

SUPREME COURT OF THE STATE OF NEW YORK  
COUNTY OF NEW YORK

In the Matter of the Application of  
NEW YORK CITY COALITION TO END LEAD  
POISONING, *et al.*

Petitioners-Plaintiffs

for a Judgment pursuant to Article 78  
and § 3001 of the Civil Practice Law  
and Rules

-against-

PETER VALLONE, as Speaker of the New  
York City Council; *et al.*

Respondents-Defendants.

Index No. \_\_\_\_\_/99

**AFFIDAVIT OF BRUCE P. LANPHEAR, M.D., M.P.H., IN SUPPORT OF  
PETITION AND MOTION FOR PRELIMINARY INJUNCTION**

STATE OF OHIO                    )  
  )  SS:  
COUNTY OF HAMILTON         )

BRUCE L. LANPHEAR, M.D., M.P.H., being sworn, states as follows under oath:

1.        I am an Associate Professor of the Department of Pediatrics and the Director of the General Pediatric Research Fellowship Training Program at Children's Hospital Medical Center and the University of Cincinnati. I am also the Director of the Children's Environmental Health Center at the Children's Hospital Medical Center and serve as an Adjunct Associate Professor at the Department of Pediatrics and of Environmental Medicine at the University of Rochester School of Medicine.

2.        A major focus of my professional career has been working for lead poisoning prevention. For example, I serve as the scientific consultant to the National Center for Lead-Safe Housing and chaired the United States Department of Housing and Urban Development ("HUD") Committee on Lead-Contaminated House Dust and Soil with Children's Blood Lead Levels from 1995 to 1998. I am a Member of the Committee on Children's Environmental Health, Environment Section of the American Public Health Association; a Member of the Cincinnati Board of Health and the Cincinnati Lead Poisoning Prevention Advisory Task Force.

3.        In addition, I have published original research and written extensively on lead poisoning, with a particular focus on lead dust, including methods of collections for sampling, racial

differences in environmental exposures routes, and community characteristics associated with children's elevated blood lead levels. Among these are: Lanphear *et al.*, Pathways of Lead Exposure in Urban Children, *Environmental Research* 1997;74:67-73; Lanphear *et al.*, Community Characteristics Associated with Elevated Blood Lead Levels in Children, *Pediatrics* 1998;101:264-271; Lanphear *et al.*, Environmental Exposures to Lead and Urban Children's Blood Lead Levels, *Environmental Research* 1998;76:120-130; Lanphear *et al.*, The Paradox of Lead Poisoning Prevention; *Science* 1998;281:1617-1618; Lanphear *et al.*, The Contribution of Lead-contaminated House Dust and Residential Soil to Children's Blood Lead Levels: A Pooled Analysis of 12 Epidemiologic Studies; *Environmental Research* 1998;79:51-68; Lanphear *et al.*, Primary Prevention of Childhood Lead Exposure: a Randomized Trial of Dust Control; *Pediatrics* 1999;103:772-777.

4. I attach my entire curriculum vitae as Exhibit A.

5. In 1904, Lockhart Gibson recognized that lead-contaminated house dust was the cause of lead poisoning among children via hand-to-mouth activity. Gibson JL, A Plea for Painted Railings and Painted Rooms as the Source of Lead Poisoning Amongst Queensland Children, *Australasian Medical Gazette* 1904;23:149-153. Since then, there have been important advances in our understanding of the risks and sources of childhood lead exposure. Still, almost one century after lead-

contaminated dust was first identified as a cause of lead poisoning, many children continue to be unduly exposed to lead because they live in housing which is in disrepair or has undergone renovation.

6. In urban centers such as New York City, house dust contaminated with lead from deteriorated paint constitutes the primary source of lead ingestion for children. Various housing conditions generate lead-contaminated house dust, including, most importantly, impact and friction surfaces such as doors and windows.

7. Consequently, any statutory scheme for child lead poisoning prevention that reflects current scientific research and understanding of childhood lead poisoning must necessarily define and address lead-contaminated dust as a hazard. I have reviewed Local Law 38 and am familiar with New York City's current statutory framework for preventing childhood lead poisoning. Local Law 38's omission of lead dust in its definition of lead paint hazards, and the conditions that create lead dust (such as lead-painted friction and impact surfaces) and its failure to adequately address lead dust hazards constitutes a devastating flaw and will very likely result in an increased lead poisoning among children residing in pre-1980 dwellings with deteriorated housing conditions.

8. The risk of childhood lead poisoning can be significantly exacerbated by sloppy repair and abatement work,

which generates and disperses lead-contaminated dust throughout residential units. Such lead hazards can be overcome by promulgating effective work safety measures that require, among other things, that clearance tests be conducted following any renovation or lead paint removal. Local Law 38's failure to retain New York City's current work safety standards and clearance tests constitutes a serious public policy mistake that will undoubtedly increase the risk of lead exposure for children.

9. The importance of understanding the hazards of lead dust in the context of environmental and public health policy-making cannot be over-emphasized here. As research progresses, we continue to find that minute amounts of lead in household dust have significant adverse impacts on children's health. In a recent study, Lanphear *et al.*, The Contribution of Lead-Contaminated House Dust and Residential Soil to Children's Blood Lead Levels, A Pooled Analysis of 12 Epidemiologic Studies; *Environmental Research* 1998;79:51-68, we estimated the contributions of lead-contaminated house dust and soil to children's blood lead levels. The results of this pooled analysis, the most comprehensive existing epidemiologic analysis of childhood lead exposure, confirmed that lead-contaminated house dust is the major source of lead exposure for children. These analyses further demonstrated that a strong relationship between interior dust lead and children's blood lead levels

persist at dust lead levels considerably below even HUD's current post-abatement standards and the EPA current guidance levels. Floor dust lead was the most significant environmental predictor of children's blood lead levels

10. At the time of the above study, the HUD and EPA standards for lead in household dust (which were previously incorporated into the New York City Health Code safety standards) were 100 micrograms (i.e., millionth's of a gram) per square foot (:g/ft<sup>2</sup>) for floor dust. These dust levels were based on earlier standards set by the State of Maryland in 1988 (when higher blood lead levels of 25 micrograms per deciliter [:g/dL] were considered acceptable), based on limited data. The results of our pooled analysis confirmed that the proportion of children with an elevated blood lead level increases dramatically at floor dust lead loadings of 5 :g/ft<sup>2</sup> to 10 :g/ft<sup>2</sup> - levels that are 10 to 20 times lower than the current New York City Health Code safety standards. We estimated, from epidemiologic data, that 5% of children will have a blood lead level  $\geq$  10 :g/dL (which I understand is the definition of "lead poisoning" in the New York City Health Code) at a floor lead level of 5 :g/ft<sup>2</sup> - a value 20-times lower than the clearance standards in New York City Health Code. At a floor standard of 50 :g/ft<sup>2</sup> -- half the current clearance standards in the New York City Health Code -- 20% of children are estimated to have a blood lead level  $\geq$  10 :g/dL. Based in part on our work, last month HUD tightened its

standards for lead in floor dust to 40 :g/ft<sup>2</sup> for federally assisted housing.

11. Given these concerns, it is unfathomable that New York City has now virtually eliminated clearance dust testing altogether for the vast majority of lead paint renovations and repairs. This will serve neither children, nor, in the long run, property owners (who may face negligence suits when children are poisoned in dwellings where hired contractors have unsafely repaired or failed to properly clean up after such repair). Such a course of action will undoubtedly increase the number of children exposed to hazardous lead dust conditions. For without such tests, one cannot know whether the home environment is safe. The extremely minute quantities of lead dust that can poison children, as explained in the prior paragraphs, cannot be detected by a visual inspection.

12. Moreover, certified and trained workers must be required to undertake repair work in lead-contaminated units. My own research has shown that dust control, as performed by families and in the absence of lead hazard controls to reduce ongoing contamination from lead-based paint, does not serve as an effective primary prevention of childhood lead exposure. The findings of one study indicated that despite intense efforts to inform families about lead poisoning prevention, offer recommendations for cleaning techniques to reduce dust lead levels, and provide high quality cleaning equipment and supplies,

no significant decline on children's blood lead levels occurred.

Lanphear *et al.*, Primary Prevention of Childhood Lead Exposure: a Randomized Trial of Dust Control; *Pediatrics*, 103:772-777 (1999).

Thus, dust controls when combined with abatement and performed by professionals offer the only way to protect children. Local Law 38's failure to require that such repairs be conducted by professionals comprises another grave oversight.

13. Lead poisoning has far-reaching public health and socio-economic ramifications. The preponderance of studies demonstrate serious deleterious and irreversible effects of low-level lead exposure on children's brain function, such as lowered intelligence and diminished school performance, especially from exposures that occur in early life. Baghurst PA, *et al.* *N Engl J Med* 327:1279-1284 (1992); Bellinger D, *et al.* *Pediatrics*, 87:219-227 (1991); Bellinger DC, *et al.* *Pediatrics* 90:855-861 (1992); Dietrich KN, *et al.* *Pediatrics* 91:301-307 (1993); Needleman HL, *et al.* *JAMA* 263:673-678 (1990); Needleman HL, *et al.* *N Engl J Med* 322:83-88. (1990); Thacker SB, *et al.* *Arch Environ. Health* 47:336-346. (1992).

14. Costs to prevent childhood lead poisoning from residential hazards are substantial. It was been estimated by HUD in 1996, for example, that the first-year cost to reduce residential lead hazards in federally owned or federally assisted housing is \$458 million. The overall estimated benefit, defined as increase in lifetime earnings of children who are protected



from the detrimental effects of lead exposure, was \$1.538 billion -- a net benefit of \$1.08 billion. This estimate does not include other anticipated advantages, such as reduction in cardiovascular disease, behavioral problems and delinquent behaviors.

15. Collectively, the results of the current research indicates that efforts to prevent lead poisoning's devastating and costly neuro-cognitive impairment should emphasize primary prevention (*i.e.*, the elimination of residential lead hazards before a child is unduly exposed). This contrasts, paradoxically, with today's practices and policies that rely almost exclusively on secondary prevention efforts (*i.e.*, attempts to reduce a child's exposure to residential lead hazards only after a child has been unduly exposed).

16. For too long, policy decisions about lead poisoning have ultimately favored the lead industry or economic concerns over children's health. The lead industry has left a toxic legacy comparable with that of the tobacco industry -- yet it has contributed nothing to its resolution. Nonetheless, for over a quarter-of-a-century, New York City led the nation in establishing cutting-edge legislation that effectively lowered the numbers of lead poisoned cases year after year. New York City must re-establish a scientifically based strategy to

eliminate subclinical lead toxicity by controlling residential  
lead hazards; it is within its grasp.

---

BRUCE P. LANPHEAR, M.D., M.P.H.

Sworn to before me on  
October \_\_\_\_, 1999

---

NOTARY PUBLIC

## CURRICULUM VITAE

**Bruce Perrin Lanphear, M.D., M.P.H.**

### **Work**

Division of General and Community Pediatrics  
Children's Hospital Medical Center  
3333 Burnet Avenue  
Cincinnati, Ohio 45229-3039  
TEL: (513) - 636 - 3778  
FAX: (513) - 636 - 4402  
E-mail: bruce.lanphear@chmcc.org

### **Home**

3526 Mooney  
Cincinnati, OH 45208  
TEL: (513) 321-1927

**Date of Birth** January 12th, 1963

**Marital status** Married

### **Specialty**

Board certified in General Preventive Medicine and Public Health

### **Employment**

- 1984-86 Paramedic, Jackson County Jail, Kansas City, Missouri
- 1988-89 Physician, Travel Clinic, University of Cincinnati, Cincinnati, Ohio
- 1987-89 Staff Physician, Sexually Transmitted Disease Clinic, Cincinnati Public Health Department, Cincinnati, Ohio
- 1988-92 Assistant Professor of Environmental Health and Associate Director, Medical Center Health Services, University of Cincinnati
- 1990-92 Medical Director, Employee Health, Children's Hospital Medical Center Cincinnati, Ohio
- 1991-94 Senior Instructor, Departments of Pediatrics and of Community & Preventive Medicine, University of Rochester School of Medicine
- 1991-95 National Research Scholar Award in General Pediatric Research, The University of Rochester School of Medicine and Dentistry
- 1992-97 Course Director, "Public Health & the Environment" Masters in Public Health Program, Department of Community & Preventive Medicine, The University of Rochester School of Medicine.
- 1993-97 Assistant Professor, Departments of Pediatrics and of Community & Preventive Medicine, University of Rochester School of Medicine
- 1997- Associate Professor, Department of Pediatrics, Children's Hospital Medical Center and the University of Cincinnati, Cincinnati, Ohio

- 1997- Director, General Pediatric Research Fellowship Training Program, Children's Hospital Medical Center and University of Cincinnati
- 1997- Director, Children's Environmental Health Center, Children's Hospital Medical Center
- 1997- Associate Professor (Adjunct), Departments of Pediatrics and of Environmental Medicine, University of Rochester School of Medicine, Rochester, New York

**Committee and Community Involvement**

- 1993-97 Lead Poisoning Prevention Task Force, Monroe County Health Department.
- 1994-97 Clinical Investigations Committee, Rochester General Hospital.
- 1995- Scientific Consultant, National Center for Lead-Safe Housing, Columbia, Maryland.
- 1996-97 Member, New York State Task Force on Environmental Neurotoxins, University of Rochester School of Medicine.
- 1996-97 Member, National Institute for Environmental Health Sciences Grant Review Committee for Community-Based Interventions.
- 1995-98 Chairman, U.S. Department of Housing and Urban Development Committee on Lead-Contaminated House Dust and Soil with Children's Blood Lead Levels.
- 1996- Scientific Consultant, Westat, Inc., Rockville, Maryland.
- 1996- Member, Committee on Children's Environmental Health, Environment Section, American Public Health Association.
- 1997- Member, 1998 Peer Review Group for National Research Service Awards, Health Resources and Services Administration.
- 1996- Member, Cincinnati Board of Health, Cincinnati, Ohio.
- 1998 Member, Science and Research Work Group, Office of Children's Health Protection Advisory Committee, U.S. EPA.
- 1998- Member, Cincinnati Lead Poisoning Prevention Advisory Task Force.
- 1998- Scientific Consultant, Battelle Memorial Institute, Columbus, Ohio.

1999- Fellow, Institute for Health Policy and Health Services Research  
University of Cincinnati, Cincinnati, Ohio.

### **Societies and Organizations**

1989- American Public Health Association  
1989- Association of Teachers of Preventive Medicine  
1996- Ambulatory Pediatric Association  
1997- American Association for the Advancement of Science

### **Education**

1980-86 University of Missouri at Kansas City  
Bachelor of Arts in Biology (1985)  
Medical Degree (1986)

1985-87 Transitional Internship  
University of Arkansas for Medical Sciences, Little Rock, Arkansas

1986-88 Tulane School of Public Health & Tropical Medicine  
Masters in Public Health & Tropical Medicine

1987-89 General Preventive Medicine and Public Health Residency  
Tulane School of Public Health & Tropical Medicine  
Masters in Public Health & Tropical Medicine

1992-95 Fellowship in General Academic Pediatric Research  
University of Rochester School of Medicine, Rochester, NY

### **Original Research**

1. Lanphear BP. Deaths in Custody. American Journal Forensic Medicine & Pathology 1987;8:299-301.
2. Lanphear BP, Snider DE. Myths of Tuberculosis. Journal Occupational Medicine 1991;33:501-504.
3. Linnemann CC Jr, Cannon C, DeRonde M, Lanphear BP. Effect of educational programs, rigid sharps containers, and universal precautions on reported needle-stick injuries in healthcare workers. Infection Control Hospital Epidemiology 1991;12:214-20.
4. Lanphear BP, Buncher CR. Latent period for malignant mesothelioma of occupational origin. Journal Occupational Medicine 1992;34:718-721.
5. Lanphear BP, Linnemann CC Jr, Cannon CG, DeRonde MM. Decline of clinical hepatitis B in workers at a general hospital: Relation to increasing vaccine-induced immunity. Clinical Infectious Disease 1993;11:10-14.

### **Original Research (continued)**

6. Lanphear BP, Linnemann CC Jr, Cannon CG, DeRonde MM, Pandy L, Kerly L. Hepatitis C virus infection in health care workers: Risk of exposure and infection. *Infection Control Hospital Epidemiology* 1994;15:745-750.
7. Lanphear BP, Emond M, Jacobs DE, Weitzman M, Winter NL, Tanner M, Yakir B, Eberly S. A side-by-side comparison of dust collection methods for sampling lead-contaminated house-dust. *Environmental Research* 1995;68:114-123.
8. Lanphear BP, Winter NL, Apetz L, Eberly S, Weitzman M. A randomized trial of the effect of dust control on children's blood lead levels. *Pediatrics* 1996;98:35-40.
9. Christy C, Pulcino M, Lanphear BP, McConnochie K. Screening for tuberculosis infection in urban children. *Arch Pediatrics Adolescent Med* 1996;150:722-726.
10. Lanphear BP, Weitzman M, Eberly S. Racial differences in environmental exposures to lead. *American Journal of Public Health* 1996;86:1460-1463.
11. Lanphear BP, Weitzman M, Winter NL, Tanner M, Yakir B, Eberly S, Emond M, Matte TD. Lead-contaminated house dust and urban children's blood lead levels. *American Journal of Public Health* 1996;86:1416-1421.
12. Lanphear BP, Byrd RS, Auinger P, Hall CB. Increasing prevalence of recurrent otitis media among children in the United States. *Pediatrics* 1997;e99:1-7.
13. Emond MJ, Lanphear BP, Watts A, Eberly S and the Rochester Lead-in-Dust Study Group. Measurement error and its impact on the estimated relationship between dust lead and children's blood lead. *Environmental Research* 1997;72:82-92.
14. Lanphear BP, le Cessie S, Atkinson WL, Watelet L. Association of live births and the resurgence of measles. *International Journal Epidemiology* 1997;26:204-211.
15. Rust SW, Burgoon DA, Lanphear BP, Eberly S. Log-additive versus log-linear analysis of lead-contaminated house dust and children's blood lead levels: Implications for residential dust-lead standard. *Environmental Research* 1997;72:173-184.
16. Lanphear BP, Roghmann KJ. Pathways of lead exposure in urban children. *Environmental Research* 1997;74:67-73.

## Original Research (continued)

17. Lanphear BP, Byrd R, Auinger P, Schaffer S. Community characteristics associated with elevated blood lead levels in children. *Pediatrics* 1998;101:264-271.
18. Lanphear BP, Rust SW, Burgoon DA, Eberly S, Galke W. Environmental exposures to lead and urban children's blood lead levels. *Environmental Research* 1998;76:120-130.
19. Lanphear BP. The paradox of lead poisoning prevention. *Science* 1998;281:1617-1618.
20. Lanphear BP, Hall CB, Black J, Auinger P. Risk factors for the early acquisition of HHV-6 and HHV-7 infection in children. *Pediatric Infectious Disease Journal* 1998;17:792-795.
21. Lanphear BP, Matte TD, Rogers J, Clickner R, Dietz B, Bornschein RL, Succop P, Mahaffey KR, Dixon S, Galke W, Rabinowitz M, Farfel M, Rohde C, Schwartz J, Ashley P and Jacobs DE. The contribution of lead-contaminated house dust and residential soil to children's blood lead levels: A pooled analysis of 12 epidemiologic studies. *Environmental Research* 1998;79:51-68.
22. Marron R, Lanphear BP, Kouides R, Dudman L, Manchester R, Christy C. Efficacy of informational letters on Hepatitis B immunization rates in university students. *Journal American College Health* 1998;47:123-127.
23. Howard CR, Howard FM, Lanphear BP, deBlieck EA, Eberly S, Lawrence RA. Effect of early pacifier use on breastfeeding duration. *Pediatrics* 1999;103:e33.
24. Lanphear BP, Howard CR, Eberly S, Auinger P, Kolassa J, Weitzman M, Alexander K, Schaffer S. Primary prevention of childhood lead exposure: A randomized trial of dust control. *Pediatrics* 1999;103:772-777.
25. Moss ME, Lanphear BP, Auinger P. Association of dental caries and blood lead levels among the U.S. population. *JAMA* 1999;281:2294-2298.
26. Howard CR, de Blieck EA, ten Hoopen CB, Howard FM, Lanphear BP, Lawrence RA. Physiologic stability of newborns during cup and bottle-feeding. *Pediatrics* (in press).
27. Steiner JF, Curtis P, Lanphear BP, Vu KO, Reid A. Federally-funded fellowship training in primary care research: perspectives of program directors. *Academic Medicine* 2000 (in press).

28. Stone KE, Lanphear BP, Pomerantz WJ, Khoury J. Injuries and deaths in children due to window-falls. *Journal of Urban Health* 2000 (in press).

### **Review Articles and Chapters**

1. Lanphear BP. Hepatitis B immunoprophylaxis: Development of a cost effective program in the hospital setting. *Infection Control Hospital Epidemiology* 1990;11:47-50.
2. Lanphear BP. Trends and patterns in the transmission of bloodborne pathogens to health care workers. *Epidemiologic Reviews* 1994;16:437-450.
3. Kapil V, Lanphear BP. Tuberculosis - surveillance, prevention, and control. *Occupational Environmental Medicine Report* 1994;8:35-38.
4. Myers G, Davidson P, Weitzman M, Lanphear BP. Contribution of heavy metals to developmental disabilities in children. *Mental Retard Develop Dis* 1997;3:239-245.
5. Lanphear BP. Transmission and control of bloodborne viral hepatitis in health care workers, in *Occupational Medicine: State of the Art Reviews*. McDiarmid MA, Kessler E, (eds), Hanley and Belfus, Inc. Philadelphia, PA, 1997;12:717-730.
6. Lanphear BP. Indoor Pollutants and Toxins, in *Ambulatory Pediatrics*, Green, Haggerty and Weitzman (eds.) 5<sup>th</sup> edition, 1999, W.B. Saunders Company, Philadelphia, PA.

### **Letters**

1. Lanphear BP. Post-exposure prophylaxis for hepatitis B virus. *Lancet* 1989;2:860.
2. Menkhaus NA, Lanphear BP, Linnemann CC Jr. Airborne transmission of varicella-zoster virus in hospitals. *Lancet* 1990;2:1315.
3. Lanphear BP. The resurgence of measles and herd immunity. *JAMA* 1992;268:789.
4. Lanphear BP, Linnemann CC Jr, Cannon CG. A high false positive rate of tuberculosis associated with Aplisol: an investigation among health care workers. *Journal Infectious Disease* 1994;169:703-704.
5. Lanphear BP. Potential consequences of using Aplisol tuberculin tests in prior epidemic investigations. *Infection Control Hospital Epidemiology* 1995;16:255.



## **Presentations**

1. "Biologic Hazards to Health Care Personnel in the Workplace". University of Cincinnati, Cincinnati, Ohio, September 26, 1990.
2. "Common Misconceptions about Tuberculosis". American Lung Association, St. Elizabeth's Hospital, Belleville, Illinois, March 19, 1991.
3. "Prevention and Control of Infectious Disease in Health Care Workers". Miami Valley Hospital, Dayton, Ohio, September 5, 1991.
4. "Hepatitis B Virus Infections in Health Care Workers". Ohio University, Athens, Ohio, March 21, 1992.
5. "Universal Immunization Against Hepatitis B Virus". Grand Rounds, Dayton Children's Hospital, May 1992, Dayton, Ohio.
6. "Correlation of Blood Lead Levels and Dust Lead Levels Using Three Dust Collection Methods. Environmental Protection Agency, Research Triangle, N.C., January 20, 1994.
7. "Relation of Lead-Contaminated House Dust and Blood Lead Levels in Urban Children" Environmental Protection Agency, Washington, D.C., February, 1994.
8. "Lead-Contaminated House Dust and Blood Lead Levels in Urban Children" Society for Pediatric Research, Seattle, Washington May 5, 1994.
9. "EPA Health-Based Standards for Soil and Dust". Alliance to End Childhood Lead Poisoning, Washington, D.C., May 17, 1994.
10. "Epidemiology and Surveillance of Tuberculosis in Health Care Settings". University of Cincinnati, Cincinnati, Ohio, August 19, 1994.
11. "A Side-by-Side Comparison of Sampling Methods for Lead-Contaminated House Dust". American Public Health Association, Washington, D.C., November 1, 1994.
12. "Trends in Childhood Exposure to Lead: Implications for Prevention". University of Rochester, Pediatric Grand Rounds, February 15, 1995.
13. "Childhood Exposure to Lead". Visiting Professor, Nazareth College, Rochester, New York, March 24, 1995.
14. "Transmission and Control of Infections in Health Care Workers". (Moderator & Speaker) American College of Occupational and Environmental Medicine, Las Vegas, Nevada, May 4, 1995.

### **Presentations (continued)**

15. "Lead Exposure Prevention Research at the University of Rochester". New England Lead Conference, Kennebunkport, Maine, August 3, 1995.
16. "Prevention of Childhood Lead Exposure". 1<sup>st</sup> Annual Midwest Conference on Childhood Lead Poisoning Prevention, Kansas City, MO, September 10-11, 1995.
17. "Childhood Lead Exposure: Implications for Occupational Health". National Institute for Occupational Safety and Health, Cincinnati, OH, May 10, 1996.
18. "Community Characteristics and Children's Blood Lead Levels". American Public Health Association, New York City, NY, November 19, 1996.
19. "Evolution of a Disease: The Science of Childhood Lead Exposure Prevention." American Public Health Association, New York City, NY, November 18, 1996.
20. "Childhood Lead Exposure: A Local and National Perspective." Occupational Medicine Grand Rounds, University of Rochester, January 2, 1997.
21. "Prevention of Childhood Lead Exposure: The United States Experience". (Keynote Presentation) University of the West Indies and Pan American Health Organization, Kingston, Jamaica, January 23, 1997
22. "Lead-Contaminated House Dust and Children's Blood Lead Levels". (Keynote Presentation) Look Out for Lead Conference, Madison, WI, May 22, 1997.
23. "Primary Prevention of Childhood Lead Exposure: A Randomized Trial of Dust Control". American Public Health Association, Indianapolis, November 13, 1997.
24. "Evolution of a Disease: Prevention of Childhood Lead Exposure." Pediatric Grand Rounds, Medical University of South Carolina, Charleston, SC, March 20, 1998.
25. "The Science of Childhood Lead Exposure Prevention." Tulane/Xavier Center for Bioenvironmental Research, New Orleans, May 4-5<sup>th</sup>, 1998.
26. "Lead Hazard Control Research" Conference on Linking Health, Housing & Environment, Centers for Disease Control, Department of Housing and Urban Development, National Institutes of Health, Phoenix, Arizona, June 21-24, 1998.

## **Presentations (continued)**

27. "A Randomized Trial of Dust Control to Prevent Childhood Lead Exposure." Presenter and Co-chairman, Section on Heavy Metals, 1st International Conference on Children's Environmental Health, Amersterdam, The Netherlands, August 11-13<sup>th</sup>, 1998.
28. "Blood Lead as a Biomarker of Exposure and Effects." Protecting Children's Health: Assessing the Relationship of Soil Lead to Blood Lead, National Environmental Policy Institute, Washington, D.C., October 27, 1998.
29. "Prevention of Childhood Lead Exposure: A Critique of the EPA's Proposed Residential Lead Standard". Office of Children's Health Protection, U.S. Environmental Protection Agency, Washington, D.C., November 5, 1998.
30. "Science and Policy of Lead Poisoning Prevention in the United States". Nicholas School of the Environment, Duke University, Durham, North Carolina, February 22, 1999.
31. "Behaviors in Early Childhood and Exposure to Environmetnal Toxins". (invited) Pediatric Environmental Health Conference, San Francisco, CA May 4, 1999.
32. "Patterns of Lead Exposure in Early Childhood". International Conference on Lead Exposure, Reproductive Toxicity and Carcinogenicity, Gargnano, Italy, May 7, 1999.

## **Grants**

1. Principal Investigator, "Dust-Lead and Blood Lead Levels Among Urban Children". The National Center for Lead-Safe Housing, \$561,619, June 15, 1993 to Aug. 31, 1994. Department of Housing and Urban Development Contract MDLPT0001-93. (25% effort)
2. Principal Investigator, "Determinants of Lead Exposure Among Children in Monroe County, NY", National Institute Environmental Health Sciences Pilot Grant, University of Rochester School of Medicine and Dentistry, Department of Environmental Medicine. \$7,600, June 15, 1993 to December 31, 1995.
3. Principal Investigator, "The Effectiveness of Dust Control in Reducing Children's Blood Lead Levels" U.S. Department of Housing and Urban Development, \$128,394, April 1, 1994 to June 30, 1995. [25% effort]
4. Principal Investigator, "Primary Prevention of Exposure to Lead". Centers for Disease Control and Prevention, \$832,228, September 30, 1994 to October 1, 1998. (25% effort)

## **Grants** (continued)

5. Principal Investigator, "Secondary Analyses of the Relation of Lead-Contaminated House Dust and Children's Blood Lead Levels". The National Center for Lead-Safe Housing, \$43,260, October 1, 1994 to March 30, 1996. [25% effort]
6. Co-investigator (Christy, PI), "Tuberculosis Screening in Children". New York State Department of Health, \$15,000, January 1, 1995 to December 31, 1996.
7. Co-investigator (Weitzman, PI), "Fellowship Training in General Pediatrics" (Grant # D28PE50008). Bureau of Health Professions, HRSA, U.S. Public Health Service, \$1,752,816, July 1, 1996 to June 30, 1997. (10% effort)
8. Principal Investigator, "Neurobehavioral Effects of Low-Level Lead Exposure in Children". Strong Children's Research Center, University of Rochester School of Medicine and Dentistry, \$8,560, July 1, 1996 to June 30, 1997.
9. Principal Investigator, "Neurobehavioral Effects of Low-Level Lead Exposure in Children". NIEHS Pilot Grant, University of Rochester School of Medicine, Dept. of Environmental Medicine, \$20,035 September 1, to August 30, 1997.
10. Co-investigator (Howard, PI), "Effect on Breastfeeding of Pacifiers and Bottle Feeding". Bureau of Maternal and Child Health, \$420,333, October 1, 1996 to September 30, 2000. (2.5% effort)
11. Co-investigator (Canfield, PI) "Lead and Children's Cognitive Functioning", Research Grants Program, Cornell University. \$17,000, October 1, 1996 to September 31, 1997.
12. Principal Investigator, "Neurobehavioral Effects of Low-Level Lead Exposure in Children" (RO1-ES 08338). National Institute of Environmental Health Sciences, December 1, 1996 to November 31, 2001, \$1,946,848. (20% effort).
13. Co-investigator, (Aligne, PI) "Reduction in Passive Smoking among Children with Asthma: A Randomized Trial of HEPA Air Filtration". October 1, 1996 to September 31, 1997, \$6,000. KIDD Grant, Rochester General Hospital.
14. Co-investigator, (DeWitt, PI). "Faculty Development in General Pediatrics". Bureau of Health Professions, Health, Department of Health and Human Services July 1, 1997 to June 30, 2000, \$338,000. (20% effort).
15. Principal Investigator, "A Side-by-Side Comparison of Allergen Sampling Methods", U.S. Department of Housing and Urban Development, January 2, 1998 to December 31, 1998, \$163,065. (15% effort).

**Grants** (continued)

16. Principal Investigator, "National Research Service Award - Fellowship Training in General Pediatrics and Adolescent Medicine" [1T32PE10027], Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services. July 1, 1998 to June 30, 2003. \$634,408. [20% effort]
17. Co-investigator, [Steiner, PI] "Survey of Directors and Graduates of NRSA Fellowship Training Programs", Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services. July 1, 1998 to June 30, 1999.
18. Principal Investigator, "Effect of Soil Remediation on Children's Blood Lead Levels in Midvale, Utah: An Observational Study". U.S. Environmental Protection Agency, August 1, 1998 to July 30, 1999. \$62,550. [30% effort].
19. Principal Investigator, "Risk Assessment for Residential Lead Hazards". U.S. Department of Housing and Urban Development, May 1, 1999 to April 30, 2000. \$102,435. [25% effort].
20. Co-investigator, (Phelan, PI) Trends and Patterns in Playground Injuries Among U.S. Children." Ambulatory Pediatric Association, May 5, 1999 to May 4, 2000. \$9,000 (0% effort).
21. Principal Investigator, "Residential Exposures associated with Asthma in U.S. Children and Adolescents" U.S. Department of Housing and Urban Development, July 16, 1999 to January 15, 2000. \$30,400. [10% effort].