



The NCAC-SOT Dr. Bern Schwetz Travel Award – Honouring a Pioneering Toxicologist

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**Named in Honor of a Great
Toxicologist**

Who is Dr. Bernard Schwetz?

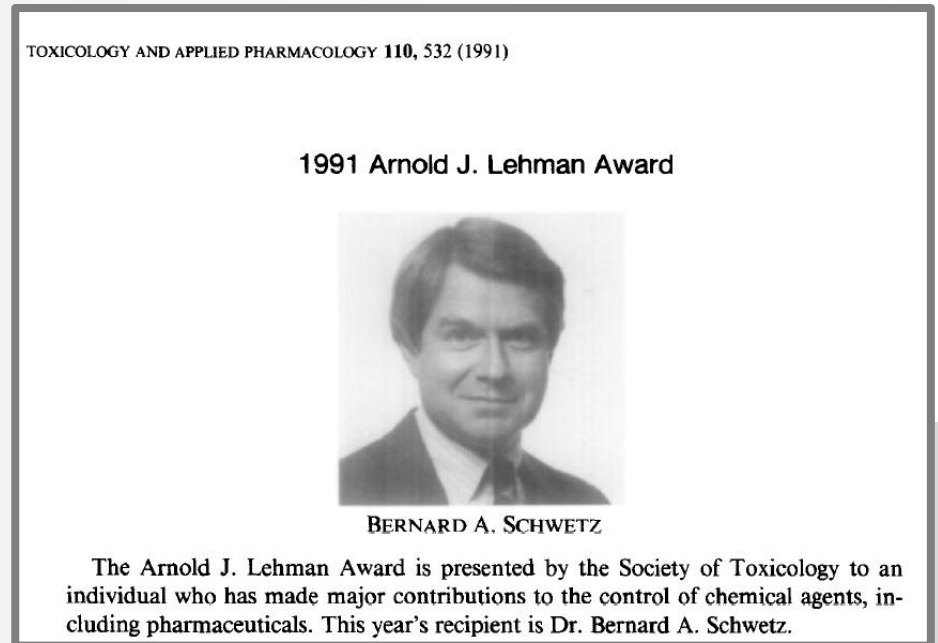


**Acknowledging Tomorrow's
Leading Toxicologists!**

**What is the Bern Schwetz Travel
Award?**

Dr. Bernard Schwetz: An Overview of His Contributions to Toxicology

- Dr. Schwetz was an expert reproductive and developmental toxicologist
 - DVM. from Univ. of Minnesota in 1967
 - PhD in Pharmacology and Toxicology from the University of Iowa in 1970
- Dr. Schwetz served key roles in industry, the U.S. government, and the field of toxicology
 - Joined NTP in 1982
 - Acting Director of the Environmental Toxicology Program at NIEHS, Associate Director of NTP
 - Director of FDA's National Center for Toxicological Research (1993 to 1999)
 - Acting Deputy Commissioner of FDA (2001-2002)
 - Retired from HHS in 2007
- Diplomate of the American Board of Toxicology, elected member of the NAS Institute of Medicine, SOT member, and NCAC-SOT officer
 - NCAC-SOT President, 2001-2002



Awarded SOT's Arnold J. Lehman Award in 1991

<https://www.sciencedirect.com/science/article/pii/S0041008X9190056K?via%3DiHub>

tion, and Editor of *Fundamental and Applied Toxicology*. Above all, our recipient is a toxicologist's toxicologist characterized by a strong, broad technical foundation, preciseness, discipline, and dedication. He is a person driven by his dedication to and love of toxicology and its use in safeguarding the health of people.

Dr. Bernard Schwetz: An Overview of His Contributions to Toxicology

- Dr. Schwetz recognized that toxicology would need to change well before the term “21st Century Toxicology” was coined!
- His January, 2001 International Journal of Toxicology review article identifies these challenges...
 - “...the field of toxicology will require new types of expertise to handle the questions that will be raised by new technology derived from new scientific findings.”

TABLE 1

Expertise needed in the field of toxicology in the future

• Molecular genetics	• Proteomics
• Cell-signaling	• Informatics
• Nutrition	• Bioengineers
• Computational sciences	• Immunology
• Microbiology	• Virology

WHY WILL THE FUTURE BE DIFFERENT?

How will new technology in future decades be different from what we have seen in the recent past? Although large-molecular-

TRAINING TOXICOLOGISTS OF THE FUTURE

With the anticipated change in toxicological issues, driven by new science and new technology, there are important questions about the future of toxicology. Will we as a field be prepared to handle these issues? Are we training scientists in areas to be responsive to these issues? How do we avoid ending up with

- His article concludes that it is not too late for the field of toxicology to change and create future toxicology experts...

Toxicology at the Food and Drug Administration: New Century, New Challenges

Bernard A. Schwetz

Food and Drug Administration, Rockville, Maryland, USA

DISTINGUISHED SERVICE AWARDEE



Bernard A. Schwetz, DVM, PhD
Acting Deputy Commissioner, FDA

Dr. Schwetz is the Acting Deputy Commissioner of the Food and Drug Administration (FDA). He was Director of FDA National Center for Toxicological Research in Jefferson, AR, from 1993 to 1999. A diplomate of the American Board of Toxicology, Dr. Schwetz was acting Director of the Environmental Toxicology Program at

Phi Zeta, Honor Society of Veterinary Medicine; Teratology Society; Behavioral Teratology Society; and the Reproductive Toxicology Specialty Section of the SOT. He is past president of the Reproductive Toxicology Specialty Section of the SOT and of the North Carolina and the South Central Chapters of the SOT. In addition to numerous other professional awards during his career, Dr. Schwetz received the U.S. Government 1998 Meritorious Executive Presidential Rank Award.

This commentary presents thoughts on the future needs of expertise within the field of toxicology as the field moves from “...licities” to “...omics.” Toxicology is largely driven by issues, not science for the sake of science, as are many other areas of research. Toxicology is largely driven by issues that relate to safety of consumer products, occupational exposures, human exposure from substances in the environment, as well as the effect of chemicals on environmental species. The bottom line message of this commentary is that the field of toxicology faces new types of issues, ones that will require new types of expertise to deal with them over the next decade. My point of reference

<https://journals.sagepub.com/doi/pdf/10.1080/109158101750103297>



Dr. Schwetz in retirement, with his pet alpacas

https://chippewa.com/news/former-fda-head-settles-into-life-as-cadott-farmer/article_e66cd4aa-4b93-5797-bc62-c21d317b074f.html

Dr. Bern Schwetz Travel Award

- The Bern Schwetz Travel Award was established by the NCAC SOT to support students presenting at the annual SOT meeting
 - Susan Makris shared that the award was presented to Dr. Schwetz at fall 2002 NCAC-SOT meeting, and he was truly surprised and pleased with the honor
 - It is a cash award for local students and post-doc toxicologists
 - The NCAC SOT provides from 1-5 awards annually
- The Bern Schwetz Travel Award has been awarded to over **50** outstanding student/post-doc toxicologists since 2003

Example Titles of Past Bern Schwetz Award Winners	Date
Thomas Rogers Cutrone, Virginia Tech: Vacuolar Changes in Sensory Neurons in Organophosphate-Induced Delayed Neurotoxicity (OPIDN): Incidence and Structure	2010
Peter Petrochenko, CDRH, UNC-Chapel Hill: Laser 3D printing with nanoscale resolution: improving biocompatibility and mitigating toxicity from photoinitiators	2014
Sarah Attreed, Johns Hopkins: Chronic Arsenic Exposure Reduces Influenza Vaccine Immunogenicity in Adult Female C57BL/6 Mice	2018 (shout out to a former NCAC-SOT Grad Student Rep!)
Dana Freeman, Johns Hopkins: Human Allele-Specific Methylated Regions Have Increased Resilience to Rotenone Exposure in α -Synuclein Knockdown Neurons	2020 (shout out to a former NCAC-SOT Grad Student Rep!)