

## BIOSKETCH

Bruce A. Fowler Ph.D., Fellow A.T.S.

### Education:

B.S. degree in Fisheries (Marine Biology) - University of Washington in 1968

Ph.D. in Pathology - University of Oregon Medical School in 1972.

### Biosketch:

He began his scientific career at the National Institute of Environmental Health Sciences prior to becoming Director of the University of Maryland System-wide Program in Toxicology and Professor at the University of Maryland School of Medicine. He then served as Associate Director for Science in the Division of Toxicology and Environmental Medicine at Agency for Toxic Substances and Disease Registry (ATSDR). He is currently a private consultant and Adjunct Professor, Emory School of Public Health and Presidents Professor of Biomedical Science and the University of Alaska- Fairbanks. Dr. Fowler, is an internationally recognized expert on the toxicology of metals and has served on a number of State, National and International Committees in his areas of expertise. These include the Maryland Governor's Council on Toxic Substances (Chair), various National Academy of Sciences / National Research Council Committees, the USEPA Science Advisory Board and Fulbright Scholarship review committee for Scandinavia (Chair, 2000-2001). He has also served as a temporary advisor to the World Health Organization (WHO) and the International Agency for Research Against Cancer (IARC) for a number of issues. Dr. Fowler has been honored as a Fellow of the Japanese Society for the Promotion of Science, a Fulbright Scholar and Swedish Medical Research Council Visiting Professor at the Karolinska Institute, Stockholm, Sweden and elected as a Fellow of the Academy of Toxicological Sciences. His more recent awards include a CDC/ATSDR, Honor Award for Excellence in Leadership Award 2010, the 2014 U.S. Pharmacopeia Award for an Innovative Response to Public Health Challenges (Group Award). Dr. Fowler was elected to the Council of the Society of Toxicology (2005-2007), the Board of Directors of the Academy of Toxicological Sciences (2006-2009), and more recently, to the Council of the Society for Risk Analysis (2014). He is the Federal Legislative and National Active and Retired Federal Employees Association (NARFE)- PAC Chair for the Rockville Maryland Chapter of NARFE. Dr. Fowler is the author of over 260 research papers and book chapters dealing with molecular mechanisms of metal toxicity and molecular biomarkers for early detection of metal-induced cell injury. He has been the editor or co-editor of 7 books or monographs on metal toxicology and mechanisms of chemical – induced cell injury. He serves on the editorial boards of a number of scientific journals in toxicology and is currently an Associate Editor of the journals Toxicology and Applied Pharmacology and Environmental Health Perspectives.

## Research Interests:

Toxicology of Metals  
Molecular Biomarkers  
Mechanisms of Cell Injury/Cell Death  
Computational Toxicology and Risk Assessment

## Recent Publications:

- McPhail B, Tie Y, Hong H, Pearce BA, Schnackenberg L, Valerio Jr. LG, Fuscoe JC, Tong W, Buzatu DA, Wilkes JG, Fowler BA, Demchuk E, Beger RD. Modeling interaction profiles: I. Spectral data-activity relationship and structure- activity relationship models for inhibitors and non- inhibitors of cytochrome P450 CYP3A4 and CYP2D6 isozymes. *Molecules: QSAR and its applications*. 17:3383-3406, 2012.
- Tie Y, McPhail B, Hong H, Pearce BA, Schnackenberg L, Weigong G, Buzatu DA, Wilkes JG, Fuscoe JC, Tong W, Fowler BA, Beger RD, Demchuk E. Modeling Chemical Interaction profiles: II. Molecular docking, spectral activity relationship, and structure activity relationship models for potent and weak inhibitors of cytochrome P450 CYP3A4 isozyme. *Molecules: QSAR and its applications*. 17:3407-3460, 2012.
- Fowler BA. Biomarkers in Toxicology and Risk Assessment. In: Volume 3. *Environmental Toxicology*. Luch, A. (ed) Birkhauser-Springer *Experientia* Volume 101: 459-470, 2012.
- Fowler BA ed. *Computational Toxicology: Applications for Risk Assessment*. Elsevier Publishers, Amsterdam (2013) pp 258.
- Nordberg GF, Fowler BA, Nordberg M. eds. *Handbook on the Toxicology of Metals (4<sup>th</sup> Edition)* Elsevier Publishers, Amsterdam (2015) pp 1385.
- Go YM, Sutliff RL, Chandler JD, Khalidur R, Kang BY, Anania FA, Orr M, Hao L, Fowler BA, Jones DP. Low-dose cadmium causes metabolic and genetic dysregulation associated with fatty liver disease in mice. *Toxicol Sci*. 2015 Jul 16. pii: kfv149. [Epub ahead of print]