

BIOGRAPHICAL SKETCH

NAME: Vernon A. Benignus POSITION TITLE: Reserch Psychologist

EDUCATION/TRAINING

Institution	Degree	Year	Field of Study
University of Houston	B.S.	1960	Electronics
University of Houston	Ph.D.	1967	Physiol Psychology

PROFESSIONAL EXPERIENCE

2004-present Detail to Neurotoxicology Division, USEPA
1972-2004 Research Psychologist, Human Studies Division, USEPA
1986-present Adjunct Research Professor, Univ. of North Carolina, Chapel Hill, NC
1981-1986 Adjunct Associate Professor, Univ. of North Carolina, Chapel Hill, NC
1972-1981 Adjunct Assistant Professor, Univ. of North Carolina, Chapel Hill, NC
1970-1972 Assistant Professor, Trinity University, San Antonio, TX
1967-1970 Assistant Professor, University of Texas Medical Branch, Galveston , TX
1967-1970 Director, Research Computation Center, University of Texas Medical Branch, Galveston , TX

PROFESSIONAL SOCIETIES

American Psychological Association, 1969 - present.
American Physiological Society, 1995 - present.
American Statistical Association, 1970 - present.
Institute of Electronic and Electrical Engineers, (life member) 1960 - present.

SELECTED AWARDS AND HONORS

EPA Bronze Medal for Commendable Service, 2002
Scientific Achievement in Neurotoxicology (SAINT) Award, 1999
EPA Scientific and Technological Achievement Award (honorable mention), 1998

ASSISTANCE/LEADERSHIP PROVIDED TO THE SCIENTIFIC COMMUNITY

Member, Editorial Review Board, International Agency for Research on Cancer, "Environmental Carcinogens: Selected Methods of Analysis"
Member, National Research Council, Panel on Hyperbarics and Mixtures, Submarine air Quality
Chairman, Advisory Committee, Effect of Combined Fire Products on Human and Physiological Performance, Naval Submarine Medical Research Laboratory
Member, Technical Advisor Panel, MTBE Rresearch, Chemical Industries Institute of Toxicology
Member, AIBS Peer-Review Panel at Walter Reed Army Institute of Research, Program on Inhalation Injury and Toxicology Models Research
Member, Science Advisory Panel, Environmental and Occupational Health Sciences Instutute on Controlled Exposures to Hydrogen Sulfide

ASSISTANCE/LEADERSHIP PROVIDED TO THE AGENCY (selected)

Reviewed literature and wrote sections for EPA air quality criterion and health assessment for carbon monoxide (3 sections) and for three solvents
Project officer, interagency agreement between EPA and U.S. Army to conduct research on neurobehavioral effects of carbon monoxide exposure in humans
Member Peer-Review panel, EPA grant proposals
Chairman, Session on Laboratory Exposures of Humans to Oxyfuels, Workshop on MTBE
Member of team in EPA/OTAQ on dosimetry and effect estimation for snowmobile exhaust

PUBLICATIONS (from 61 peer review publications and 47 chapters/proceedings)

Benignus, V., Hazucha, M., Smith, M. and Bromberg, P. Prediction of carboxyhemoglobin formation due to transient exposure to carbon monoxide. *Journal of Applied Physiology*. 76, 1739-1745, 1994.

Benignus, V. Behavioral effects of carbon monoxide: meta analyses and extrapolations. *Journal of Applied Physiology*. 76, 1310-1316, 1994.

Smith, M., Hazucha, M., Benignus, V. and Bromberg, P. A. Effect of regional circulation patterns on observed COHb levels. *Journal of Applied Physiology*. 77, 1659-1665, 1994.

Benignus, V. and Annau, Z. Carboxyhemoglobin formation due to carbon monoxide exposure in rats. *Toxicology and Applied Pharmacology*. 128, 151-157, 1994.

Benignus, V., Boyes, W. and Bushnell, P. A dosimetric analysis of behavioral effects of toluene exposure in rats and humans. *Toxicological Sciences*. 43, 186-195, 1998.

Benignus, V. Quantitative cross-species extrapolation in noncancer risk assessment. *Regulatory Toxicology and Pharmacology*. 34, 62-68, 2001.

Raub, J. and Benignus, V. Carbon monoxide and the nervous system. *Neuroscience and Biobehavioral Reviews*. 26, 925-940, 2003.

Bushnell, P., Benignus, V. and Case, M. Signal detection behavior in humans and rats: a comparison with matched tasks. *Behavioural Processes*. 64, 121-129, 2003.

Boyes, W., Simmons, J., Eklund, C., Benignus, V., Janssen, P. and Bushnell, P. Applications of dosimetry modeling to assessment of neurotoxic risk. *Environmental Toxicology and Pharmacology*. 19, 599-605, 2005.

Benignus, V. Bushnell, P. and Boyes, W. Toward cost-benefit analysis of acute behavioral effects of toluene in humans, *Risk Analysis*. 25, 447-456, 2005.

Bale, A., Meacham, C., Benignus, V., Bushnell, P. and Shafer, T. Volatile organic compounds inhibit human and rat neuronal nicotinic acetylcholine receptors expressed in *xenopus* oocytes. *Toxicology and Applied Pharmacology*. 205, 77-88, 2005.

Benignus, V., Geller, A., Boyes, W. and Bushnell, P. Human neurobehavioral effects of long-term exposure to styrene: a meta-analysis. *Environmental Health Perspectives*. 113, 532-538.

Boyes, W., Bercegeay, M., Krantz, T., Evans, M., Benignus, V. and Simmons, J. Momentary brain concentration of trichloroethylene predicts the effects on rat visual function. *Toxicological Sciences*. 87, 187-196, 2005.

Schafer, T., Bushnell, P., Benignus, V. and Woodward, J. Perturbations of voltage-sensitive Ca^{2+} channel function by volatile organic solvents. *Journal of Pharmacology and Experimental Therapeutics*. In Press, 2005.

Benignus, V., Coleman, T., Eklund, C. and Kenyon, E. A general physiological and toxicokinetic (GPAT) model for simulating complex toluene exposure scenarios in humans. *Toxicology Mechanisms and Methods*. 16, 27-36, 2006.