

CURRICULUM VITAE

Name DAVID ALLEN OTTO, Ph.D

Date/Place of Birth May 16, 1941 (Brockton, MA)

Citizenship U.S.A.

Education

1972 Ph.D. Physiological Psychology, Stanford University

1963 B.A. (Magna cum laude) Harvard College

Employment Chronology

1997-1998 Special Assistant to the Associate Director
for Health: US-Mexican Border XXI Program

1989 - present Research Psychologist
Clinical Research Branch
Human Studies Division
Health Effects Research Laboratory
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

1972 - 1989 Research Psychologist
Neurophysiology Branch
Neurotoxicology Division
Health Effects Research Laboratory
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

1979 - 1982 Adjunct Assistant Professor
Department of Electrical Engineering
Ergonomics Curriculum
North Carolina State University
Raleigh, NC 27695

1975 - 1986 Research Scientist
Biological Sciences Research Center
The University of North Carolina
Chapel Hill, NC 27599

1973 - 1979 Adjunct Assistant Professor
Institute of Speech and Hearing Sciences
The University of North Carolina
Chapel Hill, NC 27599

1972 - 1980 Research Assistant Professor
Department of Psychology
The University of North Carolina
Chapel Hill, NC 27599

- 1968 - 1971 NIH Predoctoral Fellow
Physiological Psychology
Stanford University:
Teaching Assistant, Introductory Psychology
Department of Psychology
Stanford University
- 1968 - 1969 Research Assistant
Neuropsychology Laboratory
Department of Psychiatry
Stanford University School of Medicine
- 1967 - 1968 Research Assistant
Sleep Laboratory
Department of Psychiatry
Stanford University School of Medicine

Professional Societies

The American EEG Society (1972-1982)
Society for Psychophysiological Research
International Neurotoxicology Association
Behavioral Toxicology Society

Honors/Awards

- 1959 - 1963 NROTC Scholarship for undergraduate studies at
Harvard College
- 1963 Graduated Magna Cum Laude from Harvard College
- 1967 - 1971 NIH Predoctoral Fellowship for Graduate Studies
at Stanford University
- 1971 - 1972 NRC Research Associateship, NASA-Ames Research
Center, Moffitt Field, CA.
- 1980 Special Achievement Award from EPA for EPIC IV
Publication
- 1982 Scientific and Technical Achievement Award in
Recognition of Excellent Scientific Accomplish-
ments in environmental health research, U.S.
Environmental Protection Agency.
- 1988 Scientific and Technical Achievement Award
(level III) for publication "Blood lead, hearing
thresholds and neurological development in
children and youth.
- 1992 Scientific and Technical Achievement Award (Level III)
for publications on the neurobehavioral effects of human

exposure to volatile organic mixtures.

- 1993 Special Achievement Award for neurobehavioral contribution to MTBE research.
- 1993 Special Achievement Award for Northern Bohemia Health Studies.
- 1997, 1998 Special Achievement Awards for Contributions to US-Mexican Border XXI Program.
- 2000 Silver Medal Award as co-author of Guidelines for Neurotoxicity Risk Assessment
- 2004 Bronze Medal for Czech Air Pollution Studies

Research Interests

Neurosensory effects of arsenic in drinking water
Neurobehavioral effects of pesticides in children
Neurobehavioral effects of estuary-associated syndrome (pfiesteria)
Neurobehavioral effects of indoor air pollutants, particularly VOCs
Neurosensory aspects of multiple chemical syndrome
Neurobehavioral effects of lead absorption on CNS function in children
Development of computerized methods for neurotoxicity field testing

Professional Activities

- 2005 - Editorial Board, Neurotoxicology and Teratology
- 2005-2006 Member, Arsenic Synthesis Document Workgroup
- 1997 - 1999 Organizing Committee, Workshop on the Assessment Of Health Effects of Pesticide Exposure in Young Children held in El Paso, TX, December, 1997. Co-editor of Proceedings published as EPA document.
- 1994 - 1996 Organizing Committee, Symposium on Computerized Behavioral Testing of Humans in Neurotoxicity Research held in Portland, OR, June, 1995. Co-editor of proceedings published in Jul-Aug 1996 issue of Neurotoxicol. Teratol.
- 1992 - 1997 Coordinator, Neurobehavioral Section, Teplice Project (EPA-Czech Study of Health Effects of Air Pollution in Northern Bohemia)
- 1991 - 1995 Member, International Commission on Occupational Health
- 1986 - 1991 Coordinator, Indoor Air Research Planning in Neurotoxicology
- 1982 - 1988 Coordinator, Neurobehavioral Field Studies

Working Group, Neurophysiology Branch,
Neurotoxicology Division, Health Effects
Research Laboratory

- 1988 - 1996 Member and contributing author, Neurotoxicity Risk Assessment Workgroup
- 1986 - 1996 EPA Advisor/Consultant to National Center for Health Statistics on National Health and Nutrition Survey III/IV
- 1983 - 1992 Consultant and contributing author, Lead Criteria Document, Environmental Criteria Assessment Office, U.S. EPA
- 1983 - 1992 Member of Ad Hoc Committee for the Prevention and Control of Lead Toxicity, NC Dept. of Human Resources, Division of Health Services
- 1982 - 1985 Organized Workshop on Neurotoxicity Testing in Human Populations held in Rougemont, NC, Oct. 1983. Co-edited proceedings published in Neurobehav. Toxicol. Teratol., 1985.
- 1973 - 1978 Organized Fourth International Congress on Event-related Slow Potentials of the Brain (EPIC IV), held in Hendersonville, NC, Apr. 1976. Editor of proceedings.
- 1972 Consultant, Institute for Childhood Aphasia, Stanford University School of Medicine
- 1971 - 1972 National Research Council Research Associate, NASA-Ames Research Center, Man-Machine Integration Branch

Project Officer/Management Experience:

Contract/Grants:

- Title: Clinical Support Services Contract (68-01-3800)
Contractor: University of North Carolina, Chapel Hill
Period: 1974-1980
Funding: approx. 100k per annum
- Title: Application of Microprocessor Technology to Behavioral Data Acquisition (R805628)
Grantee: University of Illinois, Champaign-Urbana
Period: 1977-1980
Funding: 150K
- Title: Electrophysiological Evaluation of Neurotoxic Hazards Related to Energy (R807150)
Grantee: SRI, International

Period: 1980-1982
Funding: 154K

Collaborative Agreements:

Title: Development of Behavioral Battery for Field Testing of Toxicity (CR808834)
Institution: University of North Carolina, Chapel Hill
Period: 1981-1985
Funding: 150K

Title: Electrophysiological Battery for Assessing the Effects of Exposure to Toxic Substances (CR808974)
Institution: University of Illinois, Champaign-Urbana
Period: 1981-1983
Funding: 300K

Title: Assessment of Neurobehavioral Function in children with Elevated Blood Lead Levels (809992)
Institution: University of North Carolina, Chapel Hill
Period: 1982-1985
Funding: 232K

Title: Assessment of Neurotoxicity in Workers Occupationally Exposed to Organophosphorous Pesticides (CR811179)
Institution: University of Alexandria, Egypt
Period: 1984-1987
Funding: 150K

Title: Validation of Microcomputer Neurobehavioral Testing Systems for Environmental Toxicity Studies (CR811806)
Institution: Harvard School of Public Health
Period: 1985-1986
Funding: 225K

Title: Effects of Lead Exposure on Electrophysiological Measures of Brain Function (CR812975)
Institution: University of Cincinnati Medical Center
Period: 1986-1992
Funding: 125K

Title: Neurobehavioral Assessment of Children and Adults: NHANES III Support Studies
Institution: University of North Carolina, Department of Psychology
Period: 1990-1994
Funding: 100K

Interagency Agreements:

Title: EPA/CDC-NCEH InterAgency Agreement to Support Environmental Health Programs on the US-Mexican Border (DW75938440)
Period: 1997-2002 Funding: 1.5M

Title: EPA/CDC-NCEH Interagency Agreement on Drinking Water Research (DW75938021)

Period: 9/97-8/02 Funding : 1M

Title: EPA/HRSA Interagency Agreement to Support Environmental Health Training and Surveillance Activities on the US-Mexican Border (DW75938440).
Period: 9/98-8/03 Funding: 805K

Headquarters Assignments:

EPA Advisor to National Center for Health Statistics on NHANES III,IV.
Member of Neurotoxicity Risk Assessment Guideline Workgroup

Military Service:

6/63-8/67 Commissioned Officer, U.S. Navy, USS McCaffery (DD860): Electrical/Main Propulsion Assistant:
USS Kirwin (APD-90): Engineer officer, Operations Officer, Executive officer.

Teaching Experience:

1968 - 1970 Intro. Psychology. Sections on EEG, Behavior, and Altered States of Consciousness
Stanford University (2 Semesters)

1973 - 1974 Intro. Personality. (UNC-CH/2 Semesters)

1975 EEG: Theory, Methods & Applications (Graduate Seminar at UNC/Chapel Hill)

1979 Research Methods in Work Physiology (Graduate Seminar at NCSU)

1990-present Invited lectures on Neurotoxicity Testing Methods and the Neurotoxicity of Lead, UNC-CH, School of Public Health

Invited International Scientific Presentations and Seminars (*Chaired session)

1. Otto D, Benignus V, Ryan L, Leifer L. Slow potential components of stimulus, response and preparatory processes in man. Presented at an Int Symposium on Cerebral Evoked Potentials held Brussels, Belgium, Apr >74.
2. Otto D.* Neurobehavioral assessment of environmental insult. Presented at the 4th Int Cong on Event-related Slow Potentials of the Brain (EPIV IV) held in Hendersonville, NC, Apr >76. (I organized this conference, chaired several sessions, and edited the proceedings which were published by the U.S. Govt. Printing Office.)
3. Otto D, Schroeder S, Mushak P, Muller K. Electrophysiological assessment of central and peripheral nervous system function in children with elevated body lead burden. Presented at the Int. Conf on Prospective Studies of Lead Toxicity held in Cincinnati, OH, Nov >81.
4. Otto D, Benignus V, Muller K, Barton C, Seiple K, Prah J, Schroeder S. Effects of low to moderate lead exposure on slow cortical potentials in young children: 2-year follow-up

study. Presented at a Symposium on Environmental Neurotoxicity: Assessment of Nervous System and Behavioral Dysfunction held at the University of Dusseldorf in Dusseldorf, Germany, Mar >82.

5. Otto D, Benignus V, Muller K, Barton C. Evidence of changes in CNS function at low-to-moderate blood lead levels in children: A challenge to currently accepted threshold limits. Presented at the Inst of Neurology, National Hospital, London, England in Mar >82.

6. Otto D. Event-related brain potentials: An alternative methodology for neurotoxicology research. Presented at a Symposium on the Neuropsychological Effects of Solvent Exposure held at the School of Hygiene and Tropical Medicine in London, England, Apr >82.

7. Otto D. Electrophysiological assessment of effects of lead exposure on CNS function in children. Presented at the UNESCO Science Center, Alexandria, Egypt, Apr >82.

8. Otto D*. The application of event-related slow brain potentials in occupational medicine. Presented at the Int. Symposium on Neurobehavioral Methods in Occupational Health: State of the Art and Emerging Trends held in Como and Milan, Italy in June >82.

9. Otto D, Robinson G, Baumann S, Schroeder S, Mushak P, Kleinbaum D, Barton C, Boone L. Five-year follow-up study of children with low-to-moderate lead absorption: Electrophysiological evaluation. Presented at 2nd Int Conf on Prospective Studies of Lead Exposure in Children, Cincinnati, OH, Apr >84.

10. Otto D. The relationship of event-related brain potentials and lead absorption: A review of current evidence. Presented at an Int. Conf. On Lead Environmental Health--the Current Issues held at Duke University, May >85.

11. Otto D*, Robinson G, Baumann S, Schroeder S. Effects of low to moderate lead exposure on brainstem auditory evoked potentials in children. Presented at the 2nd Int Sympos on Neurobehavioral Methods in Occupational and Environmental Health held in Copenhagen, Denmark, Aug >85.

12. Otto D. Neurotoxicity testing of agricultural workers. Presented at an Int. Conf. On Health and Safety in Agriculture held in Saskatoon, Saskatchewan, Canada, Oct >85.

13. Otto D, Robinson G, Baumann G. Electrophysiological assessment of sensory and cognitive function in children with undue lead exposure. Presented at the Int. Conf. On Lead Exposure and Neurobehavioral Effects in Children held at the University of Edinburgh, Scotland, Sep >86.

14. Otto D*, Hudnell K, Boyes W, Janssen R, Dyer R. Electrophysiological measures of visual and auditory function as indices of neurotoxicity. Presented at the 1st Int Neurotoxicity Assoc mtg in Lunteren, The Netherlands, May >87. (Served on Organizing Comm.)

15. Otto D*, Hudnell K. Electrophysiological systems for neurotoxicity field testing: PEARL II and alternatives. Presented at the 3rd Int Symposium on Neurobehavioral Methods in Environmental and Occupational Health held in Washington, DC, Dec 1988.

16. Otto D*, Hudnell K. Problems in studying low-level solvent mixtures. Presented at the Conf on Acute Effects of Exposure to Organic Solvents held in Schwerte, Germany, Mar >90.

17. Otto D*. Neurobehavioral and sensory irritant effects of controlled exposure to a

complex mixture of volatile organic compounds. Presented at the European NES User=s Meeting held at Rijswijk, The Netherlands, Mar >90.

18. Otto D*. Computerized behavioral testing of children. Presented at the European NES User=s Meeting held at Rijswijk, The Netherlands, Mar >90.

19. Otto D and Arcia C. Test-retest reliability of selected NES tests. Presented at the European NES User=s Meeting held at Rijswijk, The Netherlands, Mar >90.

20. Otto D, Hudnell K, Prah J, Counts W, House D. Time course of olfactory and trigeminal symptoms during exposure to a mixture of VOCs. Presented at the Institute of Environmental and Occupational Medicine, Aarhus, Denmark, Mar >90.

21. Otto D, Arcia E, House D. Application of computerized behavioral tests in controlled exposure studies. Presented at the 5th Int Conf on Indoor Air Quality and Climate held in Toronto, Ontario, July >90.

22. Hudnell K, Otto D, House D, Molhave L. Odor and irritation effects of a volatile organic compound mixture. Presented at the 5th Int Conf on Indoor Air Quality and Climate held in Toronto, Ontario, July >90.

23. Otto D. Assessment of neurobehavioral response in humans to low-level volatile organic compound (VOC) sources. Presented at the Pierce Institute (Yale) Conference on Indoor Air Pollution: Characterization of Sources and Acute Effects on Health and Comfort held in New Haven, CN, Oct >90.

24. Otto D, Hudnell K, Molhave L, House D. Behavioral and sensory effects of human exposure to volatile organic compounds. Presented at the Inst for Environmental and Occupational Health, Zagreb, Croatia, June 1991.

25. Otto D*, Hudnell K. The use of visual and chemosensory evoked potentials in environmental and occupational health. Presented at 4th Int Symposium on Neurobehavioral Methods and Effects in Occup. and Environ. Health held in Tokyo, Japan in July >91.

26. Otto D, Fox D. Impact of lead exposure on sensory function. Presented at 9th Int Neurotoxicol Conf held in Little Rock, Ark, Oct >91.

27. Otto D, Skalik I, Hudnell K, House D, Sram R. The assessment of neurobehavioral effects of air pollution in children from Bohemia. Presented at the Institute of Toxicology (GSF), Neuherberg, Germany, Sep >92.

28. Otto D, Skalik I, Hudnell K, House D, Sram R. The results of the neurobehavioral pilot study in children exposed to air pollutants in Northern Bohemia. Presented at the Peer-Review Workshop on the Teplice Project held in Liblice, Czech Republic, Sep >92.

29. Otto D, Skalik I, Hudnell K, House D, Sram R. Proposal for the assessment of neurobehavioral effects of chemical exposure in Bohemian children. Presented at the Peer-Review Workshop on the Teplice Project held in Liblice, Czech Republic, Sep >92.

30. Otto D. Use of electrophysiological methods in field studies of children. Presented at a Workshop on the Application of Neurobehavioral Testing in Children held at Odense University in Denmark, Jan >93.

31. Otto D*, Skalik I, Hudnell K. NES testing of school children exposed to air pollutants in Northern Bohemia. Presented at a Workshop on Further Development of Computer-based Neurobehavioral Testing in Environmental and Occupational Health held in Oslo, Norway, June >93 (served on organizing comm.).
32. Otto D*, Hudnell K, House D, Broadwell D, Darcey. Deficits in microelectronic workers chronically exposed to solvents--computerized neurobehavioral assessment. Presented at 4th Int Neurotoxicol Assoc Mtg held in Elsinore, Denmark, June >93.
33. Otto D, Hudnell K. Neurobehavioral effects of chronic solvent exposure. Seminar presented at the Institute of Hygiene for Central Bohemia, Prague, Czech Republic, June >93.
34. Otto D, Hudnell K, Molhave L, House D. Neurobehavioral and subjective reactions of young men and women to a complex mixture of volatile organic compounds. Presented (by co-author HKH due to travel restrictions) at IndoorAir=93 in Helsinki, Finland, July >93.
35. Otto D, Skalik I, Hudnell K, House D, Sram R. Neurobehavioral performance of children from Bohemia exposed to varying levels of air pollutants. Presented by I. Skalik at 1st Int Cong on Environ Med, Duisburg, Germany, Feb >94.
36. Otto D, Skalik I, Ratcliffe J, Subrt P, Sram R. Association of low-level mercury exposure and neurobehavioral performance in children from Bohemia. Presented at the Joint ISEE/ISEA Conf held at RTP, NC, Sep >94.
37. Otto D, Skalik I, Hudnell K, Kotesovec F, Dvorakova D, Nozicka J, House D, Kottnauerova S, Ratcliffe J, Sram R, Subtr P. Neurobehavioral effects of exposure to environmental chemicals in children from the Czech Republic. Paper presented at a Peer Review of the Teplice Project, Trest, Czech Republic, Oct >94.
38. Otto D, Skalik I, Sram R, Ratcliffe J, Subrt P. Association of low-level mercury exposure and neurobehavioral performance in children from Bohemia. Paper presented at the 12th Int Neurotoxicol Conf, Hot Springs, AR, Jan >95.
39. Otto D*, Skalik I, House D, Hudnell K. Comparison of NES2 scores in 2nd, 4th and 8th grade Czech children. Paper presented at the Symposium on Computerized Behavioral Testing of Humans in Neurotoxicology Research, Portland, OR, June >95. I served as co-organizer of the symposium and co-editor of the proceedings published in Neurotoxicol Teratol, 1996, vol 18.
40. Otto D, Skalik I, Bahbouh R, Hudnell K, Sram R. Neurobehavioral performance of Czech school children born in years of maximal air pollution (1982-1983). Presented at 6th Int Neurotoxicol Assoc Mtg, Szeged, Hungary, Jul >97.
41. Zenick H, Otto D, Hern S, Philen R. Pesticide exposures and health risks to children in US-Mexico border communities. Presented at ISEE/ISEA Meeting, Boston, MA, Sep >98.
42. Otto D, Skalik I, Hudnell HK, Sram R. Neurobehavioral effects of exposure to environmental pollutants in Czech children. Presented at a Conference on the Teplice Program, Prachatice, Czech Republic, Oct >00.
43. Otto D, Hudnell K. The use of tactile measures in assessing the effects of

environmental and occupational exposure to chemicals. Presented at the 8th Int Sympos on Neurobehavioral Methods and effects in Occupational and Environmental Health, Brescia, Italy, Jun >02.

44. Otto D, Li Y, Xia Y, Wu K, He L, Shao B, Kwok R, Hudnell K, Mumford J. Health effects of chronic exposure to arsenic in drinking water in Inner Mongolia: II. Vibrotactile and visual measures. Presented at the 5th Int Conf on Arsenic Exposure and Health Effects, San Diego, CA, Jul >02.

45. Otto D, Xia Y, Li Y, Wade T, Telech J, Mumford J. Neurosensory effects of chronic human exposure to arsenic associated with body burden and environmental measures. Presented at the 10th Int Neurotoxicology Assoc Mtg, Porvoo, Finland, Jun '05.

Other Invited Scientific Presentations and Seminars (*Chaired session)

1. Otto D. Neurobehavioral toxicology: Problems and methods in human research. Presented at the Southwest Psychological Assoc Ann Mtg held in Albuquerque, NM, Apr >76.

2. Otto D, Hernandez J. Subject selection, investigator interactions and informed consent in clinical and environmental research. Presented at a Symposium on Methodologies and Protocols in Clinical Research: Evaluating Environmental Effects in Man held at the Univ of North Carolina in Chapel Hill, NC, May >77.

3. Otto D,* Eckerman D. Neurotoxicity testing in human populations: Workshop overview. Presented at a Workshop on Neurotoxicity Testing in Human Populations held in Rougement, NC, Oct >83. (Dr. Eckerman and I organized this workshop and co-edited the proceedings which were published in Neurobehav. Toxicol. Teratol. in 1985.)

4. Otto D. Methods for assessing neurotoxicity in humans exposed to chemicals. Seminar presented at the UNC-CH School of Public Health, Jan >86.

5. Otto D. Methods for assessing neurotoxicity in humans exposed to chemicals. Seminar presented at the UNC-CH Dept of Psychology, Feb >86.

6. Otto D. Electrophysiological assessment of children with elevated blood lead levels. Presented at a workshop on Δ Children at Risk: The Impact of Lead Δ held at the Lenoir Memorial Hospital in Kinston, NC, Apr >86.

7. Otto D. Electrophysiological assessment of humans exposed to neurotoxicants. Presented at a Workshop on Combustion Products held at the U.S. Naval Submarine Base in Groton, CN, Nov >87.

8. Otto D. Pediatric lead poisoning. Presented in a graduate nutrition seminar at the UNC-CH School of Public Health, Chapel Hill, NC, Feb >89.

9. Otto D, Hudnell K, Molhave L, House D. Human reactions to low-level VOC mixtures found in indoor air environments. Presented at a Workshop on the Methodology for Assessing Health Risks from Complex Mixtures in Indoor Air held in Arlington, VA, Apr >90.

10. Otto D. Human reactions to complex mixtures of volatile organic compounds. Presented at 2nd Ann Symposium on Indoor Air Quality, Bowman Gray School of Medicine, Winston-Salem, NC, June >91.

11. Served as rapporteur and chaired session at a Workshop on Developing a Standardized Neurobehavioral Testing Battery for Use in Environmental Field Studies. Sponsored by ATSDR and Emory Univ, Atlanta, GA, Sep >91.
12. Otto D. Human neurotoxicity field testing. Invited lecture in the Epidemiology Seminar Series, UNC School of Public Health, Chapel Hill, NC, Apr >92.
13. Otto D, Skalik I, House D, Sram R. Neurobehavioral performance of children living in districts of Bohemia with high and low levels of air pollution. Presented at the ann. mtg. of Behav Toxicol Soc, Atlanta, GA, May >92.
14. Chaired workgroup on the "Use of ERPs in Assessing the Effects of Neurotoxicants, Drugs and Environmental Factors" at a Workshop on Cognitive Event-Related Potentials: Assessment of Current Research and Prospects for Applications held Vienna, VA in July >92.
15. Otto D. Air Pollution Health Effect Studies in Northern Bohemia. Presented to the Soc for Int Development, Duke Univ, Durham, NC, Jan >93.
16. Otto D. Human neurotoxicity field testing. Invited lecture in the Epidemiology Seminar Series, UNC School of Public Health, Chapel Hill, NC, Apr >93.
17. Otto D. Human reactions to complex mixtures of VOCs. Seminar presented to the Duke Occupational Health faculty, Durham, NC, Feb >94.
18. Otto D. Neurobehavioral methods for field testing workers exposed to chemicals. Presented at the 6th Nat Tech Info Exchange Conf (organized by DOE), Hanford, WA, May >94.
19. Invited participant/discussant at a Workshop on Experimental Approaches to Chemical Sensitivity, Princetone, NJ, Sep >95.
20. Invited participant/discussant in a Solvent Exposure to Railroad Workers Workshop, Washington, DC, Nov >96.
21. Participant/discussant in US-Mexican Border XXI Environmental Health Workgroup/ Interagency Coordinating Committee Meeting, Phoenix, AZ, Jun >97. Served on Organizing Comm.
22. Participant/discussant* at Workshop on the Assessment of Health Effects and Pesticide Exposure in Border Pediatric Populations, El Paso, TX, Dec >97. Served on Organizing Comm, chaired Neurobehavioral Workgroup, and co-edited proceedings to be published as EPA Report.
23. Organized Workshop on Research in Pesticide Exposure of Children, RTP, NC, Jan >98.
24. Otto D. Computerized neurobehavioral testing of estuary-associated syndrome. Presented at a meeting for Standardization of Neurocognitive Evaluations, Richmond, VA, Jan >98.
25. Otto D. Computerized neurobehavioral testing of estuary workers. Presented at Estuary-Associated Syndrome Study Section, Atlanta, GA, May >98.

26. Otto D. Computerized neurobehavioral testing of watermen. Presented at NC Estuary Associated Syndrome Cohort Study Site Visit, Chapel Hill, NC, Sep >98.
27. Otto D. Challenges in studying the association of neurobehavioral performance, learning disabilities and air pollution in Czech children. Invited lecture in the Integrated Toxicology Program Scholar Seminar Series at Duke University, Oct >00.
28. Otto D, Li Y, Xia Y, He L, Ning Z, Yang K, Kwok R, Hudnell K, Mumford J. Sensory effects of human exposure to arsenic in drinking water. Presented at the 20th Annual Behavioral Toxicology Society Meeting, RTP, NC May >01.
29. Invited by ATSDR to serve on an Advisory Committee to review progress of a grant Δ Neurodevelopmental Test Methods Research@, Univ of Rochester, NY, Jun >01. Two subsequent confcall reviews have been held.
30. Invited by ATSDR to participate on a panel to re-evaluate the sensitivity of the pediatric environmental neurobehavioral test battery (PENTB) to assess the occurrence of neurobehavioral disorders in children exposed to methyl parathion and its usefulness in future studies. Atlanta, GA, Nov >01.

Bibliography (Peer-reviewed journal publications)

1. Mackworth, N.H., and D.A. Otto. Habituation of the Visual Orienting Response in Young Children. *Percept. Psychophys.* 7: 173-178, 1970.
2. Donchin, E., D.A. Otto, L.K. Gerbrandt, and K.H. Pribram. While a Monkey Waits: Electro cortical Events Recorded During the Foreperiod of a Reaction-time Study. *Electroenceph. Clin. Neurophysiol.* 31: 15-127, 1971.
3. Donchin, E., D. Otto, L. Gerbrandt, and K. Pribram. Studies in the Physiology of CNV. *Electroenceph. Clin. Neurophysiol., Suppl.* 33: 257-261, 1973.
4. Otto, D.A., and L.J. Leifer. The Effect of Modifying Response and Performance Feedback Parameters on the CNS in Humans. *Electroenceph. Clin. Neurophysiol., Suppl.* 33: 29-37, 1973.
5. Benignus, V.A., D.A. Otto, and J.H. Knelson. Effects of Low-frequency Random Noises on Performance of a Numeric Monitoring Task. *Percept. Motor Skills* 40: 231-239, 1975.
6. Benignus, V.A., D.A. Otto, J.D. Prah, and L.J. Ryan. Monitoring Performance as a Function of the Rate of Ready Signals. *Percept. Mot. Skills.* 43: 815-821, 1976.
7. Benignus, V.A., D.A. Otto, J.D. Prah, and G. Benignus. Lack of Effects of Carbon Monoxide on Human Vigilance. *Percept. Motor Skills* 45: 1007-1014, 1977.
8. Otto, D.A., V.A. Benignus, and J.D. Prah. Carbon monoxide and Human Time Discrimination: Failure to Replicate Beard-Wertheim Experiment. *Aviat. Space Environ. Med.* 50: 40-43, 1979.
9. Otto, D.A., V. Benignus, K. Seiple, D. Loiselle, and T. Hatcher. ERPs in Young Children During Sensory Conditioning. *Progr. Brain Res.* 54: 574-578, 1980.
10. Otto, D.A., V.A. Benignus, K.E. Muller, and C.N. Barton. Effects of Age and Body Lead

Burden on CNS Function in Young Children. I. Slow Cortical Potentials. *Electroencephal. Clin. Neurophysiol.* 52: 229-239, 1981.

11. Benignus, V.A., D.A. Otto, K.E. Muller, and K.J. Seiple. Effects of Age and Body Lead Burden on CNS Function in Young Children. II. EEG Spectra. *Electroencephal. Clin. Neurophysiol.* 52: 240-248, 1981.

12. Otto, D., V. Benignus, K. Muller, C. Barton, and S. Schroeder. Effects of Low to Moderate Lead Exposure on Slow Cortical Potentials in Young Children. Two-year follow-up study. *Neurobehav. Toxicol. Teratol.* 4: 733-737, 1982.

13. Muller, K., D. Otto, and V. Benignus. Strategies for Analyzing EEG/ERP Data. *Psychophysiology* 20: 212-218, 1983.

14. Otto, D.A., and L. Reiter. Developmental Changes in Slow Cortical Potentials of Young Children with Elevated Body Lead Burden: Neurophysiological Considerations. *N.Y. Acad. Sci.* 425: 377-383, 1984.

15. Otto, D. Developmental Aspects of Event-related Potentials: Aberrant Development. *N.Y. Acad. Sci.* 425: 319-337, 1984.

16. Otto, D., G. Robinson, S. Baumann, S. Schroeder, P. Mushak, D. Kleinbaum, and L. Boone. Five-year Follow-up Study of Children with Low-to-Moderate Lead Absorption: Electrophysiological Evaluation. *Environ. Res.* 38: 168-186, 1985.

17. Schroeder, S., B. Hawk, D. Otto, P. Mushak, and E. Hicks. Separating the Effects of Lead and Social Factors on IQ. *Environ. Res.* 38: 144-154, 1985.

18. Otto, D., S. Baumann, and G. Robinson. Application of a Portable Micro-Processor-based System for Electrophysiological Field Testing of Neurotoxicity. *Neurobehav. Toxicol. Teratol.* 7: 409-414, 1985.

19. Moody, L., J. Arezzo, and D. Otto. Evaluation of Workers for Early Peripheral Neuropathy: The Role of Existing Diagnostic Tools. *Sem. Occup. Med.* 1: 153-162, 1986.

20. Moody, L., J. Arezzo, and D. Otto. Screening Occupational Populations for Asymptomatic or Early Peripheral Neuropathy. *J. Occup. Med.* 28: 975-986, 1986.

21. Hawk, B., S. Schroeder, G. Robinson, D. Otto, P. Mushak, and C. Barton. Relation of Lead and Social Factors to IQ of Low SES Children: A Partial Replication. *Am. J. Ment. Defic.* 9: 178-183, 1986.

22. Otto, D. The Use of Sensory Evoked Potentials in Neurotoxicity Testing of Workers. *Sem. Occup. Med.* 1: 175-184, 1986.

23. Schwartz, J., and D. Otto. Blood Lead, Hearing Thresholds and Neurological Development in Children and Youth. *Arch. Environ. Health* 42: 153-160, 1987.

24. Otto, D., K. Hudnell, W. Boyes, R. Janssen, and R. Dyer. Electrophysiological Measures of Visual and Auditory Function as Indices of Neurotoxicity. *Toxicology* 49: 205-218, 1988.

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