

# NEUROTOX 25

## Twenty-Fifth International Neurotoxicology Conference

Location	Rochester, New York – Hyatt Regency
Event Starts On	October 12, 2008 at 1:00 pm
Event Ends On	October 16, 2008 by 12:00 Noon
Language	English
Conference Chair	Joan M. Cranmer, Professor of Pediatrics and Toxicology, Department of Pediatrics, University of Arkansas for Medical Sciences
Conference Co-Chair	Deborah A. Cory-Slechta, Professor, Department of Environmental Medicine, University of Rochester School of Medicine and Dentistry
Program Committee	Michael Aschner, Philip Davidson, Donato Di Monte, Steve Gilbert, Pamela Lein, Richard LoPachin, Christopher Newland, Lisa Opanashuk, Isaac Pessah, Jason Richardson, Richard Seegal, Mona Thiruchelvam
Advisory Committee	William Atchison, Alycia Halladay, Jean Harry, David Jett, Annette Kirshner, Cindy Lawler, Donna Mergler, Toshio Narahashi, John O'Donoghue, Kenneth Reuhl, Deborah Rice, Evelyn Tiffany-Castiglioni, Bernard Weiss
Conference Staff	Leslie Hicks, Jackie Jagers and Alycia Buford-Penn
Conference Website And Program	Visit <a href="http://www.neurotoxicology.com">www.neurotoxicology.com</a>

Person of Honor **Bernard Weiss**

***One day of NEUROTOX 25 will be The Rochester Conference on "Critical Issues in Neurotoxicity Research"***

On October 15th, 2008, the University Of Rochester Department Of Environmental Medicine will sponsor and host the *21st Rochester Conference on Environmental Toxicity* in conjunction with NEUROTOX 25. The 2008 *Rochester Conference* will focus on highlighting the *State of the Science* in the field of neurotoxic exposures and diseases and disorders of the nervous system. Many of the critical issues facing the field today had their origins in research conducted in Rochester. The meeting will showcase the many roles played by Rochester colleagues whose work has had a major impact on the field of neurotoxicology. The *Rochester Conference* series started in 1968. Each symposium involves 15 to 20 distinguished scientists in the field of environmental toxicology and typically results in a major publication which this year will be combined with NEUROTOX 25. Historically, publication of these peer-reviewed proceedings has had a substantial impact on ongoing research, research funding, and policy making.

This *Rochester Conference* will be dedicated as a *Festschrift* for Dr. Bernard Weiss, who, for the past half century, has been a seminal force within the behavioral and developmental neurotoxicology field. Much of his career has been spent at the University of Rochester. The *Festschrift* will take place in conjunction with the *25th Annual International Neurotoxicology Meeting*, which is being held in Rochester on October 12th through 16th. About 200 attendees are expected. The *Festschrift* is still being planned. It will focus on areas of research stimulated by Bernie Weiss. The Department plans to invite about 20 of Bernie's present and former students, fellows, and colleagues as presenters and discussants. In addition to the scientific meeting, the *Festschrift* will culminate in a reception and dinner honoring Bernie on his home ground.

### Important Dates

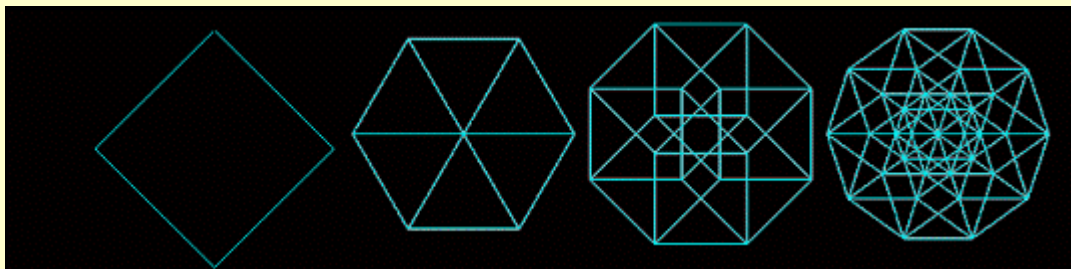
<b>"Early Bird" Discounted Registration Deadline</b>	<b>July 1, 2008</b>
Last Day for Submission of Abstract	August 1, 2008
Discounted Hotel Rate Deadline	September 15, 2008
Discounted Conference Registration Deadline	September 15, 2008
Deadline to Submit your Paper for Peer-Reviewed Special Issue of NeuroToxicology	February 1, 2009

## Background and Rationale

Scope

### 'ENVIRONMENTAL ETIOLOGIES OF NEUROLOGICAL DISORDERS: *Scientific, Translational and Policy Implications*'

**Significance and Justification for the Theme:** The International Neurotoxicology Conference Series will reach its silver anniversary in 2008, with its 25th meeting. The history of this series reflects the expansion of neurotoxicology into domains that had hardly been conceived of in 1982, the date of the first conference. There is no better way to depict its evolution than to show it geometrically.



*The Geometry of Neurotoxicology:* The series began with essentially one topic, as in the first square, which depicts a single dimension. This first conference featured metals—manganese, tin, and lead—still prominent in later meetings, and the question of chlordecone. The next expanded the conference scope by examining a critical endpoint, axonopathies, that could be the outcome of many different kinds of exposures, followed by one that embraced a variety of pesticides; the second figure represents the scope of these two meetings. The fourth conference, Neurotoxicology in the Fetus and Child (1985), for the first time addressed a topic with multiple dimensions, and might be depicted by the third figure. The scope of each successive conference until the 24th, held in 2007, varied from single topics to multiple perspectives on an issue such as children's development. The 24th conference (NEUROTOX 24) represented a large evolutionary step. It encompassed not just the science of neurotoxicology, but its societal implications, ranging from how it affected (and reflected) social order, how it might move health and environmental policy, and how it might influence clinical practice. The fourth figure depicts its dimensional expansion.

NEUROTOX 25 continues this evolution. It will take up issues that, in earlier conferences, were treated, if not in isolation, at least as principals in their own domains. NEUROTOX 25 will be looking, not just at the multiple surfaces in the fourth figure, but at their intersections, which are multiples of surfaces. Science, policy, and translation can no longer be treated as independent entities. NEUROTOX 25 is poised to view them as they truly are: a problem in multidimensional geometry.

**Background and Rationale:** Environmental Etiologies of Neurological Disorders: Scientific, Translational and Policy Implications. It has become increasingly evident that many human neurological diseases and disorders arise from complex interactions of multiple risk factors, of which environmental chemical exposures may serve as one contributing risk. Other environmental and host factors, such as genetic background, stage of development, dietary status, immune status, obesity, stress, socioeconomic status, gender, aging, behavior, and intercurrent disease state, as well as simultaneous chemical exposures, can also contribute. For example, Parkinson's disease exhibits gender differences, and protection is conferred by caffeine and smoking. The impact of neurotoxicants like lead and methylmercury is heavily influenced by developmental windows, with children showing significantly greater vulnerability. Thus, a full understanding of the true risk posed by any environmental toxicant for human neurological diseases or disorders will ultimately require assessments of its interaction with other relevant environmental, host and genetic risk factors and other modifiers of effect.

Despite these complexities, the paradigms used to understand the impact of

environmental exposures as risk factors for human diseases continue to rely on approaches that fail to capture this reality. Instead, they focus on exposures to single chemicals in isolation from other risk factors. Animal studies often examine effects of a single chemical in young adult, mostly male rodents, ignoring, for instance, the potential importance of age and gender. Epidemiological and clinical studies generally focus on main effects of environmental exposures, since risk modification, as reflected in statistical interactions, is considered inaccessible because of inadequate sample sizes. Consequently, as models of diseases and disorders, current research approaches are distant from actual human conditions, constraining the ability to determine pathophysiological mechanisms from which biomarkers and therapeutic strategies can be identified, thereby limiting the ability to protect human health.

An understanding of the interactions of host and environmental risk factors with environmental chemical exposures in the etiology of neurological diseases and disorders allows the development of increasingly more realistic and valid animal models of disease, and more focused clinical /epidemiological studies. Refined animal and human models will expedite the discovery of pathophysiological mechanisms of environmentally-related diseases and disorders, and thus improve the ability to define biomarkers of disease onset and progression, as well as potential targets for therapeutic interventions, thereby leading to improved prevention and detection strategies. Understanding how risk factors interact is also critical in the context of global public health protection, since different populations and cultures bring different sets of risk factors into play.

## Focus Topics

Check [www.neurotoxicology.com](http://www.neurotoxicology.com)

## Call for Abstracts

For complete details and form go to [www.neurotoxicology.com](http://www.neurotoxicology.com)

E-mail your abstract to Leslie Lang Hicks. The information on the form must be included with Abstract Submission! Notification of presentation from platform or poster will be by e-mail using the e-mail address shown on your abstract form.

### Submission/Contact Address

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## Poster Session

Posters on any aspect of toxicology/neuroscience/public health are welcome.

Poster Size: 4 feet high x 6 feet wide

Check [www.neurotoxicology.com](http://www.neurotoxicology.com) for updates

Posters do not need to be related to the theme. Posters on any aspect of toxicology/neuroscience/public health are welcome

## Additional Information about the event

### Student Awards:

Students are encouraged to submit an abstract and compete for the Pre- and Post-Doctoral Student Award. Presentations will be from poster.

Student awards are judged during the poster session.

## Register Online for both the Conference and Hotel

For conference registration questions, please contact

Jackie Jagers, Registrar  
The Neurotoxicology Conference  
Arkansas Children's Hospital

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Little Rock, AR 72202-3591 USA  
Tel: (501) 364 - 1248  
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## Venue

Rochester New York and the Finger Lakes Region are famous for glorious fall colors and rich autumn harvests. It is rich in much more.... Rochester is home to historic attractions and a menagerie of Art, Theater, Museums, Activities and Parks. The Hyatt Regency Rochester is located in the heart of Downtown Rochester providing a great venue for breaks, buffets and receptions for networking and camaraderie just outside the modern conference center with wireless high-speed internet available. The \$269 room rate has been reduced to \$138 for conference participants and the Government Rate will be honored for government employees. The Hyatt offers 27 stories of renovated guest rooms overlooking New York States third largest city. Thanks to recent renovations all guest rooms now feature Hyatt's legendary "Grand Bed", and ergo-dynamic work space. Hyatt Regency Rochester has a conference center and support services ideal for the size of this conference series; we have negotiated greatly reduced room rates for NEUROTOX 25 participants.

**Purpose, Audience, Expected Registration:** The purpose of this conference is to bring together international experts from academia, industry, governmental and non-governmental organizations to discuss/debate the state-of-the-science of what is known, identify information gaps, and help define future directions for research to advance our fundamental knowledge of the mechanisms and health consequences (including subtle, delayed, and long-term) from exposure to neurotoxicants.. This conference of international experts, active researchers, regulatory scientists, risk assessors, policy makers, and other related individuals will provide information to draw upon and apply to important scientific, environmental, clinical, methodological, epidemiological, policy, regulatory, risk assessment and future funding issues. The conference has an expected registration of approximately 200 and is intended to foster an informal atmosphere for all participants to stimulate interaction and collaboration in forging a direction that promotes the health of persons of all ages.

## Publication Details

Name ***NeuroToxicology***  
Language of Publication English  
Medium of Publication Full Text (Available in Hard Copy and Online)  
Additional Information about Publication

Abstracts will be included in an Abstract Booklet in the conference packet and also published in the international journal NeuroToxicology.

Website <http://www.neurotoxicology.com/defaultflash.htm>

## Sponsors

The Neurotoxicology Conference is seeking Sponsors to make this meeting a great success. Sponsorship Opportunities are posted on the website.

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### **Educational Partner**

- **The University of Arkansas for Medical Sciences**