

# BREAK THE CYCLE 9

## Break the Cycle of Environmental Health Disparities in Children

**APRIL 7-8, 2014**

RITA ANNE ROLLINS ROOM, 8TH FLOOR  
ROLLINS SCHOOL OF PUBLIC HEALTH, EMORY UNIVERSITY  
1518 CLIFTON ROAD ATLANTA, GEORGIA 30322

### A PROJECT OF:

Southeast Pediatric Environmental Health Specialty Unit at Emory  
Innovative Solutions for Disadvantage & Disability  
Georgia Council on Developmental Disabilities  
Sustainability Initiatives at Emory University



**BREAK THE CYCLE** is a collaborative interdisciplinary research and training program to cultivate leadership in children's environmental health disparities. The target populations are communities where the environmental hazards are related to circumstances of social and economic disadvantage.



Funding for this conference was made possible (in part) by the cooperative agreement award number 1U61TS000118-05 from the Agency for Toxic Substances and Disease Registry (ATSDR). The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Acknowledgement: The U.S. Environmental Protection Agency (EPA) supports the PEHSU by providing funds to ATSDR under Inter-Agency Agreement number DW-75-92301301-0. Neither EPA nor ATSDR endorse the purchase of any commercial products or services mentioned in PEHSU publications.

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**AGENDA**  
**Monday, April 7, 2014**

- 8:00 – 8:30**      **Registration and Continental Breakfast (*sponsored by Sustainability Initiatives at Emory University*)**
- 8:30**              **Introductory Remarks**
- 8:40**              **Overview of Break the Cycle – I. Leslie Rubin, MD**
- NUTRITION**
- 9:15**              **Early Childhood Obesity, Socioeconomic Status, and Executive Functioning in Atlanta’s Children.** Amanda Brzozowski, *student*, Dr. Carolyn Drews-Botsch, *mentor*; Emory University Rollins School of Public Health, Department of Epidemiology
- 9:40**              **Multisport/Triathlon Training and Self-determined Exercise Among an Overweight Latino Middle School Population.** Jeffrey Condit, *student*, Dr. Paula Papanek, *mentor*; Marquette University, Dept. of Physical Therapy
- ADOLESCENCE**
- 10:05**             **Media Literacy and Perceptions of Identity among Pre-adolescent African-American Girls.** Johari Harris, *student*, Dr. Miles Irving, *mentor*; Georgia State University, Department of Educational Psychology
- 10:30**             **HEALTH BREAK**
- 11:00**             **Rural Kentucky Adolescents and Effects of Parenting.** Lesley Davidson, *student*, Dr. Hatim Omar, *mentor*; University of Kentucky, Department of Pediatrics
- 11:35**             **Breaking the Cycle through Next Step Up: An Educational and Mentoring Intervention.** Elise Tolbert, *student*, Dr. Pamela Maxson, *mentor*; University of Michigan, School of Public Health, Department of Environmental Health
- INTERNATIONAL**
- 12:00**             **Violence Against Children and Youth in Mexico: A Public Health Approach.** Carolina de la Portilla, *student*; Dr. Enrique Cifuentes, *mentor*; University of Munich and Harvard School of Public Health
- 12:20**             **LUNCH (*sponsored by Georgia Council on Developmental Disabilities*)**
- 1:40**              **Predictors of Completed Childhood Vaccination in Bolivia.** Brianna Osetinsky, *student*; Dr. Laura Gaydos, *mentor*; Emory University Rollins School of Public Health Department of Health Policy and Management
- 2:05**              **Elements of culture and tradition that shape the perceptions and expectations of Somali refugee mothers regarding Autism** Shanna Miller-Gairy, *student*, Dr. Saul Mofya, *mentor*; Fort Valley State University, Department of Graduate Studies
- 2:30**              **Early Detection of Autism Spectrum Disorders: A Good Beginning Towards Making a Difference.** Maria Ignacia Eugenin, *student*; Dr. Patricia Valenzuela and Dr. Rosario Moore, *mentors*; Pontificia Universidad Católica de Chile
- 2:55**              **Improving environmental Exposure and Health Outreach to Children in Puerto Rico: A Geographic Information Systems Approach.** Lauren Ritter, *student*; Dr. Damiris Perez Agu, *mentor*; Mount Sinai Icahn School of Medicine, Dept. of Preventative Medicine
- 3:20**              **HEALTH BREAK**
- LEGAL**
- 3:55**              **Evaluating In Home Intervention Strategies to Mitigate Disparate Respiratory Illness Rates in Disadvantaged Urban Pediatric Populations.** Emily McClendon and Justin Babino, *students*, John Marshall, *mentor*; Georgia State University College of Law
- 4:20**              **Breaking the Cycle with Medical-Legal Partnerships: A Comparison of Referral and Intake Processes with a Focus on Addressing Substandard Housing Condition.** Caroline Wick, *student*, Dr. Colin Crawford, *mentor*; Tulane University Law School and the School of Public Health and Tropical Medicine and Environmental Health Sciences
- 4:55**              **Concluding Remarks/ Summaries – Optional ABC (*Abbreviated Boot Camp*)**

**Tuesday, April 8, 2014**

**LAW, HEALTH AND THE ENVIRONMENT**

This workshop focuses on realistic case scenarios, discussion and practical solutions.

- 8:00**            **BREAKFAST and morning Comments** (*sponsored by Emory University Department of Pediatrics*)
- 8:30**            **Health Law Partnerships: What They Do, National and Local.** **Sylvia Caley, JD, MBA, RN** *Associate Clinical Professor and Co-Associate Director of the Health Law Partnership (HeLP), Georgia State University College of Law, Atlanta, Georgia*
- 8:55**            **The Contribution of Health Law Partnerships to Improving Health, Well-being, and the Patient Environment.** **Robert Pettignano, MD, MBA** *Professor of Pediatrics, Emory University; Medical champion of the Atlanta Health Law Partnership, Atlanta, Georgia*
- 9:20**            **The Role of the Home and Local Environment in Children's Health and Development.** **Benjamin Gitterman, MD,** *Associate Professor of Pediatrics and Public Health at Children's National Medical Center and George Washington University, Washington, DC; Medical Director of Project Health, DC*
- 9:45**            **HEALTH BREAK**
- 10:00**           **Assessing the Community – by Windshield Survey.** **Andrew S. Matey and Kristin Sparks,** *Emory University School of Nursing, Nurse Practitioner Program; Maeve Howett, RN, PhD, and Janice Nodvin, mentors*
- 10:15**           **Project Introduction: Group Scenarios**  
1. Food Deserts: Issues with Access to Food and Commodities  
2. Home and Neighborhood Environmental Challenges
- Topics to consider in each group:  
1. What potential changes could improve the children's environment in these areas?  
2. What are the barriers to participant actions? How do we assess these barriers?  
3. How do we involve the participants in the changes needed (avoiding "non-compliance")?
- 10:30**           **Task Groups Convene**
- 11:15**           **Task Group Presentations – 10 min each**
- 11:55**           **Conclusions and Discussion.** **Colin Crawford, JD,** *Robert C. Cudd Professor of Law at Tulane University; Executive Director, Payson Center for International Development*
- 12:15**           **Wrap Up**
- 12:30**           **Conclusion of Meeting**

Thank you to our sponsors and participants.

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Innovative Solutions for Disadvantage and Disability: [www.isdd-home.org](http://www.isdd-home.org)  
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## Guest Presenters

### Georgia State University College of Law

#### **Sylvia Caley, JD, MBA, RN**

**Sylvia Caley** is an associate clinical professor at Georgia State University College of Law, teaching law students and other professional graduate students enrolled in the HeLP Legal Services Clinic. She also teaches Health Legislation and Advocacy, a year-long course in which law students work with community partners to address health-related legislative and regulatory issues affecting the community. She is the director of the Health Law Partnership (HeLP), interdisciplinary community collaboration among Children's Healthcare of Atlanta, the Atlanta Legal Aid Society, and the College of Law. She is a member of the Ethics Committees at Grady Health System and Children's Healthcare of Atlanta. Her research interests focus on using interdisciplinary and holistic approaches to address the socio-economic and environmental issues affecting the health and well-being of children, specifically the lives of low-income, chronically ill, and disabled children.

### Emory University, Department of Pediatrics

#### **Robert Pettignano, MD, FAAP, FCCM, MBA**

**Dr. Pettignano** graduated from Iona College in New York with a Bachelor's degree in Biology. He taught high school biology for two years before attending and graduating from medical school at Ross University, Dominica, West Indies. Dr. Pettignano completed his pediatric residency at Newark Beth Israel in New Jersey, his pediatric critical care fellowship at Egleston Children's Hospital at Emory University in Atlanta, and an MBA at Kennesaw State University. He is a Professor of Pediatrics, and attending physician at Children's Healthcare of Atlanta at Egleston, primarily providing sedation services. The pediatric residents from Emory University and Orlando Regional Healthcare have each recognized Dr. Pettignano as Teacher of the Year. Since 2006, he has been the Medical Champion (Director) of HeLP (The Health Law Partnership). He serves on the local HeLP Advisory Board as well as on the Board of the National Center for Medical Legal Partnerships.

## Conference Participants

### Emory University Rollins School of Public Health Department of Epidemiology

Student

#### **Amanda Brzozowski**

**Amanda Brzozowski** is a Ph.D. candidate in Epidemiology graduating this semester. Amanda has vast experience in numerous areas of public health and has explored many facets of epidemiology including infectious diseases, social epidemiology, pediatrics, and methods. She has worked in both research-based and applied environments. She looks forward to both

branching out into new areas and diving deeper into my two favorite topics, pediatric research and teaching introductory/intermediate methods. Her honors include: Maternal/Child Health Enhanced Epidemiology Field Practicum (2003); Delta Omega, Honorary Society in Public Health (2004); George W. Woodruff Fellowship (2006-2011); Trainee, NIH T32 Pediatric and Perinatal Training Grant (2010-2013). Amanda's Break the Cycle project builds upon her dissertation research by exploring another aspect of childhood development, executive functioning, and also allows her to look further into the role socioeconomic status plays in the potential childhood obesity/development relationship. She resides in St. Louis, Missouri with her husband, and one-year-old daughter.

Faculty Mentor

**Carolyn Drews-Botsch, MPH, PhD**

**Carolyn Drews-Botsch** is Professor of Epidemiology at Emory University Rollins School of Public Health. Dr. Drews-Botsch is a pediatric and perinatal epidemiologist who has worked on congenital cataracts, child abuse, mental retardation, intrauterine growth restriction, stillbirth and fetal alcohol syndrome. Her current research interests focus on parenting stress among parents of children with congenital cataracts, as well the interaction between biological and sociological factors in determining the administrative prevalence of intellectual disability.

**Emory University Rollins School of Public Health  
Department of Health Policy & Management**

Student

**Brianna Osetinsky**

**Brianna Osetinsky** is currently completing her MSPH in the Department of Health Policy and Management at Emory University Rollins School of Public Health. She has worked as a Research Assistant at Rollins School of Public Health and with the Interfaith Health Program at Emory University. She has previously worked in both rural and urban public health in developing countries as a research coordinator with Friends of African Village Libraries in Ghana and Burkina Faso, and with Society for Women and AIDS in Africa in Ethiopia. Variations within and between health systems ignited a general interest in barriers to access and utilization in pediatric care. Her interest in predictors of pediatric vaccination in Bolivia arose from the recent expansion of Bolivia's vaccine schedule to include a vaccination for Rotavirus and the extensive regional and ethnic variation in Bolivia. She plans to continue to apply her curiosity and passion to researching the social and systems level causes of health disparities in low and middle income countries as a health services researcher.

Faculty Mentor

**Laura Gaydos, PhD**

**Laura Gaydos** is Research Assistant Professor of Health Policy & Management in the Department of Health Policy and Management at Emory University, Rollins School of Public Health. She is also the Director of the Masters of Science in Public Health (MSPH) program in the Health Policy and Management Department at the Rollins School of Public Health. She received her A.B. from Brown University in 1998 and her Ph.D. at the University of North Carolina at Chapel Hill in 2004. Dr. Gaydos' work focuses in the areas of unintended pregnancy prevention/ reproductive health, religion and reproductive health, women's fitness and nutrition, racial disparities in women's health, and legislative advocacy for women's health.

Her work has been supported by the Centers for Disease Control, United States Department of Agriculture, the Atlanta Women's Foundation, and the Healthcare Georgia Foundation.

## **Emory University Nell Hodgson Woodruff School of Nursing**

Student

### **Andrew S. Matey**

**Andrew Matey** is currently enrolled in the Emory University School of Nursing Acute Care Nurse Practitioner Program. He is currently practicing as a certified Critical Care Registered Nurse (CCRN) in the Surgical/Trauma ICU at Grady Hospital and has done so for the past three years. He also works in the Emory Healthcare ICUs as well. He has been the chair of the research council at Grady for the past two years, and guest lectures at Georgia State University to undergraduate nursing student across the spectrum of their education. Mr. Matey aspires to be an Acute Care Nurse Practitioner with a cardiothoracic surgery team upon graduation. His long-term career goals include obtaining his PhD in nursing, conducting research, and being a leader in academia. Mr. Matey's journey in health care began upon his enlistment in the United States Navy as a Fleet Marine Force Corpsman. His interests include pain, agitation, and sedation management in a critical care setting, as well as mechanical ventilation strategies for the critically ill. He has been involved in the community based home visits of Project GRANDD and is providing the group with a Windshield Survey.

Student

### **Kristin Sparks**

**Kristin Sparks** is currently a student in Emory University's Master of Science in Nursing Adult-Gerontology Acute Care Nurse Practitioner Program. In 2011, she graduated Summa Cum Laude from the Medical College of Georgia's Bachelor of Science in nursing program. Since graduating from this program, she has been practicing as a registered nurse in Emory University's Cardiovascular Intensive Care Unit. During her years as a bedside nurse, she obtained her CCRN, a specialty certification which reflects exemplary direct bedside nursing care to acutely and critically ill adults, received the Rookie of the Year award, spoke as the keynote speaker at the 2011 March of Dimes "Nurse of the Year" ceremony, became an active member of the American Association of Critical-Care Nurses, and volunteered regularly at Medshare, a nonprofit organization dedicated to improving the environment by reallocating surplus medical supplies to under-served healthcare facilities in underdeveloped countries. She also has participated this year in the Project GRANDD home and health assessment program and will share her experiences in the home visit. Kristin is interested in cardiovascular medicine and hopes to be an Adult-Gerontology Acute Care NP.

Faculty Mentor

### **Maeve Howett, PhD, APRN, CNP-Ped, IBCLC**

**Maeve Howett** is a pediatric nurse practitioner, lactation consultant, and Clinical Associate Professor in the Nell Hodgson Woodruff School of Nursing at Emory University. She has over twenty-five years of pediatric nursing experience, with research interests in infant attachment and feeding, early childhood nutrition, toxic exposures in infants and lactating women and vulnerable pediatric populations. She is particularly interested in the at-risk mother-infant dyad made vulnerable by poverty or lack of resources. She lectures on multiple environmental topics and has incorporated environmental health into Emory School of Nursing's curriculum - twice lecturing to the National Student Nurses Association. Recently named to the Federal Advisory Committee: Environmental Protection Agency (EPA) Children's Health Protection Advisory



Council (CHPAC), she also is President of the Georgia Chapter of Pediatric Nurse Practitioners and in 2013 became a Nurse Luminary with Healthcare Without Harm's Luminary Project. She serves on the international board of the Lactation Education Accreditation and Approval Committee (LEAARC) and in that capacity is also the commissioner to CAAHEP - the Commission on Accreditation in Allied Health Education Programs. Dr. Howett serves on the Sustainability Taskforce for Emory Healthcare. She has two grown children and is a foster parent for medically fragile infants.

Faculty Mentor

**Janice T. Nodvin**

**Janice Nodvin** serves as Project Administrator and Educator for the SE PEHSU. She is Program Director of Innovative Solutions for Disadvantage and Disability. One of ISDD's core programs since 2005 is Project GRANDD (Grandparents raising their grandchildren with disabilities and chronic illness). In this capacity, she works with Dr. Maeve Howett of the Emory University Nell Hodgson Woodruff School of Nursing to provide consultation, direction, care coordination and training to the Community Outreach nurse practitioner students. She is the liaison between the student nurses and the grandparent families.

## **Fort Valley State University Department of Graduate Studies**

Student

**Shanna Miller-Gairy**

**Shanna Miller-Gairy** is currently a graduate student at Fort Valley State University, College of Graduate Studies and Extended Education pursuing her Masters of Public health in Environmental Health and plans to graduate in July of 2014. She has worked as a research assistant on a variety of different topics. Shanna's interest stems from a desire to understand how society and culture affect health disparities within minority communities. In recent years, she has worked with the refugee and immigrant communities in metro Atlanta. Her experience with these communities has taught her the importance of preserving health and just how much life changes and experience can affect one's health. In 2012 she began working with the HERCULES Emory's Environmental Health Research Center as a community partner. Mrs. Gairy hopes to become a health communication specialist focusing on neurological and developmental disabilities.

Faculty Mentor

**Saul Mofya, DVM**

**Dr. Saul Mofya** is an Assistant Professor of Veterinary Medicine and Public Health at Fort Valley State University, Fort Valley, Georgia. He received his D.V.M from University of Zambia in 2001 and eventually earned his Master's degree in Veterinary Microbiology at St. George's University, Grenada in 2008. After his seven-year career as clinical teaching instructor/Assistant Hospital director at St. George's University, School of Veterinary Medicine, Dr. Mofya decided it was time for a change of scenery (and weather) and moved to Georgia, where he was offered a Job as Associate Veterinarian at Banfield pet Hospital in 2010. In 2013, Dr. Mofya joined Fort Valley State University, as Assistant professor in Department of Veterinary Medicine and public health where he teaches undergraduate students in Veterinary Technology program and graduate students in public health. In addition to teaching, Dr. Mofya is involved in research and community outreach. Dr. Mofya has been involved in several

researches and publications in Veterinary Medicine. His major interests involve one health one medicine and public health and awareness in disadvantaged communities.

## **Georgia State University College of Law**

Student

### **Justin Babino**

**Justin Babino** is a first year law student at Georgia State University's College of Law, where he serves as a graduate assistant to Ronald Mazique, J.D., the Senior Coordinator for Judicial Affairs in the Office of the Dean of Students. He is also a student member in the Atlanta Bar Association Real Estate Section, for students interested commercial and residential real estate transactions, environmental, and international law issues. Further, Justin is an active member of the Urban Fellows Program, an interdisciplinary initiative of the Center for the Comparative Study of Metropolitan Growth in the College of Law. Recently, Justin was appointed by Atlanta Public Schools to the Atlanta BeltLine Affordable Housing Advisory Board. In that role, he makes recommendations to the Atlanta Development Authority and City of Atlanta officials on affordable housing policies and coordinates with other affordable housing efforts throughout the City of Atlanta. Prior to attending law school, he was a Realtor with Better Homes and Gardens Real Estate. He is particularly interested in community development for moderate and low income neighborhoods.

Student

### **Emily McClendon**

**Emily McClendon** is a second year law student at Georgia State University's College of Law. In addition to her coursework, Emily acts as a graduate research assistant to Professor Julian Juergensmeyer, the Ben F. Johnson Chair in Law and Director of Metro Growth Center at Georgia State. She is also a participant in Transactional LawMeet, the premier "moot court" experience for students interested in transactional practice. Further, Emily is an active member of the Urban Fellows Program, an interdisciplinary initiative of the Center for the Comparative Study of Metropolitan Growth in the College of Law. While in law school, Emily has been awarded the merit and academic based Land Use Law Award and is the Daniel J. Curtin 2013 Fellow. Fundamentally, Emily's professional credo is that the future of planning law requires a breakdown of the silos between the professionals involved.

Faculty Mentor

### **John Travis Marshall, JD**

**John Travis Marshall** is an Assistant Professor of Law at the Georgia State University College of Law, where he teaches Environmental Law and Land Use Law. In August 2013, he joined GSU from Yale Law School where he was a Clinical Lecturer in Law and the Ludwig Community Development Fellow. From 2007 to 2011, John was a Rockefeller Foundation Fellow with the New Orleans Redevelopment Authority (NORA). In that role, he advised NORA on post-Hurricane Katrina implementation of the Authority's urban revitalization efforts, including land acquisition, development, and disposition programs. Prior to his work in New Orleans, he was a partner with Holland & Knight LLP, specializing in land use and zoning matters as well as real estate litigation. He is particularly interested in private, non-profit and government interventions to promote long-term urban recovery from crises and disasters.



## **Georgia State University Department of Educational Psychology**

Student  
**Johari Harris**

**Johari Harris** is originally from the Bay Area, where she never pictured herself working in education or living so far from home. However, after working at Harlem Children's Zone during undergraduate school at City College of New York, she became passionate about issues that surround urban education and urban youth. She received a Fulbright English Teaching Apprenticeship: South Africa: 2012, participated in Teach For America in New Orleans 2009-2011, and World Teach in Cape Town, South Africa. Johari is a first year student pursuing a concurrent program of MS/PhD. Through her Break the Cycle project, she hopes to learn more about African-American girls' mindsets and how media impacts them, while at the same time providing coping and relationship skills that could help them make healthy and positive choices in the future. Johari wants to continue working in understanding youth identities, and how that impacts choices locally and abroad and the ways in which one can foster healthy development in adolescents.

Faculty Mentor  
**Miles Anthony Irving, PhD**

**Miles Anthony Irving** is Associate Professor at Georgia State University in the Department of Educational Psychology and Special Education. Dr. Irving received his Bachelor's Degree from the University of California at Berkeley and his Ph.D. in Educational Psychology from the University of California at Santa Barbara. Prior to earning his doctorate, Dr. Irving taught high school and worked in various educational and community programs in Oakland, California. Dr. Irving maintains an active line of research investigating the impact of cultural and social variables on human agency and cognition. Understanding the link between cultural identity, motivation and school success is at the heart of Dr. Irving's research and scholarship.

## **Harvard University, School of Public Health University of Munich**

Student  
**Carolina de la Portilla**

**Carolina de la Portilla** was born in Mexico City and received my high school diploma from the German School. I was awarded a scholarship from the German Academic Exchange Office (DAAD) for academic merit. After finishing high school, she moved to Munich, Germany to pursue an undergraduate degree in Molecular Biotechnology, one of the most challenging and rewarding experiences of her life. Carolina maintained close ties to Mexico where she learned about the challenges of working in the Mexican Health sector. My own experiences taught me about the severe health disparities between different socio-economic groups. This encouraged her to pursue a graduate degree in Public Health instead of continuing studies in the Biotechnology sector. She is currently doing a research Internship at the Harvard School of Public Health in the department of Environmental Health. Upon completion of her graduate studies in September, Carolina plans on developing her Break the Cycle project into her Master's thesis and then work in the global health sector.

Faculty Mentor  
**Enrique Cifuentes, MD PhD**

**Enrique Cifuentes** is the Director of the new Children's Environmental Health Specialty Unit (PEHSU, Lake Chapala communities, Mexico). In 2008 in collaboration with colleagues from Mount Sinai School of Medicine, Dr. Cifuentes launched an ongoing research study in Lake Chapala that involves pregnant women and their babies, in response to local concerns ('fish contamination'). The project focuses on prenatal methylmercury exposure. The study is supported by the Mexican National Council for Science and Technology (CONACYT) and the National Institute of Environmental Health (NIEH). Dr. Cifuentes has initiated research on the effects of the built environment and related policies on children's health in countries such as Argentina, Bolivia, Brazil, Chile, Ecuador and Peru. Between the years 2000 and 2004, Dr. Cifuentes led the WHO Environmental Health Collaborating Center at the National Institute of Public Health in Cuernavaca, Mexico, and the PEHSU in the Children's Hospital (Cuernavaca, Mexico). As part of that work, he and his colleagues implemented innovative community outreach projects (e.g., health fairs, street theatre and parent-children-teachers school-based activities) to educate the population on locally relevant water and sanitation issues, with special emphasis on water-based diseases such as dengue fever, as well as drinking water disinfection using solar energy. Dr. Cifuentes has extensively published in major environmental health journals and contributed to "A Community Guide to Environmental Health" (a volume of the "Where There is No Doctor" series published by The Hesperian Foundation).

**Marquette University College of Health Sciences**  
**Department of Physical Therapy**

Student  
**Jeffrey Condit**

While **Jeffrey Condit** enrolled in Marquette University's accelerated Doctorate of Physical Therapy program, he worked as a student mentor and tutor for the second installment of Marquette's Youth Empowered to Succeed Program. It was in this setting that he gained interest in pediatric exercise physiology and the unique opportunities in translational research work. Jeff is passionate for the sport of triathlon and currently has four years of elite racing and two years of coaching experience. His interests for future research include methods and protocols to create self-determined exercise, self-sustaining exercise behaviors, and/or self-motivational behavior. Jeff is currently working on developing a protocol and IRB submission to explore the connection between the psychology of Hope and predicting exercise behavior. He would also like to explore PhD programs in education and motivational behaviors. The title of my current project is: Triathlon Program as a Mechanism to Promote Self-determined Exercise among an overweight Inner-city Middle School Latino Population. If successful, we will be able to produce a 'manual' for the installation of a comprehensive school based multisport team/league program that leads to increased self-determined exercise. We hope to understand what combination of elements are necessary in a guided fitness program to create sustained self-directed exercise upon termination of the program, specifically in at-risk/overweight/obese inner city Hispanic middle school population. The results of this study will add to the standards of 'best practice' in creating a protocol for weight management programs for inner-city minorities.

Faculty Mentor

**Paula Papanek, Ph.D., M.P.T., ATC/L, FACSM**

**Dr. Paula Papanek** is the founding director of the Program of Exercise Science in the Department of Physical Therapy at Marquette University. She is Associate Professor at Marquette University and is Program Director, Exercise Science Degree Program in the Department of Physical Therapy. Dr. Papanek has been teaching and training exercise physiologists for over 10 years. Her graduate work and post-doctoral studies were in animal models of hypertension. She currently maintains active collaborations with the Cardiovascular Center and the Department of Physiology at MCW with an overall interest in disease prevention and wellness in human populations. Over the last 5 years she has been involved in community initiatives directed at exercise and wellness in both geriatric and youth populations.

**Mount Sinai School of Medicine  
Preventive Medicine**

Student

**Lauren Ritter**

**Lauren Ritter** is a first year MPH Candidate at Columbia University Mailman School of Public Health Department of Epidemiology, with a concentration in Comparative Effectiveness and Outcomes Research. Lauren was awarded the Mailman School's Public Health Leadership Scholarship for all four semesters of her Master's program. She earned her Bachelor of Science in Biology with a minor in Women's and Gender Studies from Boston College in 2013. Lauren has been working with her mentor for the project, Damiris Perez Agu, since the summer of 2013 on a relating project, which studies environmental exposures that affect childhood health outcomes in NY, NJ, US Virgin Islands, and Puerto Rico. Lauren also has experience working in biochemical research, and her past projects include studying a prostate cancer tumor-suppressor gene. She has traveled to Guatemala with the non-profit Timmy Global Health to provide cost-free medical care to rural populations and promote sustainable health care development in these communities. Lauren is interested in health disparities across socioeconomic, age, and gender lines, as well as translating new and existing research to inform decision-making and program implementation that will improve health care and services at the individual and population levels.

Faculty Mentor

**Dr. Damiris Perez Agu**

**Damiris Perez Agu, MPA**, is the Program Coordinator with the Region II Pediatric Environmental Health Specialty Unit (PEHSU). In her current position, she oversees the daily activities involving clinical consultations on environmental toxins. She graduated from Binghamton University in 2003 with a Bachelor of Science and later received a Master in Public Administration with a Health Care Concentration in 2005 from Rutgers University. She also recently graduated from the CDC Environmental Public Health Fellowship. She is the principal investigator on a project examining environmental toxins and outreach education in Spanish speaking populations within Region II. Her main initiative began in 2009, when she led the first Puerto Rico Children's Environmental Health conference in collaboration with the Region II Agency for Toxic Substances and Disease Registry and the Puerto Rico Department of Health. She is now involved in an EPA funded project to develop a children's environmental health program in Puerto Rico, the Children's Environmental Health Center in Puerto Rico which is also known as Centro Ambiental Pediatrico (CAP). Furthermore, she is involved in the

development of the potential Children's Environmental Health Center in the United States Virgin Islands. Her current project inspects qualitatively through a survey to groups of health care professionals in Puerto Rico, the barriers that exist regarding the PEHSU services, environment contaminants affecting the population they serve, the specific needs of their communities and how Geographic Information Systems (GIS) can improve their outreach services to the community. As a bilingual and bicultural public health professional, she has a heightened awareness of how these urban minority communities are vulnerable to environmental toxins.

## **Pontificia Universidad Católica de Chile**

### **Department of Pediatrics**

Student

#### **Maria Ignacia Eugenin**

**María Ignacia Eugenin** was born in Santiago, Chile. She later moved with her family to Montreal, Canada, where she completed her High School education. She returned to Chile in order to study medicine, and is currently a 2<sup>nd</sup> year resident in Pediatrics at PUC. Dr. Eugenin's interest in ASD began as a medical student, where she worked along her current mentors (one of whom is a Developmental Pediatrician). She was offered the opportunity to participate in the development of National Guidelines for Health-Surveillance, particularly on the subset of Psychomotor and Developmental delays and had the experience to observe patient management in both Chile and the U.S.A. (in the Developmental Pediatrics' Clinic at Children's Hospital of Boston). Apart from her medical interests, she is passionate about arts/music and plays de violin. Dr. Eugenin has just returned from her honeymoon.

Faculty Mentor

#### **Patricia M. Valenzuela, MD, MSc**

**Dr. Patricia M. Valenzuela** is from Santiago, Chile. She received her medical degree from the Pontificia Universidad Católica de Chile (PUC) School of Medicine in 1983 and completed her pediatric residency at PUC (1986). In 1986, she moved to Columbus, Ohio, USA where she was a visiting scientist at the Pharmacology Toxicology Department of the Children's Hospital in Columbus and worked with Dr. Philip Walson and Dr. Mary Ellen Mortensen in lead poisoning. During 1989 to 1991 she entered the Graduate School at the Ohio State University and obtained a M.Sc. in Preventive Medicine in 1991. She returned to Santiago, Chile in 1991, and since then has worked at the Ambulatory Unit of the Department of Pediatrics, PUC. Currently, she is an Associate Professor, and spends most of the time teaching pediatrics to medical students. She coordinates the ambulatory pediatric rotation of interns and she is the main professor of a course, "Introduction to the Medical Studies" for first year students at the School of Medicine and Odontology, PUC. Her main interests include medical education, ambulatory pediatric care, well-child care, childhood injury prevention, epidemiologic surveillance of respiratory viruses, and research, especially on PFAPA syndrome and environmental pediatrics. Recently she published the review article: Valenzuela PM, Matus S, Araya GI, Paris E. Environmental pediatrics: an emerging issue. J Pediatr (Rio J) 2011;87(2): 89-99. Also, she is the first author of the book "Ambulatory Pediatrics: A holistic approach (in Spanish)", 2011. She is member of the Board of directors of the Ambulatory Pediatric Branch of the Chilean Society of Pediatrics.

Faculty Mentor  
**Dr. Rosario Moore**

**Dr. Rosario Moore Valdés** received her medical degree from PUC in 1981 and completed her Pediatrics' Residency at Universidad de Chile in 1984. After working for 5 years in Ambulatory Pediatrics, she moved to the U.K. to study Community Pediatrics, where she obtained a M. Sc. at Warwick University in 1990. She later returned to Chile, where she created the first Child Development Outpatient Clinic in PUC. Today, she has a 24-year experience in Developmental Assessment and Child Development and a 12-year experience in Preterm Follow-Up. She is a member of the Board of Directors of the Ambulatory Pediatrics Branch of the Chilean Society of Pediatrics. Currently, she is an Assistant Professor and Chief of the Ambulatory Unit in PUC. She spends most of her time practicing Developmental Pediatrics and is passionate about teaching Developmental Assessment to Medical and Pediatrics students. She has experienced first-hand the difficulties of ASD management in our country and has contributed in many ways to the care of these patients. She was awarded with the Best Latin American Poster at Congreso de Pediatría Español in Madrid, 2003, and recently published the book "Ambulatory Pediatrics: A Holistic Approach" alongside Dr. Patricia Valenzuela. This book has been chosen by the Ministry of Culture to be present in all public libraries of Chile.

**Tulane University Law School**  
**Payson Center for International Development**

Student  
**Caroline Wick**

**Caroline Wick** graduated from Tufts University in 2008 with a B.A. in International Relations and Environmental Studies. She studied abroad in Chile for a semester during undergraduate career, and after graduation worked at an environmental non-profit and lived in Washington, D.C., for four years. Currently, she is pursuing dual degrees from Tulane Law School and the School of Public Health. She was motivated to conduct this research project due to an interest in exploring how attorneys can alleviate health disparities and became interested in medical-legal partnerships (MLPs). Ms. Wick believes that healthcare and legal workers should work in tandem, and is interested in exploring how the partnership functions in practice.

Faculty Mentor  
**Colin Crawford, JD**

**Colin Crawford** is the Robert C. Cudd Professor of Environmental Law at Tulane University Law School and Executive Director, Payson Center for International Development. He received his BA at Columbia University, his MA at the University of Cambridge, and his JD at Harvard University. Professor Crawford joined the Tulane faculty in 2010 after his tenure at the Georgia State University College of Law, where he founded and co-directed the Center for the Comparative Study of Metropolitan Growth and directed a summer program in Rio De Janeiro. He has also been a visiting professor at the University of Denver Sturm College of Law, the National School of Public Health, Oswaldo Cruz Foundation in Rio de Janeiro, and the Technological Institute of Santo Domingo in the Dominican Republic, where he was a Fulbright Scholar. Professor Crawford has significant expertise in international development, an area in which he will teach and work in his role as Executive Director of Tulane's Payson Center. He is currently completing execution of a three-year grant from Higher Education for Development/US Agency for International Development to direct an environmental law



capacity-building project in Guatemala, Nicaragua, the Dominican Republic, El Salvador and Panama.

## **University of Kentucky Department of Pediatrics**

Student

### **Lesley Davidson**

**Lesley Davidson** is currently a second year pediatric resident at the University of Kentucky and is planning on pursuing a Neonatology fellowship following completion of residency in summer of 2015. While at UK, she has been an active participant in the global health program and medical brigades to Ecuador with Shoulder to Shoulder project and is planning a second brigade in August 2014. Lesley is trained to be a Master Facilitator for Helping Babies Breathe curriculum. During her residency, she has found a special interest in childhood outcomes based on environmental factors. Kentucky has a high rate of non-traditional family dynamics. Poor family dynamics may be associated with increased rates of high risk behaviors among teenagers. Statistics in the CDC Youth Risk Behavior Surveillance 2011 suggests that there is an elevated prevalence of several high risk behaviors among teenagers in Rural Kentucky. Among these behaviors are tobacco use, illicit drug use, unprotected sexual intercourse, suicide attempts, poor dietary intake, and inadequate physical activity. These ties into her special interest in neonatology due to the high risk behavior these adolescents are partaking in, putting them at a high risk to deliver premature babies and babies with complications due to substance abuse.

Faculty Mentor

### **Hatim Omar, MD**

**Dr. Hatim Omar** is Professor of Pediatrics and Obstetrics and Gynecology and Chief of Adolescent Medicine and Young Parent Program at the University of Kentucky in Lexington. He is founder and Chairman of the Stop Youth Suicide Campaign. He is also co-founder and executive committee member of the International Society of Holistic Health. He served as a member of Executive Committee of the Section of Adolescent Health of the American Academy of Pediatrics and the Board of Directors of the North American Society for Pediatric and Adolescent Gynecology. Dr. Omar has published extensively about care for adolescents. He is a Fulbright Scholar.

## **University of Michigan School of Natural Resources and Environment**

Student

### **Elise Tolbert**

**Elise Tolbert** currently attends University of Michigan's School of Public Health the Environmental Health Sciences department working towards her master's degree. She is a graduate of Tuskegee University, her hometown university, where she saw an opportunity to make a significant impact on the community. She founded "Next Step Up" which is a community service organization that provides an avenue for Tuskegee University students to assist local high school students with homework, college test prep, and anything that helps the



students achieve their “Next Step.” For the past four years, she has worked to improve the organization so that both mentors and mentees benefit. Currently Ms. Tolbert is exploring future career options. This summer she will be researching water quality in Mongolia and is considering using the data collected to develop a proposal for the Fulbright Fellowship. She is also considering environmental health career opportunities available through the Environmental Protection Agency (EPA), Center for Disease Control (CDC), US AID and other organizations that conduct environmental health research. I hope to gain the necessary experience to start an Environmental Justice Resource Center for small communities that face environmental issues but lack resources to alleviate the burden placed upon them.

Faculty Mentor

**Pamela Maxson, PhD**

**Pamela Maxson** is the Research Director for the Children's Environmental Health Initiative (CEHI) at Duke University and the University of Michigan. She is Project Manager for the Southern Center on Environmentally Driven Disparities in Birth Outcomes (SCEDDBO). Dr. Maxson received her B.S from the University of Hawaii, and her M.S. and Ph.D. in Human Development and Bio-behavioral Health from Pennsylvania State University. Her research interests lie in the interface of psychological, social, host, and environmental contributors to health, including chemical and non-chemical stressors and their influence on health. Specific interests include environmental and social justice issues.

## **Southeast Pediatric Environmental Health Specialty Unit Team at Emory University**

**Emory University  
Department of Pediatrics**

PEHSU

**Robert J. Geller, MD**

**Robert Geller** currently serves as the Chief of the Emory Pediatrics Service at the Grady Health System/CHOA, Hughes Spalding campus, as Medical Director of the Georgia Poison Center, and as Director of the Emory Southeast Pediatric Environmental Health Specialty Unit (PEHSU). Dr. Geller was graduated in 1979 from Boston University School of Medicine. He then pursued his residency and Chief Residency in Pediatrics at the Medical College of Virginia in Richmond, followed by a fellowship in Clinical Pharmacology and Toxicology at the University of Virginia in Charlottesville. He is a fellow of the American Academy of Pediatrics, the American College of Medical Toxicology, and the American Academy of Clinical Toxicology. He has been a member of the Southeast PEHSU since its formation in 2001. He is the author of more than 50 publications, and is one of the editors of the text, Safe and Healthy School Environments. He is the author or co-author of numerous community information sheets and has met with community members at many sites of children's environmental health concern throughout the Southeastern United States.

**Emory University**  
**Nell Hodgson Woodruff School of Nursing**

PEHSU

**Maeve Howett, PhD, APRN, CNP-Ped, IBCLC**

**Maeve Howett** is a pediatric nurse practitioner, lactation consultant, and Clinical Associate Professor in the Nell Hodgson Woodruff School of Nursing at Emory University. Dr. Howett joined the SE PEHSU team in June 2010. See her complete biographical sketch above on page 5.

**Innovative Solutions for Disadvantage and Disability**

PEHSU

**Janice T. Nodvin**

**Janice Nodvin** serves as Project Administrator for the Southeast Pediatric Environmental Health Specialty Unit. She is Program Director for ISDD, Innovative Solutions for Disadvantage and Disability. Ms. Nodvin directs Project GRANDD, a program providing intensive supports to grandparents who are raising grandchildren with disabilities and works closely with Dr. Howett in providing community based clinical opportunities to Emory University graduate nurse practitioner students. She serves as the Project Coordinator for Healthy Tomorrows Partnership for Children's grant called Healthcare Without Walls: A Medical Home for Homeless Children (HWW). She also serves as Center Director for The Adult Down Syndrome Program. As Project Administrator and Educator of the PEHSU, Ms. Nodvin serves as the initial contact to the SE PEHSU as well as the project coordinator to our Break The Cycle Projects. Ms. Nodvin has over nine years' experience as an educator and is the parent of an adult with a dual diagnosis. With this diversity, she shares insight with parents and professionals alike. She has over thirty years' experience in all areas of developmental disabilities and is a parent advocate. Ms. Nodvin has co-edited Safe and Healthy School Environments and all of the monographs for the Break the Cycle projects. She is the contact person for the SE PEHSU.

**Morehouse School of Medicine Department of Pediatrics**  
**Innovative Solutions for Disadvantage and Disability**

PEHSU

**I. Leslie Rubin, MD**

**Leslie Rubin MD** is Research Associate Professor in the Department of Pediatrics at Morehouse School of Medicine, Co-Director of the Southeast Pediatric Environmental Health Specialty Unit at Emory, President and Founder of Innovative Solutions for Disadvantage and Disability, and Principal Investigator of the Healthy Tomorrows Partnership Project – Healthcare Without Walls, a project to create a medical home for homeless children. He founded the Institute for the Study of Disadvantage and Disability (now renamed Innovative Solutions for Disadvantage and Disability) in May 2004 and launched the first Break the Cycle Program in 2004-2005! He is dedicated to improving awareness and understanding of the relationship between social and economic disadvantage and disabilities in children. Since 2000, he has been a Co-Director with the Southeast Pediatric Environmental Health Specialty Unit at Emory University, where he focuses on raising awareness of environmental health

disparities and promoting health equity for children - particularly those who are most vulnerable from exposure to adverse environmental factors. In 2012, the American Academy of Pediatrics (AAP) presented Dr. Rubin with the Calvin C. J. Sia Community Pediatrics Medical Home Leadership and Advocacy Award. This award honors pediatricians who have advanced the medical home through practice and advocacy, especially for children with special health care needs. On behalf of ISDD, he received the 21st Annual Community Service Award from Emory University Rollins School of Public Health and The Goizueta Business School of Emory University.

## **George Washington University Children's National Medical Center in Washington D.C**

Break the Cycle Consultant

**Benjamin Gitterman, MD**

**Benjamin Gitterman, MD** is Associate Clinical Professor of Pediatrics and Public Health at George Washington University and Children's National Medical Center in Washington D.C. His major interests have included Children's Environmental Health, Child Advocacy, and Community Health-focused training and program development. Prior to coming to Washington D.C., he was the Director of Ambulatory Pediatric Services for Denver Health and Hospitals, and was a faculty member of the University of Colorado School of Medicine. In Washington, he has been the Chair of General and Community Pediatrics at Children's National Medical Center. Dr. Gitterman was a co-founding Director of the Mid-Atlantic Center for Children's Health and the Environment (the PEHSU serving the mid-Atlantic region). He is a member of the Children's Environmental Health and Protection Advisory Council for the State of Maryland. He has been a member of the Scientific Advisory Board for Children's Environmental Health of the U.S. Environmental Protection Agency, and has been a liaison member to the Advisory Committee for Children's Lead Poisoning and Prevention for the CDC. He has been a member of the American Academy of Pediatrics (AAP) Committee on Children's Environmental Health. He is currently the Chairperson of the AAP Council on Community Pediatrics and is a member of the AAP Task Force on Childhood Poverty. He continues to be a practicing pediatrician.

## **Health Services, Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem**

Break the Cycle Consultant/Editor-in-Chief

**Joav Merrick, MD, MMedSci, DMSc**

**Joav Merrick, MD, MMedSci, DMSc**, is Professor of Pediatrics, Child Health and Human Development, Kentucky Children's Hospital, University of Kentucky, Lexington, United States and affiliated with the Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel. He is the Medical Director of the Health Services Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem, and the founder and director of the National Institute of Child Health and Human Development in Israel. He has authored numerous publications in the fields of pediatrics, child health and human development, rehabilitation, intellectual disability, disability, health, welfare, abuse, advocacy, quality of life and prevention. Dr Merrick received the Peter Sabroe Child Award for outstanding work on behalf of Danish Children in 1985 and the International LEGO-Prize ("The Children's Nobel Prize") for an extraordinary contribution towards improvement in child welfare and well-being in 1987.

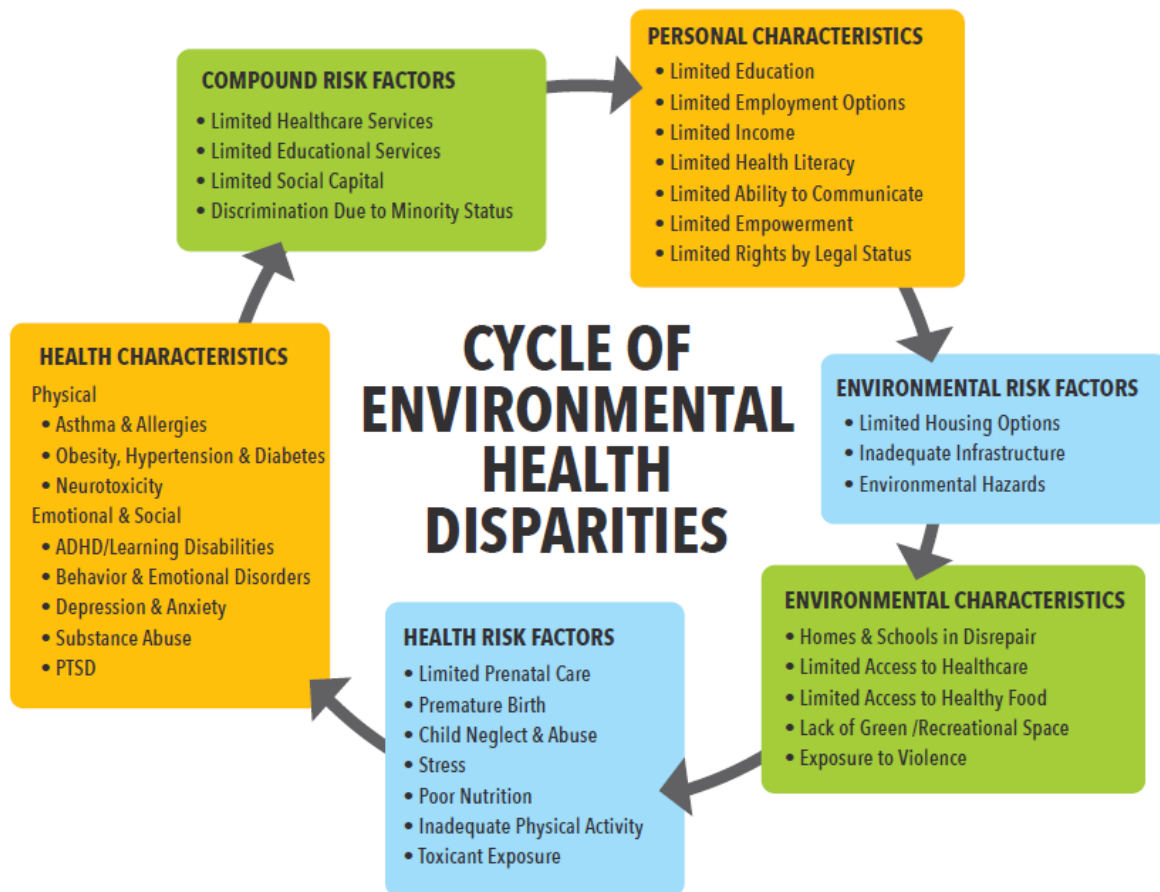
# Overview of Break the Cycle

The threats to children's health and well-being are often multiple and complex. Children are uniquely vulnerable to environmental toxicants for several reasons: they are growing rapidly; they have a more active metabolic rate than adults; they breathe larger amounts of air for their size; they have a greater surface area-to-body mass; they are closer to the ground, and they may pick up and play with objects and then put these objects in their mouths and may even swallow them. They are at risk, therefore, to absorb more toxins in the environment through their skin, from the air they breathe, from the food they eat, and the water they drink. Also, they do not yet have the fully sophisticated metabolic systems to detoxify some chemicals, or they may metabolize chemicals into toxic metabolites at a different rate than adults. Furthermore, because they are growing rapidly and their organs and organ systems are developing, they may incorporate toxins into their developing organ systems which can have immediate adverse impact. They are more likely to suffer long-term consequences on organ structure and function that may only be evident much later in life.

Today, some of the major health concerns for children, such as asthma, obesity and its complications of hypertension and diabetes, and neurodevelopmental disorders (most commonly learning disabilities, attention deficit hyperactivity disorder and autism), are often caused or exacerbated by environmental factors. Not only does the presence of a disorder or disability create significant complications that affect the child's health as well as learning and social opportunities, but it may adversely the child's potential for self-actualization and fulfillment. This is a challenge, not only at an individual level, but also at the level of the family and community and, ultimately, it also has an impact on society in terms of prevention and management strategies, and utilization of resources as well as how society cultivates its future citizens, workforce, and leaders.

Not only are children vulnerable to the chemical, physical and microbiological factors in their environment, they are uniquely sensitive to the social and economic environment in which they live, learn, and play. It has become increasingly evident that children who grow up in an environment of social and economic disadvantage are at greater risk for exposure to toxins like lead and other chemicals. They are impacted by the age and quality of the houses in which they live as well as the schools where they learn, the infrastructure of the communities in which they live, the risks of violence that they may experience, and the associated emotional stress that they face on a day to day basis. The vulnerability of these children is therefore greater, by virtue of their risks for exposure, magnified further by limitations in support for optimal education, access to quality health care, infrastructure, and limited social capital. The impact is even greater because the risks are cumulative.

The diagram below illustrates the elements that operate when children are born into circumstances of social and economic disadvantage and the resultant impact that manifests in disparities in health and education. The diagram also illustrates how the pattern becomes intergenerational and traps people in this cycle.



Our real challenge is how to Break the Cycle and liberate the children by providing a more nurturing and supportive environment, greater access to quality education and health services and to opportunities for success in life. We know this can be achieved at many different levels.

At a fundamental level, the idea of changing the life of one child for the better can have a positive impact not only for that child, but also for the family, for other people who know that child and for what that child can do in the present and in the future to change the world for the better. So, it might be said that “if you save the life of one child, you may be saving the whole world!” Ideally, it would be desirable to improve the lives of as many children as possible today, so that we have a better world in the future. Realistically, however, doing so would require substantial changes, if not complete redesign to many of our social institutions, including the health care delivery system, educational system, social safety net systems and economic and financial systems. Because those changes are beyond our scope and require large shifts in politics and economics over long periods of time, we have developed an approach to *Break the Cycle* and change the world a little at a time towards achieving health and educational equity for our most vulnerable children.

# **Project Presentations ABSTRACTS**



## Theme: Nutrition

### Early Childhood Obesity, Socioeconomic Status, and Executive Functioning in Atlanta's Children

**Amanda Brzozowski**, *student*, Dr. Carolyn Drews-Botsch, *mentor*,  
Emory University Rollins School of Public Health, Department of Epidemiology

With 26.7% of preschool-aged children classified as overweight or obese, early childhood obesity poses a significant public health problem. Studies have suggested an association between childhood obesity and problems with components of executive functioning, including inhibitory control, reward sensitivity, attention, and working memory. Further, the association between socioeconomic status (SES) and childhood executive functioning is well-established. Finally, despite recent progress, the obesity burden is disproportionately borne by lower-income children and children of color.

#### Hypothesis

Overweight/obese children will demonstrate poorer executive functioning compared with normal weight children; any detrimental effect of obesity will be magnified among low-SES children.

#### Methods

The Follow-Up Development and Growth Experiences Study collected data on preschool-aged children born at two Atlanta hospitals: a private, suburban hospital serving primarily a white, middle-class population, and a downtown, public hospital with a largely black, lower-SES population. We will assess the association between three metrics of childhood obesity (body mass index, triceps- and subscapular-skinfold-thickness) and two measures of executive functioning (NEPSY Statue and Visual Attention scores). We will further examine the impact of SES on this association, using hospital of birth as a proxy for SES.

#### Results

After adjustment, a moderate, negative association was observed among girls between the NEPSY statue score and both skinfold thickness measurements (TST: -1.02 (95% confidence interval -2.36, 0.32); SST: -1.67 (-2.87, -0.48)) and among children born at the private hospital for all three obesity metrics (BMI: -0.94 (-1.96, 0.07); TST: -1.17 (-2.68, 0.34); SST: -1.99 (-3.17, -0.81)). Among girls born at the private hospital, the magnitude of the negative association was even greater for all three metrics. No consistent association was observed between statue score and any obesity metric among boys and children born at the public hospital, nor between any metric and visual attention score regardless of gender or hospital of birth.

#### Discussion

The consistent and specific nature of the negative association between early childhood obesity and the NEPSY statue score among girls of higher SES did not support our a priori hypothesis. That this negative association was found in the group at lowest risk for EF problems suggests that the relationship between EF and childhood obesity is complex and warrants further exploration.

## Multisport/Triathlon Training and Self-determined Exercise Among an Overweight Latino Middle School Population

Jeffrey Condit, *student*, Dr. Paula Papanek, *mentor*,  
Marquette University, Department of Physical Therapy

### **HYPOTHESIS:**

Participation in a progressive 12 week multisport team training program that targets the use of a novel activity, personalized goal setting and feedback, self-management skills, high probability of success (competence), personal barrier identification, team sessions, music, targeting introjected, identified, and intrinsic motivation, autonomy, relatedness, ideal trainer selection, varied activities, role of parents, clear explanation of expectations and benefits, peer training, and reminders of commitment to self will result in:

- 1) increased correlations between PAQ-C and accelerometer measurements,
- 2) increase scores on BREQ-2,
- 3) and increases in total MVPA as measured by the PAQ-C and accelerometers.

### **METHOD:**

The target cohort will be compared to peers both inside and outside of the boot camp program. The target cohort will receive 12 weeks of multisport based education and fitness programming in addition to the twice weekly boot camp style fitness workouts and nutrition curriculum received during normal programming and regular PE classes during school. The multisport programming will consist of two sessions per week, each divided into a short skills/goal setting lecture (33%) and a strength/swim or bike/run team based training session (67%). The non-boot camp students only receive standard PE classes 2-3 times per week with normal school curriculum.

### **OUTCOME:**

If successful, we will be able to produce a 'manual' for the installation of a comprehensive school based multisport team/league program that leads to increased self-determined exercise. We hope to understand what combination of elements is necessary in a guided fitness program to create sustained self-directed exercise upon termination of the program, specifically in at-risk/over-weight/obese inner city Hispanic middle school population. The results of this study will add to the standards of 'best practice' in creating a protocol for weight management programs for inner-city minorities.

## Theme: Adolescence

### Media Literacy and Perceptions of Identity Among Pre-adolescent African-American Girls

**Johari Harris**, *student*, Dr. Miles Irving, *mentor*,  
Georgia State University, Department of Educational Psychology

This study seeks to examine pre-adolescents African American girls' views and ideas about media content and how that informs their identity and choices they may make. Using a preventative curriculum, I explore the participants' feelings about medias stereotypes ad highly sexualized images of black women. I plan to questions how this affects their relationships. African-Americans girls are at a heightened risk for sexual exploitation so the preventative curriculum is designed to increase critical thinking skills and promote healthy relationships. I will be conducting 6 focus groups sessions with the participants and hold individual interviews sessions with each girl. The findings can help guide preventative curriculum development directed at this population. The information will also give insight into the issues these young girls grapple and deepen our understanding of their development.

### Rural Kentucky Adolescents and Effects of Parenting

**Lesley Davidson**, *student*, Dr. Hatim Omar, *mentor*,  
University of Kentucky, Department of Pediatrics

Many children and adolescents in rural Kentucky are raised by someone other than biological parents. In this project, we are assessing the impact if any of this fact on teen risk behaviors and overall outcome. We are collecting data about parenting status: two biological parents, one biological parent, no biological parents. We are then looking at teen behaviors including school attendance, drug use, sexual activity, depression. Will compare the three groups based on these data sets.

## Breaking the Cycle through “Next Step Up”: An Educational and Mentoring Intervention

**Elise Tolbert**, *student*, Dr. Pamela Maxson, *mentor*,  
University of Michigan, School of Public Health, Department of Environmental Health

. Tuskegee is a predominantly African-American community composed of 95.8% Blacks (United States Census, 2012). The median household income is \$25,804 and 31.5% of the population lives below the poverty level (United States Census, 2012.) The environment can influence youth's educational aspirations, especially disadvantaged communities. Here, we examine these factors in Tuskegee, Alabama. Tuskegee, most known for its rich history, is home to both Booker T. Washington and George Washington Carver. Tuskegee, which lies in the heart of the black belt region, is also stricken by a cycle that perpetuates low educational attainment, low motivation, and poor overall health. To begin to break this cycle, Ms. Tolbert founded *Next Step Up* in 2010, which provides mentoring and tutoring services to students at a local high school. Tuskegee University students mentor and tutor students at Booker T. Washington High School assisting with homework, ACT/SAT practice, college applications, and job applications to help students envision and achieve their “Next Step.”

We hypothesize that the historical and current educational, social, and physical environment in Tuskegee perpetuates a cycle of disadvantage. To begin to break this cycle, we seek to

- 1) identify aspects of the environment that perpetuate the cycle of low educational attainment and poverty;
- 2) evaluate the effectiveness of Next Step Up; and
- 3) address whether changing the educational environment also has a trickle-down effect on the students' subsequent decisions.

We propose to survey students, parents and mentors to gain a better understanding of the community factors that contribute to the educational environment of Tuskegee, AL. Additionally, we will ask questions to assess the effectiveness of Next Step Up. Factors such as peer influence (South, 2003), parental involvement (Stewart, 2007; Jeynes, 2003), and neighborhood context (Stewart, 2007) have been shown to influence students' educational aspirations, especially in minority communities

Studies have shown that these characteristics are all risk factors for low educational attainment. However, we believe that these factors can be mediated through mentoring, tutoring and programing. Through examining the community environment and the effectiveness of Next Step Up we hope to break the cycle of disadvantage by improving the educational and occupational outlook of students. Providing hands-on assistance can help students envision and realize academic achievement.

## Theme: International

### Violence Against Children and Youth in Mexico: A Public Health Approach

**Carolina de la Portilla**, *student*; Dr. Enrique Cifuentes, *mentor*  
University of Munich and Harvard School of Public Health

Mexican children and youths are living in a social environment characterized by the daily threat of becoming a victim or witness to a violent act. Both events can have a serious impact on a their physical and mental health. We require a better understanding on the predictors of violence against children and youths in Mexico. Evidence based policy may help to break the cycle.

Previous studies have shown an association between income inequality and lethal violence. These issues have received very limited attention from public health practitioners and advocates in Mexico. Our ecologic study aims to identify risk factors at an individual and environmental level and organize them within a socio-ecological framework to better understand the epidemic of violence in Mexico.

We collected data from the public database of the National Institute of Statistics (INEGI) and the National Council of Population Demographics (CONAPO) to calculate the incidence of deaths due to intentional homicide in Mexico for children and youths aged 0 to 24 years old. We will look at gender and age as an individual risk factor. We will further present temporal and regional trends between the years 2002 and 2012, and for the 32 federal states. We will employ different hierarchical regression models to analyze the interaction between these two risk factors.

Data from my research can help to build some basis for the development of effective violence prevention strategies. Interventions should be aimed at preventing early childhood exposure to violence, and at mitigating the negative effects it can have on the physical and mental health of younger generations.

# Predictors of Completed Childhood Vaccination in Bolivia

Brianna Osetinsky, *student*; Dr. Laura Gaydos, *mentor*  
Emory University Rollins School of Public Health  
Department of Health Policy and Management

This study examines the role of physical access and type of health center as predictors of completed childhood vaccination across ethnicities and regions in Bolivia.

## Hypothesis:

- (1) Families for which distance to health center causes a problem in access are less likely to have completed vaccination.
- (2) Children vaccinated in private health centers are more likely to have completed vaccination than public hospitals and health centers.

**Background:** Despite significant improvements in Bolivia's health sector, the country still faces high mortality in children aged less than 5 years for the region. One of the reasons for this may be unequal distribution of crucial preventative medical services. Bolivia's rich variation in culture and geography may result in unequal healthcare utilization.

**Methodology:** This study will use binary logistic regression for the dependent variable completed/uncompleted vaccination. The key independent variables are distance to health facility and type of health center, which will interact with ethnicity and geographic region. Home environment measures like SES, maternal education and age, and family size are covariates. Village level environmental factors are adjusted through random effects.

**Results:** Children whose parents reported distance as a problem in obtaining health care were less likely to have completed all vaccinations controlling for covariates. When difficulty receiving healthcare due to distance is interacted with ethnicity however, this significance is eliminated. Living in a rural environment has a protective effect on completed vaccinations, though ethnicity was not statistically significant. There were significant differences in outcomes of interest across geographic regions

**Discussion:** Distance as a problem in obtaining healthcare highlights a significant barrier to completing healthcare vaccination. The differences across regions demonstrate unequal access and utilization of health services nationally.



# Cultural Beliefs and Traditions that Prevent East African Refugees with Children with Developmental Delays from Accessing Treatment

**Shanna Miller-Gairy**, *student*, Dr. Saul Mofya, *mentor*  
Fort Valley State University, Department of Graduate Studies

The purpose of this project is to examine the environmental health disparities that are caused by cultural traditions and beliefs among refugee and immigrants of East African decent diagnosed with developmental disabilities in Clarkston, Georgia. It will also explore how these disparities prevent them from accessing early intervention and treatment resources.

**Hypothesis:** There are a number of different issues that prevent people from properly settling into life in their new homes. Many of who are not only suffering from undiagnosed and treated PTSD but also other mental health issues. These issues are not assigned to just children but adults and elder refugees as well.

**Method:** Ethnographic study (19-25 participants),  
Focus groups  
Participatory observation  
Interviews: families (parents), service providers, others associated with community

**Outcomes:** Identify barriers that prevent refugees from accessing care.  
Understand needs  
Understand barriers  
Develop solution that will allow both the community and service providers to better communicate.  
Enable and empower the community to access resources outside of their immediate community.

# Early Detection of Autism Spectrum Disorders: A Good Beginning Towards Making a Difference

Maria Ignacia Eugenin, *student*, Dr. Patricia Valenzuela and Dr. Rosario Moore, *mentors*  
Pontificia Universidad Católica de Chile

**BACKGROUND** - ASD constitute an important healthcare concern with increasing incidence. Early identification improves outcomes, therefore screening and prompt treatment are crucial. In Chile, index-of-suspicion is low, particularly in under-privileged areas. There is neither systematical screening nor appropriate referral, which usually confers a late diagnosis.

**HYPOTHESIS** – By applying the M-CHAT (Modified Checklist for Autism in Toddlers), we expect to estimate the prevalence of risk for ASD in our community. Furthermore, we anticipate that early screening will raise awareness and promote timely diagnosis, helping to develop an appropriate systematic follow-up and early referral practice.

**METHODS** – The M-CHAT will be applied to 200 toddlers (18 to 24-month-old) who attend to two primary healthcare centers in Santiago, Chile. One of these centers concentrates a low/medium income community; the second one a very low/poor income community with various social and environmental risk factors. Those who screen positive will be assessed by the Follow-Up Interview. If they continue to be at risk for ASD, they will receive a complimentary evaluation by a Developmental Pediatrics Specialist and be guided towards an appropriate therapeutic strategy.

**RESULTS** – Considering a 1.9% prevalence of risk for ASD<sup>1</sup>, we expect to find in our sample 18 patients who screen positive and 4 patients who remain at-risk for ASD after the Follow-Up Interview has been applied. So far we have been able to apply the M-CHAT to 79 patients. Of these, 15 have screened positive (19%) and only 7 have completed the Follow-Up Interview, all having passed.

**DISCUSSION** – Early screening for ASD is invaluable for prompt diagnosis and treatment. Since there is limited knowledge and research of ASD in Chile, applying the M-CHAT is a good beginning towards making a difference, particularly in under-privileged areas. Improving index-of-suspicion and referral, as well as raising awareness amongst our community, will lead to better opportunities that promote the development of our children to their fullest potential

# Improving Environmental Exposure and Health Outreach to Children in Puerto Rico: A Geographic Information Systems Approach

Lauren Ritter, *student*; Dr. Damiris Perez Agu, *mentor*  
Mount Sinai Icahn School of Medicine, Department of Preventative Medicine

## Background

The Region II Pediatric Environmental Health Specialty Unit (PEHSU) is home to more than 8 million Spanish-speaking individuals. A disproportionate amount of the Region II Spanish-speaking population lives in poor housing and in communities with existing patterns of environmental injustice. PEHSUs across the country collaborate with health care professionals, parents, schools, and community groups to provide environmental health community education and outreach, health professional training, and consultation. Through preliminary research, a gap has been discovered in PEHSU outreach services conducted in Puerto Rico, and thus it is important to focus on improvement of services in this area.

## Hypothesis

In this study, we argue that a Geographic Information Systems (GIS) approach to improving outreach will identify areas of focus that will serve as an intervention to increase educational initiatives to health care professionals and residents within these communities. A better understanding of the geographic distribution of potential exposures to children as well as the prevalence of related health outcomes will enhance PEHSU outreach efforts to identify and prevent a number of environmental exposures that children are faced with on a daily basis where they live, learn, and play.

## Methods

Individuals working in the field of pediatric environmental health in various regions of Puerto Rico were surveyed to determine the environmental exposures of greatest concern in their respective communities, as well as opinions regarding the importance of the role of GIS in health outreach initiatives. Using survey responses, Toxic Release Inventory (TRI), demographic, and health indicator data as well as Arc GIS, we geographically identified environmental exposures of concern in Puerto Rico, asthma prevalence, and current PEHSU outreach.

## Intended Results

We expect a 30% survey response rate with equal representation from academia, clinical practice, governmental organizations, and community-based organizations. Pending completion of survey analysis, environmental exposures including pesticides (36%), air pollution (36%), lead (9%), and land waste (9%) have been reported as concerning. GIS maps of air emission density, land discharge density, and asthma prevalence are expected to target hot spots to inform modifications to PEHSU outreach efforts with the ultimate goal of improving these communities' ability to identify and reduce a number of daily environmental exposures.

## Discussion

In studying childhood health problems and diseases, we must determine the at-risk population and the environmental hazards that are exacerbating these health problems. Both of these can be accomplished using GIS as a visual method to identify at-risk regions and to potentially determine a potential correlation between environmental toxicant distribution and disease prevalence. We are particularly interested in Puerto Rico since this island has been especially marginalized in terms of outreach and service. This study will assist the PEHSU and lay community with the identification of potential exposure sources and toxic hot spots, such that useful interventions and outreach methods can be determined to improve the overall health of these communities.

## Theme: Legal

# Evaluating In Home Intervention Strategies to Mitigate Disparate Respiratory Illness Rates in Disadvantaged Urban Pediatric Populations

**Emily McClendon** and **Justin Babino**, *students*, John Marshall, *mentor*  
Georgia State University College of Law

The purpose of this study is to examine how in home interventions, and the specific mechanisms thereof, reduce asthma rates in disadvantaged pediatric populations. The information gained about particular in home intervention success metrics will be used to support a legal and political framework for the provision of further dedicated funding. There are two primary components of the research that will be conducted (1) Green and Healthy Homes Initiative (GHHI) in home intervention before and after participant records complete with addresses and (2) interviews with GHHI participants who saw a decrease in emergency asthma events to gain perspective on their perception of the relative benefits of in home interventions. Results will be presented at the conference.

Our study of pediatric asthma in Atlanta is helping us see more clearly the layered resources that we need to bring to the table to help children live healthier, more productive lives and to conserve valuable resources for pediatric health care for low income children. If our project could help 'advance the ball' on identifying funding for or smarter thinking about the implementation of a local roll-out of asthma interventions for Atlanta's children we could, among other things, help a local gov't improve educational outcomes for low-income and African American children and help free-up health care dollars and hospital beds and emergency medical response dollars for children with other acute and chronic conditions. Our project breaks the cycle of environmental health disparities by attempting to promote synergy and gain additional funding from various programs that are committed to reducing the burden caused by asthma, especially among children — in particular, minority children and children with family incomes below the poverty level. Also, our project breaks the cycle by attempting to show that HUD's GHHI has a positive impact because it addresses environmental factors that trigger asthma attacks. Our project's most important influence is taking a policy decision and providing analysis of implementation. Taking a hard look at the pros and cons of in home intervention will allow us to tie future medical legal partnerships and funding to sustainable actions rather than acting blindly but in good faith - thus acting more effectively to break the cycle.

# Breaking the Cycle with Medical-Legal Partnerships: A Comparison of Referral and Intake Processes with a Focus on Addressing Substandard Housing Condition

**Caroline Wick**, *student*, Dr. Colin Crawford, *mentor*

Tulane University Law School and the School of Public Health and Tropical Medicine and  
Environmental Health Sciences

The purpose of this research is to address Medical-Legal Partnerships' (MLPs) best practices for addressing environmental health issues that affect pediatric health. As of 2012, MLPs exist in 38 states across the U.S. and are established in 100 hospitals and 166 community health centers. The basis for the first MLP was a simple notion: healthcare institutions and cutting-edge research cannot address critical health problems alone.

MLPs aim to improve the health of vulnerable and low-income populations by incorporating legal aid into a medical setting. To accomplish their mission, a legal organization (e.g. a legal aid nonprofit or a law school) collaborates with a medical institution (e.g. a hospital or a community health center). MLPs work with clients to address legal issues that can affect health like access to medical insurance, substandard housing conditions, and eligibility for state and federal government benefit programs.

Few studies have been published concerning MLPs' referral and intake processes. This paper will evaluate four MLPs' practices and policies; specifically it will examine how MLPs refer clients to the legal side of the partnership, conduct client intakes, and decide which cases to assume. The author will conduct empirical interviews to ask MLPs about their practices. The questions will address general practices and then will focus specifically on identification and treatment of substandard housing conditions. It is hypothesized that intake and referral practices for substandard housing conditions is a reasonable proxy for MLP legal cases most relevant to breaking the cycle of environmental and pediatric health disparities.

## Student Comments on the Break the Cycle Experience

This has been a wonderful experience for us since we have had the opportunity to work side by side with outstanding professionals at Emory University. We have already learned so much from our last year's experience with BTC, such as the holistic approach you have in your practice when assessing children. During this new project we have learned even more from receiving enlightening opinions of the different participants of BTC to improve our research. We will also have been able to extract great ideas to incorporate in our work in Chile. We know for sure that we will be helping to Break The Cycle in our community. Keeping this in mind it is important, since the final aim of all the work we do goes in favor of helping our patients, specially the underprivileged children and their families.

*Dra. M. Ignacia Eugenin*

*Residente Pediatría Universidad Católica de Chile*

BTC allowed me to dig deeper into a topic I'd been working on – and what I found was really quite interesting! My original hypothesis turned out to be incorrect and thinking about the possible reasons for that – as well as the implications of those underlying reasons – has been both challenging and worthwhile. I've also really enjoyed listening to the other projects. The differences between the projects have made clear how far-reaching environmental health disparities can be and the kind of impacts they can have on the population. I'm really looking forward to meeting everyone in person and hearing the presentations.

*Amanda Brzozowski*

*Emory University Rollins School of Public Health*

I feel honored to have our project received so enthusiastically and am very excited to share my passion and work with an international group. Our pilot study will provide a model for a physical activity intervention for overweight/obese urban minority youth that can be replicated at schools and facilities across the country. Incorporating key components of safe exercise prescriptions for obese adolescents from physical therapy into a triathlon program provides a novel and safe medium that allows for individual and team training and goal setting while it redefines success, not as winning with points, but as advancing towards one's full potential to successfully compete and enjoys physical activity events.

*Jeff Condit, CSCS*

*Marquette University: Exercise Physiology '13*

BTC fellowship was crucial in allowing me to have the support to explore research topic that excited me most, which turned the luxury of intellectual freedom to a reality of daily life.

*Shanna Gairy-Miller*

*Fort Valley State University*

Participating in Break the Cycle has provided me the opportunity to explore real solutions to improving environmental conditions in my community. For years, I have heard people complain about problems with Tuskegee's educational system, but with no solution. By participating in BTC I have been able to take a deeper look at the characteristics that perpetuate the cycle in Tuskegee. I have also been able to examine how the mentoring/tutoring program that I started years ago, Next Step Up, has worked towards breaking the cycle to make a substantial positive impact in my hometown. This has been an incredible experience, and with this foundation I hope to continue working towards improving the educational and community environment in Tuskegee.

*Elise Tolbert*

*University of Michigan*

Participating in this program has allowed me to explore an area that I have always had great interest in but had none done academic research in. I have been able to better understand the influences that impact African American girls and how it relates to larger disparities in areas such as mental health and physical wellbeing. Furthermore, the collective nature of the program has illustrated how interconnected many of our interests are and the importance of finding valuable and feasible solutions. Overall, I am so happy to have participated in the program.

*Johari Harris*

*Georgia State University*



## Summary of Academic Partnerships (2005 – 2014)

### University Partners and the Departments:

- Clark Atlanta University, School of Social Work
- Duke University – Children’s Environmental Health Initiative
- Duke University – Trinity College
- Emory University Barton Law Center
- Emory University Nell Hodgson Woodruff School of Nursing
- Emory University School of Public Health
- Fort Valley State University, Department of Graduate Studies
- George Washington University School of Medicine & Health Sciences
- Georgia Institute of Technology, Department of Architecture
- Georgia State University Department of Educational Psychology and Special Education
- Georgia State University, Department of Public Health, Healthcare Management and Policy
- Georgia State University School of Law
- Harvard School of Public Health
- Hofstra University, Department of Health Professions
- Marquette University, Department of Physical Therapy
- Mercer University School of Medicine, Department of Community Medicine
- Morehouse School of Medicine, Department of Community Health and Preventive Medicine
- Morehouse School of Medicine, Masters in Public Health
- Mt. Sinai School of Medicine, Preventive Medicine
- Pontificia Universidad Católica de Chile, Department of Pediatrics
- Spelman College, Department of Biology
- Tulane University Law School
- Tulane University, School of Public Health and Tropical Medicine
- University of Florida in Jacksonville, College of Medicine and College of Public Health
- University of Kentucky, Department of Pediatrics
- University of Michigan – Ann Arbor, School of Natural Resources and Environment
- University of Munich
- University of North Carolina-Chapel Hill, Gillings School of Global Public Health
- Wayne State University, School of Medicine

**Totals to date: University Departments: 29    Students Mentored: 86**

## SUMMARY

We have developed an approach to Break the Cycle that is modest, manageable, incremental and achievable. We focus on university students who are in a learning phase and are excited about making a difference in the world. We realize that we, in our generation, may not be able to achieve our ultimate goal but, if we can establish the system and set the process in motion, our goals will be achievable in the future. In other words, we are cultivating our future leaders to improve the lives and the potential of our most vulnerable children and, in so doing, change the world for the better.

The model is simple; we invite students from a variety of different disciplines in universities around the country and the world to develop projects to Break the Cycle that they can achieve in one semester. They are required to have a mentor from their academic discipline who will coach them and guide them through the research process. Some projects are descriptive and some interventional, but all of them contribute significantly to our knowledge of what the challenges are and how we may act to make a positive difference.

The Break the Cycle Program thus is a collaborative, interdisciplinary set of creative projects developed by university students from different schools in different states that specifically address the challenge to *Break the Cycle of Environmental Health Disparities*. Each year, students from a variety of universities and academic disciplines are invited to submit proposals that will Break the Cycle. The application process with selection criteria judging the likelihood that the students selected will ultimately complete a project that conceptually will break the cycle in a meaningful way. This competitive process enables the selection of those projects with the most promise to become the cadre of students for that particular year. The students will then work collaborative and collectively with their academic mentors and Break the Cycle faculty, towards completion of the projects.

The process is time-limited and time sensitive. From the moment that the students have been selected, we hold conference calls with all students and mentors to have each describe the projects, the research methodology, and describe how their projects will contribute to break the cycle. These conference calls occur monthly in order to keep track of the students and keep them on track. The students and their mentors also have the opportunity during these conference calls to become familiar with the work of the other students from the other universities and disciplines and expand their understanding and appreciation for the complexity of the challenges and solutions. Completion of the project coincides with a conference in which the students are required to present their work to their Break the Cycle peers and to a broader academic and community audience. For many, this may be their first formal public presentation. Once the project and presentation are completed, they are required to write up their work, which then is published collectively in a supplement to an international journal. Thus, the project, the presentation, and the paper become valuable experiences and achievements for the students that will guide, shape, and support their future success.

Since its inception in 2004-2005, we have had over 70 students from 24 different departments of 14 different universities from seven states in the continental USA. This year, we continue our work with international students, from Santiago Chile and from Munich Germany. In 2012, we conducted a survey of all the students who had been part of the program from 2004-2011 and learned that an overwhelming number –indeed, almost all – felt the project was worthwhile. Most reported that it increased their knowledge and understanding of children's environmental health disparities and that they valued the exercise and the outcomes of their

involvement in the program. Many graduates reported that they are currently involved in a similar field of practice in academic settings, in the community or in the private sector. The details of this report will be published in the near future.

The important message is that the Break the Cycle Program can make a difference in generating projects that raise awareness of children's environmental health disparities. It inspires and cultivates a group of students for whom this program is a step towards a career and towards leadership in reducing health disparities and promoting health equity for all children, regardless of their social and economic circumstances.

This year, we have another set of stimulating projects from 12 university departments, from 10 universities in 7 states and one international university. The projects are grouped into 4 categories: Nutrition, Adolescents, International and Law.

On the day after our conference we deal more in depth with the issues of environmental justice and access to healthcare through Health Law Partnerships. Two of our nurse practitioner students have prepared an actual *Windshield Survey* video describing what may be encountered in going on a home visit in an urban low income, minority and undeserved community. Participant will have the opportunity to develop solutions through work groups.

## CONCLUSION

Children living in circumstances of social and economic disadvantage are at higher risk for experiencing health problems caused or exacerbated by environmental factors. They are more likely to be trapped in the cycle of environmental health disparities as a result of family stress, limited quality education, limited social capital, and lack of access to comprehensive healthcare and appropriate educational services. Furthermore, the homes and neighborhoods in which they live learn and play are inadequate at best, and may even result in a serious impact on the child's health, growth and development.

Given the current economic realities, it seems unlikely that many children and families will escape this cycle unless resources and public policies make children's health and the environment a priority.

The Break the Cycle project is a replicable means by which to promote student interest in addressing issues related to environmental health disparities. It serves as a catalyst through which academic mentors committed to issues of children's health and environmental justice can inform, guide, and inspire future professionals to become actively involved in finding creative solutions to environmental health dilemmas that the children of tomorrow will face.

This suggests that the incorporation of children's environmental health environmental health disparities into college curricula is likely to play an important role in shaping future leaders who will be invested in breaking the cycle of environmental health disparities.

## Resources

AAP Policy Statement, Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health. [www.pediatrics.org/cgi/doi/10.1542/peds.2011-2662](http://www.pediatrics.org/cgi/doi/10.1542/peds.2011-2662)

Chetty R, Friedman JN, Rockoff JE The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood NBER Working Paper No. 17699 December 2011, Revised January 2012

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## Pediatric Environmental Health Specialty Units

[www.pehsu.net](http://www.pehsu.net)

The Pediatric Environmental Health Specialty Units (PEHSU) form a respected network of experts in children's environmental health. The PEHSU were created to ensure that children and communities have access to, usually at no cost, special medical knowledge and resources for children faced with a health risk due to a natural or human-made environmental hazard. Located throughout the U.S., Canada, and Mexico, PEHSU professionals provide quality medical consultation for health professionals, parents, caregivers, and patients. The PEHSU are also dedicated to increasing environmental medicine knowledge among healthcare professionals around children's environmental health by providing consultation and training. Finally, the PEHSU provide information and resources to school and community groups to help increase the public's understanding of children's environmental health.

### REGION 1

**Service area:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

#### **New England Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* Harvard Medical School and Harvard School of Public Health

*Hospital Affiliation:* Children's Hospital Boston and Cambridge Hospital

*Location:* Boston, Massachusetts

### REGION 2

**Service area:** New Jersey, New York, Puerto Rico, Virgin Islands

#### **Mount Sinai Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* Mount Sinai School of Medicine: Department of Pediatrics, Department of Community and Preventive Medicine

*Hospital Affiliation:* Mount Sinai Medical Center

*Location:* New York, New York

### REGION 3

**Service area:** Delaware, Maryland, Pennsylvania, Virginia, Washington DC, West Virginia

#### **Mid-Atlantic Center for Children's Health & the Environment Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* George Washington University

*Hospital Affiliation:* Children's National Medical Center

*Location:* Washington, DC

### REGION 4

**Service area:** Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

#### **Southeast Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* Emory University Department of Pediatrics

*Hospital Affiliation:* Children's Healthcare of Atlanta –

Egleston Children's Hospital and

Hughes Spalding Children's Hospital

*Location:* Atlanta, GA

### REGION 5

**Service area:** Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

#### **Great Lakes Centers' Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University of Illinois at Chicago, School of Public Health

*Hospital Affiliation:* Stroger Hospital of Cook County

*Location:* Chicago, Illinois

## REGION 6

*Service area:* **Arkansas, Louisiana, New Mexico, Oklahoma, Texas**

### **Southwest Center for Pediatric Environmental Health**

*Academic Affiliation:* Texas Institute of Occupational Safety and Health - University of Texas Health Science Center at Tyler, West Texas Regional Poison Center in El Paso, and the Occupational & Environmental Health Program at the University of New Mexico

*Hospital Affiliation:* University of Texas Health Science Center at Tyler

*Location:* Tyler, Texas

## REGION 7

*Service area:* **Iowa, Kansas, Missouri, Nebraska**

### **Mid-America Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University of Missouri-Kansas City School of Medicine

*Hospital Affiliation:* Children's Mercy Hospitals and Clinics

*Location:* Kansas City, Missouri

## REGION 8

*Service area:* **Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming**

### **Rocky Mountain Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University of Colorado Health Sciences Center

*Hospital Affiliation:* National Jewish Medical and Research Center in collaboration with Denver Health and Hospitals Authority and the Rocky Mountain Poison and Drug Center

*Location:* Denver, Colorado

## REGION 9

*Service area:* **Arizona, California, Hawaii, Nevada**

### **University California Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University California at San Francisco and University of California at Irvine

*Hospital Affiliation:* University of California, Irvine Medical Center

*Location:* San Francisco and Irvine, California

## REGION 10

*Service area:* **Alaska, Idaho, Oregon, Washington**

### **Northwest Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University of Washington: Occupational and Environmental Medicine Program, Department of Pediatrics

*Hospital Affiliation:* Harborview Medical Center, University of Washington Medical Center, Children's Hospital and Regional Medical Center

*Location:* Seattle, Washington

*Service area:* **Canada**

### **Canada Pediatric Environmental Health Specialty Unit**

*Academic Affiliation:* University of Alberta and Stollery Children's Hospital

*Hospital Affiliation:* Misericordia Community

*Service area:* **Mexico**

### **Mexico Pediatric Environmental Health Specialty Unit (*Unidad Pediátrica Ambiental*)**

*Academic Affiliation:* National Institute of Public Health (*Instituto Nacional de Salud Pública*)

*Hospital Affiliation:* Morelos Children's Hospital (*Hospital del Niño Morelense*)

*Location:* Cuernavaca, Mexico



# BREAK THE CYCLE 10

## BREAK THE CYCLE OF ENVIRONMENTAL HEALTH DISPARITIES IN CHILDREN

2014-2015

TITLE: Break the Cycle 10

TIME FRAME: September 2014 – June 2015

DEADLINE FOR APPLICATION: September 26, 2014

TENTATIVE DATE OF SELECTION: October 24, 2014

TENTATIVE DATE OF CONFERENCE: April 15, 2015

BREAK THE CYCLE DIRECTOR: Leslie Rubin, MD

SUBMIT THIS APPLICATION TO : Leslie Rubin MD, [lrubi01@emory.edu](mailto:lrubi01@emory.edu) and CC Janice Nodvin, [jnodvin@emory.edu](mailto:jnodvin@emory.edu)

STUDENT NAME : \_\_\_\_\_

UNIVERSITY : \_\_\_\_\_

DEPARTMENT: \_\_\_\_\_

MENTOR/SUPERVISOR: \_\_\_\_\_

Abstract of Proposal for Break the Cycle Research Project (approximately 250 words) describing the proposal and how it relates to breaking the cycle of children's environmental health disparities:

- Background
- Hypothesis
- Method
- Discussion

STUDENT EMAIL : (AFTER GRADUATION) \_\_\_\_\_

STUDENT EMAIL : (CURRENT SCHOOL EMAIL) \_\_\_\_\_

WORK PHONE : \_\_\_\_\_ CELL PHONE : \_\_\_\_\_

STUDENTS EDUCATIONAL STATUS: UNDERGRADUATE GRADUATE OTHER

FACULTY SUPERVISOR EMAIL: \_\_\_\_\_

FACULTY SUPERVISOR PHONE: work \_\_\_\_\_ cell \_\_\_\_\_