

## **Training Project Grants**

### **Annual Program Highlights**

**Reporting Period: July 1, 2014 – June 30, 2015**

#### **Section I**

PI Name: Sangita Chakrabarty, MD

Institution: Meharry Medical College

Training Program Grant Name: Meharry Occupational Medicine Residency  
Training Program

#### TPG Summary:

Meharry Medical College is the largest, private, historically black institution exclusively dedicated to educating health care professional and biomedical scientists. The only occupational medicine residency program in a HBCU in the US is at Meharry Medical College. The Occupational Medicine Residency program is a 2 year institutional program that supports the completion of residency requirements in occupational medicine. The program has maintained continued full accreditation since 1978 and is currently accredited until 2019.

The mission of the Occupational Medicine Residency program is to:

1. Recruit qualified physicians who show evidence of commitment to a career in occupational medicine.
2. Train physicians who are strongly committed to the prevention of occupational and environmental diseases; skilled in the diagnosis and treatment of occupational injury and disease; able to develop and administer occupational and environmental health programs for unions, industry, government and academic institutions; and are active in the development of scientific, legal, political and ethical questions of the field.

The academic phase consists of a course of study leading to a master's degree that includes certified training in the five areas required by the American Board of Preventive Medicine: epidemiology, biostatistics, environmental health, and health administration and behavioral health. In addition, residents are required to take courses in Occupational health, occupational toxicology and Industrial Hygiene. Training is given at the Meharry Medical College's School of Graduate Studies and Research through its CEPH accredited MSPH degree program.

The practicum phase comprises both didactic and applied components. The overall goal of the practicum year is to train the resident in the practice of occupational medicine. This occurs by providing supervised application of the knowledge, skills and attitudes of occupational medicine gained in the academic phase and in the didactic component of the practicum phase.

**Public Health Relevance:** In addition to increasing the number of occupational medicine specialists, this TPG also enables improved training in minority occupational health issues such as dealing with migrant farm workers and Hispanic workers. In keeping with the mission of Meharry, these physicians are better able to address health disparities in the working population.

### **Key Personnel:**

**Sangita Chakrabarty, MD, MSPH (PI):** is the Director of the Division of Occupational and Preventive Medicine and is responsible for the implementation on this project. Contact: Dept. of Family and Community Medicine, Meharry Medical College, 1005 Dr. D. B. Todd Jr Blvd, Nashville TN37208, Ph:615 3276782; Email:schakrabarty@mmc.edu

**Heather OHara, MD,MSPH (Co-Investigator)** is the Program Director of the occupational medicine residency program Contact: Dept. of Family and Community Medicine, Meharry Medical College, 1005 Dr. D. B. Todd Jr Blvd, Nashville TN37208, Ph:615 3276782; Email:hohara@mmc.edu

**Muktar Aliyu, MD, MPH (Co-Investigator)** is the Associate Program Director of the occupational medicine residency program Contact: Dept. of Family and Community Medicine, Meharry Medical College, 1005 Dr. D. B. Todd Jr Blvd, Nashville TN37208, Ph:615 3276782; Email:maliyu@mmc.edu

**Robert Levine, MD (Co Investigator)** is the Director for research and is responsible for research mentoring on thesis and research projects. He retired on January 1, 2015

**Thomas Arcury, PhD (Consultant)** provides mentoring and supervision during the Ag Health and Safety rotation. **Contact:** Professor and Vice Chair for Research, Department of Family and Community

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**Haiying Chen (Consultant)** provides statistical and research support for projects and manuscript submission. Contact: Associate Professor, Center for Worker Health Wake Forest School of Medicine Winston-Salem, NC 27157; Phone 336-716-4431 or 336-716-2011 Email: hchen@wakehealth.edu

**Juan Canedo, M.A (Consultant)** supports the community outreach and research opportunities as described in the research proposal. **Contact** : Executive Director, Progreso Community Center, Centro Comunitario Progreso, 2675 Murfreesboro Pike, Nashville, TN 37217 Phone: 615-365-9002 Fax: 615-365-9002; Toll Free: 1-866-519-6294 Email: info@progresocommunitycenter.org

TPG Web link:

<http://www.mmc.edu/education/gradmeded/residencyprograms/schoolofmedicine/family-community/occ-res-overview.html>

## SECTION II

High Impact Outcome:

Residents in the TPG supported residency at Meharry Medical College participate in the Prevention Leadership Advocacy Rotation (PLAR). Residents are instructed to study policies, regulations, laws, or lack thereof that affect patients, populations, or public health as a whole within occupational and/or environmental realms and explore whether or not scientific evidence supports the implementation of these practices. Through the inclusion of this rotation, our residents have been able to identify several areas where best practices are not necessarily the guiding doctrine in the care, or safety of patients and the population. One of the projects that was conducted as part of the PLAR activity examined concerns related to prescription medication use in DOT drivers, focusing on the lack of guidelines as it pertains to non-narcotic medications. The resident that worked on the project argued that newly prescribed or dose adjusted medications could impact the safe performance of a DOT-licensed driver and may be a cause behind crashes due to the lack of regulations pertaining to commercial drivers and driving under the influence of prescription medications. This project was presented by the resident at the American Occupational Health Conference (AOHC2015) IN Baltimore, MD. Another project currently being explored is focused on the need for policies that require the use of Workplace

Wellness Programs (WWP) to encourage increased awareness of healthy lifestyle habits. The resident described how WWP could influence and reduce the soaring obesity rates, as workers tend to spend the majority of their wakeful hours at their job. The resident also provided recommendations on how WWP could serve as cost-effective approaches to promoting healthy choices and activities. The findings from this project were shared with other public health professionals at the Tennessee Public Health Association Meeting in Franklin, TN . In summary, our residents are working to impact the way that policies, regulations, or laws are made to support the health of the worker, population, and environment.

#### Other Updates:

Resident Performance: During the current reporting period (2014-2015), there were six (6) residents in the program. There were three PGY3 residents and three PGY2 residents. Both of our graduates (June 2014) currently practice occupational medicine in Pennsylvania and Minnesota.

Agricultural Health and Safety Rotation: During this period, two of our residents (PGY2) completed one month of residency training at Greene County Healthcare Inc., Snow Hill, NC and the Center for Worker Health, Wake Forest University, NC. This community outreach and research rotation has provided our residents with valuable insight into the working conditions and occupational health issues of migrant farm workers.

Outreach Activities: PGY3 residents continue to collaborate with Progreso Community Center ( PCC) to incorporate occupational safety into English language classes for the Spanish speaking workers in the community, using curriculum and presentation slides developed by the residents and faculty.

Research Activities: Residents are required to work on a research project during their residency training. The residents enrolled in the MSPH program work in their thesis project and prepare a manuscript of the same to be submitted for publication. Residents who enroll in the program with a prior MPH or equivalent degree utilize this time to work on a research project and present their results in paper publication, poster or oral presentation. This rotation enables the residents

to gain better understanding about occupational health disparities and work on ways to address them in their future career choices.

Integrative Medicine Training: We have incorporated evidence based Integrative Medicine curriculum into our occupational medicine training program. This includes faculty lectures, grand rounds on Integrative Medicine topics, and an Integrative Medicine rotation at the TVHS where residents will be exposed to music therapy, biofeedback, motivational interviewing, and auricular therapy. We have been recently funded by HRSA to continue implementing integrative medicine competencies into our occupational medicine residency

Preventive Cardiology Rotation: Residents participate in a Preventive Cardiology rotation that exposes them to an underserved population of patients. They are given the opportunity to interact with patients and address their cardiac conditions as it relates to their workplace duties and exposures. Residents review the metabolic equivalent (MET) calculations to understand the ranges of participation in the patient's personal and occupational activities.

Prevention Leadership Advocacy Rotation: The Prevention Leadership Advocacy Rotation (PLAR) is a mechanism for preparing the residents to be leaders in advocacy for evidence based preventive medicine practice. During the PGY-2 year, residents work with a faculty coach/mentor to: (a) define a population or problem of interest whereby legislative mandates reject medical evidence; (b) describe and understand the process that may lead to adverse effects in vulnerable sub-populations in terms of refined epidemiologic theory; and (c) identify opportunities for improving population health through application of evidence-based interventions. During the PGY-3 year, residents complete their analyses and interpret results in terms of what initiatives might successfully move populations towards better health based on the totality of medical evidence. Recent PLAR projects include:

1. A resident conducted a review of the Federal Motor Carrier Service Administration (FMCSA) guidelines and policies regarding the use of prescription and over the counter medications by commercial motor vehicle (CMV) drivers and examine the role of Department of Transportation (DOT) medical examiners in the approval of medical certificates for drivers on prescription drugs was done and recommendations were

given to help reduce these contributing factors as cause of motor vehicle accidents ( Resulted in poster presentation at AOHC 2015)

2. Another project involved advocacy for worksite wellness program for obesity preventive by collaborating with a local medical center, American Heart Association( local chapter) and the Tennessee Department of Health (Resulted in poster presentation at TN Public Health Association meeting )
3. Advocacy for Occupational Safety Programs for Occupational Heat Illness in migrant farmworkers, particularly in undocumented workers. ( Resulted in poster presentation at AOHC 2015)
4. Studying the impact of indoor air quality and outdoor air quality monitoring on asthma among children who live in public housing.

**Ethics conference in Tuskegee:** PGY3 residents attend a five-day intensive, interdisciplinary course that reviews the theoretical frameworks for bioethics. The course provides a foundation for understanding various principles of and approaches to bioethics in medical practice, law, research and public policy. This is hosted by The National Center for Bioethics in Research and Health Care at Tuskegee University, which is dedicated to involving sciences, humanities, law, and religious faiths in the understanding of ethical and moral issues that influence research and medical treatment of African Americans and other vulnerable populations.

#### American Occupational Health Conference(AOHC) 2015: (National)

The following five abstracts from Meharry (four from PGY3 residents and one from a recent graduate, based on her work while at Meharry) were accepted for poster presentation at AOHC 2015 in Baltimore, MD

1. “**Vanderbilt Assessment of New Latent Tuberculosis Infection Diagnosis and Acceptance of Treatment for Employees (VALIDATE)**”.
2. Meharry Medical Residents’ Knowledge of Ebola Virus Disease (EVD)
3. Prescription Drug Use among CMV Drivers: A Policy Review
4. Occupational Heat-related Illnesses
5. The Poison Control Center as a meaningful partner in Public Health Events: Lessons Learned

Tennessee College of Occupational and Environmental Medicine (TCOEM)2015  
Spring Conference: (Regional)

All three of our PGY3 residents were invited to present their research findings at the 2015 TCOEM Spring Conference in Cool Springs, TN on March 28<sup>th</sup>, 2015