CURRICULUM VITAE MICHAEL C. MADDEN

[Updated: November 8, 2016]

PERSONAL INFORMATION:

Work Address: Research Biologist
National Health and Environmental Effects Research Laboratory
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U.S. Environmental Protection Agency
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EDUCATION:

1973 - 1977 B. S., Biology, Manhattan College, Bronx, New York
1977-1980 M.S., Zoology, University of Georgia, Athens
1980-1986 Ph.D., Toxicology, University of North Carolina at Chapel Hill

PROFESSIONAL TRAINING AND EXPERIENCE:

2014-present: Adjunct Professor, Dept. of Environmental Sciences and Engineering, School of Public Health, University of North Carolina at Chapel Hill (appointed through 2017)

2011-present: Research Biologist, U.S. Environmental Protection Agency, GS-15 grade, Research Triangle Park, NC

2009-present: Adjunct Associate Professor, Dept. of Environmental Sciences and Engineering, School of Public Health, University of North Carolina at Chapel Hill (appointed through 2014)

2008-present: : Adjunct Associate Professor, Curriculum in Toxicology, University of North Carolina at Chapel Hill

2003-2011: Research Biologist, U.S. Environmental Protection Agency, GS-14 grade, Research Triangle Park, NC

1998-2003: Research Biologist, U.S. Environmental Protection Agency, GS-13 grade, Research Triangle Park, NC

1995-1998: Research Biologist, U.S. Environmental Protection Agency, GS-12 grade, Research Triangle Park, NC

1995-2008: Adjunct Assistant Professor, Curriculum in Toxicology, University of North Carolina at Chapel Hill

1993-2009: Adjunct Assistant Professor, Dept. of Environmental Sciences and Engineering, School of Public Health, University of North Carolina at Chapel Hill

1989- 1994: Research Associate, Center for Environmental Medicine and Lung Biology, University of North Carolina at Chapel Hill

1986-1989: Postdoctoral Fellow Trainee, Center for Environmental Medicine, University of North Carolina at Chapel Hill.

1983-1988: Lectured in ENVR 143, Dept. of Environmental Sciences & Engineering, University of North Carolina at Chapel Hill.

1980-1986: Research Assistant, Dept. of Medicine, University of North Carolina at Chapel Hill.

1980: Research Technician, Skidaway Institute of Oceanography, Savannah, Georgia.

1978-1980: Teaching Assistant, University of Georgia

1978- 1979: Research Assistant, Skidaway Institute of Oceanography, Savannah, Georgia 1975-1977: Chemistry Laboratory Assistant, Manhattan College.

Continued Training:

●1998 "Measurement of oxidative stress", Continuing Education Course (3.5 hr), SOT Annual Meeting, Seattle, WA.

●2001 "Genomic technologies applied to toxicology", Mini-course (1 hr), SOT Annual Meeting, San Francisco, CA.

●2001 "Diesel particulates and NOx emissions", University of Leeds, UK course (Prof. Gordon Andrews, coordinator) at EPA facility in Ann Arbor, MI. Oct 22-Oct 26th. 35 hr.

●2002 “Basic principles and protocols in molecular toxicology”, Continuing Education Course (3.5 hr), SOT Annual Meeting, Nashville, TN.
●2002 HPLC repair course (3.5 hr), conducted by Waters Associates. RTP, NC.
●2003 “Medicinal herbals and dietary supplements”, Continuing Education Course (3.5 hr), SOT Annual Meeting, Salt Lake City, UT.
●2004 “Of mice and magnets: metabonomics technology in safety assessment”. Continuing Education Course (3.5 hr), SOT Annual Meeting, Baltimore MD.
●2005 Human Subjects Research Ethics Training and Certification via Collaborative IRB Training Initiative (CITI) web site (2 hr).
●2005 “Fundamentals of nanotechnology: chemistry, exposure, environmental/health assessment and societal impacts”. Mini-course (1 hr), SOT Annual Meeting, New Orleans, LA.
●Duke University National Human Subjects Protections Conference on “What is Acceptable Risk”, Sept 25-26, 2006. RTP, NC
●2006 “Predictive Power of Novel Technologies (Cells to 'Omics'): Promises, Pitfalls and Potential”. Continuing Education Course (3.5 hr), SOT Annual Meeting, San Diego CA.
● 2007 “Allergy and Allergic Disease: A Primer for Toxicologists”. Continuing Education Course, SOT Annual Meeting, Charlotte, NC.
●2008 “Dose-Response Modeling for Occupational and Environmental Risk Assessment”. Continuing Education Course, SOT Annual Meeting, Seattle, WA.
●2011 “Current Nonclinical Strategies and Methods for Evaluating Drug-Induced Cardiovascular Toxicity”. Continuing Education Course, SOT Annual Meeting, Washington DC.
●2015 “New Horizons in Chemical Carcinogenesis: Advances in Mode of Action and Mechanism of Cancer Pathogenesis”. Continuing Education Course, SOT Annual Meeting, San Diego, CA.
●2016 “Basic Principles and Practices for Applying Epigenetics in Mechanistic Toxicology” Continuing Education Course, SOT Annual Meeting, New Orleans, LA.

PROFESSIONAL HONORS, ASSOCIATIONS, and RESPONSIBILITIES:

Membership in Professional Societies:

Academy of Toxicological Sciences
Phi Beta Kappa
Sigma Xi, University of North Carolina-Chapel Hill, Chapter President 2013-2016; Chapter Vice-President 2016-present
Society of Toxicology, North Carolina Chapter Society of Toxicology, National Chapter:

SOT Inhalation Specialty Section: Councilor 2003-2005
SOT Occupational & Public Health Specialty Section Vice-President Elect 2009

Luxuriant Flowing Hair Club for Scientists

Editorial Responsibilities:
Associate Editor Inhalation Toxicology (2004-2015)

Editorial Staff
Inhalation Toxicology (January 1998-2016)
Journal of Breath Research (2015-present)

Review Consultant (Most Recent)
Aerosol Science and Technology
American Journal of Respiratory Cell and Molecular Biology
Archives of Environmental Contamination and Toxicology
Atmospheric Chemistry and Physics
Atmospheric Environment
Biomarkers
Cell Biology and Toxicology
Chemical Research in Toxicology
Chemosphere
Environmental Health Perspectives
Environmental Pollution
Environmental Research
Environmental Science and Technology
European Respiratory Journal
International Journal of Environmental Research and Public Health
Journal of Applied Toxicology
Journal of Breath Research
Journal of Chemistry
Journal of Chromatography B
Journal of Hazardous Materials
Journal of Toxicology and Environmental Health
Journal of the Air and Waste Management Association
Mutagenesis
Mutation Research
Particle and Fibre Toxicology
PLOS One
Regulatory Toxicology and Pharmacology
Toxicology
Toxicology and Applied Pharmacology
Toxicology In Vitro
Toxicology Letters
Toxicological Sciences

Ad Hoc Grant Reviewer (last ~10 years)**:**
University of North Carolina Center for Environmental Health and Susceptibility Natural Environment Research Council (NERC), U.K.
Asthma UK (London, UK)
Kentucky Lung Cancer Research Program (Universities of Kentucky and Louisville)
Research Council of the Lung Foundation Netherlands

INVITED SCIENTIFIC PRESENTATIONS AND SEMINARS:

1. "Uptake and depuration of polycyclic hydrocarbons by the American oyster". Southeastern Estuarine Research Society Annual Meeting. Wrightsville Beach, NC. 1980.
2. "Cellulose: Its limited effect in respiratory responses". American Chemical Society Annual Meeting. Philadelphia, PA. August, 1984.
3. "Effect of ozone exposure on arachidonic acid metabolism in pulmonary endothelial cells". Duke University, Durham, NC. January, 1987.
4. "Ozone inhibits endothelial cyclooxygenase via hydrogen peroxide". FASEB Annual Meeting. Washington, DC. April, 1987.
5. "Effect of ozone on lung cell arachidonic acid metabolism". Glaxo Pharmaceutical Corporation, Research Triangle Park, NC. August, 1989.
6. "Oxidized arachidonic acid and DNA damage". Duke University, Durham, NC. January 5, 1993.
7. "Effects of air pollutants on lung lipid metabolism in humans and rodent models". Ashland University, Ashland, OH. March 7, 1997.
8. "Biomarkers and Methods Development" Session Overview, HSD review 2/26/98 (Cochairman with Jane Gallagher).
9. “The influence of co-pollutants on the toxicity of airborne particulate matter” Session Overview, SOT Annual Workshop, March 22, 1999; Philadelphia, PA. (Session co-chairman with Kent Pinkerton).
10. “An Historical Overview of the Ozone Exposure Problem”, Fifth U.S. EPA NHEERL Symposium, “Indicators in Health and Ecological Risk Assessment”, June 6-8, 2000, Research Triangle Park, NC. (Session co-chair with William Hogsett).
11. “Noninvasive approaches for toxicological research of the lung”, SOT Annual Workshop, March 27, 2001; San Francisco, CA. (Session co-chair with William Foster).
12. “Diesel exhaust particulate health effects-results from in-vitro and in-vivo studies” Seminar, University of Washington, Oct. 24, 2002.
13. “Novel insights into the toxicology of lung oxidative stress”, SOT Annual Symposium, March 11, 2003; Salt Lake City, UT (Session co-chair with Maria Kadiiska).
14. “In vitro and In vivo evaluation of toxicity of particles from differences sources”, HEI Diesel Emissions Toxicity, November 6-7, 2003, Denver, CO.
15. “Lipomics, an important component of metabolomics, and possible use in toxicology studies” SOT Annual Meeting, March 22, 2004, Baltimore, MD. (Symposium co-chair with David White).

16. “Strategies to identify bioactive substances in complex air pollutant mixtures”. SOT Annual Meeting, March 24, 2004, Baltimore, MD. (Workshop co-chair with Jack Harkema)
17. “Controlled diesel exposures: Inter-phasing human and animal studies and their use in the risk assessment process”**.** SOT Annual Meeting, March 21-25, 2004, Baltimore, MD. 18. "Diesel Exhaust Exposure Studies: Some Key Questions Related to Health Effects, and Implications for Indoor Air Research" Syracuse University, October 24, 2005. Part of the 2005 Syracuse Symposium on Environmental and Energy Programs.
19. Invited Panelist for Discussion of Session entitled “Diesel Emissions: Recent Developments in Emissions, Health Effects and Impacts on Risk Assessment”. 31st Winter Meeting, The Toxicology Forum. Washington DC, January 31, 2006.
20. “Comprehensive Responses of Lipid Classes to Toxicants and Involvement in Diseases”. SOT Annual Meeting, March 7, 2006, San Diego, CA. (co-chair with Ron Riley)
21. “Diesel Exhaust Research: What Has It Told Us About Ambient Organic PM Toxicity”. EPRI Workshop on Organic Aerosols EPRI Workshop Palo Alto CA October 24-25, 2006.
22. “Complex issues with examining diesel exhaust toxicity: Is the task getting easier or harder?” BfR Federal Institute for Risk Assessment, Alternative Test Methods in Inhalation Toxicology Congress. Berlin, Germany. May 7-9, 2007.
23. “Toxicologist for hire: Experiences in academia, federal government, and consulting”, Ashland University, Ashland OH. Oct. 30, 2007. [Sponsored partially by SOT Education Committee]
24. “Measurements of air pollutant biomarkers with exhaled breath techniques”. International Association for Breath Analyses Annual Meeting, Cleveland, OH. Nov. 1-3, 2007.
25. “The Toxicology of Biofuels Combustion Emissions” SOT Annual Meeting, March 20, 2008, Seattle, WA (co-chair with Flemming Cassee)
26. “Ozone Toxicology: Historical perspectives of the science that shaped the regulatory standards” SOT Annual Meeting, March 17, 2008, Seattle, WA. (co-chair with Daniel Costa) 27. University of California-Los Angeles & University of Southern California Exposure Assessment Workshop.”Exhaled breath biomarkers with air pollution studies: what looks promising”. July 10-11, 2008, Los Angeles.
28. “Validation studies of exhaled breath condensate biomarkers using diesel exhaust exposures”. American Chemical Society Western Regional Meeting, Las Vegas, NV. September 23-27, 2008.
29. “Biomarkers: New Breakthoughs in the World of Air Pollution Studies”. SOT Annual Meeting, Baltimore MD, March 15-19, 2009. (co-chair with Stephen Edwards)
30. SOT Special Regional Interest Symposium. “Biofuels & the Bay: Characterizing Health and Ecosystem Impacts in the Chesapeake”. SOT Annual Meeting, Baltimore MD, March 15-19, 2009. (Co-chair with Anne Jarabek)
31. “Examination of cytokines and metals in exhaled breath condensate and lung lavage fluids after diesel exhaust exposure.” Joint International Association of Breath Research and International Society of Breath Odor Research, Dortmund, Germany. April 26-30, 2009. [Note: US EPA NHEERL would not pay for travel; talk presented by NERL co-author.]

32. "Human lung responses to controlled diesel exhaust exposure". 13th ETH (Eidgenössische Technische Hochschule) Conference on Combustion Generated Nanoparticles. Swiss Federal Institute of Technology, Zurich, Switzerland. June 22nd – 24th 2009. [Note: Could not attend due to personal medical reasons].
33. "Use of EBC Endpoints For Examination of Body Mass Index as a Susceptibilty Factor to Diesel Exhaust ". At Exhaled breath analysis: From sensors to devices and applications. Engineering Conferences International. October 24-29, 2010. Barga, Italy.
34. Markers in Exhaled Breath Condensate and Lung After Diesel Exhaust Exposure". Lecture at CNR (Council of National Research) Center of the Italian National Academy. Pisa, Italy. Oct. 22, 2010.
35. "Toxicological Considerations in the Gulf of Mexico Oil Spill" Society of Toxicology Annual Meeting. Washington DC March 2011.
36. SOT Biotechnology Specialty Section Reception Speaker. Co-speaker with Anne Chappelle. Biofuels: Toxicological Issues from Cradle to Grave. SOT Annual Meeting, Washington DC, March 6, 2011.
37. "Liquid Biofuels: toxicology of biomass combustion emissions". Pennsylvania State Bioenergy Emissions and Health Impacts Course, March 2012, Harrisburg PA.
38. "Co-exposures of Volunteers to Petroleum Diesel Exhaust and Ozone to Examine Potential Synergistic Interactions". Duke University, Durham, NC. January 18, 2013.
39. "Pulmonomics, the Exposome, and Microbiomes in Immunotoxicology". Society of Toxicology Annual Meeting. San Antonio, TX. March 13, 2013.
40. "Breath Biomarkers from Viable Pulmonary Aerosols: Discovery of Human Microbiome Contributions." Society of Toxicology Annual Meeting. San Antonio, TX. March 13, 2013.
41. "Controlled exposures of human volunteers to diesel engine exhaust: Biomarkers of exposure and health outcomes". International Society of Aerosols in Medicine. Chapel Hill, NC. April 8, 2013.
42. "Are Biofuels More or Less Toxic than Conventional Fuels and What are the implications for Human Exposure and Risk?" Society Of Toxicology Workshop Session, Phoenix, AZ March 27, 2014 (Co-chair with Annemoon vanErp).
43. "Some Like It Hot: Impacts of Wildfires on Human Health", Regional Interest Session. Society Of Toxicology Annual Meeting, March 2015 San Diego CA.(Co-Chair with Shelley DuTeaux).
44. "Variability of exhaled breath condensate (EBC) volume and pH using a feedback regulated breathing pattern". International Association of Breath Research Annual Meeting, Vienna, Austria, September 14, 2015.
45. "Human and animal studies: portals into the whole body and whole population response". International Association of Breath Research Annual Meeting, Zurich, Switzerland, September 14-16, 2016.

Additionally:
-Several Work-in-Progress presentations at EPA facilities in Chapel Hill between 1987-present (at least one/year).

-Lectures at in classes at UNC-CH in Environmental Science & Engineering ENVR732 (Health Effects of Outdoor and Indoor Air Pollution), ENVR 430 (Health Effects of Environmental Agents), and ENVR 640 (Environmental Exposure Assessment); Duke University ENVIRON235 (Air Quality Management).

EPA LEADERSHIP:

1. HSD Team Leader: Antioxidants 1996-1997.
2. HSD Team Member: Ozone Mechanisms, Ozone Dose Response, Particulate Matter. 1996-1997.
3. Team Co-Leader, Biomarkers and Methods Development Session, HSD Review 2/25-2/26/98.
4. NHEERL Synergy Workgroup Member for 1995-2000.
5. Participant, EPA sponsored Ozone Research Needs Workshop 3/25-3/27/97 Chapel Hill, NC.
6. Participant, EPA/NARSTO PM Workshop. 7/22-7/23/98 Chapel Hill, NC.
7. Organizing Committee, NHEERL Toxicology Extrapolation Workshop. 8/10-8/12/99, Research Triangle Park, NC.
8. Session Co-chairman, Ambient Ozone Session, Fifth U.S. EPA NHEERL Symposium, "Indicators in Health and Ecological Risk Assessment", 6/6-6/8/00, Research Triangle Park, NC.
9. Member, U.S. EPA Ozone Research Strategy Needs Document, 2000-2002.
10. Union Steward, American Federation of Government Employees Local 3347, AFL-CIO. 2000-200present.
11. Reviewer, U.S. EPA Air Quality Criteria for Particulate Matter (3rd external review draft, April 2002)
12. Member, EPA Workgroup on Nonroad Diesel- drafting preamble to new regulation proposal, 2002-2004.
13. Participant, First External Review Draft of the Ozone Criteria Document Workshops, 2003-2004, RTP, NC.
14. NHEERL Core Analytical Operations Workgroup, HSD representative, 2004-2006.
15. NHEERL-wide Awards Committee Member, AFGE representative, 2004 & 2005, 2007.
16. Contributor, EPA's Asthma Research Document, 2004.
17. Union Local 3347 Vice President for Office of Research and Development, American Federation of Government Employees, AFL-CIO. 2005-2010.
18. Member, Health Effects Institute (Organizer) Advanced Collaborative Emissions Study (ACES) Workgroup on Biological Screening of Emission Toxicity (2003-2006).
19. Member, NHEERL "Revisioning" Committee, AFGE representative, 2006.
20. Co-Author (with N. Mayer), Plaintiff Brief for Arbitration, FMCS Case no. # 060821-59004-3, American Federation of Government Employees, plaintiff, vs. United States Environmental Protection Agency, defendant. 2007

21. Inter-agency Federal Biomass Research and Development Board; Environment, Health, and Safety Team. 2008-2012.
22. Union Local 3347 Chief Steward, American Federation of Government Employees, AFL-CIO. 2010-present.
23. Contributor, US EPA "Biofuels and the Environment: the First Triennial Report to Congress" (2011 Final Report). Publication EPA/600/R-10/183F. http://cfpub.epa.gov/ncea/biofuels/recordisplay.cfm?deid=235881.

EPA Honors:

1. Scientific and Technical Achievement Award honorable mentionable (2001). [Dye, J.A., *M.C. Madden*, J.H. Richards, et al. Ozone Effects on Airway Responsiveness, Lung Injury, and Inflammation. Comparative Rat Strain and In Vivo/In Vitro Investigations]
2. US EPA Gold Medal for PM Team Research (2003).
3. Scientific and Technical Achievement Award honorable mentionable (2004). [Prahalad, A.K., Inmon, J., Dailey, L.A., *Madden, M.C.,* Ghio, A.J., Gallagher, J.E. Air pollution particles mediated oxidative DNA base damage in a cell free system and in human airway epithelial cells in relation to particulate metal content and bioreactivity.]
4. NHEERL Award 2006. Analytical Chemistry Core Implementation Team member.
5. NHEERL Award 2007. Goal 4 for Interdivisional Laboratory Research on Diesel Exposure Implementation.
6. 2007 Scientific and Technical Achievement Award Level III Award (awarded 2008). [Andrew J. Ghio (25%), Lisa A. Dailey (25%), Jackie Stonehuerner (25%), Michael Madden (25%). For: (1) Disruption of Iron Homeostasis as a Mechanism of Biologic Effect by Ambient Air Pollution Particles. Inhalation Toxicology, 17(13):709-716 (2005), (2) DMT1 Decreases Metal-Related Injury in the Lung. American Journal of Physiology, 289:L460-L467 (2005), (3) TNF, IFN-Gamma, and Endotoxin Increase Expression of DMT1 in Bronchial Epithelial Cells. American Journal of Physiology, 289:L24L33 (2005).]
7. ORD Bronze Medal for Commendable Service Award 2008**.** Analytical Chemistry Core Workgroup and Implementation Team.
8. ORD Bronze Medal for Commendable Service Award 2008**.** Exhaled Breath Condensate Research Team.
9. ORD Bronze Medal for Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices Award 2012. Diesel Exhaust Studies Team.
10. US EPA 2011 Scientific and Technical Achievement Award, Honorable Mention. Innovative Analytical and Statistical Methods for Identifying Environmental and Background Chemicals in Human Blood.
11. US EPA 2015 Scientific and Technical Achievement Award, Level III. Kahle JJ, Neas LM, Devlin RB, Case MW, Schmitt MT, **Madden MC,** Diaz-Sanchez D. Interaction effects of temperature and ozone on lung function and markers of systemic inflammation, coagulation, and fibrinolysis: a crossover study of healthy young volunteers. Environ Health Perspect. 2015 Apr;123(4):310-6.
12. ORD Bronze Medal for Commendable Service Award 2016. Human Research Protections Team.

GRANT SUPPORT:

1. Sigma Xi Grant-in Aid of Research, Principal Investigator. "Uptake and depuration of four petroleum hydrocarbons by the American oyster, Crassostrea virginica." 1978.
2. Society of Toxicology Student Travel Award, 1985.
3. AmericanLung Association of North Carolina Grant, Principal Investigator. "Effects of Ozone on Arachidonate Metabolism in Human Lung Cells", $9,620. July 1, 1987 - June 30, 1988; Renewed $8,880. July 1, 1988 - June 30, 1989.
4. National Institute of Environmental Health Sciences. Principal Investigator. "Role of Eicosanoids in Ozone-Induced Lung Injury." 8/1/89 - 7/31/94. 1-R01-ES04951-01, $62,098 Direct costs for fiscal year 1993-94.
5. U.S. Environmental Protection Agency Cooperative Agreement "Collaborative Clinical Research on Health Effects of Exposure to Air Pollutants. " P. Bromberg, PI. 12/16/90-12/15/95.

CR-817643, M. Madden, Co-investigator: $61,237 Direct costs for fiscal year 1992-93.

6. HSD infrastructure funds for one graduate student 1997-99.
7. NHEERL Synergy Travel Award, 2001. (To NHEERL WED-Corvallis) 8. NHEERL Bioinformatics/CompTox Center Award 2004.
9. Society of Toxicology Education Committee Travel Sponsorship for presentation to undergraduate students, Ashland University, Ashland OH. 2007.
10. US EPA Internal ORD Competition for Biofuels Toxicology Funding. *Effect of Biofuel Combustion Constituents on Cardiopulmonary Responses in Rodents and Humans*; M. Madden, PI [team of 15 EPA co-investigators, 2 nonEPA investigators]Total $944K funding/ 2 years
11. US EPA Internal ORD Competition for Biofuels Toxicology Funding.. *Toxicity screening of Bio-Diesel fuels through in vitro exposure to photo-processed combustion exhausts*. J. Offenbach (NERL), PI [M.Madden one of 5 EPA co-investigators] Total $525K funding/ 2 years.

UNDERGRADUATE, GRADUATE, AND POSTGRADUATE TRAINING RECORD:

Graduate and Professional Student Mentorship:

1. David Wright, Master of Science 1992, Curriculum in Toxicology, University of North Carolina at Chapel Hill. [Committee Member]
2. J. Philip Smith, 1992-1994. Curriculum in Toxicology, University of North Carolina at Chapel Hill.
3. Katherine Kraft, 1993-1999. Curriculum in Toxicology, University of North Carolina at Chapel Hill.
4. Jiann-Gwu Lee, 1993-1995. Cell Biology Program, North Carolina State University.
5. Monique Richards, 2000. Curriculum in Toxicology, University of North Carolina at Chapel Hill. [Lab rotation].

6. Alejandro Molinelli, 2001-2006. Doctor of Philosophy. Curriculum in Toxicology, University of North Carolina at Chapel Hill. [Research Advisor].
7. Demetra Stamm, 2001. School of Medicine, University of North Carolina at Chapel Hill. [Lab rotation].
8. Sailaja Mundandhara, 2002-2004. Postdoctoral Fellow, University of North Carolina-Chapel Hill, Center for Environmental Medicine, Asthma, and Lung Biology. [Mentor]
9. Keegan Sawyer [formerly Musgrove-Wesley]. 2003-2008. Department of Environmental Sciences and Engineering. [Doctoral Research Advisor]
10. Miyoung Yoon. 2003-2007. National Research Council Postdoctoral Fellow. [Co-mentor with Hugh Barton]
11. Weiyan Zhu. 2004-2009. Postdoctoral Fellow, University of North Carolina-Chapel Hill Center for Environmental Medicine, Asthma, and Lung Biology. [Co-mentor with Ian Gilmour]
12. Lars Perlmutt. 2007-2009. Department of Environmental Sciences and Engineering. [Master's Research Advisor]
13. Tina Stevens, 2004-2008, Curriculum in Toxicology Doctoral Candidate. Committee Member.
14. Tina Stevens, 2008-2011, US EPA R-authority post doctoral fellow, Co-mentor (with D. Diaz-Sanchez)
15. Matt Steigel, 2012-2015. Doctoral student, UNC Dept Environ. Sci. & Engineer. Committee Member.
16. Kim deBruijne, 2010-2011. Doctoral candidate, UNC Dept Environ. Sci. & Engineer. Committee Member.
17. Laya Bhavaraju, 2011-2015. Doctoral Candidate, UNC Curriculum in Toxicology. Research Advisor.
18. Nicole Kurhanowitz, 2012. UNC Curriculum in Toxicology. Laboratory Rotation Advisor.
19. Virginia Bass. 2014- present UNC Department of Environmental Sciences and Engineering. [Doctoral Research Advisor]
20. Brett Winters, 2014-present. UNC . Doctoral Candidate, Curriculum in Toxicology. [Research Advisor.]
21. Sibel Mentese, Visiting Scientist University of Çanakkale, Turkey. 2015-2016.

Undergraduate Student Mentorship:

1. Sadhana Char, 1993. University of North Carolina at Chapel Hill.
2. Sujankumar Patel, 1993. University of North Carolina at Chapel Hill.
3. Ripa Patel, 1994. University of North Carolina at Chapel Hill.
4. Margaret Brewinski, 1997. St. Andrew's Prebyterian College, Laurinburg, NC.
5. Dawn Reilly, 1997-1998. University of North Carolina at Chapel Hill.
6. Anna Calderon, 1997. Universidad Autonoma Metropolitana, Mexico City, Mexico
7. Charles Marshall, 1998. St. Andrew's Prebyterian College, Laurinburg, NC.
8. Ahtavea Castellanos. 2002. Texas Southern University, Houston, TX.

9. Benjamin Wiener. 2009. University of North Carolina at Chapel Hill.

COMMUNITY SUPPORT

Special Olympics Orange County Head Coach 18 years (Basketball, Soccer, Softball)

The Arc of Orange County Board of Directors 2010-2014; President 2013-2014;

The Arc of the Triangle Board of Directors (2014-present) [Merger of The Arcs of Orange, Wake, and Durham Counties]; President 2014-2015. [Currently Past President officer]

PUBLICATIONS:

Thesis:
"Uptake and depuration of four polycyclic hydrocarbons by the American oyster, Crassostrea virginica" (under the direction of Robert Taylor, Ph.D.). 1980. Department of Zoology, University of Georgia, Athens.

Dissertation:
"Ozone-induced alterations in arachidonic acid metabolism in cultured lung cell types" (under the direction of Mitchell Friedman, MD). 1986. Curriculum in Toxicology, University of North Carolina at Chapel Hill.

Journal Articles (Peer Reviewed):
PubMed records (incomplete listing):
http://www.ncbi.nlm.nih.gov/sites/myncbi/1tcKmW9M-t8Qi/bibliograpahy/45377317/public/?sort=date&direction=ascending

1. Friedman, M., D. S. Saunders, *M. C. Madden*, K. Gammon and L. Kwock. Ozone inhibits prostacyclin synthesis in pulmonary endothelium. Prostaglandins. 30: 1069-1083, 1985.

2. Suggs, J.E., *M C. Madden*, M. Friedman, C. S. Edgell. Prostacyclin expression by a continuous human cell line derived from vascular endothelium. Blood. 68:825-829 l 986.

3. Friedman, M., D. S. Saunders, *M. C. Madden*, E.L. Chaney, L. Kwock. The effects of ionizing radiation on the pulmonary endothelial cell uptake of alpha-aminoisobutyric acid and synthesis of prostacyclin. RadiationResearch. 106:171-181, 1986.

4. *Madden, M. C.*, R.L. Vender, and M. Friedman. Effect of hypoxia on prostacyclin production in cultured pulmonary artery endothelium. Prostaglandins. 31: 1049- 1062, 1986

5. *Madden, M. C.*, T.E. Eling, and M. Friedman. Ozone inhibits endothelial cell cyclooxygenase activity through formation of hydrogen peroxide. Prostaglandins. 34 445-463 l 987

6. *Madden, M.C.*, T.E. Eling, L.A. Dailey, and M. Friedman. The effects of ozone exposure on rat alveolar macrophage arachidonic acid metabolism. Exp. Lung Research. 17:4763. 1990.

7. *Madden, M.C.*, M. Friedman, L.L. Keyes, H.S. Koren, G.R. Burleson. The effects of phosgene exposure on lung arachidonic acid metabolism. Inhalation Toxicolology. 3:73-90 1991.

8. Becker, S., *M C. Madden*, S.L. Newman, R.B. Devlin, H.S. Koren. Modulation of human alveolar macrophage properties by ozone exposure in vitro. Toxicol Appl. Pharmacol. 110:403415, 1991.

9. Friedman, M., *M.C. Madden*, J.M. Samet, H. S. Koren. Effects of ozone exposure on lipid metabolism in human alveolar macrophages. Environ. Health Perspect. 97: 95- 101. 1992.

10. Koren, H.S., R. Devlin, M. Joyce, R.B. Devlin, S. Becker, K. Driscoll, *M. C. Madden*. Modulation of eicosanoid production by human alveolar macrophages exposed to silica in vitro. Environ.Health. Perspect. 97: 77-83. 1992.

11. Noah, T.L., A.M. Paradiso, *M.C. Madden*, K.P. McKinnon, R.B. Devlin. The responses of a human bronchial epithelial cell line to histamine: cytosolic calcium fluxes and extracellular release of mediators. Amer. J. Respir. Cell Molecular Biol. 5:484-492. 1991.

12. *Madden, M.C.*, S. Becker, H.S. Koren, M. Friedman. Differences in arachidonic acid metabolism by human myelomonocytic cell lines. J. Leuk. Biol. 51:118-123, 1992.

13. *Madden, M.C.*, M. Friedman, N. Hanley, E. Siegler, J. Quay, S. Becker, R.B. Devlin, H.S. Koren. Chemical nature and immunotoxicological properties of arachidonic acid degradation products formed by exposure to ozone. Environ. Health Perspect. 101: 154-164. 1993.

14. McKinnon, K.P., T. Noah, *M. C. Madden*, R.B. Devlin. In vitro ozone exposure increases release of arachidonic acid products from a human bronchial epithelial cell line. Toxicol. Appl. Pharmacol. 118:215-223. 1993.

15. *Madden, M.C.*, J.P. Smith, L.A. Dailey, M. Friedman. Polarized release of lipid mediators derived from phospholipase A_2 activity in a human bronchial cell line. Prostaglandins. 48: 197215 1994

16. Kozumbo, W.J., N.M. Hanley, S. Agarwal, M. Thomas, *M C. Madden*. Products of ozonized archidonic acid potentiate the formation of DNA single strand breaks in cultured human lung cells. Environmental and Molecular Mutagenesis. 27: 185-195, 1996

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