the thioredoxin system. *The Toxicologist*, 156: 147 (A1629).
144. Sunil VR, Vayas KP, Cervelli J, Goedken M, Malaviya R, Abramova E, Gow AJ, Laskin JD, Laskin, D.L. (2017). Structural and functional changes in the lung following exposure of mice to nitrogen mustard are correlated with macrophage phenotype. *The Toxicologist*, 156: 252 (A2067).
145. Minchala S, Vayas KP, Murray A, Choi H, Cervelli J, Laskin JD, Laskin DL. (2017). Regulation of macrophage activity by histone deacetylases during ozone-induced lung injury. *The Toxicologist*, 156: 471 (A2997).
146. Taylor S, Francis M, Venosa A, Murray A, Gow A, Laskin J, Laskin D. (2017). Ethyl nitrite suppresses ozone-induced proinflammatory macrophage activation and lung injury. *The Toxicologist*, 156: 332 (A2413).
147. Gow JG, Taylor S, Murray A, Malaviya R, Venosa A, Laskin JD, Laskin DL, Gow AJ. (2017). Suppression

- of bleomycin-induced pulmonary fibrosis and lung macrophage activation by anti-tumor necrosis factor-alpha antibody. *The Toxicologist*, 156: 333 (A2415).
148. Murray A, Venosa A, Gow AJ, Laskin JD, Laskin DL. (2017). Suppression of nitrogen mustard-induced inflammatory macrophage activation by gadolinium chloride. *The Toxicologist*, 156: 252 (A2068).
 149. Kipen HM, Black K, Choi H, Cervelli JA, Hernandez M, Alimokhtari S, Perez A, Laskin JD, Laskin DL. (2017). Characterization of sputum macrophages from humans exposed experimentally to ozone. *The Toxicologist*, 156: 13 (A1057).
 150. Mishin V, Heck DE, Laskin DL, Laskin JD. (2017). Cytochrome P450 monooxygenase activity is independent of its hydrogen peroxide generating NADPH oxidase activity. *The Toxicologist*, 156: 114 (A1484).
 151. Malaviya R, Gardner CR, Laskin JD, Laskin DL. (2017). Structural and inflammatory alterations in the respiratory track following chlorine gas inhalation in mice. *FASEB J*, 31:1b625.

SELECTED PRESENTATIONS (2007 –present)

1. "Laminins and the Extracellular Matrix as Targets for Sulfur Mustard", 1st Annual CounterACT Network Research Symposium, Arlington, VA, 4/26/07.
2. "Oxidative Stress and Skin Toxicity", NJ Spotlight on Skin Research; Minisymposium, Biomaterials Research Center, Rutgers University, 6/25/07.
3. "Sulfur Mustard Countermeasures: NATO conference on Defense against the Effects of Chemical Hazards, Edinburgh, Scotland, 10/12/07.
4. "Mechanism of Cutaneous Inflammation", Dermal Clinical Evaluation Society, Glenpointe Marriott, Teaneck, NJ, 11/14/07.
5. "The UMDNJ/Rutgers University CounterACT Research Center of Excellence", Robert Wood Johnson Medical School Executive Council, New Brunswick, NJ, 2/21/08.
6. "Oxidative Stress in Chemical-induced Skin Injury", 2nd Annual CounterACT Network Research Symposium, Washington, DC, 4/16/08.
7. "Treatments for Sulfur Mustard Poisoning", Department of Chemistry, Lehigh University, Bethlehem, MA, 4/25/08.
8. "Risks from Exposure to Sulfur Mustard", Woods Hole Toxicology Forum, Woods Hole Oceanographic Institute, Woods Hole, MA, 8/03/08.
9. "Perspectives in Homeland Security Research", Department of Environmental Health, New York Medical College School of Public Health, New York, NY, 9/18/08.
10. "The UMDNJ/Rutgers University CounterACT Research Center of Excellence", Biomedical Advanced Research and Development Authority (BARDA), 2009 HHS Public Health Emergency Medical Countermeasures (PHEMC) Enterprise Stakeholders Workshop, Marriott, Arlington, VA, 10/24/08.
11. "Oxidative Stress in Sulfur Mustard Toxicity"; Lovelace Respiratory Research Institute, Sulfur Mustard Symposium, Albuquerque, NM, 11/5/08.
12. "Thioredoxin Reductase as a Target for Sulfur Mustard", Biomaterials Center, Rutgers University, 12/18/08.

13. "Antioxidants as Countermeasures to Sulfur Mustard", 3rd Annual CounterACT Network Symposium, Washington, DC, 4/15/09.
14. "Drug Development under the FDA Animal Efficacy Rule", Johnson and Johnson Pharmaceutical Research Institute, Raritan, NJ, 6/8/09.
15. "Mechanisms of inflammation", Javelin Pharmaceuticals, Cambridge, MA, 7/28/09.
16. "Redox cycling of 2- and 4-hydroxyestrogen catechol metabolites in breast epithelial cell lines", 2009 Gordon Research Conference on Hormones & Cancer, Holderness School, NH, 7/29/09.
17. "Mechanisms mediating chemical redox cycling", Woods Hole Oceanographic Institute, Woods Hole, MA, 8/7/09.
18. "US efforts to combat chemical terrorism", Woods Hole Toxicology Forum, Woods Hole, MA, 8/8/09.
19. "Oxidative stress induced by chemical alkylating agents", New York Academy of Sciences symposium on Oxidative and Nitrosative Stress, New York, NY, 11/30/09.
20. "Mechanism of action of sulfur mustard and related alkylating agents, Department of Chemistry, Lehigh University, 5/2/10.
21. "Control of Stem Cell Differentiation in the Lung", Society of Toxicology Annual Meeting, Washington, DC, 3/8/11.
22. The Threat of Chemical Terrorism, Department of Environmental Medicine, New York University, Sterling Forest, NY, 4/29/11.
23. Mechanisms of Action of Chemical Threat Agents, 5th Annual CounterACT Network Research Symposium, Washington, DC, 6/22/11.
24. UMDNJ-Rutgers University CounterACT Research Center of Excellence, 6th Annual CounterACT Network Research Symposium, San Francisco, CA, 6/22/11.
25. Countering Chemical Terrorism, Rutgers University Center for Dermal Research CDR Seminar Series 2012, Piscataway, NJ, 1/23/12.
26. UMDNJ-Rutgers University CounterACT Research Center of Excellence, 7th Annual CounterACT Network Research Symposium, Bethesda, MD, 6/27/13.
27. Mechanisms of skin toxicity by chemical vesicants, Woods Hole Toxicology Forum, Woods Hole, MA, 8/16/13.
28. Mechanism of toxicity of bifunctional alkylating agents, Woods Hole Oceanographic Institution, Woods Hole, MA, 7/14/13.
29. Thioredoxin reductase as a target for bifunctional alkylating agents, Department of Chemistry, Lehigh University, 2/3/14.
30. UMDNJ-Rutgers University CounterACT Research Center of Excellence, 8th Annual CounterACT Network Research Symposium, Denver, CO, 6/21/14.
31. Rutgers University CounterACT Research Center of Excellence, JASON Annual Meeting (FBI Sponsored Symposium), La Jolla, CA, 6/26/14.
32. Strategies to Counter Chemical Terrorism, American Association of Anatomists (AAA) Regional meeting, Philadelphia, PA, 10/11/14.

33. Countering Agents of Chemical Terrorism, Rutgers University Robert Wood Johnson Medical School, Pediatric Ground Rounds, 11/13/14.
34. Plenary Speaker: Pulmonary Effects of Inhaled Sulfur Mustard, 15th Medical Chemical Defence Conference, Bundeswehr Medical Academy in Munich on 22nd and 23rd of April 2015. Munich, Germany, 4/28/15.
35. Plenary Speaker: Countering Agents of Chemical Terrorism, Inaugural Conference of the Rutgers Institute for Emergency Preparedness and Homeland Security, New Brunswick, NJ, 6/6/15.
36. Plenary Speaker; Rutgers CounterACT Research Center of Excellence, 9th Annual CounterACT Research Program Symposium (sponsored by the New York Academy of Sciences), 6/15/15.
37. Global Issues in Chemical Terrorism, Role of the CounterACT Program in Public Health Initiatives, Rutgers University RBHS, Global Health Research Symposium, 6/30/15.
40. Plenary Speaker, Chemical Effects on Human Health: The Costs of Development” UNAI START Conference on Our Environment and Our Health, United Nations, New York, NY, 6/6/16.
41. Plenary Speaker, Rutgers University CounterACT Research Center of Excellence: The Development of Countermeasures, 10th Annual CounterACT Research Symposium, Davis, CA, 6/16/16.
42. “Living in a World of Chemical Threats”, Rutgers University New Jersey Medical School, Newark, NJ 1/24/17
43. “Developing Drugs to Counter Chemical Threats”, Yale University School of Public Health, New Haven, CT, 2/22/17
44. Plenary Speaker: “Mechanisms of Pulmonary Injury by Sulfur Mustard”, 16th Medical Chemical Defence Conference, Bundeswehr Medical Academy in Munich on 4th-6th of April 2017. Munich, Germany
45. Plenary Speaker, Rutgers University CounterACT Research Center of Excellence, “The Development of Medical Countermeasures”, 11th Annual CounterACT Research Symposium, Davis, CA, 6/15/17.