



## The Monticello Conference



### 2017 SUNDAY, OCTOBER 15

12.00 pm – 5.00 pm Registration/Hospitality in the Tack Room at Boar's Head Inn

### MONDAY, OCTOBER 16

9.00 am – 5.30 pm Registration/Hospitality in the Tack Room at Boar's Head Inn

3.15 pm Meet in lobby of Boar's Head Inn

3.30 pm Depart for the Behind the Scenes Tour of Monticello

4.00 pm Behind the Scenes Tour begins

6.00 pm Behind the Scenes Tour concludes, depart for Montalto (*this dinner is for conference attendees only, spouses/guests will be returned to Boar's Head Inn*)

6.00 pm Meet in lobby of Boar's Head Inn, depart for reception and dinner at Montalto (*for conference attendees who did not go on the tour, but are planning to attend the dinner*)

6.30 pm – 7.30 pm **RECEPTION**

7.45 pm – 9.00 pm **DINNER**

9.30 pm **RETURN TO BOAR'S HEAD INN**



## The Monticello Conference



### TUESDAY, OCTOBER 17

6.30 am – 8.00 am

#### **BREAKFAST AT BOAR'S HEAD INN**

*Hearth Room*

8.00 am

#### **MEET IN LOBBY OF BOAR'S HEAD INN**

8.15 am

#### **DEPART FOR MONTALTO**

9.00 am - 9.15 am

#### **WELCOME AND MEETING OVERVIEW**

David Weill

#### **SESSION I: DEFINING EMPS**

Moderator: Ann Wylie

Rapporteur: Bob Nolan, Alan Rogers, Christy Barlow

9:15 am – 9:30 am

#### **CHARACTERISTICS OF NATURALLY OCCURRING EMPS**

Mickey Gunter

Elongate Mineral Particles in the Natural and Built Environment

*9.30 am – 9.40 am Questions*

9.40 am – 9.55 am

#### **EMPS FROM EXCAVATION**

Bradley Erskine

An Example: Calaveras Dam Replacement Project

*9.55 am – 10.05 am Questions*

TUESDAY, OCTOBER 17 (CONTINUED)

10.05 am – 10.20 am

## MEASURING EMPS IN THE LUNG

Victor Roggli

What Can Be Measured in the Lung: Asbestiform Minerals and Cleavage Fragments

*10.20 am – 10.30 am Questions*

10.30 am – 10.45 am

Coffee Break

10.45 am – 11.00 am

## CHARACTERISTICS OF LUNG BURDEN EMPS

Fred Pooley

Analysis of Respirable Fibrous Particles

*11.00 am – 11.10 am Questions*

11.10 am - 11.25 am

## BACKGROUND LEVELS OF EMPS

Drew Van Orden

Identification and Analysis of Ambient EMPS

*11.25 am – 11.35 am Questions*

11.35 am - 11.50 am

## EMP DEPOSITION AND RETENTION IN THE HUMAN LUNG

Bahman Asgharian

Dosimetry of Inhaled Elongated Particles in the Respiratory Tract: The Impact of Shape Factor

*11.50 am – 12.00 pm Questions*

12.00 pm – 12.15 pm

## MEASUREMENT OF EMPS

Eric Chatfield

What We Should Measure and How Do We Do It?

*12.15 am – 12.25 pm Questions*

12.30 pm - 1.30 pm

Lunch

**TUESDAY, OCTOBER 17 (CONTINUED)**

1.30 pm – 2:30 pm

## **GENERAL DISCUSSION**

EMP Definitions:  
What Can and What Should be Known About Them That Would Inform  
Health-Related Studies

## **SESSION II: EFFECTS AND MECHANISMS**

Moderator: Roger McClellan  
Rapporteurs: Eric Chatfield, Victor Roggli, Murray Finkelstein

2.30 pm – 2.45 pm

## **EFFECTS AND MECHANISMS**

Gunter Oberdorster  
Extrinsic and Intrinsic Physico-Chemical Properties of EMPs: Predictors of Toxicity  
*2.45 pm - 2.55 pm Questions*

2.55 pm- 3.10 pm

## **IN VITRO MODELS AND EXPERIMENTS**

Brooke Mossman  
Mechanistic Studies of EMPs: Cell Cultures, Organ Cultures and Beyond?  
*3.10 pm - 3.20 pm Questions*

3.20 pm - 3.35 pm

## **BIOPERSISTENCE AND OTHER OBSERVATIONS FROM EXPERIMENTAL STUDIES**

David Bernstein  
Comparative Analysis of Elongated Mineral Particles Using  
Quantitative Inhalation Toxicology  
*3.35 pm - 3.45 pm Questions*

**3.45 pm - 4:00 pm**

**Coffee Break**

TUESDAY, OCTOBER 17 (CONTINUED)

4.00 pm - 4.15 pm

## WHAT CAN WE LEARN FROM NANO PARTICLE STUDIES?

Agnes Kane

The Asbestos-Carbon Nanotube Analogy: An Update

*4.15 pm - 4.25 pm Questions*

4.25 pm - 4.40 pm

## BIOLOGICAL RESPONSES TO EMPS

Uschi Graham

Translocation, Bioprocessing and Tissue Interactions of  
EMPs following Inhalation Exposure

*4.40 pm - 4.50 pm Questions*

4.50 pm - 5.05 pm

## TOXICITY PREDICTION

Alessandro Gualtieri

Towards a General Model to Predict the Toxicity of Mineral Fibers

*5.05 pm - 5.15 pm Questions*

5.30 pm

**DEPART MONTALTO**

6.00 pm

**ARRIVE BOAR'S HEAD INN**

7.00 pm

**COCKTAILS & DINNER AT BOAR'S HEAD INN**

*Hearth Room*



## The Monticello Conference



### WEDNESDAY, OCTOBER 18

6.30 am – 8.00 am

**BREAKFAST AT BOAR'S HEAD INN**

*Hearth Room*

8.00 am

**MEET IN LOBBY OF BOAR'S HEAD INN**

8.15 am

**DEPART FOR MONTALTO**

9.00 am – 10.30 am

**GENERAL DISCUSSION**

Toxicology, Mechanisms and Experimental Issues

**10.30 am – 10.45 am**

**Coffee Break**

### **SESSION III: HUMAN EXPOSURE, EFFECTS AND RISKS**

Moderator: Graham Gibbs

Rapporteurs Wayne Berman, Morton Lippmann, Philip Hibbs

10.45 am – 11.00 am

**RELATIONSHIPS BETWEEN QUALITATIVE ASPECTS OF EXPOSURE  
AND DISEASE FROM LUNG TISSUE STUDIES**

Bruce Case

Does Qualitative Examination of EMP Recovered from Human and  
Animal Lungs Provide Reliable Information on their Carcinogenic and other Effects?

*11.00 am - 11.10 am Questions*

11.10 am – 11.25 am

**THE EPIDEMIOLOGIC EVIDENCE FOR EMP-RELATED  
HUMAN HEALTH EFFECTS**

Paola Boffetta

Carcinogenic Risk of Elongated Particles: The Contribution of Epidemiology

*11.25 am - 11.35 am Questions*

11.35 am – 11.50 am

### **PARTICLE DIMENSIONS AND MESOTHELIOMA**

Ed Ilgren and Yosara Andrea Mejia

The Role of Fiber Width in Mesothelioma - Bolivian Crocidolite,  
Finnish Anthophyllite and Fiber Width

*11.50 am – 12.00 pm Questions*

12.00 pm – 12.15 pm

### **ARE CANCER RISKS IN TACONITE MINING CAUSED BY ASBESTIFORM OR NON-ASBESTIFORM EMPS?**

Jeff Mandel

The Taconite Story

*12.15 pm - 12.25 am Questions*

12.25 pm - 12.40 pm

### **NON-CANCER ENDPOINT RISKS WE MIGHT ANTICIPATE FROM NON-ASBESTIFORM EMPS**

Mark Utell

Refractory Ceramic Fibers as an EMP: Fibre Characteristics,  
Potential Health Effects and Clinical Observations

*12.40 pm - 12.50 am Questions*

**12.50 pm - 1.50 pm**

**Lunch**

1.50 pm – 2.05 pm

### **OTHER FACTORS TO CONSIDER; SURFACE PROPERTIES**

Art Langer and Robert Nolan

Surface Chemistry and Structure: Factors Controlling the Biological  
Potential of Inorganic Particulate

*2.05 pm - 2.15 pm Questions*

2.15 pm – 2.30 pm

### **FIBER POTENCY VS EMP POTENCY IN HUMANS**

David Garabrant

Fiber Potency Analyses for Mesothelioma and Lung Cancer

*2.30 pm - 2.40 pm Questions*

2.40 pm - 2.55 pm

### **DOSE RESPONSE**

Tony Cox

Biomathematical Mechanisms of Non-Linear Dose-Response  
for Respirable Elongated Mineral Particles

*2.55 pm - 3.05 pm Questions*

3.05 pm - 3.20 pm

### **RISK FROM NON-OCCUPATIONAL EMP EXPOSURES**

Bian Liu

Environmental Mesothelioma Risk

*3.20 pm - 3.30 pm Questions*

3.30 pm - 3.45 pm

**Coffee Break**

3.45 pm - 4.00 pm

### **MESOTHELIOMA AND TALC**

Gary Marsh and Christy Barlow

The Mineralogy and Epidemiology of Cosmetic Talc

*4.00 pm - 4.10 pm*

4.10 pm - 4.25 pm

### **RISK ESTIMATES FOR EMPS**

Annie Jarabek

What a Difference the Dose Makes: Dosimetry Approaches to Aid Experimental Design,  
Inform Inferences, and Support Evidence Integration for Risk Assessment Applications

*4.25 pm - 4.35 pm Questions*

4.45 pm

**DEPART MONTALTO**

5.15 pm

**ARRIVE BOAR'S HEAD INN**

6.00 pm

**MEET IN LOBBY OF BOAR'S HEAD INN**

6.15 pm

**DEPART FOR FARMINGTON COUNTRY CLUB**

6.30 pm - 7:30 pm

**RECEPTION - LOWER PATIO**

7.45 pm - 9:30 pm

**DINNER - MAIN DINING ROOM**

9.45 pm

**RETURN TO BOAR'S HEAD INN**





## The Monticello Conference



### THURSDAY, OCTOBER 19

6.30 am – 8.00 am

**BREAKFAST AT BOAR'S HEAD INN**  
*Hearth Room*

8.00 am

**MEET IN LOBBY OF BOAR'S HEAD INN**

8.15 am

**DEPART FOR MONTALTO**

9.00 am -10.00 am

#### **OTHER FACTORS TO CONSIDER: GENETICS AND THE ENVIRONMENT**

Michele Carbone

Gene-Environment Interaction in Asbestos Carcinogenesis and Mesothelioma

*10.00 am - 10.15 am Questions*

10.15 am – 10.30 am

**Coffee Break**

10.30 am – 12.00 pm

#### **GENERAL DISCUSSION**

Is there human evidence that non-asbestiform EMPS cause health effects?

If so, under what circumstances? What are the levels of risk from EMPS?

12.00 pm – 1.00 pm

**Lunch**

### **SESSION IV: RAPPORTEURS REPORTS AND GENERAL DISCUSSION**

Moderator: John Hoskins

Rapporteurs: Brooke Mossman, Gunter Oberdorster, Robert Glenn

1.00 pm – 4.00 pm

THURSDAY, OCTOBER 19 (CONTINUED)

## SESSION V: FUTURE RESEARCH

Moderator: David Weill

Rapporteurs: Gunter Oberdorster, Brooke Mossman, Robert Glenn

4.00 pm – 4.15 pm

### STATE OF KNOWLEDGE IN FRANCE

Erell Leocat

State of Knowledge in France Pertaining to Legislation and to the ANSES Report

4.15 pm - 4.25 pm Questions

4:25 pm – 5:30 pm

### GENERAL DISCUSSION

#### WHAT WE DO NOT KNOW AND WHAT IS NEEDED TO FILL THE GAPS

5.30 pm

**DEPART MONTALTO**

6.00 pm

**ARRIVE AT ROTUNDA**

6.15 pm – 7:15 pm

**RECEPTION - UPPER WEST OVAL ROOM**

7.45 pm

**DINNER - DOME ROOM**

9.00 pm

**KEYNOTE SPEAKER: ANDREW O'SHAUGHNESSY**

*"The Illimitable Freedom of the Human Mind" Thomas Jefferson's Idea of a University*

**CLOSING REMARKS**

10.00 pm

**RETURN TO BOAR'S HEAD INN**

## FRIDAY, OCTOBER 20

6.30 am – 8.30 am

**BREAKFAST AT BOAR'S HEAD INN**

*Hearth Room*