

Updated 7/1/18

**Rachel L. Miller MD, FAAAAI**

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ACADEMIC TRAINING

Harvard University: A.B., Magna Cum Laude, 1982-1986  
New York University School of Medicine: M.D., 1986-1990

PROFESSIONAL TRAINING

Intern and Resident, Department of Medicine, Columbia-Presbyterian Medical Center, 1990-1993  
Postdoctoral Fellow, Pulmonary and Critical Care Medicine, Columbia-Presbyterian Medical Center, 1993-1997  
Postdoctoral Fellow, Allergy and Immunology, Columbia-Presbyterian Medical Center, 1997-1999

BOARD CERTIFICATION AND MEDICAL LICENSURE

New York State License #187277, 1991  
Internal Medicine, Diplomate, 1993; 2002  
Pulmonary Disease, Diplomate, 1996; 2005; 2016  
Critical Care Medicine, Diplomate, 1997; 2006  
Allergy and Immunology, Diplomate, 1999; 2009; meeting MOC requirements

PROFESSIONAL SOCIETIES

American Thoracic Society, full member, 1993-present  
American College of Chest Physicians, affiliate, 1993-2001  
American Academy of Allergy, Asthma, and Immunology, member, 1998-present; Interest Section: Mechanism of Asthma and Allergic Inflammation  
Assembly on Allergy, Immunology and Inflammation of the American Thoracic Society, 1999-present

ACADEMIC APPOINTMENTS

Assistant in Clinical Medicine, Department of Medicine, Columbia University College of Physicians and Surgeons, 7/1/93-6/30/97  
Instructor in Clinical Medicine, Department of Medicine, Columbia University College of Physicians and Surgeons, 7/1/97-3/31/98  
Assistant Professor of Clinical Medicine, Columbia University College of Physicians and Surgeons, 4/1/98-7/1/05  
Irving Assistant Professor of Clinical Medicine, Columbia University College of Physicians and Surgeons, 7/1/99-6/30/02  
Assistant Professor of Clinical Medicine and Public Health (Environmental Health Sciences) at Columbia University, 7/1/05-1/08  
Associate Professor of Medicine and Environmental Health Sciences at the New York Presbyterian Hospital/Columbia University Medical Center, 1/08-4/09

Associate Professor of Medicine (In Pediatrics) and Environmental Health Sciences at the New York Presbyterian Hospital/Columbia University Medical Center, 4/09-10/13  
Director, Division of Pediatric Allergy and Immunology, Department of Pediatrics, Columbia University College of Physicians and Surgeons, 9/12-present  
Professor of Medicine (In Pediatrics) and Environmental Health Sciences at the New York Presbyterian Hospital/Columbia University Medical Center, 11/13-present  
Director, Division of Pediatric Allergy, Immunology and Rheumatology, Department of Pediatrics, Columbia University College of Physicians and Surgeons, 6/14-present

#### HOSPITAL APPOINTMENTS

Clinical Assistant Physician, Department of Medicine, Columbia-Presbyterian Medical Center, 7/1/93-6/30/97  
Assistant Physician, Department of Medicine, Columbia-Presbyterian Medical Center, 7/1/97-6/30/99  
Attending Physician, Department of Medicine, Columbia-Presbyterian Medical Center, 1999-present  
Program Director, Allergy and Immunology Fellowship, Columbia University College of Physicians and Surgeons, 8/1/04-present

#### ADDITIONAL APPOINTMENTS

Co-Director, Asthma Project, Columbia Center for Children's Environmental Health, 5/02-6/04  
Director, Asthma Project, Columbia Center for Children's Environmental Health, 7/04-present  
American College of Allergy, Asthma and Immunology Epidemiology of Anaphylaxis Working Group 11/04  
Fellow, American Academy of Allergy, Asthma and Immunology, 6/05-present  
Editorial Board of Clinical Medicine Insights: Circulatory, Respiratory and Pulmonary Medicine, 6/07-present  
Director of Allergy, New York Presbyterian Hospital, 7/1/07-present  
Associate Director, Lead Physician Scientist, P50 Disease Investigation through Specialized Clinically-Oriented Ventures in Environment Research, 7/1/07-2013.  
Editorial Board of The Open Allergy Journal, 1/08-8/15  
Co-Deputy Director, Columbia Center for Children's Environmental Health, 1/1/09  
Co-Investigator/Lab Supervisor for ICAC (Inner City Asthma Consortium) URECA study, 1/4/11-present  
Editorial Board of American Journal of Physiology- Lung Cellular and Molecular Physiology 1/1/12-present  
Editorial Board of the Journal of Allergy and Clinical Immunology 3/12-3/17. Impact Factor 13.08  
Section Editor, Allergies and the Environment, *Current Allergy and Asthma Reports*, volume 13, 2014.  
Associate Editor, Clinical Epigenetics, Allergy and Immunology section, 9/14-7/18  
AAAAI grant review committee, Vice Chair/Chair, 1/1/16-present  
Member, Herbert Irving Comprehensive Cancer Center, Cancer Epidemiology Program, 3/5/16-present  
Columbia University Twenty-Five Year Club, 6/16-present  
Associate Director/Director, Columbia University Medical Center and New York-Presbyterian/Morgan Stanley Children's Hospital Food Allergy Research and Education Clinical Network, 7/16-present  
Deputy Editor, *Journal of Allergy and Clinical Immunology*, 7/18-present

#### HONORS AND AWARDS

Harvard College Dean's List

Collegiate National Rowing Championship, second place, 1985  
 Thomas T. Hoopes Prize for excellent senior honors thesis, 1986  
 Faculty Prize for distinguished senior honors thesis in psychobiology, 1986  
 President of NYU Chapter of American Medical Student Association, 1987-1988  
 Eve Flechner Award in Internal Medicine, 1990  
 Florence and Herbert Irving Clinical Research Career Award, 1999  
 2007 AAAAI Clinical Fellowship Award to Allergy and Immunology Training Program  
 at Columbia to support training of Dr. Kathleen Donohue  
 2011, 2012, 2013 US News and World Report Top Doctor (pulmonologist)  
 2015 Samberg Scholar in Children's Health  
 2017 Thomas A. Neff Lecturer at the Thomas L. Petty Aspen Lung Conference, 60<sup>th</sup> Annual  
 Meeting, "Environment and Global Lung Health: Exposure, Susceptibility and Intervention"  
 2018 AAAAI Foundation and Sheldon L. Spector, MD FAAAAI Memorial Lectureship at the  
 AAAAI/ACAAI Joint Congress for delivering the talk "Epigenetic Changes Ascribed to  
 Pollutant Exposures"

## GRANT SUPPORT

### Active:

The Columbia Center for Children's Environmental Health P50 ES09600/RD-83214101 (Perera/Peterson) National Institute of Environmental Health Sciences/EPA Role: Pediatric Physician Scientist	09/1/98-6/30/19
5 T32 ES007322 (Baccarelli) Effort: Less than 0.12 cal. mos. Salary support: None Role: Member of the Faculty Advisory Committee	7/1/00 - 6/30/22
5 T32 HL105323 (Bhattacharya) Columbia University Training Program in Lung Science Roles: Mentor, Member of the Executive Committee Effort: none; Salary support: None	7/1/11-6/30/21
2T32AI007531-16 (Saiman) Columbia University Training Program in Pediatric Infectious Disease Roles: Mentor Effort: none; Salary support: None	9/1/14-8/31/19
5T32ES023770 (Jack) Interdisciplinary Training in Climate and Health Roles: Mentor; Effort: none	7/01/14-06/30/19
4R33 ES024718 (Herbstman) "Personal Environmental Exposure Assessment Using Wristbands for Epidemiological Studies in Disadvantaged Communities" Role: Co-investigator	4/01/16-3/31/20
1U01ES026122 (Terry/Miller) Pregnancy and prenatal PAHs and other environmental exposures and breast cancer Role: Co-PI	9/30/15-6/30/20
1UG3OD023282-01 (Gern) "Children's Respiratory Research and Environment Workgroup (CREW)" A consortium of research centers and birth cohorts that aims to establish risk factors that account for the rise in childhood asthma.	9/1/16-8/31/23

Role: Columbia site PI

Mary Kay, Inc. (L. Liu)

1/1/18-6/30/18

“Role of Antioxidants in Reducing Pollution-Induced Skin Damage”

We will conduct dose-response experiments to determine a maximal concentration of the PAH mixture with minimally visible cellular toxicity using cultured human keratinocytes, which will be used for subsequent exposure studies.

Role: Co-Investigator

Completed:

“Molecular mechanisms controlling IgE production during atopic asthma and allergic rhinitis in patients living in Northern Manhattan”

Division of Environmental Health Sciences Pilot Project Grant (from National Institute of Environmental Health Sciences), Co-investigator, 4/1/96-3/31/98

“Generation of Stat6 transgenic mice as models for allergic disease”

Stony Wold-Herbert Fund Fellowship, Principal investigator, 7/1/97-7/31/98

“Reducing indoor allergen exposures in Northern Manhattan”

National Institute of Health #R21 ES09142, Co-investigator, 9/30/97-9/30/02

“Inducible dominant negative of Stat6 in memory IgE”

National Institute of Health #K08 HL0387

Principal Investigator, 8/1/98-7/30/03

“Functional analysis of IL4Ra polymorphisms in asthmatics living in Washington Heights”

Florence and Herbert Irving Clinical Research Career Award

Principal Investigator, 7/1/99-6/30/02

“Th2 differentiation and gene expression following environmental diesel exposure”

NIEHS Center Pilot Award

Columbia University NIEHS Center

Principal Investigator, 7/1/03-6/31/04

“Antigen-specific sensitization in newborn mice”

Stony Wold Grant-In-Aid

Principal Investigator, 7/1/03-6/30/05

“Antigen Presentation and T cell Polarization *In Utero*”

Asthma and Allergic Diseases Research Center 1 P01 AI50514

Project Leader No. 5, 9/1/01-8/31/06

“Prenatal diesel exposure and adult-onset asthma”

NIEHS: R21ES013063

Principal Investigator, 4/9/04-3/31/08

“Biomarkers of PAH exposure and asthma in an inner city birth cohort”

STAR Grant RD832096: U.S. Environmental Protection Agency, Office of Research and Development

Principal Investigator, 12/1/04-11/30/07

06-0301 Sandler Program for Asthma Research

Alternative splicing of mRNA precursors: Links to asthma

Co-investigator, 7/1/06-6/30/09

NIEHS Center Pilot Award

*In utero* exposure to allergen and diesel: Transgenerational (grandparental) effects on asthma-like outcomes in mice

Co-Principal Investigator, 7/1/06-6/30/07

“Risk factors accounting for neighborhood differences in asthma”

R01 ES014400

Role: Co-Investigator, 7/1/07-6/30/11

RC2 ES018784

“Early-life bisphenol A, immune dysregulation and inner city pediatric asthma”

Role: Co-investigator, 9/30/09-7/31/11

“Urban diesel exposure and inner city asthma”

1R01 ES013163

Principal Investigator, 7/16/05-6/30/11

“Environmental health in a cohort of minority women/infants”

2 R01 ES008977

Role: Director of Asthma Project, 07/1/02-5/31/12

“Residential Pesticide Exposure and Inner City Pediatric Asthma”

Thrasher Research Fund, 07/1/11-6/30/12

“Phthalate exposure and inner city pediatric asthma”

R01ES014393

Co-Investigator, 07/01/07-06/30/12

“The role of airborne PAHs and DEP in the pathogenesis of childhood asthma”

P50ES015905

Associate Director, Lead Physician Scientist, Project Leader, 07/01/07-05/31/13

“DNA methylation in asthma genes following multi-faceted allergen environmental intervention trial” (R. Miller)

AAAAI

Role: Principal Investigator, 7/01/12-12/31/13

“Comparative effectiveness of environmental intervention and standard care in ability to reduce asthma step therapy”

ARRA NoA: 1 R01 HS019384

Agency for Healthcare Research and Quality

Role: Co-investigator, 09/01/10-8/31/2013

“Urban Environment And Childhood Asthma (URECA)

N01-AI-90052/HHSN272200900052C

NIH/NIAID-Univ of Wisconsin Subcontract

Role: Subcontract Principal Investigator/Lab supervisor, 11/1/10-9/29/14

“Validating particulate matter monitors for multiple parameters”

1R01 ES020424 (S. Chillrud)

Role: Co-investigator, 9/2/11-8/31/14

“Validation of a genomic biomarker of response to environmental tobacco smoke”

RO1ES020425 (Spira)

Boston University (NIH)

Role: Co-investigator, 9/01/11-8/31/14

RO1 ES020926 (Nadeau)

Stanford University Subcontract

“Phenotyping/Epigenetic Studies of PAH-Associated T-reg Impairment in Asthma” 6/1/13-3/31/16

1 R21 AI101296 (R. Miller)

“Mouse allergen intervention and DNA methylation of asthma regulatory genes”  
Role: Principal Investigator, 7/1/12-6/30/15

3R01ES013163-07S1 (Miller)  
Research Supplement to Promote Diversity in Health-Related Research  
(Dr. Stephanie Lovinsky-Desir)  
Role: PI, mentor, 7/12/13-10/31/16

“Phase 2 study of vitamin D for tx of respiratory complications in Sickle Cell Disease”  
1 R01 FD003894-01AI (Brittenham)  
Role: Co-investigator, 6/1/11-5/31/15

“Black carbon exposure, DNA methylation, airway inflammation in pediatric asthma”  
2R01ES13163-6A1 (Miller)  
Role: Principal Investigator, 12/1/11- 10/31/17

1R01HL118612A1 (Miller/Nadeau)  
“Secondhand smoke and asthma: Mechanistic outcomes of DNA methylation in T cells”  
Role: Co-PI, 1/15/14 – 12/31/17

#### TEACHING EXPERIENCE AND RESPONSIBILITIES

Pulmonary section: Body in Health and Disease, Preceptor or lecturer, 1997-present  
Medical Intensive Care Unit, Attending, 1997-2015  
Adult Allergy Consult Service, Director, Attending, 1999-present; 4-5 months/year  
John Edsall-John Wood Asthma Center, Attending  
Edgemont High School Science Scholars Program, Mentor, 1997-2001  
Allergy/Immunology Conference for Pulmonary/Allergy Fellows, Course Director, 1998-present  
Intel Science Talent Search, Supervising Scientist/Mentor, Semifinalist (Margaret Samuels-Kalow), 2000

#### MANUSCRIPT REVIEWER:

Chest, Environmental Health Perspectives, Pediatrics, Pediatric Pulmonology, Journal of Clinical Investigation, European Respiratory Journal, Allergy, Journal of Immunology, Clinical Experimental Allergy, Journal of Allergy and Clinical Immunology, PlosOne, American Journal of Respiratory and Critical Care Medicine, Toxicological Sciences, Trends in Molecular Medicine, American Journal of Respiratory Cell and Molecular Biology, Environment Science and Technology, The Lancet, Environmental Research, Mount Sinai Journal of Medicine, Thorax, Journal of Urban Health, The Lancet Respiratory, Journal of Allergy and Clinical Immunology In Practice.

#### GRANT REVIEWER:

U.S. Civilian Research Development Plan, NIH/NIGMS Minority Biomedical Research Support (MBRS) - Support for Continuous Research Excellence (SCORE) program; K23 Patient-Oriented Research Career Development Award, National (British) Coordinating Centre for Research Capacity Development Postdoctoral Award; National Medical Research Council (Singapore); University of Michigan EHS Center pilot grant program, Wellcome Trust, Thrasher Research Fund, NIH Study Section RIBT 2/11; American Association for the Advancement of Science (AAAS) advising the King Abdulaziz City for Science and Technology (KACST)(Saudi Arabia), recurrently; Dietary Influence on the Human Health Effects of Environmental Exposures (R21) 10/11; Northern Ireland Chest Heart and Stroke (NICHs) Scientific Research Grants Scheme, Canadian Institutes of Health: Research Canadian Epigenetics, Environment and Health Research Consortium (CEEHRC) Roadmap Signature Initiative 2/12, French National Research Agency 3/12, Special Emphasis Panel for the NIAID Clinical Trials Implementation Cooperative Agreements (U01s) 3/12, Raine Research Foundation, 6/12, CEED Exploratory Research Grant Program UMDNJ-Robert Wood Johnson Medical School and School of Public Health, 6/12, University of Michigan NIEHS P30 Core Center program pilot study award application, 7/12, Columbia Irving Institute for Clinical and Translational Research and the Clinical Trials Office 5/12, ARTrust/APFED Hope Award 2013-2015, NIAID Investigator Initiated Program

Project Applications (P01) Special Emphasis Panel 2/13; Protect Research MRC PSMB (CB), United Kingdom, 4/13, Irving Institute CaMPR Planning Grants, 1/14, ARTrust/FARE Award 5/14; NIH PAR-13-109 SEP 5/14; NIH ZRG1 PSE-U (chair); Irving Institute for Clinical and Translational Research pilot award, 6/15; Columbia NIEHS Center for Environmental Health in Northern Manhattan - pilot project review 11/15; AAAAI Foundation Faculty Award 12/15; 12/16; 12/17 (Chair); 2016 APFED AAAAI Hope Award 1/16; Michael Smith Foundation for Health Research Scholar Award Application 1/16; ZRG1 PSE-U 02 M 7/16; ZRG1 PSE-C(59)R-7 7/16; NIAID CoFAR CRU (UM1) 11/16. AAAAI International travel grant awards, 12/16; Department of Medicine fellow research abstracts, 1/17; Irving Institute for Clinical and Translational Research integrating special populations (isp) pilot award application, 2017; NIH ZRG1 RPHB-W53R special Director's Early Independence Award. Irving CTSA KL2 reviews 3/18; Irving Institute/Clinical Trials Office Pilot Award Program 4/18

## PUBLICATIONS

Original, peer reviewed:

1. Miller, R. L. and M.J. Baum. Naloxone inhibits mating and conditioned place preference for an estrous female in male rats soon after castration. Pharmacology Biochemistry and Behavior 26:781-189, 1987.
2. Miller, R. L. and R. P. Cole. Association between reduced cuff leak volume and postextubation stridor, Chest 110:1035-40, 1996.
3. Miller, R. L., S. Das, T. Anandarangam, D. W. Leibowitz, B. Thomashow, P.O. Alderson, S. Homma. Relation between patent foramen ovale and perfusion abnormalities in acute pulmonary embolism, The American Journal of Cardiology, 70:377-388, 1997.
4. Miller, R. L., S. Das, T. Anandarangam, D. W. Leibowitz, B. Thomashow, P.O. Alderson, S. Homma. Association between right ventricular function and perfusion abnormalities in hemodynamically stable patients with acute pulmonary embolism, Chest, 113:665-70, 1998.
5. Miller, R. L., T. M. Eppinger, D. McConnell, C. Cunningham-Rundles, P. B. Rothman. Analysis of cytokine signaling in patients with extrinsic asthma and hyperimmunoglobulin E. Journal of Allergy and Clinical Immunology, 102:503-11, 1998.
6. Neugut, A.I., A. Ghatak, R. Miller. Anaphylaxis in the United States: An investigation into its epidemiology. Archives of Internal Medicine, 161:15-21, 2001.
7. Miller, R.L., G. Chew, C.A. Bell, S.A. Biedermann, M. Aggarwal, P.L. Kinney, W.Y. Tsai, R.M. Whyatt, F. P. Perera, J.G. Ford. Prenatal antigen exposure, maternal sensitization, and sensitization in utero to indoor allergens in an inner-city cohort. American Journal of Respiratory and Critical Care Medicine, 164:995-1001, 2001.
8. Perera, F.P., S.M. Illman, P.L. Kinney, R. M. Whyatt, E. A. Kelvin, P. Shepard, D. Evans, M. Fullilove, J. G. Ford, R.L. Miller, I. Meyer, V. Rauh. The challenge of preventing environmentally-related disease in young children: Community-based research in New York City, Environmental Health Perspectives, 110(2):197-204, 2002.
9. Chew, G.L., M.S. Perzanowski, R.L. Miller, J.C. Correa, L. A. Hoepner, C.M. Jusino, M.G. Becker, P. L. Kinney. Distribution and determinants of mouse allergen exposure in low-income New York City apartments, Environmental Health Perspectives, 111 (10):1348-1351, 2003.
10. Miller, R.L., M. Cheng, E.A. DiMango, K. Geromanos, P.B. Rothman. T cell priming and hypersensitivity to influenza and egg antigens among asthmatic adults immunized with the influenza vaccine, Journal of Allergy and Clinical Immunology, 112:606-08, 2003.
11. Miller, R.L., J.C. Correa, P.L. Kinney. Rat sensitization among inner-city asthmatic children, Journal of Children's Health, 1 (4), 489-98, 2003.

12. Miller, R.L., R. Garfinkel, M. Horton, D. Camann, F. P. Perera, R. Whyatt, P.L. Kinney. Prenatal exposure to polycyclic aromatic hydrocarbons, postnatal environmental tobacco smoke, and pulmonary symptoms in a birth cohort, Chest, 136: 1071-78, 2004.
13. Goldstein, I.F., Matthew S. Perzanowski, Cynthia Lendor, Robin S. Garfinkel, Lori A. Hoepner, Frederica P. Perera, Rachel L. Miller. Prevalence of allergy symptoms and total IgE in a New York City cohort and their association with birth order, International Archives of Allergy and Immunology, 137 (3), 249-257, 2005.
14. Eggleston, P.A, G. Diette, M. Lipsett, T. Lewis, I. Tager, R. McConnell, E. Chrischilles, B. Lanphear, R. Miller, and J. Krishnan. Lessons learned for the study of childhood asthma from the Centers for Children's Environmental Health and Disease Prevention Research, Environmental Health Perspectives, 113 (10): 1430-1436, 2005.
15. Perzanowski MS, RL Miller, PS Thorne, RG Barr, A Divjan, BJ Sheares, RS Garfinkel, IF Goldstein, FP Perera, GL Chew. Endotoxin inner-city homes and the association with atopy and wheeze in the first two years of life. J Allergy Clin Immunology, 117:1082-9, 2006.
16. Rastogi, D. Chaodong Wang, Cynthia Lendor, Paul B. Rothman, Rachel L. Miller. T helper 2 polarization among asthmatics during and following pregnancy and its effect on newborns, Clinical and Experimental Allergy, 36:892-898, 2006.
17. Narvaez, Rafael, Kathleen Moors, Mayra Ramirez, Rachel L. Miller. Risks in using non-rigorous Spanish translations of asthma questionnaires. Chest, 131(4): 1271-2, 2007, letter. PMID: PMC2852125
18. Rastogi, D., Chaodong Wang, Xia Mao, Cynthia Lendor, Paul B. Rothman, Rachel L. Miller. Antigen-specific immune responses to influenza vaccine in utero, Journal of Clinical Investigation, 117 (6):1637-46, 2007.
19. Liu, Jinming, Manisha Ballaney, Umaima Al-alem, Chunli Quan, Ximei Jin, Frederica Perera, Lung-Chi Chen, Rachel L. Miller. Combined inhaled diesel exhaust particles and allergen exposure alter methylation of T helper genes and IgE production *in vivo*, Toxicological Sciences, 102 (1), 76-81, 2008.
20. Perzanowski, M.S., GL Chew, A Divjan, K Panjwani, A Johnson, BJ Sheares, IF Goldstein, TA Platts-Mills, FP Perera, RL Miller. Cat ownership is a risk factor for developing anti-cat IgE but not current wheeze at age 5 in a low income urban NYC cohort, Journal of Allergy and Clinical Immunology, 121:1047-52, 2008.
21. Perzanowski, M.S, Maria Jose Rosa, Adnan Divjan, Alina Johnson, Judith S. Jacobson, Rachel L. Miller. Modifications improve an offline exhaled NO collection device for use with young children, Journal of Allergy and Clinical Immunology, 122:213, 2008, letter.
22. Lendor, Cynthia, Alina Johnson, Matthew Perzanowski, Ginger L. Chew, Inge F. Goldstein, Elizabeth Kelvin, Frederica Perera, Rachel L. Miller. Effects of winter birth season and prenatal indoor allergen exposure on indoor allergen-specific cord blood cell proliferation and cytokine production, Annals of Allergy, Asthma and Immunology, 101(2):193-9, 2008.
23. Miller, R. L., Ho, S.-m. Epigenetic studies should focus on specific cell types. Am J Respir Crit Care Med, 178:883, 2008, letter.
24. Narvaez, Rafael F., Lori Hoepner, Steven N. Chillrud, Beizhan Yan, Robin Garfinkel, Robin Whyatt, David Camann, Frederica P. Perera, Patrick L. Kinney, Rachel L. Miller. Spatial and temporal trends of polycyclic aromatic hydrocarbons and other traffic-related airborne pollutants in New York City, Environmental Science and Technology, 42:7330-35, 2008.
25. Donohue, Kathleen M., Umaima Al-alem, Matthew S. Perzanowski, Ginger L. Chew, Alina Johnson, Adnan Divjan, Elizabeth A. Kelvin, Lori A. Hoepner, Frederica P. Perera, Rachel L. Miller. Anti-cockroach, mouse IgE is associated with early wheeze and atopy in an inner-city birth cohort, Journal of Allergy and Clinical Immunology, 122(5):914-20, 2008.



26. Perera F, W-Y Tang W-Y, JB Herbstman, DT Tang, L Levin, RL Miller and S-M Ho. Relation of DNA methylation status of a 5' island of *ACSL3* to transplacental exposure to airborne polycyclic aromatic hydrocarbons and childhood asthma. PlosOne, 4(2) February 2009.
27. Patel, Molini M., Lori Hoepner, Robin Garfinkel, Steven Chillrud, Andria Reyes, Frederica Perera, Rachel L. Miller Ambient metals and elemental carbon in fine particulate matter predict wheeze and cough in very young urban children, American Journal of Respiratory and Critical Care Medicine, 180 (11):1107-1113. 2009.
28. Reardon, Ann Marie, Matthew S. Perzanowski, Robin M. Whyatt, Ginger L. Chew, Frederica P. Perera, Rachel L. Miller. Associations between prenatal pesticide exposure and cough, wheeze and IgE in early childhood, Journal of Allergy and Clinical Immunology, 124 (4): 852-4, 2009.
29. Patel, Molini M. and Rachel L. Miller. Rapid DNA methylation changes after exposure to traffic particles: The issue of spatio-temporal factors. American Journal of Respiratory and Critical Care Medicine, 180 (10): 1030, 2009, letter.
30. Perzanowski, Matthew S., Rachel L. Miller, Deliang Tang, David Ali, Robin S. Garfinkel, Ginger L. Chew, Inge F. Goldstein, Frederica P. Perera, R. Graham Barr. Prenatal acetaminophen exposure and risk of wheeze at age 5 years in an urban, low-income cohort, Thorax, 65 (2): 118-23, 2010.
31. Rachel L. Miller, Robin Garfinkel, Cynthia Lendor, Lori Hoepner, Zheng Li, Lovisa Romanoff, Andreas Sjodin, Larry Needham, Frederica P. Perera, Robin M Whyatt. Polycyclic aromatic hydrocarbon metabolite levels and pediatric asthma-related outcomes in an inner city cohort. Pediatric Allergy and Immunology, 21:260-267, 2010.
32. Kyung Hwa Jung, Beizhan Yan, Steven N. Chillrud, Frederica P. Perera, Robin Whyatt, David Camann, Patrick L. Kinney, and Rachel L. Miller. Assessment of benzo(a)pyrene-equivalent carcinogenicity and mutagenicity of residential indoor versus outdoor polycyclic aromatic hydrocarbons exposing young children in New York City. International Journal of Environmental Research and Public Health, 7:1889-9000, 2010.
33. Lin Lin, Huaijie Zhu, Chunli Quan, Gabriele Grunig, Manisha Ballaney, Ximei Jin, Frederica P. Perera, Phillip H. Factor, Lung-Chi Chen, Rachel L. Miller. Prenatal allergen and diesel exhaust exposure and their effects on allergy in adult offspring mice. Allergy, Asthma and Clinical Immunology, 6(1):7, 2010.
34. Maria Jose Rosa, A. Divjan, L. Hoepner, B. J. Sheares, D. Diaz, K. Gauvey-Kern, F. P. Perera, R. L. Miller, M.P. Perzanowski. Fractional exhaled nitric oxide exchange parameters among nine year-old inner-city children, Pediatric Pulmonary, 46(1):83-91, 2011.
35. Carolyn Chang, Kevin Gauvey-Kern, Alina Johnson, Elizabeth A. Kelvin, Ginger L. Chew, Frederica Perera, Rachel L. Miller. Association of age 5, but not cord blood, indoor allergen-induced mononuclear cell proliferation with age 5 IgE and asthma. Clinical and Molecular Allergy, 8:11, 2010.
36. Kyung Hwa Jung, Molini M. Patel, Kathleen Moors, Patrick L. Kinney, Steven N. Chillrud, Robin Whyatt, Lori Hoepner, Robin Garfinkel, Beizhan Yan, James Ross, David Camann, Frederica P. Perera, and Rachel L. Miller. Effects of heating season on residential indoor and outdoor polycyclic aromatic hydrocarbons, black carbon, particulate matter in an urban birth cohort, Atmospheric Environment, 44: 4545-53, 2010.
37. Marilyn Reyes, Matthew S. Perzanowski, Robin M. Whyatt, Elizabeth A. Kelvin, Andrew G. Rundle, Diurka Diaz, Lori Hoepner, Frederica P. Perera, Virginia Rauh, Rachel L. Miller. Maternal demoralization is associated with childhood wheeze, but not IgE, at age five years in an inner-city cohort, Annals of Allergy, Asthma & Immunology, 107 (1): 42-49, 2011.
38. Wieslaw Jedrychowski, Frederica Perera, Umberto Maugeri, Rachel L. Miller, Maria Rembiasz, Elzbieta Flak, Elzbieta Mroz, Renata Majewska and Marek Zembala. Intrauterine exposure to lead may

enhance sensitization to common inhalant allergens in early childhood. A prospective prebirth cohort study Environmental Research, 1(1): 199-124, 2011.

40. Unnur S. Bjornsdottir, Stephen T. Holgate, Padmalatha S. Reddy...Rachel L. Miller...et. al. Pathways activated during human asthma exacerbation as revealed by gene expression patterns in blood. PlosOne. 6(7): e21902, 2011.

41. Jedrychowski W, Perera F, Maugeri U, Mrozek-Budzyn D, Miller RL, Flak E, Mroz E, Jacek R, Spengler JD. Effects of prenatal and perinatal exposure to fine air pollutants and maternal fish consumption on the occurrence of infantile eczema. Int Arch Allergy Immunol: 155(3):275-281, 2011.

42. Justin Mostecky, Walter T. Klimecki, Debra A. Stern, Suzanne L. Cassel, Lizhi Yu, Judith Knisz, Penelope Graves, Rachel L. Miller, Brian M. Showalter, Maartje van Peer, James Russo, Marilyn Halonen, Fernando D. Martinez, Donata Vercelli and Paul B. Rothman. A SOCS-1 Promoter Variant is associated with total serum IgE level, J. Immunology, 187 (5):2794-802 , 2011.

43. WA Esposito, GL Chew, JC Correa, SN Chillrud, Rachel L. Miller and PL Kinney. Quantitative measurement of airborne cockroach allergen in New York City apartments. Indoor Air, 21 (6):512-20 2011.

44. Omar Olmedo, Luis Acosta, Inge F. Goldstein, Adnan Divjan, Andrew G. Rundle, Ginger Chew, Robert B. Mellins, Lori Hoepner, Frederica P Perera, Rachel L. Miller, Judith S. Jacobson, Matthew S. Perzanowski. Neighborhood differences in exposure and sensitization to cockroach, mouse, dust mite, cat and dog allergens in New York City, J Allergy Clin Immunol, 128 (2):284-292.e7, 2011.

45. Phillip Factor, Alexander Akhmedov, Jacob MacDonald, Anna Xu, Jie Wu, Trisha Das, Raymond Panettieri, Frederica Perera, and Rachel L. Miller. Polycyclic aromatic hydrocarbons impair  $\beta_2$ AR function in airway epithelial and smooth muscle cells. The American Journal of Respiratory Cell and Molecular Biology, 45: 1045-1049, 2011.

46. Shuang Wang, Zhaoxia Yu, Rachel L. Miller, Deliang Tang, Frederica P. Perera. Methods for detecting interactions between imprinting genes and environmental exposures with mother-offspring pairs, Human Heredity, 71 (3): 196-208, 2011.

47. Kyung Hwa Jung, Kerlly Bernabé, Kathleen Moors, Beizhan Yan, Steven Chillrud, Robin Whyatt, David Camann, Patrick Kinney, Frederica Perera, Rachel Miller. Effects of floor level and building type on residential levels of outdoor and indoor polycyclic aromatic hydrocarbons, black carbon, and particulate matter in New York City. Atmosphere, 2:96-109, 2011.

48. Wieslaw Jedrychowski, John D. Spengler, Umberto Maugeri, Rachel L. Miller, Dorota Budzyn-Mrozek, Matt Perzanowski, Elzbieta Flak, Elzbieta Mroz, Renata Majewska, Irena Kaim, Frederica Perera. Effect of prenatal exposure to fine particulate matter and intake of Paracetamol (Acetaminophen) in pregnancy on eczema occurrence in early childhood. Science of the Total Environment 409, 5205-5209, 2011.

49. Molini M. Patel, James W. Quinn, Kyung Hwa Jung, Lori Hoepner, Diurka Diaz, Matthew Perzanowski, Andrew Rundle, Patrick L. Kinney, Frederica P. Perera, and Rachel L. Miller. Traffic density and stationary sources of air pollution associated with asthma and allergy from birth to age 5 years among New York City children, Environmental Research, 111(8): 1222-29, 2011.

50. Beizhan Yan, Daniel Kennedy, Rachel L. Miller, James Cowin, Kyung-hwa Jung, Matt Perzanowski, Marco Balletta, Federica Perera, Pat Kinney, Steven N. Chillrud. Application of an optical and nondestructive method for PM filters to estimate urban environment exposure of black carbon, Atmospheric Environment, 45 (39):7478-7486, 2011.

51. Alexandra G. Cornell, Steven N. Chillrud, Robert B. Mellins, Luis M. Acosta, Rachel L. Miller, James W. Quinn, Beizhan Yan, Adnan Divjan, Omar E. Olmedo, Sara Lopez-Pintado, Patrick L. Kinney, Frederica P. Perera, Judith S. Jacobson, Inge F. Goldstein, Andrew G. Rundle, Matthew S. Perzanowski.

Domestic airborne black carbon and exhaled nitric oxide in children in NYC. Journal of Exposure Science and Environmental Epidemiology, May-Jun;22(3):258-66, 2012.

52. DZ Torrone, JS Kuriakose, K Moors, H Jiang, M Niedzwiecki, F Perera, RL Miller. Reproducibility and intra-individual variation over days in buccal cell DNA methylation of two asthma genes, interferon gamma (IFN- $\gamma$ ) and inducible nitric oxide synthase (iNOS), Clinical Epigenetics, 4:3, 2012.

53. Julie S. Kuriakose, Maria José Rosa, Matthew S. Perzanowski, and Rachel L. Miller. Bronchial nitric oxide flux may be better associated with inducible nitric oxide synthase (iNOS) promoter methylation. American Journal of Respiratory and Critical Care Medicine. 185: 460-461, 2012, letter.

54. Kyung Hwa Jung, Beizhan Yan, Shao-I Hsu, Kathleen Moors, Steven N. Chillrud, Robin Whyatt, Matthew Perzanowski, Lori Hoepner, Inge Goldstein, Bingzhi Zhang, David Camann, Patrick L. Kinney, Frederica P. Perera, and Rachel L. Miller. Repeated exposure to pyrene and nonvolatile polycyclic aromatic hydrocarbons and asthma at ages 5-6 yrs: Effect of seroatopy, Annals of Allergy, Asthma and Immunology, 109 (4): 249-54, 2012.

55. Allan C. Just, Robin M. Whyatt, Matthew S. Perzanowski, Antonia M. Calafat, Frederica P. Perera, Inge F. Goldstein, Qixuan Chen, Andrew G. Rundle, Rachel L. Miller. Prenatal exposure to butylbenzyl phthalate and early eczema in an urban cohort, Environmental Health Perspectives, 120 (10): 1475-80 2012.

56. Megan Niedzwiecki, Huaijie Zhu, Lin Corson, Gabriele Grunig, Phillip H. Factor, Sophie Chu, Hong Jiang, and Rachel L. Miller. Prenatal exposure to allergen and DNA methylation, allergy in grandoffspring mice, Allergy, 67: 904-910, 2012.

57. Kyung H. Jung, Shao-I Hsu, Kathleen M. Moors, Kerlly Bernabé, Matthew S. Perzanowski, Patrick L. Kinney, Steven N. Chillrud, Robin M. Whyatt, Shuang Wang, Beizhan Yan, James Ross, Frederica Perera, Rachel L. Miller. Childhood exposure to fine particulate matter and black carbon and the development of new wheeze between ages 5 and 7 in an urban prospective cohort. Environment International 45:44-50, 2012.

58. Qixuan Chen, Allan C. Just, Rachel L. Miller, Matthew S. Perzanowski, Inge F. Goldstein, Frederica P. Perera, Robin M. Whyatt. Using latent class growth analysis to identify childhood wheeze phenotypes in an urban birth cohort, Annals of Allergy, Asthma & Immunology, 108(5):311-315.e1, 2012.

59. Wan-ye Tang, Glenn Talaska, Yuk Yin Cheung, Linda Levin, Julie Herbstman, Rachel L. Miller, Frederica Perera and Shuk-Mei Ho. Maternal exposure to polycyclic aromatic hydrocarbons is associated with methylation at a 5'-CpG island of interferon- $\gamma$  in cord white blood cells, Environmental Health Perspectives, 120:1195-1200, 2012.

60. Manuela A. Orjuela, XinHua Liu, Rachel L. Miller, Dorothy Warburton, DeLiang Tang, Vaidehi Jobanputra, Lori Hoepner, Ida Suen, Silvia Diaz-Carreño, Zheng Li, Andreas Sjodin, Frederica P. Perera. Urinary naphthol metabolites and chromosomal aberrations in 5 yr old children, Cancer Epidemiology, Biomarkers & Prevention, 21(7):1191-202, 2012.

61. Allan C. Just, Robin M. Whyatt, Rachel L. Miller, Andrew G. Rundle, Qixuan Chen, Antonia M. Calafat, Adnan Divjan, Maria J. Rosa, Hanjie Zhang, Frederica P. Perera, Inge F. Goldstein, Matthew S. Perzanowski. Children's urinary phthalate metabolites and fractional exhaled nitric oxide in an urban cohort. American Journal of Respiratory and Critical Care Medicine, 186 (9), 830-837, 2012.

62. Bian Liu, Kyung Hwa Jung, Megan K. Horton, David E. Camann, Xinhua Liu, Ann Marie Reardon, Matthew S. Perzanowski, Hanjie Zhang, Frederica P. Perera, Robin M. Whyatt, Rachel L. Miller. Prenatal exposure to pesticide ingredient piperonyl butoxide and childhood cough in an urban cohort Environment International, 48:156-61, 2012.

63. Arunima Kohli, Marco Garcia, Rachel L. Miller, Christina Maher, Olivier Humblet, Katharine Hammond, Kari Nadeau. Secondhand smoke in combination with ambient air pollution exposure is

associated with increased CpG methylation and decreased expression of *IFN- $\gamma$*  in T effector cells and *FoxP3* in T regulatory cells. Journal of Clinical Epigenetics, 4(1):17, 2012.

64. R. Scott Runyon, Leslie M. Cachola, Nitya Rajeshuni, Tessa Hunter, Marco Garcia, Regina Ahn, Fred Lurman, Ruth Krasnow, Lisa Jack, Rachel L. Miller, Gary Swan, Amanda C. Jacobson, Kari C. Nadeau. Asthma discordance in twins is mediated by epigenetic modifications of T cells. PlosOne, 7(11):e48796, 2012.

65. Timothy R. Mainardi, Robert B. Mellins, Rachel L. Miller, Luis Acosta, Alexandra Cornell, Lori Hoepner, James W. Quinn, Beizhan Yan, Steven N. Chillrud, Omar E. Olmedo, Frederica P Perera, Inge F. Goldstein, Andrew G. Rundle, Judith S. Jacobson, Matthew S. Perzanowski. Exercise-induced wheeze, urgent medical visits and neighborhood asthma prevalence. Pediatrics, 131 (1) e127-35, 2013.

66. Matthew S. Perzanowski, Ginger L. Chew, Adnan Divjan, Kyung Hwa Jung, Robert Ridder, Deliang Tang, Diurka Diaz, Inge F. Goldstein, Patrick L. Kinney, Andrew G. Rundle, David E. Camann, Frederica P. Perera, Rachel L. Miller. Early-life cockroach allergen and polycyclic aromatic hydrocarbon exposures predict cockroach sensitization among inner-city children. J. Allergy and Clinical Immunology, 131(3):886-893, 2013.

67. Gina S. Lovasi, Jarlath O'Neil-Dunne, Jacqueline W. T. Lu, Daniel Sheehan, Matthew Perzanowski, Sean MacFaden, Kristen L. King, Thomas Matte, Rachel Miller, Lori Hoepner, Frederica Perera, Andrew Rundle. Urban tree canopy and development of asthma, wheeze, rhinitis, and allergic sensitization to tree pollen in a birth cohort study, Environmental Health Perspectives, 121 (4):494-500, 2013.

68. Kathleen M. Donohue, Rachel L. Miller, Matthew S. Perzanowski, Allan C. Just, Lori A. Hoepner, Srikesh Arunajadai, Stephen Canfield, David Resnick, Antonia M. Calafat, Frederica P. Perera, Robin M. Whyatt. Prenatal and postnatal bisphenol A exposure and asthma development among inner-city children. J. Allergy and Clinical Immunology, 131(3):736-742. 2013. (**Editors Choice**)

69. Marija Kundakovic, Kathryn Gudsnuk, Becca Franks, Jesus Madrid, Rachel L Miller, Frederica P. Perera, Frances A Champagne. Sex-specific epigenetic disruption and behavioral changes following low-dose in utero Bisphenol A exposure, PNAS, 110 (24):9956-61, 2013.

70. Cai, Jing; Yan, Beizhan; Kinney, Patrick; Perzanowski, Matt; Jung, KyungHwa; Li, Tiantian; Xiu, Guangli; Zhang, Danian; Olivo, Cossette; Ross, James; Miller, Rachel; Chillrud, Steven. Optimization approaches to ameliorate humidity and vibration related issues using the microAeth black carbon monitor for personal exposure measurement. Aerosol Science and Technology, 47 (11):1196-1204, 2013.

71. Cai, Jing, Yan, Beizhan, Ross, James, Zhang, Danian, Kinney, Patrick, Perzanowski, Matthew, Jung, KyungHwa, Miller, Rachel, Chillrud, Steven. Validation of microAeth as a black carbon monitor for fixed-site measurement and optimization for personal exposure characterization. Aerosol Science and Technology, 214 (1): 1-9, 2014.

72. Sophie Chu, Hanjie Zhang, Christina Maher, Jacob D. McDonald, Xiang Zhang, Shuk-Mei Ho, Beizhan Yan, Steven Chillrud, Frederica Perera, Phillip Factor, Rachel L. Miller. Prenatal and postnatal polycyclic aromatic hydrocarbon exposure, airway hyperreactivity and beta 2 adrenergic receptor function in sensitized mouse offspring, Journal of Toxicology, 2013 (2013).

73. Kyung Hwa Jung, Matthew Perzanowski, Andrew Rundle, Kathleen Moors, Beizhan Yan, Steven N. Chillrud, Robin Whyatt, David Camann, Frederica P. Perera, Rachel L. Miller. Polycyclic aromatic hydrocarbon exposure, obesity and childhood asthma in an urban cohort, Environmental Research, 128:35-41, 2014.

74. Jung, Kyung Hwa, Liu, Bian, Lovinsky-Desir, Stephanie, Yan, Beizhan, Camann, David, Sjodin, Andreas, Li, Zheng, Perera, Frederica, Kinney, Patrick, Chillrud, Steven, and Miller, Rachel L. Time trends of polycyclic aromatic hydrocarbon exposure in New York City from 2001 to 2012: Assessed by repeat air and urine samples, Environmental Research, 31, 95-103, 2014.

75. Kamal D Srivastava, David Dunkin, Changda Liu, Nan Yang, Rachel L. Miller, Hugh Sampson, Xiu-Min Li. Effect of Antiasthma Simplified Herbal Medicine intervention on neutrophil predominant airway inflammation in a ragweed sensitized murine asthma model. Annals of Allergy and Immunology, 112: 339-347, 2014.
76. Stephanie Lovinsky-Desir, Candace Folch, Kyung Hwa Jung, David Torrone, Eric Gil, Frederica Perera, Rachel L Miller, Steven N. Chillrud. Urban adolescents readily comply with a complicated asthma research protocol. Clinical Medicine Insights: Circulatory, Respiratory and Pulmonary Medicine, 8:5-9, 2014.
77. Jean Bousquet, James E. Gern, Fernando D. Martinez...Rachel L. Miller.et. al. Birth cohorts in asthma and allergic diseases: Report of a NIAID/NHLBI/MeDALL joint workshop. Journal of Allergy and Clinical Immunology, 133 (6):1535-46, 2014.
78. Robin M. Whyatt, Matthew S. Perzanowski, Allan C. Just, Andrew G. Rundle, Kathleen M. Donohue, Antonia M. Calafat, Lori Hoepner, Frederica P. Perera, Rachel L. Miller. Asthma in inner-city children at 5-11 years of age and prenatal exposure to phthalates: The Columbia Center for Children's Environmental Health Cohort, Environmental Health Perspectives, 122:1141-1146, 2014.
79. Stephanie Lovinsky-Desir, Robert Ridder, David Torrone, Christina Maher, Surinder Narula, Melissa Scheuerman, David Merle, Meyer Kattan, Emily DiMango, Rachel L Miller. DNA methylation of the allergy regulatory gene, interferon gamma, varies by age, sex, and tissue type in asthmatics. Journal of Clinical Epigenetics, 6:9, 2014.
80. Robin M. Whyatt, Andrew G. Rundle, Matthew S. Perzanowski, Allan C. Just, Kathleen M. Donohue, Antonia M. Calafat, Lori Hoepner, Frederica P. Perera, Rachel Miller. Prenatal phthalate and early childhood Bisphenol A exposures increase asthma risk in inner-city children. J. Allergy Clin. Immunol. 134 (5):1195-97, Letter to Editor, 2014.
81. Dennis Lazarev, Rachel L. Miller, Emily Dimango, Xian-Dong Fu, Hai-Ri Li, Charlotte J. Logan, and James L. Manley. cFLIP expression is altered in severe corticosteroid-resistant asthma. Genomics Data, 2: 99-104, 2014.
82. Maria José Rosa, Matthew S. Perzanowski, Adnan Divjan, Steven N Chillrud, Lori Hoepner, Hanjie Zhang, Robert Ridder, Frederica P. Perera, Rachel L. Miller. Association of recent exposure to ambient metals on fractional exhaled nitric oxide in 9-11 year old inner-city children. Nitric Oxide: Biology and Chemistry, 40:60-6, 2014.
83. Zhonghai Yan, Hanjie Zhang, Christina Maher, Emilio Arteaga-Solis, Frances A. Champagne, Licheng Wu, Jacob D. McDonald, Beizhan Yan, Gary J. Schwartz, Rachel L. Miller. Prenatal polycyclic aromatic hydrocarbon, adiposity, peroxisome proliferator-activated receptor (PPAR)  $\gamma$  methylation in offspring, grand-offspring mice, PLoSOne, 9(10):e110706, 2014.
84. Ying Song, Changda Liu, Yiqun Hui, Kamal Srivastava, Zhenwen Zhou, Jia Chen, Rachel L. Miller, Fred D. Finkelman, Xiu-Min Li. Maternal allergy increases susceptibility to offspring allergy in association with Th2 biased 1 epigenetic alterations in a mouse model of peanut allergy. Journal of Allergy and Clinical Immunology, 134:1339-45, 2014.
85. Maria José Rosa, Beizhan Yan, Steven N Chillrud, Luis M Acosta, Adnan Divjan, Judith S Jacobson, Rachel L Miller, Inge F Goldstein, Matthew S Perzanowski. Domestic airborne black carbon levels and 8-isoprostane in exhaled breath condensate among children in New York City. Environmental Research, 135C:105-110, 2014.
86. Perera FP, Chang H, Tang D, Roen EL, Herbstman J, Margolis A , Huang T, Miller RL, Wang S, Rauh V. Early-life exposure to polycyclic aromatic hydrocarbons and ADHD behavior problems. PLoS One. 9 (11):e111670, 2014.

87. Iván López-Expósito, Kamal D Srivastava, Neil Birmingham, Alexandra Castillo, Rachel L Miller and Xiu-Min Li. Maternal ASHMI-therapy prevents airway inflammation and modulates pulmonary innate immune responses in young offspring mice. Annals of Allergy and Immunology, 114 (1):43-51, 2014.
88. Allan C. Just, Rachel L. Miller, Matthew S. Perzanowski, Andrew G. Rundle, Qixuan Chen, Kyung Hwa Jung, Lori Hoepner, David E. Camann, Antonia M. Calafat, Frederica P. Perera, Robin M. Whyatt. Vinyl flooring in the home is associated with children's airborne butylbenzyl phthalate and urinary metabolite concentrations. Journal of Exposure Science And Environmental Epidemiology, 25 (6):574-79, 2015.
89. Julia Vishnevetsky , Deliang Tang, Hsin-Wen Chang, Emily L. Roen, Ya Wang, Virginia Rauh, Shuang Wang, Rachel L. Miller, Julie Herbstman, Frederica P. Perera. Combined effects of prenatal polycyclic aromatic hydrocarbons and material hardship on child IQ. Neurotoxicology & Teratology, 49:74-80, 2015.
90. Peterson BS, Rauh VA, Bansal R, Hao X, Toth Z, Nati G, Walsh K, Miller RL, Arias F, Semanek D, Perera F. Effects of prenatal exposure to air pollutants (polycyclic aromatic hydrocarbons) on the development of brain white matter, cognition, and behavior in later childhood. JAMA Psychiatry. 72 (6)531-40, 2015
91. Kyung Hwa Jung, Stephanie Lovinsky-Desir, Matthew Perzanowski, Xinhua Liu, Christina Maher, Eric Gil, David Torrone, Andreas Sjodin, Zheng Li, Frederica P. Perera, Rachel L. Miller. Repeatedly high polycyclic aromatic hydrocarbon exposure and cockroach sensitization among inner-city children, Environmental Research, 140: 649-56, 2015.
92. Changda Liu , Nan Yang , Ying Song, Lixin Wang, Jiachen Zi Bingji Ma, David Dunkin, Paula Busse , Weir David, Jody Tversky, Rachel L. Miller, Jixun Zhan, Xiu-Min Li. Ganoderma lucidum triterpenoids isolated from anti-Asthma formula, ASHMI, inhibit TNF- $\alpha$  production by macrophage cell line and peripheral blood mononuclear cells from asthma patients associated with modulation of NF- $\kappa$ B signaling pathway, Int. Immunopharmacol, Aug;27(2):224-31, 2015.
93. Ahmad R Sedaghat, MD, PhD; Elizabeth Matsui, MD, MHS; Sachin Baxi, MD; Mary Bollinger, DO; Rachel Miller, MD; Matthew Perzanowski, PhD; Wanda Phipatanakul, Mouse sensitivity is an independent risk factor for rhinitis in children with asthma, Journal of Allergy and Clinical Immunology-In Practice, Jan-Feb;4(1):82-88, 2016. PMID: PMC4715958.
94. Stephanie Lovinsky-Desir, Rachel Miller, Joshua Bautista, Eric Gil, Steven Chillrud, Beizhan Yan, David Camann, Frederica Perera, Kyung Hwa Jung. Differences in ambient polycyclic aromatic hydrocarbon concentrations between streets and alleys in New York City: Open space versus semi-closed space. International Journal of Environmental Research and Public Health, 13, 127, 2016.
95. Qixuan Chen, Xiaobo Zhong, Luis Acosta, Adnan Divjan, Andrew Rundle, Inge F. Goldstein, Rachel L. Miller, Matthew S. Perzanowski. Allergic sensitization patterns identified through latent class analysis among NYC asthmatic and non-asthmatic children. Annals of Allergy, Asthma & Immunology, 116 (3):212-18, 2016.
96. Emily DiMango, Denise Serebrisky, Surinder Narula, Chang Shim, Claire Keating, Beverly Sheares, Matthew Perzanowski, Rachel Miller, Angela DiMango, Howard Andrews, David Merle, Xinhua Liu, Agustin Calatroni, Meyer Kattan. Individualized household allergen intervention lowers allergen level but not asthma medication use: a randomized controlled trial. Journal of Allergy and Clinical Immunology-In Practice, Jul-Aug;4(4):671-679, 2016.
97. Rachel L. Miller, Zhonghai Yan, Christina Maher, Hanjie Zhang, Kathryn Gudsnuk, Jacob McDonald, Frances A. Champagne. Impact of prenatal polycyclic aromatic hydrocarbon exposure on behavior, cortical gene expression and DNA methylation of the *Bdnf* gene. Neuroepigenetics, 5:11-18, 2016.

98. Jeffrey D Edwards, Amy J Houtrow, Adam R Lucas, Rachel L Miller, Thomas G Keens, Howard B Panitch, R. Adams Dudley. Children and young adults who received tracheostomies or were initiated on long-term ventilation in pediatric ICUs, Pediatric Critical Care Medicine, 7(8):e324-34, 2016.
99. Watcharoot Kanchongkittiphon, Jonathan M. Gaffin, Lianne Kopel, Carter R. Petty, Mary E. Bollinger, Rachel Miller, Matthew Perzanowski, Elizabeth C. Matsui, Wanda Phipatanakul. The Association of FEF<sub>25-75</sub> and bronchodilator reversibility with asthma control and asthma morbidity in inner city children with asthma. Annals of Allergy, Asthma & Immunology, 117 (1):97-99, 2016.
100. Stephanie Lovinsky-Desir, Kyung Hwa Jung, Andrew G Rundle, Lori A Hoepner, Joshua B Bautista, Frederica P Perera, Steven N Chillrud, Matthew S Perzanowski, Rachel L Miller. Physical activity, black carbon exposure and airway inflammation in an urban adolescent cohort. Environmental Research, 151:756-762, 2016.
101. Grant T, Aloe C, Perzanowski M, Phipatanakul W, Bollinger ME, Miller R, Matsui EC. Mouse sensitization and exposure are associated with asthma severity in urban children. J Allergy Clin Immunol Pract, 5 (4): 1008-1014, 2017.
102. Carrie V. Breton, Carmen J. Marsit, Elaine Faustman...Rachel Miller... Small magnitude effect sizes in epigenetic endpoints are important in Children's Environmental Health Studies. Environmental Health Perspectives, 125: 511-526, 2017.
103. Perzanowski MS, Ono JG, Acosta LM, Kim BI, Divjan A, Miller RL, Rundle AG, Worgall S, Worgall TS. Distinct serum sphingolipid profiles among school-age children with exercise-induced wheeze and asthma persistence. American Journal Respiratory Critical Care Medicine, 195 (8): 1068-1070, 2017, correspondence.
104. Changda Liu, Nan Yang , Xiaoke Chen, Jody Tversky , Jixun Zhan, Mirna Chehade, Rachel L. Miller and Xiu-Min Li The flavonoid 7,4'-dihydroxyflavone prevents dexamethasone paradoxical adverse effect on eotaxin production by human fibroblasts. Phytotherapy Research, 31(3):449-458, 2017.
105. Elizabeth C. Matsui, Matthew Perzanowski, Roger D. Peng, Robert A. Wise, Susan Balcer-Whaley, Michelle Newman, Amparito Cunningham, Adnan Divjan, Mary E. Bollinger, Shuyan Zhai,, Ginger Chew, Rachel L. Miller, Wanda Phipatanakul. Effect of an integrated pest management intervention on asthma symptoms among mouse-sensitized children and adolescents with asthma: A randomized clinical trial, JAMA, 317 (10): 1027-36, 2017.
106. Kyung Hwa Jung, David Torrone, Stephanie Lovinsky-Desir, Matthew Perzanowski, Joshua Bautista, Jacqueline R. Jezioro, Lori Hoepner, Jamie Ross, Frederica P. Perera, Steven N. Chillrud, Rachel L. Miller. Short-term exposure to PM<sub>2.5</sub> and vanadium and changes in asthma gene DNA methylation and lung function decrements among urban children. Respiratory Research, 18 (1): 63, 2017.
107. Rachel L. Miller, Hanjie Zhang, Jacqueline Jezioro, Mariangels De Planell Sagner, Stephanie Lovinsky-Desir, Xinhua Liu, Matthew Perzanowski, Adnan Divjan, Wanda Phipatanakul, Elizabeth C. Matsui. Reduced mouse allergen is associated with epigenetic changes in regulatory genes, but not mouse sensitization, in asthmatic children. Environmental Research, 256: 619-624, 2017.
108. Jeffrey D Edwards, Marilyn C Morris, Judith E Nelson, Howard B Panitch, Rachel L Miller. Decisions around long-term ventilation for children: Perspectives of directors of pediatric home ventilation programs. Annals of the American Thoracic Society, 14 (10): 1539-47, 2017.
109. Stephanie Lovinsky-Desir, Kyung Hwa Jung, Jacqueline R. Jezioro, David Z. Torrone, Mariangels de Planell-Sagner, Beizhan Yan, Frederica P. Perera, DrPH, Andrew G. Rundle, Matthew S. Perzanowski, Steven N. Chillrud, Rachel L. Miller. Physical activity, black carbon exposure and DNA methylation in the *FOXP3* promoter. Clinical Epigenetics, 9:65, 2017.
110. Kyung Hwa Jung, Stephanie Lovinsky-Desir, Beizhan Yan, David Torrone, Jennifer Lawrence· Jacqueline R. Jezioro, Matthew Perzanowski, Frederica P. Perera, Steven N. Chillrud, Rachel L. Miller.

Effect of personal exposure to black carbon on changes in allergic asthma gene methylation measured five days later in urban children: Importance of allergic sensitization. Clinical Epigenetics, 9:61, 2017.

111. Frederica P. Perera, Kylie Wheelock, Ya Wang, Deliang Tang, Amy Margolis, Gladys Badia, Whitney Cowell, Rachel L. Miller, Virginia Rauh, Shuang Wang, Julie B. Herbstman. Combined effects of prenatal exposure to polycyclic aromatic hydrocarbons and material hardship on child ADHD behavior problems. Environmental Research, 160:506-513, 2018.

112. Jeffrey D Edwards, Howard B Panitch, Andrei Constantinescu, Rachel L Miller, Patricia W Stone. The financial burden of families in the U.S. with children using home mechanical ventilation. Pediatric Pulmonary, 53 (1): 108-116, 2018.

113. Khalil W. Savary, Rachel L. Miller, Emilio Arteaga-Solis, Lori Hoepner, Luis M. Acosta, Frederica P. Perera, Andrew G. Rundle, Inge F. Goldstein, Matthew S. Perzanowski. Infant rhinitis and watery eyes predict school-age exercise-induced wheeze, emergency department visits and respiratory-related hospitalizations. Annals of Allergy, Asthma & Immunology, 120 (3):278-84, 2018.

114. Mary Prunicki, Laurel Stell, Deendayal Dinakarpanidian, Mariangels de Planell-Saguer, Richard W. Lucas, Kathleen Hammond, John Balmes, Xiaoying Zhou, Tara Paglino, Chiara Sabatti, Rachel L. Miller, Kari C. Nadeau. Exposure to NO<sub>2</sub>, CO, and PM<sub>2.5</sub> is linked to regional DNA methylation differences in asthma. Clinical Epigenetics, 10 (2)1-11, 2018.

115. Hui-Chen Wu, Catherine Do, Irene L. Andrulis, Esther M. John, Mary B. Daly, Sandra S Buys, Wendy K. Chung, Hanina Hibshoosh, Julia A. Knight, Angela R. Bradbury, Theresa H. M. Keegan, Lisa Schwartz, Izabela Krupska, Rachel L. Miller, Regina M. Santella, Benjamin Tycko, Mary Beth Terry. Breast cancer family history and allele-specific DNA methylation in the Legacy girls study. Epigenetics, Feb 13:1-23. doi: 10.1080/15592294.2018.1435243. [Epub ahead of print], 2018.

116. Stephanie Lovinsky-Desir, Luis M. Acosta, Andrew G. Rundle, Rachel L. Miller, Inge F. Goldstein, Judith S. Jacobson, Steven Chillrud, Matthew S. Perzanowski. Neighborhood asthma prevalence as an effect modifier of the relationship between air pollution and urgent asthma care, submitted, 2018.

117. Mary Beth Terry, Hui-Chen Wu, Catherine Do, Irene Andrulis, Esther John, Mary Daly, Sandra Buys, Wendy Chung, Julia Knight, Angela Bradbury, Theresa Keegan, Lisa Schwartz, Izabela Krupska, Rachel Miller, Regina Santella, and Benjamin Tycko. Differentially methylated regions and breast cancer family history in the LEGACY girls study. Cancer Research, submitted, 2018.

118. Margaret T. Lee, Meyer Kattan, Ilene Fennoy, Rachel L. Miller, Jeri W. Nieves, Serge Cremers, Donald J. McMahon, Stephen M. Arpadi, MD, Gary M. Brittenham. A randomized clinical trial of high-dose vitamin D to prevent respiratory complications in children with sickle cell disease: The ViDAS Trial. Blood Advances, 2 (9): 969-978, 2018.

119. Nitzan Soffer, Brett J. Green, Luis Acosta, Adnan Divjan, Edward Sobek, Angela R. Lemons, Andrew G. Rundle, Judith S. Jacobson, Inge F. Goldstein<sup>4</sup> Rachel L. Miller, Matthew S. Perzanowski. Relevance of *Alternaria* to asthma symptoms and exhaled NO among NYC children. J. Allergy and Clin. Immunology, in press, 2018.

Invited chapters, editorials, book chapters:

1. Miller, R. L. and P. B. Rothman. Molecular mechanisms controlling IgE responses In: T.F. Kresina, ed., Immune modulating agents, Marcel Dekker Inc, Chapt. 2, 21-33, 1998.

2. Miller, R. L. Breathing freely: The need for asthma research on gene-environment interactions. American Journal of Public Health, 89:819-822, 1999.

3. Rachel L. Miller, Manisha Daswani, and Cynthia Lendor. Prenatal exposure to air pollution and respiratory outcomes in children. In: Passive Smoking and Health Research, Editor: N.A. Jeorgenson, Nova Science Publishers, Inc., Chapt 12, 283-296, 2007.



4. Miller, Rachel L. and Shuk-mei Ho Environmental epigenetics and asthma: Current concepts and call for studies, American Journal of Respiratory and Critical Care Medicine, 177:567-573, 2008.
5. Miller, Rachel L. Prenatal maternal diet and asthma risk. The Journal of Clinical Investigation, 118(10):3265-3268, 2008.
6. Molini M. Patel and Rachel L. Miller. Air pollution and childhood asthma: Recent advances and future directions. Current Opinion in Pediatrics, 21: 235-242. 2009.
7. Rachel L. Miller and Julie Herbstman. Epigenetic mechanisms in asthma, In: Epigenetics Nutrition and Environmental Health. Wiley Publishers (Germany), Chapt. 20, p253-263, 2009.
8. Julie S Kuriakose and Rachel L Miller. Environmental epigenetics and allergic diseases: Recent advances. Clinical and Experimental Allergy, 40(11):1602-10, 2010. PMID: PMC2970703
9. Jennifer Camacho MD and Rachel L. Miller. Asthma in women and treatment guidelines. Lung Health Professional Magazine, 1(3): 8-10, 2010.
10. Miller, Rachel L. Asthma epigenetics: Emergence of a new paradigm? In: Michels KB (ed). Epigenetic Epidemiology. New York, Springer Publishing, Chapt 16: 307-320, 2012.
11. Rachel L. Miller and Cara L. Agerstrand. Targeting indoor air pollution: Interpreting the RESPIRE trial, The Lancet, 378:1682-83, 2011.
12. Stephanie Lovinsky-Desir and Rachel L. Miller. Environmental epigenetics and asthma: Our environment's molecular footprints, In: Toxicology and Epigenetics. John Wiley & Sons, Ltd., (England), Chapt 9, p. 191-203, 2012.
13. Stephanie Lovinsky-Desir and Rachel L. Miller. Epigenetics, asthma and allergic diseases: A review of latest advancements. Current Allergy and Asthma Reports, 12:211-20, 2012.
14. William Bailey and Rachel L. Miller. Trigger control to enhance asthma management. UpToDate, updated annually.
15. Witherspoon NO, Trousdale K, Bearer CF, Miller RL. The public health and policy implications of epigenetics and pediatric health research. Environmental Health Perspectives 120 (10):a380-a381, 2012.
16. Mariàngels de Planell-Saguer, Stephanie Lovinsky-Desir and Rachel L Miller. Epigenetic regulation: The interface between prenatal and early-life exposure and asthma susceptibility. Environmental and Molecular Mutagenesis, 55 (3): 231-243, 2014, 2014.
17. Stephanie Lovinsky-Desir and Rachel L. Miller. Commentary: Bisphenol A exposure is associated with decreased lung function. Year Book of Pediatrics, Michael Cabana Ed. Elsevier Mosby (Philadelphia, PA), 2015.
18. Rachel L. Miller and David Peden. Environmental impacts on immune responses in atopy and asthma. Journal of Allergy and Clinical Immunology, 134: 1001-8, 2014.
19. Lacey Robinson and Rachel Miller. The impact of bisphenol A and phthalates on allergy, asthma and immune function- A review of latest findings. Current Environmental Health Reports. Springer Publishing, 2(4):379-87, 2015.
20. Rachel L. Miller. Environmental medical epigenetics: A review of epigenetically-induced medical risks generated from exposures in our air, food, and personal products. Medical Epigenetics. Chapter 7. p. 103-125. Trygve Tollesfsbol editor, Elsevier (NY, NY), 2016.
21. Kinney, P. L., Weinberger, K. R., Miller, R. L. Interactions among climate change, air pollutants, and aeroallergens. Chapter 8. P 137-156. In: Beggs, P. J., Ed. Impacts of Climate Change on Allergens and Allergic Diseases. Cambridge University Press. 2016.
22. Joyce E. Yu and Rachel L. Miller. Got milk? Understanding the farm milk effect in allergy and asthma prevention. Journal of Allergy and Clinical Immunology, 137 (6), 1707-08, 2016.

23. Rachel L. Miller and Jennifer Lawrence. Understanding root causes of asthma: Perinatal environmental exposures and epigenetic regulation. Annals of the American Thoracic Society, 15 (supplement 2), 2018.
24. Joyce E. Yu, Anu Mallapaty, Rachel L. Miller. It's not just what you eat: Environmental factors in the development of food allergies. Environmental Research, 2018: 118-24, 2018.

Additional reviews:

1. Children's Environmental Health Research – Highlights from the Columbia Center for Children's Environmental Health. Frederica Perera, Sheila Viswanathan, Robin Whyatt, Deliang Tang, Rachel L. Miller, Virginia Rauh, Ann. New York Academy of Sciences, 1076:15-28, 2006.
2. Epidemiology of Anaphylaxis: Findings of the ACAAI Epidemiology of Anaphylaxis Working Group (Phil Lieberman, MD; Carlos Camargo, Jr., MD; Kari Bohlke, ScD; Hershel Jick, MD; Rachel L. Miller, MD; Aziz Sheikh, MD; Estelle Simons, MD). Annals of Allergy, Asthma & Immunology, 97: 596-602, 2006.
3. Chung, E.K., R. L. Miller, M. T. Wilson, S. J. McGeady, J. F. Culhane. Antenatal risk factors, cytokines and the development of atopic disease in early childhood, Arch. Dis. in Child. Fetal Neonatal Ed. 92: 68-73, 2007.
4. Eun Soo Kwak, Allan Just, Robin Whyatt, Rachel L. Miller, Phthalates, pesticides, and bisphenol-A exposure and the development of nonoccupational asthma and allergies: How valid are the links?, Open Allergy Journal, 2; 45-50, 2009.
5. Virginia A. Rauh, Megan K. Horton, Robin M. Whyatt, Rachel L. Miller, Frederica Perera, Neonatology and the environment: Impact of early exposure to airborne environmental toxicants on infant and child neurodevelopment, NeoReviews, 11:e363-69, 2010.

CME exams:

1. Donohue, Kathleen, Alissa Hersh, Rachel Miller. Continuing Medical Education examination. Asthma and obesity: Common early-life influences. Journal of Allergy and Clinical Immunology 121(5): 1085-86, 2008.
2. Donohue, Kathleen, Amy Shah, Alissa Hersh, Rachel Miller. Continuing Medical Education examination. Complementary and alternative medicine: Herbs, phytochemicals, and vitamins and their immunologic effects. Journal of Allergy and Clinical Immunology 123(10): 295-6, 2009.
3. Spalding, Collette, Niti S. Agarwal, Rachel L. Miller. Continuing Medical Education examination. Glucocorticoid-induced osteoporosis: An update on effects and management. Journal of Allergy and Clinical Immunology 132: 1031-32, 2013.
4. Agarwal, Niti S., Coscia, G., Miller, R.L. Continuing Medical Education examination. The allergy epidemics: 1870-2010. Journal of Allergy and Clinical Immunology 136: 14.
5. Kartan, Saritha, Rebecca Koransky, Rachel L. Miller. Continuing Medical Education examination. Pharmacogenomics and adverse drug reactions: Primetime and not ready for primetime tests. Journal of Allergy and Clinical Immunology 138(4); 956, 2016.

Abstracts:

1. Miller, R.L., A. Chachoua, J. Le, R. H. Blum, J. Vilcek. Lack of stimulation of human monocyte-mediated cytotoxicity by recombinant M-CSF. Proceedings of the American Association for Cancer Research 31:242, 1990.
2. Miller, R. L., S. Das, T. Anandarangam, D. Leibowitz, B. Thomashow, M. T. Savoia, P.O. Alderson, S. Homma. Extent of perfusion abnormality on V/Q scan in acute pulmonary emboli determines presence of patent foramen ovale. American Journal of Respiratory and Critical Care Medicine 153:A95, 1996.
3. Miller, R. L. ,T. Anandarangam, S. Das, D. Leibowitz, B. Thomashow, M. T. Savoia, P. O. Alderson, S. Homma. Right ventricular enlargement persists in acute pulmonary emboli despite clinical improvement. American Journal of Respiratory and Critical Care Medicine 153:A96, 1996.
4. Miller, R.L. and R. P. Cole. Reduced cuff leak volume predicts postextubation stridor. American Journal of Respiratory and Critical Care Medicine 153:A606, 1996.
5. Miller, R. L. and P. B. Rothman. Analysis of interleukin-4 mediated IgE pathway in asthma and Hyperimmunoglobulin E Syndrome, American Journal of Respiratory and Critical Care Medicine, 155:A883, 1997.
6. Miller, R. L., Y. Kuang, X. Bai, P.B. Rothman, L. Mayer. 446-B Cell Differentiation Factor stimulates Stat1. American Journal of Respiratory and Critical Care Medicine, 157:A423, 1998.
7. Miller, R.L., L. Acosta, C. Bell, G. Chew, D. Evans, M. Northridge, I. Goldstein, P. Shepard, S. Frantz, P. Rothman, P. Kinney. Asthmatic children in northern Manhattan both highly exposed and sensitized to cockroach allergens in comparison to dust mite, mouse, rat. American Journal of Respiratory and Critical Care Medicine, 159:A856, 1999.
8. Chew, G., R.L. Miller, S. Frantz, M. Northridge, P. Shepard, D. Evans, P. Kinney. Allergen intervention in low-income New York City apartments. American Journal of Respiratory and Critical Care Medicine, 159:A501, 1999.
9. Miller, Rachel, Anita Ghatak, Paul Rothman, Alfred Neugut. Anaphylaxis in the United States: An investigation into its epidemiology. Journal of Allergy and Clinical Immunology, 105:S349, 2000.
10. Miller, R.L., C.A. Bell, S.A. Biedermann, R.M. Whyatt, F.P. Perera, P.B. Rothman, J.Ford. In utero sensitization to indoor allergens occurs even in the absence of maternal allergy. American Journal of Respiratory and Critical Care Medicine, 161(3):A203, 2000.
11. Perera, F.P., V.A. Rauh, J.G. Ford, I. Meyer, R.L. Miller, P.L. Kinney, H.F. Andrews, D. Evans R. Wallace, D. Wallace, M. Fullilove, P. Shepard. Recent study findings from the Columbia Center for Children's Environmental Health, American Public Health Association, 2000.
12. Perera, F.P, M. Aggarwal, H. Andrews, G. Chew, D. Evans, J.G. Ford, M. Fullilove, R. Fullilove, P.L. Kinney, I. Meyer, R.L. Miller, M. Orjuela, V. Rauh, R. M. Santella, P. Shepard, W.Y. Tsai, D. Wallace, R. Wallace, R. M. Whyatt. Recent study findings from the Columbia Center for Children's Environmental Health. Annual Meeting of Children's Environmental Health Centers, Berkeley, 2000.
13. Miller, R.L. S.A. Biedermann, G.C. Chew, M. Aggarwal, P.L. Kinney, R.M. Whyatt, F.P. Perera, J.G. Ford. Increased cockroach and mouse-IgE level at age 2 years in a highly exposed inner-city cohort. American Journal of Respiratory and Critical Care Medicine, 163(5): A603, 2001.
14. Miller, R.L., S.A. Biedermann, C.A. Bell, G. Halasz, J. Jerzynska, R.M. Whyatt, F.P. Perera, J.F. Ford. Cord blood proliferation and cytokine production in response to indoor allergens in an inner-city cohort. American Journal of Respiratory and Critical Care Medicine, 163(5): A868, 2001.
15. Perera, F.P., V.A. Rauh, R.M. Whyatt, J.G. Ford, R.L. Miller, G.L. Chew, P.L. Kinney. Battery of pre- and postnatal biomarkers and exposure assessments in a prospective cohort study of African American and Latino mothers and children, International Society of Exposure Analysis, 2001.

16. Miller R.L., S.A. Biedermann, G.L. Chew, P.K. Kinney, I. Meyer, R.M. Whyatt, F.P. Perera, J.F. Ford. Asthma related phenotypes and IgE levels at age 2 years in a high risk inner-city cohort, American Journal of Respiratory and Critical Care Medicine, 165 (8):A244, 2002.
17. Perera F.P., V.A. Rauh, R.M. Whyatt, J.G. Ford, R.L. Miller, G.L. Chew, P.L. Kinney. A molecular epidemiologic prospective cohort study of African American and Latina mothers and children, American Public Health Association, 2002.
18. Miller, R.L., M. Smith, R.S. Garfinkel, J. Ford, F.P. Perera, R.M. Whyatt, P.L. Kinney. Prenatal exposure to polycyclic aromatic hydrocarbons and antigen-specific cytokine production, IgE production in a Northern Manhattan birth cohort, American Journal of Respiratory and Critical Care Medicine, 167 (7): A942, 2003.
19. Miller, R.L., J. Correa, P.L. Kinney. Rat sensitization among inner-city asthmatic children. American Journal of Respiratory and Critical Care Medicine, 167 (7): A470, 2003.
- \*\*20. Rastogi, D., Y. Ogawa, C. Lendor, D. Blythe, R.L. Miller. B cell priming *in utero* to influenza vaccine antigens, Journal of Allergy and Clinical Immunology, 113 (2):S51, 2004.
21. Perzanowski, M.S., R.L. Miller, P.S. Thorne, B.J. Sheares, J.C. Correa, F.P. Perera, I.F. Goldstein, G.L. Chew. Endotoxin in inner-city homes and atopy and wheeze in the first two years of life. Journal of Allergy and Clinical Immunology, 113 (2): S98, 2004.
- \*\*22. Rastogi, D., C. Lendor, M. Horton, D. Blythe, and R.L. Miller. Systemic Th2 polarization among pregnant asthmatics, American Journal of Respiratory and Critical Care Medicine, 169 (7), A501, 2004.
23. Goldstein, I.F., M.S. Perzanowski, R. S Garfinkel, C. Lendor, L. A. Hoepner, F. P. Perera, and R. L. Miller. Total IgE and asthma symptoms and their association with birth order during the first three years of life in an inner-city New York City cohort, American Journal of Respiratory and Critical Care Medicine, 169 (7), A144, 2004.
24. Mostecky J.W., W.J. Klimecki, P.E. Graves, R.L. Miller et al. Single nucleotide polymorphism in the SOCS-1 promoter is associated with lower IgE levels in asthma patients Federation of Clinical Immunology Societies, 2004.
25. Perzanowski, M.S., G.L. Chew, J.Y. Kong, C. Lendor, F.P. Perera, R.L. Miller. Pet protective effect in New York City birth cohort: Inverse association with atopy but not wheeze. Journal of Allergy and Clinical Immunology, 115 (4): 893, 2005.
26. Perzanowski MS, GL. Chew, JY Kong, C. Lendor, FP. Perera, R.L. Miller. Relevance of cat allergen to allergic asthma and rhinitis symptoms among 5 year old children in a New York City birth cohort. For the 15th Annual Meeting of the European Respiratory Society, 2005.
27. Perzanowski, M.S., I.F. Goldstein, R.G. Barr, B.J. Sheares, G.L. Chew, R.S. Garfinkel, F.P. Perera, R.L. Miller. Elevated BMI at age 3 years predicts wheeze at age 5, independent of wheeze earlier in life. Journal of Allergy and Clinical Immunology, 117 (2): S346, 2006.
- \*\*28. Collins, Jennifer, Xia Mao, Chaodong Wang, Rachel L. Miller. The effects of three polycyclic-aromatic hydrocarbons on interleukin-4 and interferon gamma production among atopic individuals. Journal of Allergy and Clinical Immunology, 117 (2): S335, 2006.
- \*\*29. Nam, NJ, D Chau, RL Miller, SM Canfield. Desensitization to clopidogrel and ticlopidine in 2 patients with coronary artery disease and indwelling drug-eluting stents. Journal of Allergy and Clinical Immunology, 117 (2): S354, 2006.
- \*\*30. Al-Alem, U, Cynthia Lendor, Ji Yong Kong, Robin Garfinkel, Ginger L. Chew, Matthew Perzanowski, David Camann, Robin M. Whyatt, Patrick L. Kinney, Frederica P. Perera, Rachel L. Miller. Association of mouse, cockroach and dustmite IgE levels at age 2 with traffic-related air pollution exposure and respiratory symptoms in an inner city birth cohort. Journal of Allergy and Clinical Immunology, 117 (2): S364, 2006.

- \*\*31. Donohue KM, D Tang, D Chau, H Andrews, R Chen, S Yadavalli, F Perera, S Chanock, RL Miller. Ethnic differences in frequencies of SNPs for Glutathione S-Transferase (GST) and IL13. Journal of Allergy and Clinical Immunology, 117 (2): S361, 2006.
32. Perera, F. Virginia Rauh, Robin Whyatt, Sally Lederman, Rachel Miller, Wieslaw Jedrychowski, Pat Kinney, David Camann, Howard Andrews, Manuela Orjuela, Deliang Tang. International research on the effects of *in utero* exposure to air pollutants on child growth and development, asthma and cancer risk, ISEA, 2006.
33. McConnell, R., F. Gilliland, N. Kuenzli, I. Tager, P. Eggleston, R. Miller, F. Perera. In utero and childhood exposures and respiratory health. ISEA, 2006.
34. Panjwani, K., G.L. Chew, A. Divjan, AM Reardon, F.P. Perera, RL Miller, M.S. Perzanowski. Fel d 1 in the bed dust of cat non-owners differs among ethnicities but not neighborhood in two NYC cohorts. J Allergy Clin Immunol 119 (1): S186, 2007.
35. Perzanowski, M.S., G.L. Chew, A. Divjan, A. Johnson, K. Panjwani, B.J. Sheares, T.A. Platts-Mills, F.P. Perera, R.L Miller. Cat ownership is a risk factor for developing sensitization to cat but not wheeze by age 5 in a low income New York City birth cohort. J Allergy Clin Immunol 119 (1): S310, 2007.
- \*\*36. Narvaez R., K. Moors, A. Reyes, M. Borjas, M. Ramirez, J. Tapia-Mendoza, R. Miller Spanish translations of 'wheeze' on asthma questionnaires American Journal of Respiratory and Critical Care Medicine, 175:A84, 2007.
37. Sheares, B.J., R.L. Miller, A. Reyes, R. Whyatt and P. Fani. Airway obstruction among a cohort of urban African American and Dominican children American Journal of Respiratory and Critical Care Medicine, 175:A86, 2007.
38. Callaghan, K., K. Moors, J. Ross, R. Narvaez, M. Borjas, P. Kinney, F. Pererra, R. Miller, and Steven Chillrud. Pilot survey of street-side summer ozone in northern Manhattan, American Journal of Respiratory and Critical Care Medicine, 175:A163, 2007.
- \*\* Rothman, and R.L. Miller. Antigen-specific immune responses to influenza vaccine in utero American Journal of Respiratory and Critical Care Medicine, 175:A324, 2007.
- \*,\*\*40. Donohue KM, F Perera, S Chanock, D Tang, H Andrews, L Hoepner, S Wang, R Liu, R Chen, S Yadavalli, B Welch, RL Miller GST polymorphisms and asthma outcomes in an inner city cohort American Journal of Respiratory and Critical Care Medicine, 175:A462, 2007.
41. Mao, X, A. Johnson, C. Lendor, E. Kelvin, R. Garfinkel, R.L. Miller Season of birth and biomarkers for allergic sensitization in young children American Journal of Respiratory and Critical Care Medicine, 175:A476, 2007.
- \*,\*\*42. Lendor, C., D.Diaz, M.B. Plaza, C.Pulgarin, A. Sjodin,L.Romanoff, Z. Li , D.G. Patterson, Jr., L. Needham. R.L. Miller Polycyclic aromatic hydrocarbon metabolites and wheeze in an inner city cohort American Journal of Respiratory and Critical Care Medicine, 175:A543, 2007.
43. Mao, X, Manisha Daswani, Sullafa Kadura, Rachel L. Miller. Immune responses of dendritic cells to diesel exposure in vitro American Journal of Respiratory and Critical Care Medicine, 175: A925, 2007.
- \*,\*\*44. Donohue KM, U. Al-alem, M.S. Perzanowski, G.L. Chew, A. Johnson, E.A. Kelvin, L.A. Hoepner , F.P. Perera, R.L. Miller. Anti-cockroach, mouse IgE associations with early wheeze and atopy in an inner-city birth cohort. J Allergy Clin Immunol, 121(2):S135, 2008.
45. Adnan Divjan, Kiran Ghouri, Ginger L. Chew, Rachel L. Miller, Matthew S. Perzanowski. Morning and afternoon repeated measurements of offline exhaled nitric oxide and exhaled breath condensate pH. J Allergy Clin Immunol, 121(2):S160, 2008.
- \*\*46. Narvaez, R, L Hoepner, R Garfinkel, D Camman, FP. Perera, PL. Kinney, S Chillrud, RL. Miller. Differential spatial and temporal trends of traffic-related air pollutants in New York City. J Allergy Clin Immunol, 121(2):S234, 2008.

47. Perzanowski, M.P., Rachel L. Miller, Robin S. Garfinkel, Ginger L. Chew, Inge F. Goldstein, Frederica P. Perera, R. Graham Barr. Prenatal acetaminophen use is a risk for wheeze at age 5 years in a low income urban population with a high risk for asthma. J Allergy Clin Immunol, 121(2):S135, 2008.
- \*\*48. Robert M. Zemble, Rachel L. Miller. Response of peripheral blood invariant natural killer T cells to diesel exhaust particles in mild atopic asthmatics. J Allergy Clin Immunol, 121(2):S261, 2008.
- \*\*49. Molini M. Patel, Steve Chillrud, Lori Hoepner, Andria Reyes, Robin Garfinkel, Robin Whyatt, Patrick Kinney, Frederica Perera, Rachel L. Miller. Effects of ambient elemental carbon and metals on wheeze and cough during early childhood. Epidemiology, 19(6 Suppl): p. S159, 2008.
- \*\*50. Patel MM, Chillrud SN, Hoepner L, Reyes A, Garfinkel R, Whyatt RM, Kinney PL, Perera FP, Miller RL, Effects of ambient elemental carbon and metals on wheeze and cough during early childhood. Epidemiology, 2008. 19(6 Suppl): p. S159.
- \*\*51. Shah, A. Miller. R. L. Toxic epidermal necrolysis, probably following administration of the experimental cancer vaccine CDX-110, ACAI annual meeting, 2008.
- \*52. Margot O'Toole.....Rachel L. Miller.....et. al. Biological Mechanism Associated with Asthma Exacerbation Attack as Revealed By Gene Expression Patterns of Peripheral Blood Mononuclear Cells. J Allergy Clin Immunol, 2009, in press. (**MAAI Featured Poster**).
53. Maria Jose Rosa, Adnan Divjan, Alina Johnson, Lori Hoepner, Beverley J Sheares, Frederic P Perera, Rachel L. Miller, Matthew S. Perzanowski, Flow-dependent and independent parameters of exhaled nitric oxide in 9 year-old children living in low-income NYC communities. J Allergy Clin Immunol, 123 (2): S:2, 2009.
54. Adnan Divjan, Maria Jose Rosa, Allan Just, Beverly J Sheares, Frederica P Perera, Rachel L. Miller, Matthew S. Perzanowski.. IgE and symptoms by age 2 years predict FENO at age 5-7 years in a low-income urban New York City population. J Allergy Clin Immunol, 123 (2): S57, 2009.
55. Luis Acosta, Inge F. Goldstein, Andrew G. Rundle, Omar Olmedo, Ginger Chew, Robert B. Mellins, James Quinn, Adnan Divjan, Lori Hoepner, Howard Andrews, Frederic P Perera, Rachel L. Miller, Judith S. Jacobson, Matthew S. Perzanowski, Preliminary Findings from the New York City Neighborhood Asthma and Allergy Study. J Allergy Clin Immunol, 123 (2): S65, 2009.
- \*\*56. Ann Marie Reardon, Matthew S. Perzanowski, Robin M. Whyatt, Ginger L. Chew, Frederica P. Perera, Rachel L. Miller Associations between prenatal pesticide exposure and early wheeze, cough, and IgE in early childhood. J Allergy Clin Immunol, 123 (2): S67, 2009.
- \*\*57. Donohue KM, F Perera, S Chanock, D Tang, L Hoepner, S Wang, R Liu, R Chen, RL Miller. GST polymorphisms and atopic dermatitis in an inner city cohort. . J Allergy Clin Immunol, 123 (2): S71, 2009.
- \*\*58. Carolyn Chang, Alina Johnson, Elizabeth Kelvin, Frederica Perera, Rachel L. Miller. Association of age 5, but not cord blood, allergen-Induced T cell proliferation with age 5 allergen-specific IgE and asthma. J Allergy Clin Immunol, 123 (2): S99, 2009.
- \*\*59. Molini M. Patel, Steve Chillrud, Lori Hoepner, Andria Reyes, Robin Garfinkel, Robin Whyatt, Frederica Perera, Rachel L. Miller. Effects of ambient nickel, vanadium, and zinc on wheeze and cough in early childhood J Allergy Clin Immunol, 123 (2): S:172, 2009.
60. Matthew Perzanowski, Kevin Gauvey-Kern, Diurka Diaz, Inge Goldstein, Frederica Perera, Rachel Miller. Inverse association between birth order and specific IgE among 5 year old children living in an inner-city community XXVIII Congress of the European Academy of Allergy and Clinical Immunology, EAACI 2009.
- \*,\*\*61. Donohue, KM, NJ Nam, A Johnson, A Divjan, J Choi, EA Dimango, M Bessler, RL Miller. Exhaled nitric oxide in obese asthmatics and obese non-asthmatics. Surgery for Obesity and Related Diseases, 5 (3): S68, 2009.

- \* \*\*62. Kuriakose, J. S.; Miller, R. L.; Hersh, A. Paradoxical bronchospasm and rash after inhaled corticosteroid and bronchodilator, ACAI annual meeting, 2009.
63. Omar Olmedo, Luis Acosta, Inge F. Goldstein, Adnan Divjan, Andrew G. Rundle, Ginger Chew, Robert B. Mellins, Lori Hoepner, Frederic P Perera, Rachel L. Miller, Judith S. Jacobson, Matthew S. Perzanowski. Differences in mouse allergen levels among high and low asthma prevalence neighborhoods in New York City. J Allergy Clin Immunol, 125 (2), 2010.
- \*\*64. Kyung Hwa Jung, Molini M. Patel, Patrick L. Kinney, Steven N. Chillrud, Robin Whyatt, Lori Hoepner, Beizhan Yan, Robin Garfinkel, James Ross, David Camann, Frederica P. Perera, and Rachel L. Miller. Effects of season and indoor heating on indoor and outdoor residential levels of airborne polycyclic aromatic hydrocarbons, absorbance and particulate matter 2.5 in an inner city cohort of young children. J Allergy Clin Immunol, 125 (2), AB81, 2010.
- \*\*65. E Kwak A Just, AY Yau DE Camann, RM Whyatt, RL Miller. Contaminating phthalates in albuterol inhalation medications. J Allergy Clin Immunol, 125 (2), AB81, 2010.
- \*\*66. M Reyes, MS Perzanowski , RM Whyatt , E Kelvin , D Diaz, B Plaza, L Hoepner , FP Perera, V Rauh, RL Miller. Maternal demoralization Is associated with childhood wheeze, but not IgE, at age 5 years in an inner-city cohort. J Allergy Clin Immunol, 125 (2), AB210, 2010.
- \* \*\*67. Molini M. Patel, James W. Quinn, Kyung Hwa Jung Lori Hoepner, Diurka Diaz, Robin Whyatt, Frederica P. Perera, and Rachel L. Miller. Residential density of roadways associated with cough and asthma in urban children through age 5 years. J Allergy Clin Immunol, 125 (2), 2010.
68. Acosta LM, Goldstein IF, Rundle AG, Sueda Y, Dahl A, Chew GL, Mellins RB, Hoepner L, Andrews H, Perera FP, Miller RL, Jacobson JS, Perzanowski MS. Housing characteristics and reported pest infestation differ among neighborhoods with high and low asthma prevalence in New York City. J Allergy Clin Immunol, 125 (2), AB208, 2010.
70. Adnan Divjan, Maria Jose Rosa, Allan Just, Beverly J Sheares, Frederica P Perera Rachel L. Miller, Matthew S. Perzanowski IgE and symptoms by age 2 years predict FENO at age 5-7 years in a low-income urban New York City population. American Journal of Respiratory and Critical Care Medicine, 181;2010:A3924, 2010.
- \*70. Maria José Rosa, Kyung Hwa Jung, Matthew S. Perzanowski, Elizabeth A. Kelvin, David Camann, Katherine W Darling, Steven N Chillrud, Robin M Whyatt, Patrick L Kinney, Frederica P Perera, Rachel L. Miller. Prenatal exposure to polycyclic aromatic hydrocarbons, environmental tobacco smoke and asthma in children 5 and 6 years of age. American Journal of Respiratory and Critical Care Medicine, 181;2010:A1860, 2010.
71. Matthew S. Perzanowski, Rachel L. Miller, Kevin Gauvey-Kern, Diurka Diaz Frederica P. Perera, Inge F. Goldstein. Inverse association between birth order seroatopy and atopic wheeze among 7-year old children living in an inner-city community. American Journal of Respiratory and Critical Care Medicine, 181;2010:A1896, 2010.
72. Alexandra G. Cornell, Robert B. Mellins, Luis M. Acosta, Andrew G. Rundle, Rachel L. Miller, Patrick L. Kinney, Frederica P. Perera, Judith S. Jacobson, Inge F. Goldstein, Steven N. Chillrud, Matthew S. Perzanowski. Association between the relative concentration of black carbon in airborne particulate matter in homes and airway obstruction in 7-8 year old children living in high and low asthma prevalence neighborhoods in New York City. American Journal of Respiratory and Critical Care Medicine, 181;2010:A4622, 2010.
73. Luis Acosta, Jonathan Salud, James Quinn, Alexandra Cornell, Robert B. Mellins, Judith Jacobson, Inge F. Goldstein, Frederica P. Perera, Howard Andrews, Rachel L. Miller, Patrick L. Kinney, Steven Chillrud,, Andrew G. Rundle, Matthew S. Perzanowski. Levels of black carbon in air differ among homes in neighborhoods with high and low asthma prevalence in New York City. American Journal of Respiratory and Critical Care Medicine, 181;2010:A4640, 2010.

74. Obeng BB, Divjan A, Rosa MJ, Just AC, Patel M, Goldstein IF, Rundle AG, Chillrud SN, Perera FP, Miller RL, Kinney PL, Perzanowski MS. Short term effects of regional air pollution on fractional exhaled nitric oxide from children in New York City. American Journal of Respiratory and Critical Care Medicine, 181:A4631, 2010.
75. Manuela A. Orjuela, Xinhua Liu, Rachel Miller, Deliang Tang, Claudia P. Cujar, Ida Hui Suen, Aisha L. Siebert, Lori Hoepner, Dorothy Warburton, Federica Perera. Chromosomal aberrations in 5 year olds and urinary PAH. ACCR Late breaking abstract, 2010.
- \*\*76. Jung, K. H., Moors, K., Yan, B., Chillrud, S. N., Perera, F., Whyatt, R., Camann, D., Kinney, P. L., and Miller, R. L. Vertical gradient of residential indoor and outdoor polycyclic aromatic hydrocarbons, black carbon, and particulate matter in New York City. Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology (ISES-ISEE). Seoul, Korea, 2010.
77. Yan, B., D. Kennedy, J. Cowin, M. Iedema, A. Butz, P. Breyse, R. Miller, K.H. Jung, K. Moors, M. Perzanowski, D. Williams, J. Juan, M. Balletta, S. Chillrud. Application of an optical and nondestructive method for archived particulate matter filters for quantifying environmental tobacco smoke exposures. Specialty Health Conference of the Association for Aerosol Research, San Diego, Ca March, 2010.
78. Manuela A. Orjuela, Xinhua Liu, Dorothy Warburton, Rachel Miller, Deliang Tang, Claudia P. Cujar, Ida Hui Suen, Lori Hoepner, Federica Perera. Levels of metabolites of naphthalene in urine predict translocations in peripheral blood lymphocytes in children. AACR International Conference, Philadelphia, November 2010.
- \*79. K. M. Donohue, R. L. Miller, M. S. Perzanowski, A. C. Just, L. A. Hoepner, S. Arunajadai, F. P. Perera, R. M. Whyatt. Bisphenol-A exposure and asthma in an inner-city birth cohort. J Allergy Clin Immunol (Featured Poster Session), 127 (2), AB300, 2011.
- \*\*80. JS Kuriakose, D Torrone, K Gauvey-Kern, S Hsu, M Niedzwiecki, H Jiang, F Perera, RL Miller. Intra-individual variation in DNA methylation of IFN- $\gamma$  and IL-4 over days. J Allergy Clin Immunol, 127 (2): AB271, 2011.
- \*\*81. Shao-I Hsu, Kyung H. Jung, Kathleen Moors, Kerlly Bernabé, Patrick L. Kinney, Steven N. Chillrud, Matt Perzanowski, Robin Whyatt, Lori Hoepner, Shuang Wang, Beizhan Yan, James Ross, Federica Perera, and Rachel L. Miller. Associations between traffic-related exposures and incidence of wheeze among children age 5-7 in NYC. J Allergy Clin Immunol, 127 (2):AB74, 2011.
- \*\*82. Jennifer M. Camacho, Shao-I Hsu, Kyung H. Jung, Kathleen Moors, Kerlly Bernabé, Patrick L. Kinney, Steven N. Chillrud, Robin Whyatt, Lori Hoepner, James Ross, Federica Perera, and Rachel L. Miller. Persistent indoor air pollution levels in the homes of New York City children over 4 to 5 years. J Allergy Clin Immunol, 127 (2): AB290, 2011.
- \*\*83. CN Spalding, S Hsu, MM Patel, K Moors, S Chillrud, CM Jusino, PM Shepard, RL Miller. The effect of wind direction and speed on black carbon concentrations in Northern Manhattan and the Bronx. J Allergy Clin Immunol, 127 (2):AB290, 2011.
84. Omar Olmedo, Inge F. Goldstein, Luis Acosta, Adnan Divjan, Andrew G. Rundle, Ginger L. Chew, Robert B. Mellins, Lori Hoepner, Howard Andrews, Sara Lopez-Pintado, James W. Quinn, Federica P Perera, Rachel L. Miller, Judith S. Jacobson, Matthew S. Perzanowski. Cat ownership and Fel d 1 in bed dust are associated with increased sensitization to cat, but not asthma symptoms among middle-income children in New York City. J Allergy Clin Immunol, 127 (2), AB298, 2011.
- \*, \*\*85. Kyung Hwa Jung, Shao-I Hsu Kathleen Moors, Kerlly Bernabé, Beizhan Yan, Steven N. Chillrud, Robin Whyat, Lori Hoepner, Inge Goldstein, Bingzhi Zhang, David Camann, Patrick L. Kinney, Federica P. Perera, and Rachel L. Miller. Prenatal and postnatal exposure to polycyclic aromatic hydrocarbons and asthma: Effect of atopy at ages 5-6 yrs in an urban birth cohort. J Allergy Clin Immunol, 127 (2), 2011. (**late breaking abstract**)



- \*\*86. Shah, A.; Canfield S. M.; Miller R.L. Chronic urticaria related to menses. J Allergy Clin Immunol, 127 (2), AB291, 2011.
- \*\*87. Allan C. Just, Robin M. Whyatt, Matthew S. Perzanowski, Frederica P. Perera, Inge F. Goldstein, Rachel L. Miller. Prenatal exposure to phthalate plasticizers and eczema in children from New York City. American Journal of Respiratory and Critical Care Medicine, 183: A1722, 2011.
88. Maria Jose Rosa, Adnan Divjan, Lori Hoepner, Beverley J Sheares, Diurka Diaz, Sophie N. Chu, Frederica P Perera, Rachel L. Miller, Matthew S. Perzanowski. Effect of reported current cold or respiratory infection on fractional exhaled nitric parameters among 9-11 year old inner-city children. American Journal of Respiratory and Critical Care Medicine, 183: A4477, 2011.
89. Adnan Divjan, Maria Jose Rosa, Marilyn Reyes, Lori Hoepner, Beverly J Sheares, Hanjie Zhang, Frederica P Perera, Rachel L. Miller, Matthew S. Perzanowski. Exhaled NO at age 7-11 years is elevated with early life but not recent onset of allergic sensitization American Journal of Respiratory and Critical Care Medicine, 183: A4472, 2011.
- \*90. Fareeha Hafeez, Benedicta B. Obeng, Tiantian Li, Jing Cai, Cosette Olivo, Alexandra G. Cornell, Adnan Divjan, Rachel L. Miller, Frederica Perera, Steven N. Chillrud, Patrick L. Kinney, Mathew S. Perzanowski. Day-to-day variability in FeNO, exhaled breath condensate pH and FEV1/FVC among 9-10 year old asthmatic versus non-asthmatic urban children. American Journal of Respiratory and Critical Care Medicine, 183: A4384, 2011.
- \*\*91. Megan Niedzwiecki, Huaijie Zhu, Lin Lin, Gabriele Grunig, Sophie Chu, Hong Jiang, and Rachel L. Miller. Prenatal exposure to allergen and its effects on IgE and DNA methylation at interferon gamma promoter in grandoffspring mice. American Journal of Respiratory and Critical Care Medicine, 183: A1352, 2011.
92. Alexandra G. Cornell, Robert B. Mellins, Luis M. Acosta, Andrew G. Rundle, Rachel L. Miller, Patrick L. Kinney, Beizhan Yan, Frederica P. Perera, Judith S. Jacobson, Inge F. Goldstein, Steven N. Chillrud, Matthew S. Perzanowski. Exhaled NO is elevated with exposure to black carbon and dust mite allergen among 7 and 8-Year-old children living in high and low asthma prevalence neighborhoods In New York City. American Journal of Respiratory and Critical Care Medicine, 183; A4473, 2011 (**Pediatric Fellows Poster Day first place**).
- \*\*93. Jung, K.H., Perzanowski, M., Rundle, A., Nath, S., Moors, K., Bernabé, K., Yan, B., Chillrud, S.N., Whyatt, R., Camann, D., Kinney, P.L., Perera, F., and Miller, R.L. Early pyrene, overweight and asthma at ages 5-6 yrs in an urban cohort. International Society of Exposure Science conference, Baltimore, Maryland, October 2011.
- \*\*94. Kathleen Moors, Kyung Hwa Jung, Shefali Nath, Beizhan Yan, Steven N. Chillrud, Robin Whyatt, David Camann, Patrick L. Kinney, Frederica P. Perera, and Rachel L. Miller. Effects of heating season on the associations between meteorological factors and traffic-related air-pollution in NYC. International Society of Exposure Science conference, Baltimore, Maryland, October 2011.
95. Allan Just, Rachel Miller, Rundle AG, Chen Q, Camann DE, Calafat AM, Whyatt RM. Vinyl flooring in the home is associated with airborne residential butyl benzyl phthalate and urinary metabolite concentrations. ISES, 2011.
96. Kwak, E., Mainardi, T., Miller, R. and Resnick, D. Mistaken diagnosis of anaphylaxis in the setting of brain herniation. Poster at the 2011 Annual Scientific Meeting of the ACAAI
97. Kathleen Donohue, George Vlad, Rachel L. Miller, Matthew S. Perzanowski, Allan C. Just, Lori A. Hoepner, Sriekesh Arunajadai, Frederica P. Perera, Raphael Clynes, Antonia Calafat, Robin M. Whyatt. Bisphenol-A and T regulatory cell counts in an inner-city birth cohort. Epidemiology, 2011. Presented September 14, 2011 at ISEE in Barcelona, Spain.

98. \*,\*\* F. L. Kuang, K. H. Jung, B. Yan, S. N. Chillrud, R. L. Miller. Annual New York City trends of ambient fine particulate matter, elemental carbon and metals implicated in airway disease. J Allergy Clin Immunol, Vol. 129, Issue 2, Supplement, Page AB204, 2012.
99. \*, \*\* S. Hasan, K. W. Jung, S. Hsu, K. Moors, B. Yan, P. Kinney, S. Chillrud, R. Whyatt, D. Camann, F. P. Perera, R. L. Miller. Time trends in residential indoor polycyclic aromatic hydrocarbons exposing inner city children. J Allergy Clin Immunol, Vol. 129, Issue 2, Supplement, Page AB19, 2012 (**Department of Medicine selectee for Housestaff Research Grand Rounds**).
100. Medina Jackson-Browne, Omar Olmedo, Adnan Divjan, Inge F. Goldstein, Luis Acosta, Andrew G. Rundle, Robert B. Mellins, James W. Quinn, Frederica P Perera, Rachel L. Miller. Judith S. Jacobson, Matthew S. Perzanowski. Among middle-income children in NYC, neighborhood reports of mouse sightings were associated with sensitization to mouse, independent of mouse allergen measured in bed dust. J Allergy Clin Immunol, Vol. 129, Issue 2, Supplement, Page AB64, 2012.
101. Timothy Mainardi, Alexandra Cornell, Luis Acosta, Inge F. Goldstein, Andrew G. Rundle, Robert B. Mellins, Lori Hoepner, Frederica P Perera, Judith S. Jacobson, Rachel L. Miller, Matthew S. Perzanowski. "Risks factors for exercise-induced wheeze among asthmatics in NYC include neighborhood asthma prevalence and differ by seroatopy. J Allergy Clin Immunol, Vol. 129, Issue 2, Supplement, Page AB20, 2012.
102. Margaret T. Lee, Ida H. Suen, Maureen Licursi, Robert Ridder, Rachel L. Miller, Gary M. Brittenham, Meyer Kattan. Validation of a respiratory questionnaire to identify viral upper respiratory tract infection in children with sickle cell disease. American Journal of Respiratory and Critical Care Medicine, 185: A2347, 2012.
- \*\*103. Bian Liu, Kyung Hwa Jung, Megan K. Horton, David E. Camann, Xianhua Liu, Matthew S. Perzanowski, Robin M. Whyatt, Frederica P. Perera, Rachel L. Miller. Associations between prenatal and postnatal exposure to piperonyl butoxide and permethrin pesticides on cough in early childhood American Journal of Respiratory and Critical Care Medicine, 185: A1757, 2012.
- \*\*104. Stephanie Lovinsky-Desir, Kathleen M. Donohue, Matthew S. Perzanowski, Allan C. Just, Stephen Canfield, David Resnick, Beverley J. Sheares, Frederica Perera, Robin Whyatt, Rachel L. Miller. Standardization of the diagnosis of current asthma in pediatric cohort studies and its association with the presence or absence of bronchodilator reversibility. American Journal of Respiratory and Critical Care Medicine, 85: A3367, 2012.
- \*\*105. Cara L. Agerstrand, Steven N. Chillrud, Kyung Hwa Jung, Kathleen Moors, Hsin-Wen Chang, Matthew S. Perzanowski, Frederica P. Perera, Rachel L. Miller. Increased residential levels of ambient nickel are associated with asthma-related outcomes in urban children. American Journal of Respiratory and Critical Care Medicine, 185: A5681, 2012.
- \*\*106. Maria Jose Rosa, Adnan Divjan, Matthew S. Perzanowski, Steve N. Chillrud, Hanjie Zhang, Robert Ridder, Frederica P Perera, Rachel L. Miller. Association of recent exposure to ambient metals on fractional exhaled nitric parameters in 9-11 year old inner-city children. American Journal of Respiratory and Critical Care Medicine, 185: A5756, 2012.
- \*107. Gina S. Lovasi, Jarlath O'Neil-Dunne, Jacqueline W. T. Lu, Daniel Sheehan, Matthew Perzanowski, Sean MacFaden, Kristen L. King, Thomas Matte, Rachel Miller, Lori Hoepner, Frederica Perera, Andrew Rundle. Urban Tree Canopy And The Development Of Asthma, Wheeze, Rhinitis, And Allergic Sensitization To Tree Pollen In A Birth Cohort Study American Journal of Respiratory and Critical Care Medicine, 185: A6756, 2012. (**ATS Assembly on Environmental & Occupational Health David Bates Award; late breaking abstract**)
108. Surinder Narula, Meyer Kattan, Bryce Robinson, Denise Serebrinsky, Chang Shim, Matthew Perzanowski, Rachel L. Miller, David Merle, and Emily DiMango. Exposure To Household Allergens Among Asthmatic Individuals With Skin Test Sensitivity To Indoor Allergens. Am. J. Respir. Crit. Care Med. 185: A4310, 2012.

- \*,\*\*109. S. Lovinsky-Desir, R. Ridder, D. Torone, H. Jiang, S. Narula, M. Kattan, E. DiMango, R. L. Miller. Epigenetic regulation of interferon (IFN)-gamma following a multifaceted environmental intervention in a pediatric and adult cohort of asthmatics. Childrens Environmental Health Network 2012 research conference. The Contribution of Epigenetics in Pediatric Environmental Health, San Francisco, CA, 2012 (**Junior Investigator Award recipient**).
- \*110. Xiang Zhang, Hanjie Zhang, Sophie Chu, Rachel Miller, Shukmei Ho. PAH linked aberrant DNA methylation of asthma genes in sensitized mice. Childrens Environmental Health Network 2012 research conference. The Contribution of Epigenetics in Pediatric Environmental Health, San Francisco, CA, 2012.
- \*111. Marija Kundakovic, Kathryn Gudsnuk, Frederica P. Perera, Rachel L. Miller, Frances A. Champagne. Prenatal BPA: epigenetic disruption, brain and behavior. Childrens Environmental Health Network 2012 research conference. The Contribution of Epigenetics in Pediatric Environmental Health, San Francisco, CA, 2012 (**Junior Investigator Award recipient**).
- \*\*112. Jung, Kyung Hwa, Lovinsky-Desir, Stephanie, Liu, Bian, Folch, Candace, Perzanowski, Matthew, Yan, Beizhan, Chillrud, Steven, Whyatt, Robin, Camann, David, Kinney, Patrick, Perera, Frederica, and Miller, Rachel. Characterization of polycyclic aromatic hydrocarbons levels in repeat indoor air and urine samples in a prospective birth cohort study. 2012 International Society of Exposure Science conference (**late breaking abstract**)
113. Kundakovic M, Gudsnuk K, Perera FP, Miller RL, Champagne FA. Epigenetic effects and behavioral consequences of low-dose in utero bisphenol A exposure. Program No. 499.23. 2011 Neuroscience Meeting Planner. Washington, DC; Soc for Neurosci online.
114. Kwak E, Mainardi TR, Canfield SM, Miller RL and Dimango EA. A Novel Desensitization Protocol for Inhaled Aztreonam. J Allergy Clin Immunol, 131(2) Supplement:AB174, 2013.
115. Maria Jose Rosa, Beizhan Yan, Steve N. Chillrud, Luis Acosta, Adnan Divjan, Judith S. Jacobson, Rachel L. Miller, Inge F. Goldstein, Matthew S. Perzanowski. Domestic airborne black carbon levels positively associated with 8-isoprostane in exhaled breath condensate among children in New York City. American Journal of Respiratory and Critical Care Medicine, 2013, in press.
- \*\*116. Stephanie Lovinsky-Desir, Robert Ridder, David Torone, Surinder Narula, Melissa Scheuerman, Meyer Kattan, Emily DiMango, Rachel L. Miller. IFN $\gamma$  promoter DNA methylation levels in peripheral CD4+ lymphocytes versus buccal bells. American Journal of Respiratory and Critical Care Medicine, 187: A1204, 2013.
117. C. N. Spalding, K.H. Jung, R.L. Miller, Y.Y. Demirdag. Frequency of Cellular and Humoral Immunodeficiencies in DiGeorge Syndrome Patients Seen at New York Presbyterian Columbia From 2006-2012. J Allergy Clin Immunol, 133:AB93, 2014.
118. Kamal D Srivastava, David Dunkin, Changda Liu, Nan Yang, Rachel L. Miller Xiu-Min Li. ASHMI suppresses neutrophil pulmonary inflammation in a ragweed allergic asthma model that is associated with modulation of innate and adaptive immune responses. J Allergy Clin Immunol, 133:AB176, 2014.
119. Ying Song, Changda Liu, Kamal Srivastava, Jia Chen, Rachel L. Miller, Xiu-Min Li. Oral co-administration of peanut and cholera toxin subunit B during pregnancy and lactation blocks anaphylaxis and induces epigenetic modifications in peanut allergic murine mothers. J Allergy Clin Immunol, 133:AB208, 2014.
- \*\*120. Jung, Kyung Hwa, Liu, Bian, Lovinsky-Desir, Stephanie, Yan, Beizhan, Camann, David, Perera, Frederica, Kinney, Patrick, Chillrud, Steven, and Miller, Rachel L. Diverging time trends of polycyclic aromatic hydrocarbon, black carbon, and particulate matter exposures in New York City. American Journal of Respiratory and Critical Care Medicine, Thematic poster session B50, publication number A3151, 2014.

- \*\*121. Stephanie Lovinsky-Desir, Robert Ridder, Christina Maher, David Torone, Surinder Narula, Melissa Scheuerman, David Merle, Hanjie Zhang, Meyer Kattan, Emily DiMango, Rachel L. Miller. Interferon gamma promoter DNA methylation is correlated with age and sex in a cohort of allergic sensitized adults and children with asthma. American Journal of Respiratory and Critical Care Medicine, Thematic poster session B59, publication number A3385, 2014.
- \*\*122. M. de Planell Sagner, K.M. Hew, Zhang, H, K. C., Nadeau, R.L. Miller. FOXP3 DNA methylation levels, gene expression, and seroatopy in children. American Journal of Respiratory and Critical Care Medicine, Thematic poster session B59, publication number A3380, 2014.
122. K.M. Hew, M. de Planell Sagner, A. Walker, M. Garcia, E. Noth, K. Hammond, R.L. Miller, and K. C. Nadeau. Ambient polycyclic aromatic hydrocarbon concentrations and FOXP3 promoter DNA methylation levels in regulatory T cells American Journal of Respiratory and Critical Care Medicine, Thematic poster session B59, publication number A3376, 2014.
123. T.W. Wang, D. Brooks, Y.M. Dumas, K. Steiling, L. Acosta, D. Williams, R.L. Miller, M. Perzanowski, F. Perera, G. Liu, X. Xiao, Y. Alekseyev, G.B. Diette, C. Rodes, P. Breyse, S. Chillrud, M. Lenburg, A. Spira. Nasal Gene Expression Profiling Captures The Physiologic Consequences Of Secondhand Smoke Exposure In Children And Adults. American Journal of Respiratory and Critical Care Medicine, Thematic poster session C107, publication number A5277, 2014.
124. W.A. Quezada, R. Kim, R.L. Miller, M.S. Perzanowski, M. Kattan, D. Serebrisky, C. Shim, D. Merle, H.F. Andrews, E. DiMango. Presence of indoor dust allergen and associated sensitization does not correlate with markers of asthma severity and control in subjects on optimal medical therapy for asthma. American Journal of Respiratory and Critical Care Medicine, publication number A1329, 2014.
125. Perera FP, Chang H, Tang D, Roen EL, Herbstman J, Camann D, Miller RL, Margolis A, Wang S, Rauh V. Early-life exposure to polycyclic aromatic hydrocarbons and ADHD behavior problems. Proceedings of the 26th Annual International Society for Environmental Epidemiology Conference; 2014 Aug 24-28; Seattle, WA, USA.
126. Ahmad R. Sedaghat, Elizabeth C. Matsui, Matthew Perzanowski, Mary E. Bollinger, Rachel Miller, and Wanda Phipatanakul. Mouse Sensitivity Is an Independent Risk Factor for Rhinitis in Children with Asthma. J Allergy Clin. Immunol, 2015, in press.
- \*,\*\*127. Emily Happy Miller, Hanjie Zhang, Mariangels De Planell Sagner, Stephanie Lovinsky-Desir, Matthew Perzanowski, Wanda Phipatanakul, Elizabeth C. Matsui, and Rachel Miller. IFN $\gamma$  and Foxp3 methylation, expression in buccal mucosa in inner-city children with allergic asthma. J Allergy Clin Immunol, 135 (2), AB73, 2015.
128. Torie Grant, Charles Aloe, Matthew Perzanowski, Wanda Phipatanakul, Mary E. Bollinger, Rachel Miller, and Elizabeth C. Matsui.. J Allergy Clin Immunol, Mouse sensitization and exposure are associated with controller medication needs and asthma severity among low income, minority children. Vol 135 (2), 2015.
129. Nitzan Soffer, Brett J. Green, Luis Acosta, Adnan Divjan, Edward Sobek, Angela R. Lemons, Rachel L. Miller, Andrew G. Rundle, Judith S. Jacobson, Inge F. Goldstein, Matthew S. Perzanowski. Alternaria alternata fungal exposure associated with increased fractional exhaled nitric oxide among children in New York City J Allergy Clin Immunol, vol 135 (2), AB17, 2015.
130. Watcharoot Kanchongkittiphon, Elizabeth Matsui, Jonathan Gaffin, Carter R. Petty, Rachel Miller, Matthew Perzanowski, Mary Beth Bollinger, and Wanda Phipatanakul. Role of FEF25-75 and bronchodilator response in childhood asthma control and morbidity among inner-city children with asthma. J Allergy Clin Immunol, vol 135 (2), AB177, 2015.
131. Rebecca N. Bauer, R. Sharon Chinthrajah, Sandra Andorf, Benjamin Hobson, Rachel L. Miller, Kari C. Nadeau. T cell immunophenotyping of second hand smoke-related asthma, Annals of the American Thoracic Society, 13 Suppl 1:S95, 2016.

- \*,\*\*132. Jennifer Lawrence, Rebecca Bauer, Kari Nadeau, Rachel Miller. Recent second-hand smoke exposure is associated with altered CpG methylation between monozygotic twins. American Journal of Respiratory and Critical Care Medicine, vol 193: A6451, 2016.
133. Rebecca N. Bauer, Ansu T. Satpathy, Kun Qu, Theo Ho, R. Sharon Chinthrajah, Rachel L. Miller, Howard Y. Chang, Kari C. Nadeau. Analysis of T helper cell gene regulation in asthma by genome-wide chromatin accessibility profiling in monozygotic twins. American Journal of Respiratory and Critical Care Medicine, vol 193: A4340, 2016.
- \*\*134. Stephanie Lovinsky-Desir, Gina Lovasi, Xinhua Liu, David Torrone, Kyung Hwa Jung, Jacqueline Jezioro, Frederica Perera, Andrew Rundle, Rachel L. Miller. Greater Urban tree canopy exposure may be linked to asthma and DNA methylation of the IL4 gene promoter. American Journal of Respiratory and Critical Care Medicine, 2016.
- \*,\*\*135. Jennifer Lawrence, Rebecca Bauer, Kari Nadeau, Rachel Miller. Recent second-hand smoke exposure is associated with altered CpG methylation between monozygotic twins. Department of Medicine Grand Rounds selected presenter, March, 2016.
- \*\*136. Debashish Sahay, Beizhan Yan, Masha Pitiranggon, Nur Zeinomar, Mary Beth Terry, Rachel L. Miller. Mouse food as a source of PAH contamination. Proceedings of The Environmental Health Science FEST; Pg 234, 2016.
137. Zeinomar et al., Understanding how to communicate health information to adolescents in Northern Manhattan and the South Bronx. Proceedings of The Environmental Health Science FEST; pg 139, 2016.
- \*138. Elizabeth C. Matsui, Matthew Perzanowski, Roger D. Peng, Robert A. Wise, Susan Balcer-Whaley, Michelle Newman, Amparito Cunningham, Adnan Divjan, Mary E. Bollinger, Shuyan Zhai, Ginger Chew, Rachel L. Miller, Wanda Phipatanakul. Intervention on asthma morbidity among children and adolescents. L39. J Allergy Clin Immunol. **Late breaking abstract**. 2017.
139. H.F. Minogue, K. Hew, SC Lyu, U Nygaard, F. Lurmann, E. Noth, J. Balmes, H. Margolis, K. Hammond, E. Eisen, R. Miller, K. Nadeau. Single-cell signatures link ambient air pollution to remodeling of the immune system in asthmatics. J Allergy Clin Immunol. AB320, 2017.
- \*\*140. Stephanie Lovinsky-Desir, Kyung Hwa Jung, Andrew G. Rundle, Beizhan Yan, Steven N. Chillrud, Frederica P. Perera, Matthew S. Perzanowski, Rachel L. Miller. The relationship between physical activity and lung function is influenced by black carbon pollutant exposure. American Journal of Respiratory and Critical Care Medicine, 195:A3899, 2017.
- \*\*141. Rothstein, Lauren G; Miller, Rachel L; Green, Peter H; Lebwohl, Benjamin. Medication use and drug allergies do not appear more frequent among patients with Eosinophilic Esophagitis. Oral abstract presentation at: American College of Allergy, Asthma & Immunology, 2017.
- \*\*142. Sahay D, Jezioro JR, Torrone D, Pitiranggon M, Yan B, Terry MB, Miller RL, Prenatal polycyclic aromatic hydrocarbon and breast cancer risk in mice. 12th Annual Breast Cancer and the Environment Research Program (BCERP) Meeting, Duarte, Dalifronia, November, 2017.
143. Karen C. Dannemiller, Luis M. Acosta, Adnan Divjan, Andrew G Rundle, Rachel L. Miller, Angela R. Lemons, Brett J. Green, and Matthew Perzanowski. Domestic fungal diversity in NYC homes, neighborhood asthma prevalence and asthma persistence. J Allergy Clin Immunol. 141 (2) Supplement, AB185, 2018.
144. Stephanie Lovinsky-Desir, Rachel L. Miller, Matthew Perzanowski. Timing and mode of commute impacts in-transit black carbon exposure and airway inflammation. American Journal of Respiratory and Critical Care Medicine, in press, 2018.
145. Ammara Ahmed, Torie Grant, Wanda Phipatanakul, Matthew Perzanowski, Susan Balcer-Whaley, Roger Peng, Jean Curtin-Brosnan, Michelle Newman, Amparito Cunningham, Adnan Divjan, Mary E. Bollinger, Robert A. Wise, Rachel Miller, Ginger Chew, Elizabeth C. Matsui. Atopy modifies the effect

of mouse allergen reduction on asthma outcomes in low-income, urban children with persistent asthma. J Allergy Clin Immunol. 141 (2), Supplement, AB81, 2018.

\*Selected for oral presentation or plenary session

\*\*Published by mentee

#### MAJOR PRESENTATIONS AT COMMUNITY/NATIONAL MEETINGS OR INVITED LECTURES/SHIPS

- 10/03: "Prenatal and early postnatal environmental influences and asthma" Pediatric Grand Rounds. Temple University Medical Center, Philadelphia
- 11/04: "Anaphylaxis in the United States" ACAI Anaphylaxis Prevalence roundtable, Boston
- 2/8/05: "In utero and early environmental exposures and asthma risk. Yearning to breathe, a symposium to honor the contributions of Inge F. Goldstein," Columbia University, New York
- 5/23/05: "In utero exposures and subsequent development of atopy/asthma," ATS Scientific Symposium B6: The impact of prenatal and early infancy environmental exposures on infant health
- 11/12/05: "Lets clear the air: Air pollution and health effects" South Bronx Environmental Health and Policy Forum, sponsored by Office of Congressman Jose E. Serrano
- 11/29/05: "Traffic-related air pollution and inner city pediatric asthma" Environmental & Occupational Medicine at UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ
- 2/8/06: "Early life exposures and asthma" National Academy of Sciences, Committee on Emerging Issues and Data on Environmental Contaminants Early Life Exposure Workshop, Washington DC
- 9/15/06: "Mechanisms and risk factors for onset of asthma/allergies" Mt Sinai Allergy and Immunology Conference, New York
- 2/8/07: "Molecular epidemiology of childhood asthma: Environmental epigenomic research in an urban cohort" National Academy of Sciences, National Research Council's Committee on Emerging Issues and Data on Environmental Contaminants, How research on pathogenesis of asthma and other pulmonary diseases arising from environmental exposures has utilized toxicogenomic approaches workshop, Washington DC.
- 4/20/07: "Asthma immunopathogenesis" University of Minnesota 65<sup>th</sup> Annual Course in Allergy and Clinical Immunology, Minneapolis, MN.
- 10/11/07: Children's Environmental Health Workshop: "Prenatal and early postnatal environmental exposures and asthma risk: How?" United States Environmental Protection Agency, Washington, D.C.
- 3/15/08: "Effects of perinatal exposure to environmental tobacco smoke and air pollution: Possibilities for early intervention in atopic children," Seminar speaker, American Academy of Allergy Asthma and Immunology 2008 meeting
- 4/08: "How to prepare for a career in academic medicine: Top 10 list" delivered to NYC-wide fellows in Allergy and Immunology
- 4/29/08: "Prenatal and early postnatal exposures and asthma risk-How?" Harvard School of Public Health
- 7/18/08: "Prenatal and early postnatal exposures and asthma risk-How?" Grand Rounds, Department of Pediatrics, Columbia University
- 10/7/08: "Prenatal and early postnatal environmental exposures and asthma risk-How?" University of Rochester School of Medicine and Dentistry
- 1/16/09: "Prenatal and early postnatal environmental exposures and asthma risk-How?" Grand Rounds, Department of Medicine, Einstein
- 3/16/08: "Effects of perinatal exposure to environmental tobacco smoke and air pollution: Possibilities for early intervention in atopic children," Seminar speaker, American Academy of Allergy Asthma and Immunology 2009 meeting, Washington DC.
- 3/17/09: "Epigenetic changes in T helper genes affecting IgE production in vivo following combined inhaled diesel exhaust particles and allergen exposure" Society of Toxicology, Baltimore, MD.

3/30/09: “Translating science to policy: Protecting children’s environmental health” Roundtable I: Addressing urban air pollution and climate change, New York City, NY

4/4/09: “Prenatal and postnatal air pollution exposure and its effects on asthma” 1199 Institute for Continuing Education "Toxins in everyday life"

2/26/10: “Environmental epigenetics and allergic disease” Course 1201 Molecular Programming of Allergic and Immunological Diseases by Environmental Agents (Part 1), American Academy of Allergy Asthma and Immunology 2010 meeting, New Orleans, LA.

5/15/10: “Environmental Epigenetics and Lung Disease” Postgraduate course: Gene-by-environment interactions on lung disease. American Thoracic Society 2010 meeting, New Orleans, LA

12/3/10: “Traffic related air pollution exposure and asthma studies (TAPAS): From bed (field) side to bench” Department of Pediatric Research Grand Rounds, Columbia University, NYC, NY

1/6/11: “Environmental Epigenetics, asthma and other lung diseases. Einstein and Montefiore Research Grant Rounds, NYC, NY

3/18/11: “Traffic related air pollution exposure and asthma studies (TAPAS). Stanford University, Palo Alto, CA

10/4/2011: “Environmental epigenetics, asthma and other lung diseases” New York Downtown Hospital, NYC, NY

11/18/11: “Environmental epigenetics, asthma and other lung diseases: Emergence of a new paradigm” Environmental & Occupational Health Sciences Institute, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ

12/15/11: “Environmental epigenetics and asthma: Department of Medicine Grant Rounds, SUNY Downstate, Brooklyn, NY

3/14/12: “Environmental triggers and asthma” Environmental Protection Agency and National Institute of Environmental Health sponsored 2012 Childrens Environmental Health Centers webinar

12/4/12: “Pediatric Allergy and Immunology: New advances at NYP/CUMC” Morgan Stanley Children’s Hospital Children’s Advisory Council, New York, NY

2/22/13: “The epigenome and asthma: Interactions between imprinted genes and environmental exposures” American Academy of Allergy, Asthma and Immunology International Annual Meeting, San Antonio, Texas

2/24/13: American Academy of Allergy, Asthma and Immunology International Annual Meeting Plenary Session: “Epigenetics: How the environment affects gene expression and the development of asthma and allergic disease”- moderator, San Antonio, Texas (approximate attendance: 5000 people)

4/11/13: “The epigenome and asthma: Interactions between imprinted genes and environmental exposures,” Montefiore Medical Center/Asthma Center Grand Rounds

5/1/13: “Doc talks: Personalized Pediatric Medicine ” CUMC lecture and discussion series panelist

5/8/13: Environmental Protection Agency and National Institute of Environmental Health sponsored 2013 Childrens Environmental Health Centers webinar

2/28/14: “Environmental influences on the epigenome” American Academy of Allergy, Asthma and Immunology International Annual Meeting, San Diego, California

3/1/14: “Pesticides, chemicals, and other exposures matter in allergic disorders” American Academy of Allergy, Asthma and Immunology International Annual Meeting, San Diego, California

3/1/14: “What have we observed about the effects of xenoestrogens on the development of childhood and adult asthma and allergy?” American Academy of Allergy, Asthma and Immunology International Annual Meeting, San Diego, California

4/3/14: “The impact of diet and nutrition as preventative medicine for children” discussion series panelist, CUMC, Department of Pediatrics

4/9/14: “Environmental influences on the epigenome” Environmental Protection Agency and National Institute of Environmental Health sponsored 2014 Childrens Environmental Health Centers webinar

2/5/15: “Air pollution, epigenetic regulation, asthma: What your grandchildren need to know” Rutgers University/Robert Wood Johnson, New Brunswick, NJ

3/6/15: “Home and school environmental exposures and allergic disease: Winthrop Hospital, Mineola, NY

3/26/15: “Prenatal and postnatal environmental exposures and epigenetic influences in asthma and allergy risk” Society of Toxicology International Annual Meeting, San Diego, California  
 10/10/15: “Drug allergy” International Forum of Pediatric Development, Beijing, China  
 10/12/15: “Asthma management” Beijing’s Children Hospital, Beijing, China  
 12/1/15: “Air pollution, epigenetic regulation, asthma: What your grandchildren need to know” Mount Sinai Child Health Research Seminar, NYC, NY  
 5/15/16: “Asthma is a systemic epigenetic disease” American Thoracic Society International Conference, San Francisco, California  
 9/16/16: “Air pollution, epigenetic regulation, asthma: What your kids’ kids need to know.” Department of Pediatrics Grand Rounds, CUMC, NY, NY.  
 1/18/17: “Air pollution, epigenetic regulation, asthma: What your grandchildren need to know.” Department of Medicine Grand Rounds, CUMC, NY, NY.  
 1/26/17: “Allergic rhinitis” Department of ENT Grand Rounds, CUMC, NY, NY  
 2/7/17: “Anaphylaxis” Department of Pediatrics Grand Rounds, Lawrence-NYP Hospital, NY, NY  
 5/13/17: “Environmental epigenetic mechanisms in allergy” 3<sup>rd</sup> East-West Integrative Medical Practice and Scientific Technology (EW-IPST) for Allergies & Wellness. Icahn School of Medicine at Mt. Sinai.  
 6/9/17: “Understanding root causes of asthma: Perinatal exposures and epigenetic regulation” Thomas A. Neff Lecturer at the Thomas L. Petty Aspen Lung Conference, 60<sup>th</sup> Annual Meeting.  
 8/17/17: “Allergic rhinitis/hay fever in children and adults” Columbia Community Partnership for Health.  
 11/16/17: “Window of susceptibility for environmental exposures: Pregnancy.” Translating Research into Action to Reduce Breast Cancer, BCERP Annual Meeting, City of Hope Hospital, Duarte, California.  
 1/23/18: “Air pollution, epigenetic regulation, asthma: What your grandchildren need to know.” Division of Pulmonary, Critical Care Medicine Grand Rounds, NYU.  
 3/2/18: “Epigenetic changes ascribed to pollutant exposures” AAAAI Foundation and Sheldon L. Spector, MD FAAAAI Memorial Lectureship at the AAAAI/ACAAI Joint Congress.

#### CONTINUING MEDICAL EDUCATION TAUGHT AT COLUMBIA

11/21/98: “Diagnosing and treating allergies in the asthmatic patient”  
 3/10/01: “Allergies in the asthmatic”  
 12/14/02: “Differences in asthma and asthma management in men and women”  
 12/11/04: “The difficult to treat asthmatic”  
 4/30/05: “The difficult to treat asthmatic”  
 7/16/07: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”  
 7/24/08: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”  
 8/13/09: Internal medicine review course: “Allergy/immunology concepts”  
 8/12/10: Internal medicine review course: “Allergy/immunology concepts”  
 7/28/11: Internal medicine review course: “Allergy/immunology concepts”  
 5/24/12: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”  
 6/6/13: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”  
 6/17/16: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”  
 6/30/17: Internal medicine review course: ”Drug allergy, food allergy, anaphylaxis”

#### MEDIA

1. Miller, R. L. and R. P. Cole. Association between reduced cuff leak volume and postextubation stridor, Chest, 1996. Presented as a paper of the year in the “Year in Review”, American Thoracic Society, 1997.

2. Rastogi, D. et. al, Antigen-specific immune responses to influenza vaccine in utero, Journal of Clinical Investigation, June, 2007.

Featured on websites of Nature and Science; interview on ABC news



3. Patel, Molini M. et. Al. Ambient metals and elemental carbon in fine particulate matter predict wheeze and cough in very young urban children, American Journal of Respiratory and Critical Care Medicine, December, 2009.

Featured on American Thoracic Society morning minute distributed nationally to all members; telephone interview on CBS news, NPR; Reuters Health; Environmental Health News

4. Marilyn Reyes, et. al. Maternal demoralization is associated with childhood wheeze, but not IgE, at age five years in an inner-city cohort, Annals of Allergy, Asthma & Immunology, 107 (1): 42-49, 2011.

Featured on American Thoracic Society morning minute distributed nationally to all members; HealthyDay; Fox 5 News Edge; msn.com

5. "Environmental epigenetics and allergic diseases: recent advances" *Clinical & Experimental Allergy*, 40, 1602–1610 featured in VEJA magazine, the largest magazine in Brazil. Natalia Cuminale Gomes Da Silva, reporter, September 2011.

6. Rachel L. Miller and Cara L. Agerstrand. Targeting indoor air pollution: Interpreting the RESPIRE trial, The Lancet, 378:1682-83, 2011

Featured in Columbia University Medical Center news room; research Capsules 11/11; <http://www.cumc.columbia.edu/news-room/research-capsules/page/2/> and SCOPE: The newsletter of the Department of Medicine

7. Conference Co-Chair: The Contribution of Epigenetics in Pediatric Environmental Health May 2012 Children's Environmental Health Network

Conference covered by Epigenie <http://epigenie.com/conferences/the-contribution-of-epigenetics-in-pediatric-environmental-health/>

8. Allan C. Just, Robin M. Whyatt, Matthew S. Perzanowski, Antonia M. Calafat, Frederica P. Perera, Inge F. Goldstein, Qixuan Chen, Andrew G. Rundle, Rachel L. Miller. Prenatal exposure to butylbenzyl phthalate and early eczema in an urban cohort, Environmental Health Perspectives, 120 (10): 1475-80. 2012.

Featured in FoxNews.com, Science Daily

9. Kyung Hwa Jung, Beizhan Yan, Shao-I Hsu, Kathleen Moors, Steven N. Chillrud, Robin Whyatt, Matthew Perzanowski, Lori Hoepner, Inge Goldstein, Bingzhi Zhang, David Camann, Patrick L. Kinney, Frederica P. Perera, and Rachel L. Miller. Prenatal and early postnatal exposure to pyrene and nonvolatile polycyclic aromatic hydrocarbons and asthma at ages 5-6 yrs: Effect of serotopy, Annals of Allergy, Asthma and Immunology, 109 (4): 249-54, 2012.

Featured in American Society of Public Health Friday Newsletter, August 31, 2012. [http://fridayletter.asph.org/article\\_view.cfm?fl\\_index=1741&fle\\_index=19034](http://fridayletter.asph.org/article_view.cfm?fl_index=1741&fle_index=19034)

10. Bian Liu, Kyung Hwa Jung, Megan K. Horton, David E. Camann, Xinhua Liu, Ann Marie Reardon, Matthew S. Perzanowski, Hanjie Zhang, Frederica P. Perera, Robin M. Whyatt, Rachel L. Miller. Prenatal exposure to pesticide ingredient piperonyl butoxide and childhood cough in an urban cohort Environment International, 48:156-61, 2012.

Featured in NIEHS November 2012 newsletter "Household contaminants associated with childhood respiratory problems": <http://www.niehs.nih.gov/news/newsletter/2012/11/science-householdcontaminants/index.htm>

11. Featured Profile in Fall 2013 Connections, Quarterly Newsletter of Columbia Women's and Children's Health

12. Featured in HHS HealthBeat (HHS.gov) February 14, 2014:"Obese kids, asthma and air pollution" based on publication: Kyung Hwa Jung et. al. Polycyclic aromatic hydrocarbon exposure, obesity and childhood asthma in an urban cohort, Environmental Research, 128:35-41, 2014.

<http://www.hhs.gov/news/healthbeat/2014/02/obese-kids-asthma-and-air-pollution.html>

13. Wall Street Journal September 23, 2014 print and online: <http://online.wsj.com/articles/researchers-shed-light-on-asthmas-mysteries-1411427207>. “Researchers Shed Light on Asthma’s Mysteries New Findings on a Particularly Confusing Form of the Lung Disease” based on publication: Robin M. Whyatt, Matthew S. Perzanowski, Allan C. Just, Andrew G. Rundle, Kathleen M. Donohue, Antonia M. Calafat, Lori Hoepner, Frederica P. Perera, Rachel L. Miller. Asthma in inner-city children at 5-11 years of age and prenatal exposure to phthalates: The Columbia Center for Children’s Environmental Health Cohort, *Environmental Health Perspectives*, 122:1141-1146, 2014.

14. US Daily News online and in print February 24, 2015. “A newly-published study shows that early exposure to peanuts can prevent infants from developing dangerous allergies” Commentary in <http://www.nydailynews.com/news/national/eating-peanuts-early-reduce-infants-allergy-chances-article-1.2126463>.

15. Time Magazine online April 7, 2015. “Here’s Why Allergy Season Might Be Especially Unpleasant This Spring” <http://time.com/3774649/allergy-pollen-spring/>

16. 6/10/16: The Easy Breathing Podcast. Childhood and pediatric asthma and allergies. [www.MyCOPDTreatment.com](http://www.MyCOPDTreatment.com)

17. 7/19/16: Fracking Linked to Asthma Flare-ups *Medscape Medical News*.

18. 9/27/16: CUMC News Room: <http://newsroom.cumc.columbia.edu>. Columbia to Participate in NIH Environment and Child Health Initiative. Featuring funding announcement of 1 UG3 OD023282-01.

19. based on study: Stephanie Lovinsky-Desir, Kyung Hwa Jung, Andrew G Rundle, Lori A Hoepner, Joshua B Bautista, Frederica P Perera, Steven N Chillrud, Matthew S Perzanowski, Rachel L Miller. Physical activity, black carbon exposure and airway inflammation in an urban adolescent cohort. *Environmental Research*, 151:756-762, 2016.

10/26/16: CUMC News Room: <http://newsroom.cumc.columbia.edu/blog/2016/10/26/pollution-exposure-higher-city-kids-active-finds-study/>. Pollution Exposure is Higher in City Kids Who Are Active, Finds Study

11/3/16: ATS Morning Minute. Study Suggests Children Who Exercise More Also At Higher Risk For Exposure To Black Carbon

also: <https://consumer.healthday.com/fitness-information-14/misc-health-news-265/exercising-city-kids-exposed-to-more-pollution-716278.html>; <http://www.allure.com/story/high-pollution-exposure-city-children>; <https://thinkprogress.org/air-pollution-is-more-dangerous-for-children-who-exercise-more-9aaa3047e480#.k5bf4jxcl>

20. Featured/cited in Veena B. Antony, Carrie A. Redlich, Kent E. Pinkerton, John Balmes, and Jack R. Harkema. National Institute of Environmental Health Sciences: 50 Years of Advancing Science and Improving Lung Health. *American Journal of Respiratory and Critical Care Medicine*. 194(10), 2016:

Maria Jose Rosa, Kyung Hwa Jung, Matthew S. Perzanowski, Elizabeth A. Kelvin, Katherine W Darling, David Camann, Steven N Chillrud, Robin M Whyatt, Patrick L Kinney, Frederica P. Perera, Rachel L. Miller. Prenatal exposure to polycyclic aromatic hydrocarbons, environmental tobacco smoke and asthma in young children, *Respiratory Medicine*, 105:869-76, 2011.

21. Dr. Oz Show, 1/12/17: Discussed peanut allergies and the new guidelines issued by the National Institute of Allergy and Infectious Diseases. The Dr. Oz show is viewed by approximately ~1.5 million people nationally.

<http://mms.tveyes.com/PlaybackPortal.aspx?SavedEditID=259a33f2-ae7c-43de-b9a7-7d543a4f3980>  
The interview was also previewed on NYP’s social media channels this week: Twitter and Instagram.

22. Featured Profile in Winter 2017 Connections, Quarterly Newsletter of Columbia Women’s and Children’s Health. ECHO Grants. Issue 14.

23. 3/4/17. Silent Springs. <http://silentspring.org/ellastudy/assessing-the-links-between-air-pollution-and-breast-cancer-risk/> featuring our ongoing research on pregnancy and prenatal PAHs and other environmental exposures and breast cancer.

24. 5/25/17 EpigenomicsNet: featured article “Environmental epigenetic regulation and urban pediatric asthma-Recent studies of the impact of home exposures from the Columbia University group”

<https://www.epigenomicsnet.com/posts/17083-environmental-epigenetic-regulation-and-urban-pediatric-asthma-recent-studies-of-the-impact-of-home-exposures-from-the-columbia-university-group>.

25. Featured article in December 2017 Connections, Quarterly Newsletter of Columbia Women’s and Children’s Health.” Education is a powerful tool for reducing inner-city, childhood asthma.” Issue 17

based on Matsui EC, Perzanowski M, Peng RD, Wise RA, Balcer-Whaley S, Newman M, Cunningham A, Divjan A, Bollinger ME, Zhai S, Chew G, Miller RL, Phipatanakul W. Effect of an integrated pest management intervention on asthma symptoms among mouse-sensitized children and adolescents with asthma: A randomized clinical trial. JAMA 2017 Mar 14;317(10):1027-1036.

26. Time.com on Spring allergies:

4/13/18 <http://time.com/5233634/spring-allergies-help/>

4/8/18: <http://time.com/3774649/allergy-pollen-spring/?iid=sr-link1>

## COMMITTEES

### Columbia University:

Molini Patel 2007 PhD. Thesis committee; Environmental Health Sciences, Columbia University

Allan Just 2011 PhD. Thesis committee; Environmental Health Sciences, Columbia University; EPA STAR graduate fellowship awardee; graduated with distinction

Maria Jose Rosa 2013 DrPh. Thesis committee; Environmental Health Sciences, Columbia University

Internal Review: Radiation Oncology; Vascular Neurology, Pediatric Critical Care

Executive Committee: T32 training grant application; Division of Pulmonary, Allergy and Critical Care Medicine

Department of Pediatrics Immunology Search Committee  
Spring 2010 to Winter 2010

Driscoll Children’s Fund Advisory Committee  
Winter/Spring 2013

Department of Pediatrics Committee on Curriculum Vitae Improvement  
June 2013-present

Department of Pediatrics Infectious Disease Search Committee  
Spring 2014 to 2015

Department of ENT Division of Rhinology Search Committee  
August 2014-2015

Department of Pediatrics Executive Committee  
2012-present

Department of Medicine Executive Committee  
August 2014-present

Physician Leadership Council  
2016-present

Department of Pediatrics, Hematology/Oncology Division Director Search Committee  
2017-present

Columbia Children's Committee  
January 2018-present

National:

American Academy of Allergy, Asthma and Immunology (AAAAI) Committees: Training Program Directors Think Tank, Air Pollution and Indoor Allergen, Women's Involvement in the AAAAI Vice Chair, Allergy and Immunology Program Directors Residency Review Subcommittee, 1/06-1/08  
Chair, Allergy and Immunology Program Directors Residency Review Subcommittee, 1/08-1/10; member through 2017.

Allergy and Immunology Division Directors Task Force member, 3/08-3/12

American Thoracic Society International Meeting Program Committee, 2004—09; Group Leader, 2008-09

External Advisory Committee, CHAP-SJV, Stanford University, Spring 2011-2016

Children's Environmental Health Network, The Contribution of Epigenetics in Pediatric Environmental Health, San Francisco, 5/30/12-6/1/12; Conference Co-Chair

Vice Chair: American Academy of Allergy, Asthma and Immunology Allergy and Immunology Division Chief committee through 2015; Chair: Committee Evolution Task Force

Vice Chair: American Academy of Allergy, Asthma and Immunology Allergy and Immunology. Grants committee. 2016-present. Chair: 2018-present

ECHO Publications Committee. Airway Outcomes representative. August 2017-present.

ADDITIONAL TRAINING, PROFESSIONAL DEVELOPMENT

Selected by Department of Medicine to participate in AAMC Mid Career Women Faculty Professional Development Seminar, December, 2009.

Selected by Department of Medicine to participate in Leadership and Management Institute for Women Leaders in Academic Medicine, Columbia University, June, 2010

CLINICAL PROGRAM BUILDING AND LEADERSHIP

Allergy and Immunology clinical program: Director of fellowship and section head for clinical program; 2004-present

Pediatric Immunology: Led development of organized program in Pediatric Immunology, including survey of faculty, listing of interested participants, development of a new website, establishment of a working group in Pediatric Immunology and research conference series. 2009-present

Columbia Adverse Drug Reaction and Desensitization Program. Founder and Director, 2/10-present

2012-2017 (1<sup>st</sup>-last issue): Department of Pediatrics and OB/GYN E-Newsletter "Connections" Editorial staff