



# The Role of Environmental Agents in Cardiovascular Disease



**August 6 and 7, 2002**  
**Durham Marriott at the Civic Center, Durham, NC**  
[www.niehs.nih.gov/dert/events/cardio02.home.htm](http://www.niehs.nih.gov/dert/events/cardio02.home.htm)



*Sponsored by*  
National Institute of Environmental Health Sciences  
U.S. Environmental Protection Agency  
National Heart, Lung, and Blood Institute  
American Heart Association, and St. Jude Medical



**ST. JUDE MEDICAL**  
CARDIAC RHYTHM MANAGEMENT DIVISION

**Cardiovascular disease** represents the primary source of mortality in the industrialized world. The etiologies of cardiovascular diseases (CVDs) are multifactorial and include diet, genetics, and lifestyle. Findings over the last several years have made it clear that environmental factors, such as ambient particulate matter, aldehydes, and polyaromatic hydrocarbons are associated with pathophysiological changes in the cardiovascular system, cardiac malformations, and death due to CVD. However, many questions remain as to what agents play a role in CVD. Recent advances in the fields of signal transduction, genetics, molecular biology, and epidemiology make expansion of research efforts in this area very timely. In addition, some environmental health science and cardiovascular researchers have successfully bridged the gap between these disciplines, resulting in innovative approaches to the study of environmentally induced CVD. Therefore, enhanced collaboration between these disciplines is seen as vital to the success of these efforts.

**The main purpose of this public workshop is to seek input from the environmental health science and cardiovascular research communities on the most appropriate and productive directions for research in the area of environmentally related cardiovascular disease.**

The format of the workshop, with emphasis on breakout sessions, is designed to enhance interactions among research scientists that will lead to identification of gaps in knowledge, appropriate questions for future research, innovative uses of existing technology and ideas for new technologies (including animal models), and types of collaborations needed to address these issues. A report will be compiled from participants' recommendations and will be forwarded to the sponsoring organizations, including the Director of NIEHS, Dr. Ken Olden, and EPA's Assistant Administrator for Research and Development, Dr. Paul Gilman.

## Organizing Committee

**Aruni Bhatnagar, PhD** (University of Louisville)  
**Wayne Cascio, MD** (UNC at Chapel Hill)  
**Robert Devlin, PhD** (US EPA)  
**John Godleski, MD** (Harvard University)  
**Stacey Katz, MPH** (US EPA)  
**Patrick Mastin, PhD** (NIEHS)

**Murray Mittleman, MD** (Beth Israel Deaconess Medical Center)  
**Kenneth S. Ramos, PhD** (Texas A&M University)  
**Gail Robarge, MS** (US EPA)  
**Eser Tolunay, PhD** (NHLBI)

## Tentative Agenda

### August 6 Morning

#### Keynote Speakers

Mark J. Utell, MD (University of Rochester)

Kenneth S. Ramos, PhD (Texas A&M University)

(To be named)

### August 6 Afternoon

#### Breakout Sessions

Currently scheduled breakout sessions and confirmed participants:

**1. Cardiovascular Epidemiology: Risk Factors from Environmental and Occupational Exposure**

C. Arden Pope, Russell V. Luepker, Robert J. Goldberg, Kim Gray, Lucas Neas, Joel Schwartz, David Siscovick

**2. Particulate Air Pollution and Myocardial Infarction**

Robert A. Kloner, Mark Utell, Phillip B. Adamson, Robert Devlin, Douglas W. Dockery, Murray A. Mittleman

**3. Environmental Agents and Vascular Disease**

Ken Ramos, Eser Tolunay, Paul J. Boor, David D. Gutterman, Emily Wilson, Mark Frampton

**4. Environmental Modulation of Myocardial Excitability**

Wayne E. Cascio, Aruni Bhatnagar, Penelope Boyden, Robert L. Lux, Richard Verrier, Wojciech Zareba

**5. Cardiovascular Oxidative Stress and Environmental Pollutants**

Daniel L. Costa, Elizabeth Murphy, Scott Ballinger, Page Anderson, Kevin Driscoll, John J. Godleski, James Kang

**6. Environmental Toxicity and Cardiovascular Development**

Seigo Izumo, Mary K. Walker, Stephen A. Fisher, Richard Di Giulio, Roger R. Markwald

### August 7 Morning

#### Presentations of Recommendations from Breakout Sessions

#### Closing Keynote Speaker

Roberto Bolli (University of Louisville)

## Registration Form

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Please indicate your first, second, and third choices of breakout sessions that you would like to participate in.

Session 1 \_\_\_\_\_

Session 2 \_\_\_\_\_

Session 3 \_\_\_\_\_

Session 4 \_\_\_\_\_

Session 5 \_\_\_\_\_

Session 6 \_\_\_\_\_

Please mail, fax, or email the above information to

#### MAIL:

J. Patrick Mastin, Ph.D.  
NIEHS  
111 T. W. Alexander Drive, P.O. 12233  
Mail Drop EC-23  
Research Triangle Park, NC 27709

#### FAX

919-541-5064

#### EMAIL

[mastin@niehs.nih.gov](mailto:mastin@niehs.nih.gov)

Or fill out the on-line registration form at

[www.niehs.nih.gov/dert/events/cardio02.home.htm](http://www.niehs.nih.gov/dert/events/cardio02.home.htm)

**Hotel reservations** should be made directly with

**Durham Marriott at the Civic Center**  
**919-768-6000**

Rate per night is \$85.

For further information call **919-541-3289** or email [mastin@niehs.nih.gov](mailto:mastin@niehs.nih.gov)

**Please note** that while this is an open meeting, space will be limited, and it may be necessary to limit registration.