

The Center of Excellence in Environmental Toxicology (CEET)
and the Center for Public Health Initiatives (CPHI)

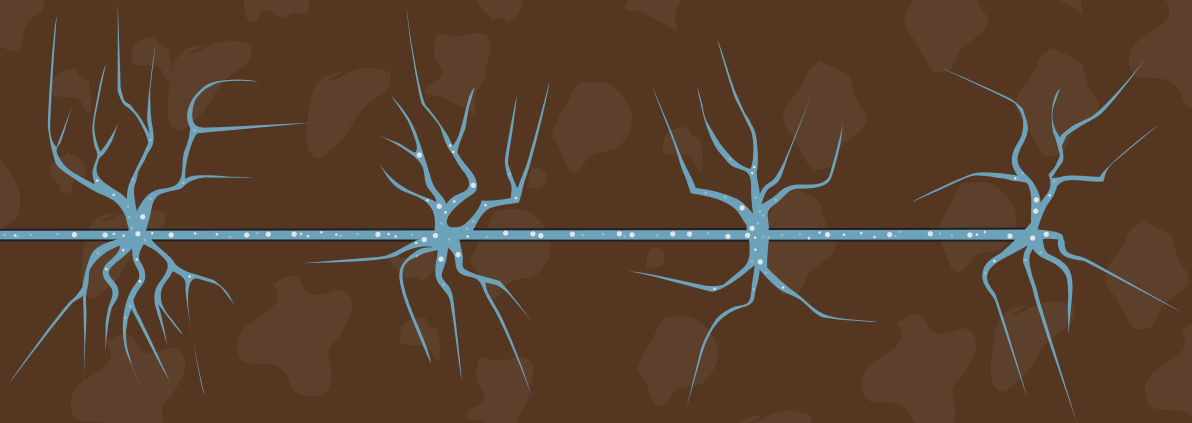
present

Impact of Unconventional Natural Gas Drilling Operations on the Environment and Public Health

Tuesday, February 18, 2014

8:30 A.M. – 5:30 P.M.

Smilow Center for Translational Research



Welcome to the Centers of Excellence in Environmental Toxicology (CEET), the Environmental Health Sciences Core Center at the University of Pennsylvania, funded by the National Institute of Environmental Health Sciences (NIEHS) and the Center for Public Health Initiatives (CPHI). Our symposium on the impact of unconventional natural gas drilling operations (which includes hydraulic fracturing) on the environment and public health was organized by our Community Outreach and Engagement Core of the CEET whose mission is to conduct multi-directional communication between scientists, communities, health care professionals and decision makers. With this spirit, our symposium is aimed to profile the ongoing science on this controversial topic by bringing together leaders in the field. It also will provide a platform for all stakeholders to make presentations; the gas and oil industry, the federal agencies, state legislators and concerned citizen groups. Participants are also invited to participate in a panel discussion at the end of the day. Our panelists include representatives of Physicians for Social Responsibility, a regulatory expert, and the PA Department of Environmental Protection. Our hope is that respectful discussion on this broad range of issues will provide participants with information to embrace evidence-based decision making.



Trevor M. Penning, PhD
CEET Director
Supported by P30 ES013508



Jennifer Pinto-Martin, PhD, MPH
CPHI Director

8:00 – 8:30 AM REGISTRATION AND BREAKFAST

8:30 AM **WELCOME & INTRODUCTION**

Trevor M. Penning, Ph.D.

Director, Center of Excellence in Environmental Toxicology, Department of Pharmacology, Perelman School of Medicine, University of Pennsylvania

Jennifer Pinto-Martin, Ph.D., M.P.H.

Executive Director, Center for Public Health Initiatives, Professor of Nursing, School of Nursing, University of Pennsylvania

**THE HYDRAULIC FRACTURING PROCESS —
ARE THERE EFFECTS ON AIR AND WATER QUALITY?**

Moderator: Trevor M. Penning, Ph.D.

9:00 AM **Unconventional Natural Gas Drilling**

Tim Bechtel, Ph.D.

Professor of Geosciences, Earth and Environmental Studies, Franklin and Marshall College

9:25 AM **Air Quality**

Peter DeCarlo, Ph.D.

Assistant Professor, Department of Civil, Architectural, and Environmental Engineering, Department of Chemistry, Drexel University

9:50 AM **Water Quality**

Lisa Senior

Acting Water-Quality Specialist, USGS Pennsylvania Water Science Center

10:15 – 10:45 AM BREAK

PUBLIC HEALTH IMPACT — WHAT IS HAPPENING NOW?

Moderator: Jennifer Pinto-Martin, Ph.D., M.P.H.

- 10:45 AM **Environmental Health Exposures**
Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources
Lisa McKenzie, Ph.D., M.P.H.
Research Associate, Department of Environmental and Behavioral Health, Colorado School of Public Health
- 11:10 AM **Environmental Health Sciences Core Center (NIEHS) – Inter Center Working Group Initiative**
Trevor M. Penning, Ph.D.
- 11:30 AM **CEET ONGOING STUDIES**
Groundwater Quality and Health Outcomes in Adjacent Areas With and Without Hydrofracturing Activities
Reynold A. Panettieri, Jr, M.D.
Robert L. Mayock and David A. Cooper Professor of Medicine, Director, Airways Biology Initiative, Deputy Director, CEET, University of Pennsylvania
Beizhan Yan, Ph.D.
Lamont Assistant Research Professor, Department of Earth and Environmental Sciences, Columbia University
Risk Perception of Hydrofracturing in Eastern States
Marilyn V. Howarth, M.D.
Director, Community Outreach and Engagement Core, CEET, Adjunct Associate Professor of Emergency Medicine, University of Pennsylvania
- 12:05 PM **ONGOING STUDIES OF MARCELLUS SHALE DEVELOPMENT AND HEALTH AT THE GEISINGER HEALTH SYSTEM**
Brian S. Schwartz, M.D., M.S.
Professor, Johns Hopkins Bloomberg School of Public Health, Senior Investigator, Geisinger Center for Health Research, Director, Environmental Health Institute
- 12:30 – 1:30 PM LUNCH
- INDUSTRY PRACTICES AND REGULATION**
Moderator: Richard Pepino, M.S., M.S.S.
- 1:30 PM **Industry Practices and Perspectives**
Russell D. White, Ph.D.
Manager, Health Sciences, American Petroleum Institute
- 1:55 PM **Federal Agencies – US Environmental Protection Agency**
Samantha Beers, Esq.
Director, U.S. EPA Mid-Atlantic Region III
- 2:20 PM **Pennsylvania State Government**
Representative Greg Vitali
(D) Delaware County, District 166
Democratic Chair, Environmental Resources & Energy Committee, Pennsylvania House of Representatives
- 2:45 – 3:15 PM BREAK
schedule continues on back

3:15 PM **CITIZEN'S CONCERNS – WHAT ARE THE CONCERNS OF THE COMMUNITY?**
Moderator: Marilyn V. Howarth, M.D.

Community Outreach and Engagement

Rebecca Roter

Founder, Breathe Easy Susquehanna County

Joseph Otis Minott, Esq.

Executive Director, Clean Air Council

3:45 PM **PANEL DISCUSSION**

Moderator: George L. Gerton, Ph.D.

Research Professor of Reproductive Biology in Obstetrics and Gynecology, Member Marcellus Shale Working Group CEET, University of Pennsylvania

Poune Saberi, M.D., M.P.H.

Clinical Assistant Professor of Emergency Medicine, Perelman School of Medicine
Physicians for Social Responsibility

Richard Pepino, M.S., M.S.S.

Deputy Director, Community Outreach and Engagement Core, CEET
(Previously with Franklin & Marshall, and US EPA Region III)

Scott Perry, Esq.

Deputy Secretary, Office of Oil and Gas Management, Pennsylvania Department of Environmental Protection

5:15 PM **WHERE DO WE GO FROM HERE?**

Reynold A. Panettieri, Jr., M.D.

Deputy Director, CEET, University of Pennsylvania

Aubrey Miller, M.D., M.P.H.,

Senior Medical Advisor, NIEHS



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