

Editorial

## The US EPA workshop on research and risk assessment for arsenic

The US Environmental Protection Agency sponsored an international Workshop on Research and Risk Assessment for Arsenic at the National Conservation Training Center in Shepherdstown, West Virginia, May 31 to June 2, 2006. This special issue of *Toxicology and Applied Pharmacology* contains articles prepared by participants in that workshop. The impetus for this workshop was persistent concerns about the health consequences of exposure to inorganic and organic arsenicals, particularly the effects of chronic exposure to low levels of these agents in food and drinking water. Both inorganic and organic arsenic compounds present significant public health concerns. Accounts of adverse health effects of exposure to inorganic

arsenic in drinking water appear frequently in the scientific and popular literature, organic arsenical pesticides have been widely dispersed in the environment, and occupational exposure to arsenic continues through traditional smelting and refining processes and through the growing use of arsine in semiconductor fabrication.

This workshop built on the success of five international meetings on the health effects of arsenic sponsored by the Society for Environmental Geochemistry and Health held between 1993 and 2002. These meetings were invaluable forums for presentation of new information on the adverse effects of arsenic exposure and for interactions between



**Workshop participants**

- 1 C.-H. Wang
- 2 C.-J. Chen
- 3 J. Mumford
- 4 S. Cohen
- 5 D. Wolf
- 6 I. Dooley
- 7 S. Ramasamy
- 8 D. Delker
- 9 R. Lorenzana
- 10 K. Francesconi
- 11 K. Cantor
- 12 A. Navas-Acien
- 13 R. Sams
- 14 N. Shao
- 15 T. Rossman
- 16 A. Lowit
- 17 C. Abernathy
- 18 W. Cullen
- 19 J. Yager
- 20 J. Tao
- 21 A. Kligerman
- 22 R. Calderon
- 23 B. Adair
- 24 D. Utterback
- 25 L. M. Del Razo
- 26 M. Waalkes
- 27 T. McMahon
- 28 M. Hughes
- 29 E. Ohanian
- 30 B. Walton
- 31 M. Zhao
- 32 D. Thomas
- 33 M. Styblo
- 34 J. Creed
- 35 W. Klimecki
- 36 M. Craun
- 37 R. Kwok
- 38 G. Craun
- 39 J. Prah
- 40 H. Clewell
- 41 E. Hudgens
- 42 M. Gamble
- 43 E. Kenyon
- 44 K. Kitchin
- 45 J. Graziano
- 46 J. Chen
- 47 H. Ozkaynak

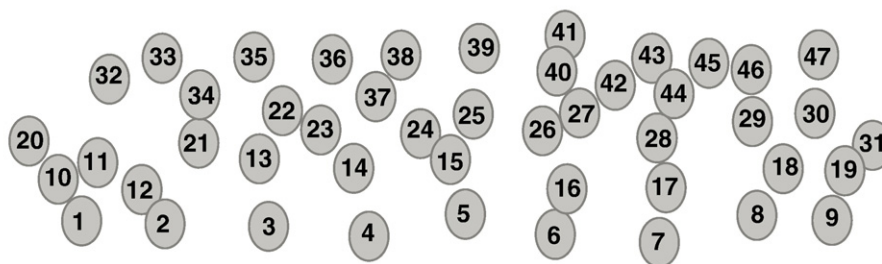


Fig. 1. Workshop participants.

scientists, regulators, and policy makers. The workshop continued this tradition with a somewhat narrower focus. Thus, speakers at the workshop presented current research on adverse health effects of arsenic exposure in human populations, on animal models useful for elucidating the basis for these adverse effects, and on metabolism and modes of action of arsenic as a toxin and carcinogen but did not discuss the important topics of hazard identification or risk mitigation. In particular, presentations were organized to emphasize connections between recent laboratory research on the actions of arsenicals as toxins and carcinogens and research on the health effects of arsenicals in human populations. The goals were to encourage speakers and other participants to consider old problems in new ways, to foster fresh perspectives on problems of interest to regulators and policy makers, and to promote new collaborative efforts. Given the feedback from participants in the workshop, we are confident that these goals were attained.

The organizers thank their colleagues at the US EPA and in other federal agencies, academia, and the private sector for advice on topics and speakers for the workshop. Speakers and attendees enthusiastically participated in all aspects of the workshop and contributed to its success (see Fig. 1). We especially thank Gunther and Mary Craun of Craun Associates for organizing and managing the workshop. Their cheerful diligence in handling travel arrangements and the many details of the meeting contributed to its success.

## Acknowledgments

This introduction was reviewed in accordance with the policy of the National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

David J. Thomas  
*Experimental Toxicology Division,  
National Health and Environmental Effects  
Research Laboratory,  
Office of Research and Development,  
U.S. Environmental Protection Agency,  
Research Triangle Park, NC 27709, USA  
E-mail address: [thomas.david@epa.gov](mailto:thomas.david@epa.gov).*  
Corresponding author.

Edward E. Hudgens  
Rebecca L. Calderon  
*Human Studies Division, National Health and  
Environmental Effects Research Laboratory,  
Office of Research and Development,  
U.S. Environmental Protection Agency,  
Research Triangle Park, NC 27709, USA*