

Tania A. Desrosiers

Curriculum Vitae

Department of Epidemiology
 Gillings School of Global Public Health
 University of North Carolina at Chapel Hill
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RESEARCH INTERESTS

perinatal and pediatric epidemiology • birth defects • surveillance • modifiable risk factors for adverse perinatal outcomes • preconceptional exposure assessment • occupational exposures during pregnancy • male-mediated teratogenesis • epidemiologic methods • research dissemination and translation

PROFESSIONAL SKILLS

research methodology • interdisciplinary collaboration • multi-center study operations • surveillance • study design • proposal and grant writing • protocol development • project management • Institutional Review Board procedures • data management • survey design • data collection • data linkage • analytic planning and statistical analysis • teaching • student mentoring • peer review • research communication

EDUCATION

University of North Carolina at Chapel Hill, Gillings School of Global Public Health <i>PhD, Epidemiology</i>	Chapel Hill, NC 2011
Tufts University School of Medicine, Graduate Programs in Public Health <i>MPH, Epidemiology/Biostatistics</i>	Boston, MA 2003
Tufts University, School of Arts and Sciences <i>BA, Philosophy; Certificate in Community Health.</i>	Medford, MA 2002

PROFESSIONAL EXPERIENCE

Department of Epidemiology, University of North Carolina <i>Research Assistant Professor</i> <i>Clinical Research Scientist</i>	Chapel Hill, NC 2016-current 2011-2015
North Carolina Birth Defects Monitoring Program, Division of Public Health <i>Epidemiologist</i>	Raleigh, NC 2008-2011
Department of Epidemiology, University of North Carolina <i>Graduate Research Assistant</i>	Chapel Hill, NC 2006-2008

Constella Group (acquired by SRA International, Inc.) <i>Independent Consultant</i>	Durham, NC 2006-2008
Cambridge Health Alliance, Department of Community Affairs <i>Research and Evaluation Associate</i>	Somerville, MA 2003
Framingham Heart Study <i>Research Intern</i>	Framingham, MA 2002

HONORS AND AWARDS

2007	UNC Chapel Hill Sidney Kark Award for Distinguished Teaching Assistant
2004-2006	Kirschstein National Research Service Award, Predoctoral Traineeship in Environmental & Occupational Epidemiology, Department of Epidemiology, UNC Chapel Hill, NC National Institute for Environmental Health Sciences (T32ES007018); (08/24/2004 - 08/23/2005; 08/24/2005 - 08/23/2006)
2002-2003	Public Health Traineeship Graduate Programs in Public Health, Tufts University Medical School, Boston, MA US Health Resources and Services Administration
2003	AMA Foundation Health Literacy Grant for Community Organizations and Alliances (\$2500)
2003	Tufts University Graduate Programs in Public Health "Class of 2003" Achievement Award
2002	Golden Key National Honors Society
2001	Tufts University Gemma Cifarelli Memorial Scholarship Award for Community Service

PROFESSIONAL MEMBERSHIPS

2005-current	Society for Perinatal and Pediatric Epidemiologic Research (SPER)
2005-current	Society for Epidemiologic Research (SER)

PEER-REVIEWED PUBLICATIONS

* denotes mentored student authors (masters, predoctoral, postdoctoral trainees)

Desrosiers TA, Siega-Riz AM, Mosley BS, Meyer RE, and the National Birth Defects Prevention Study. Low carbohydrate diets may increase risk of neural tube defects. *Birth Defects Research*. 2018 Jul 110(11):901-909. PMID: 29368448. [Press Released]

Pace ND*, **Desrosiers TA**, Carmichael SL, Shaw GM, Olshan AF, Siega-Riz AM, and the National Birth Defects Prevention Study. Antioxidant consumption is associated with decreased odds of congenital limb deficiencies. *Pediatric and Perinatal Epidemiology* 2018; 32(1):90-99. PMID : 28869773.

Rocheleau CM, Bertke S, Lawson CC, Romitti PA, **Desrosiers TA**, Agopian AJ, Bell E, Gilboa SM and the National Birth Defects Prevention Study. Factors associated with employment status before and during pregnancy: implications for studies of pregnancy outcomes. *Am J Indust Med* 2017 Apr;60(4):329-341. PMID: 282998210.

Desrosiers TA, Lawson CC, Meyer RE, Stewart PA, Waters MA, Correa A, Olshan AF and the National Birth Defects Prevention Study. Assessed occupational exposure to chlorinated, aromatic, and Stoddard solvents

during pregnancy and risk of fetal growth restriction. *Occup Environ Med* 2015 Aug;72(8):587-93. PMID: 26076683.

Rocheleau CM, Bertke SJ, Lawson CC, Romitti PA, Sanderson WT, Malik S, Lupo PJ, **Desrosiers TA**, Bell E, Druschel C, Correa A, Reefhuis J and the National Birth Defects Prevention Study. Maternal occupational pesticide exposure and risk of congenital heart defects in the National Birth Defects Prevention Study. *Birth Defects Res A Clin Mol Teratol* 2015 Oct;103(10):823-33. PMID: 26033688.

Sanders AP*, **Desrosiers TA**, Warren JL, Herring AH, Enright D, Olshan AF, Meyer RE, Fry RC. Association between arsenic, cadmium, manganese, and lead levels in private wells and birth defects prevalence in North Carolina: A semi-ecologic study. *BMC Public Health* 2014 Sept 15;14:955. PMID: 25224535. [Press Released]

Langlois PH, Hoyt AT, **Desrosiers TA**, Lupo PL, Lawson CC, Waters MA, Shaw GM, Romitti PA, Gilboa SM, Malik S and the National Birth Defects Prevention Study. Maternal occupational exposure to polycyclic aromatic hydrocarbons and small for gestational age offspring. *Occup Environ Med* 2014 Aug;71(8):529-35. PMID:24893704.

Langlois PH, Hoyt AT, Lupo PJ, Lawson CC, Waters MA, **Desrosiers TA**, Shaw GM, Romitti PA, Lammer EJ and the National Birth Defects Prevention Study. Maternal occupational exposure to polycyclic aromatic hydrocarbons and risk of oral cleft-affected pregnancies. *Cleft Palate Craniofac J* 2013 May; 50(3):337-46. PMID: 23136939.

Lupo PJ, Symanski E, Langlois PH, Lawson CC, Malik S, Gilboa SM, Lee LL, Agopian AJ, **Desrosiers TA**, Romitti PA, Correa A, Shaw GM, Mitchell LE and the National Birth Defects Prevention Study. Maternal occupational exposure to polycyclic aromatic hydrocarbons and congenital heart defects among offspring in the National Birth Defects Prevention Study. *Birth Defects Res A Clin Mol Teratol* 2012 Nov; 94(11):875-81. PMID: 22945317.

Gilboa SM, **Desrosiers TA**, Lawson CC, Lupo PJ, Riehle-Colarusso T, Stewart PA, van Wijngaarden E, Waters MA, Correa A and the National Birth Defects Prevention Study. Association between maternal occupational exposure to organic solvents and congenital heart defects, National Birth Defects Prevention Study, 1997-2002. *Occup Environ Med* 2012 Sep; 69(9):628-35. PMID: 22811060. [Press Released]

Langlois PH, Hoyt AT, Lupo PJ, Lawson CC, Waters MA, **Desrosiers TA**, Shaw GM, Romitti PA, Lammer EJ and the National Birth Defects Prevention Study. Maternal occupational exposure to polycyclic aromatic hydrocarbons and risk of neural tube defect-affected pregnancies. *Birth Defects Res A Clin Mol Teratol* 2012 Sep; 94(9):693-700. PMID: 22807044

Desrosiers TA, Herring AH, Shapira SK, Hooiveld M, Luben TJ, Herdt-Losavio ML, Lin S, Olshan AF and the National Birth Defects Prevention Study. Paternal occupation and birth defects: Findings from the National Birth Defects Prevention Study. *Occup Environ Med* 2012 Aug; 69(8):534-42. PMID: 22782864. [Press Released]

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF and the National Birth Defects Prevention Study. Maternal occupational exposure to organic solvents during early pregnancy and risks of neural tube defects and orofacial clefts. *Occup Environ Med* 2012 Jul; 69(7):493-9. PMID: 22447643; PMCID: PMC3719396.

Lupo PJ, Langlois PH, Reefhuis J, Lawson CC, Symanski E, **Desrosiers TA**, Khodr ZG, Agopian AJ, Waters MA, Duwe KN, Finnell RH, Mitchell LE, Moore CA, Romitti PH, Shaw GM and the National Birth Defects Prevention Study. Maternal occupational exposure to polycyclic aromatic hydrocarbons and gastroschisis among offspring

in the National Birth Defects Prevention Study. *Environ Health Perspect* 2012 Jun; 120(6):910-5. PMID: 22330681; PMCID: PMC3385431.

Desrosiers TA and Meyer RE. Utilization of dental health care services among pregnant women in North Carolina. *NC Med J* 2012 Mar-Apr; 73(2):136-9. PMID: 22860328.

Desrosiers, TA. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies [Dissertation]. The University of North Carolina at Chapel Hill, ProQuest, UMI Dissertations Publishing, 2011. 3465193

National Toxicology Program (NTP). 2011. Formaldehyde. Pp. 195-205 in Report on Carcinogens, 12th Ed. U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, Research Triangle Park, NC [online]. Available: <http://ntp.niehs.nih.gov/ntp/roc/twelfth/profiles/formaldehyde.pdf> [Contributing Author]

SELECT ABSTRACTS AND PRESENTATIONS

Forestieri NE*, **Desrosiers TA (presenter)**, Freedman S, Aylsworth K, Voltzke K, Olshan AF, Meyer RE. Risk factors for congenital glaucoma and anterior chamber defects. 31st Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Baltimore, MD. June 18-19, 2018. (Poster)

Drover SSM*, **Desrosiers TA (presenter)**, Werler MM, Mitchell AA, Browne ML, Aylsworth AS, Meyer RE. Lithium use during pregnancy and birth defects: Findings from the National Birth Defects Prevention Study. 21st Annual Meeting of the National Birth Defects Prevention Network (NBDPN). Atlanta, GA. March 12-14, 2018.

Desrosiers TA, Schisterman EF, Ye A, Olshan AF, Shaw GM. A sensitivity analysis to assess bias due to left-truncation in epidemiologic investigations of suspected teratogens. 50th Annual Meeting of the Society for Epidemiologic Research (SER). Seattle, WA. June 20-23, 2017. (Poster)

Desrosiers TA, Chawla D, Drover SMS, Lupo PL, Olshan AF. Risk of childhood cancers among children born with non-chromosomal major structural birth defects: A systematic review and meta-analysis. 50th Annual Meeting of the Society for Epidemiologic Research (SER). Seattle, WA. June 20-23, 2017. (Abstract)

Desrosiers TA, Chawla D, Drover SMS, Lupo PL, Olshan AF. Risk of childhood cancers among children born with non-chromosomal major structural birth defects: A systematic review and meta-analysis. 30th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Seattle, WA. June 19-20, 2017. (Invited plenary session presentation)

Desrosiers TA, Schisterman EF, Ye A, Olshan AF, Shaw GM. A sensitivity analysis to assess bias due to left-truncation in epidemiologic investigations of suspected teratogens. 30th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Seattle, WA. June 19-20, 2017. (Poster)

Desrosiers TA, Siega-Riz AM, Mosely BS, Hobbs CA, Meyer RE. Low Carb Diets: Are they counter to the success of folic acid fortification in the United States? 49th Annual Meeting of the Society for Epidemiologic Research (SER). Miami, FL. June 21-24, 2016. (Poster)

Desrosiers TA, Siega-Riz AM, Mosely BS, Hobbs CA, Meyer RE. Low Carb Diets: Are they counter to the success of folic acid fortification in the United States? 29th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Miami, FL. June 20-21, 2016. (Invited plenary session presentation)

Desrosiers TA. Do low carb diets increase the risk of NTDs? 18th Annual Meeting of the National Birth Defects Prevention Network (NBDPN). Arlington, VA. October 19-21, 2015. (Invited oral presentation)

Pace ND*, Siega-Riz AM, Carmichael SL, Shaw GM, **Desrosiers TA (presenter)**, Olshan AF. Antioxidant consumption is associated with decreased odds of congenital limb deficiencies. 18th Annual Meeting of the National Birth Defects Prevention Network (NBDPN). Arlington, VA. October 19-21, 2015. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Stewart PA, Waters MA, Correa A, Olshan AF. Assessed maternal occupational exposure to chlorinated, aromatic and Stoddard solvents during pregnancy and risk of fetal growth restriction in offspring. 48th Annual Meeting of the Society for Epidemiologic Research (SER). Denver, CO. June 16-19, 2015. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Stewart PA, Waters MA, Correa A, Olshan AF. Assessed maternal occupational exposure to chlorinated, aromatic and Stoddard solvents during pregnancy and risk of fetal growth restriction in offspring. 28th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Denver, CO. June 15-16, 2015. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies. 15th Annual Meeting of the National Birth Defects Prevention Network (NBDPN). Arlington, VA. February 27-29, 2012. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies. UNC-CH Center for Environmental Health and Susceptibility. Symposium on Interdisciplinary Environmental Health Research. Chapel Hill, NC. November 14, 2011. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies. 3rd North American Congress of Epidemiology and 44th Annual Meeting of the Society for Epidemiologic Research (SER). Montreal, Canada. June 21-24, 2011. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies. 24th Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER). Montreal, Canada. June 21-22, 2011. (Poster)

Desrosiers TA, Lawson CC, Meyer RE, Richardson DB, Daniels JL, Waters MA, van Wijngaarden E, Langlois PH, Romitti PA, Correa A, Olshan AF. Maternal occupational exposure to organic solvents during early pregnancy and selected congenital anomalies. 10th Annual "Poster Day" of the North Carolina Division of Public Health Epidemiology & Evaluation Team. Raleigh, NC. May 13, 2011. (Poster)

Desrosiers TA. Paternal occupation and birth defects: findings from the National Birth Defects Prevention Study. Annual Meeting of the Centers for Birth Defects Research and Prevention. Atlanta, GA. January 26, 2010. (Invited oral presentation)

Desrosiers TA. Assessing the relation between solvents and birth defects: analytic strategies and challenges. National Institute for Occupational Safety and Health (NIOSH). August 19, 2008. Cincinnati, OH. (Invited oral presentation)

Desrosiers TA, Maygarden SJ, Wang L, Yankaskas BC. Comparison of pathologic features of screen-detected and interval breast cancers in African American and white women. 7th Annual Women's Health Research Day. Center for Women's Health Research at the University of North Carolina. Chapel Hill, NC. June 5, 2006. (Poster)

TEACHING EXPERIENCE

Instructor

Gillings School of Global Public Health, University of North Carolina <i>Lead Instructor, EPID 851 Reproductive and Perinatal Epidemiology</i>	Chapel Hill, NC Fall 2017
Department of Civil & Environmental Engineering, Tufts University School of Engineering <i>Co-instructor, Fundamentals of Epidemiology (undergraduate)</i>	Medford, MA Spring 2002; Spring 2003

Guest Lecturer

Gillings School of Global Public Health, University of North Carolina <i>EPID 851 Reproductive and Perinatal Epidemiology</i>	Chapel Hill, NC 2010-2018
<i>EPID 853 Advanced Topics in Reproductive and Perinatal Epidemiology</i>	2016
<i>PATH 726 Human Environmental Disease</i>	2010-2015

Teaching Assistant

Gillings School of Global Public Health, University of North Carolina <i>EPID 715/16 Theory and Quantitative Methods in Epidemiology</i>	Chapel Hill, NC Spring 2007
<i>EPID 600 Principles of Epidemiology for Public Health</i>	Fall 2006
Department of Epidemiology and Biostatistics, Tufts University School of Medicine <i>Principles of Epidemiology (graduate)</i>	Boston, MA Summer 2002; Fall 2002; Summer 2004
Department of Community Health, Tufts University School of Arts and Sciences <i>Introduction to Community Health (undergraduate)</i>	Medford, MA Fall 2002

GRADUATE STUDENT ADVISING/TRAINING

Dissertation Committee, Member

Ibrahim Zaganjor, doctoral candidate in Reproductive, Perinatal and Pediatric Epidemiology (current)
 Kristin Voltzke, doctoral candidate in Reproductive, Perinatal and Pediatric Epidemiology (current)
 Devika Chawla, PhD in Epidemiology, *Time Trends and Reproductive Health Effects of Cannabis Use* (May 2018)

Masters Thesis, Reader

Marisa Ryan, MSPH in Epidemiology, *Risk Factors for Aotia/Microtia* (May 2017)

Interdepartmental Review Committee for the Epidemiology PhD Program, Member

Ibrahim Zaganjor (October 2018)
 Samantha Drover (July 2017)
 Kristin Voltzke (March 2017)
 Devika Chawla (January 2016)

RESEARCH GRANTS

- 2018-2023 BD-STEPS II Core at the North Carolina Center for Birth Defects Research and Prevention Centers for Disease Control and Prevention (1 U01 DD001231-01)
\$4,370,000 (09/01/2013 - 08/31/2018)
Role: co-Principal Investigator (co-PI: AF Olshan)
- 2014-2016 Exploring the Intersection between Childhood Cancer and Birth Defects to Identify Novel Cancer Predisposition Syndromes
Alex's Lemonade Stand Foundation
\$200,000 (07/01/2014 - 06/30/2016)
Role: Investigator; PI of sub-contract to UNC (PI: PJ Lupo)
- 2013-2018 North Carolina Birth Defects Study to Evaluate Pregnancy exposureS (NC BDSTEPS) Centers for Disease Control and Prevention (1 U01 DD0001036-01); (09/01/2013 - 08/31/2018)
Role: Investigator (co-PIs: AF Olshan and RE Meyer)
- 2002-2013 North Carolina Center for Birth Defects Research and Prevention (NCCBDRP) Centers for Disease Control and Prevention (1 U01 DD000488-01); (09/01/2002 - 11/30/2013)
Role: Research Staff (co-PIs: AF Olshan and RE Meyer)

PROFESSIONAL SERVICE

Ad-hoc reviewer for the following journals: *Birth Defects Research; Epidemiology; Journal of Occupational and Environmental Medicine; Occupational and Environmental Medicine; Pediatric and Perinatal Epidemiology*

- 2018 Data Sharing Committee Chair, Centers for Birth Defects Research and Prevention, CDC
2017 Abstract Reviewer & Poster Judge, Society for Perinatal and Pediatric Epidemiologic Research
2015 Data Sharing Committee Editor, National Birth Defects Prevention Study, CDC
2007-2008 Graduate Studies Committee (Student Representative), Epidemiology, UNC Chapel Hill
2004-2010 EpiAid (Volunteer), UNC/North Carolina Division of Public Health
2005-2007 Perinatal and Environmental Epidemiology Journal Club (Leader), UNC Chapel Hill
2005-2006 Epidemiology Student Organization (Co-President), UNC Chapel Hill

SELECT MEDIA COVERAGE

Low carb diet may increase birth defect risk. BabyCenter.com January 31, 2018.

(<https://blogs.babycenter.com/pregnancy/low-carb-diet-may-increase-birth-defect-risk/>)

Study Links Low-Carb Diets to Brain and Spinal Cord Problems in Babies. Parents Magazine. January 29, 2018.

(<https://www.parents.com/pregnancy/complications/study-links-low-carb-diets-to-brain-and-spinal-cord-problems-in-babies/>)

New UNC-Chapel Hill study links low carbohydrate intake to increased risk of birth defects. UNC Gillings School of Global Public Health, Campus Updates. January 25, 2018. (<http://www.unc.edu/campus-updates/new-unc-chapel-hill-study-links-low-carbohydrate-intake-increased-risk-birth-defects/>)

Gluten free, low-carb diets could pose serious health risks to unborn babies. USA TODAY. January 25, 2018.
(<https://www.usatoday.com/story/news/nation-now/2018/01/25/gluten-free-low-carb-diets-could-pose-serious-health-risks-unborn-babies/1061723001/>)

Study finds that dad's job can influence birth defects. NIEHS Environmental Factor. October 2012.
(<https://factor.niehs.nih.gov/2012/10/science-dadsjob/index.htm>)

What does dad's job have to do with baby's birth defects? TIME. July 20, 2012.
(<http://healthland.time.com/2012/07/20/what-does-dads-job-have-to-do-with-babys-birth-defects/>)

Dad's occupation could have a role in child's birth defects. CBS News. July 18, 2012.
(<http://www.cbsnews.com/news/dads-occupation-could-have-role-in-childs-birth-defects/>)

Teaching with touchscreen technology. January 1, 2004.
<http://healthliteracy.com/2004/01/01/touchscreen-technology/>

Speaker warns students of HIV/AIDS risk. September 1, 2000.
<https://tuftsdaily.com/archives/2000/09/01/speaker-warns-students-of-hiv-aids-risk/>