

CURRICULUM VITA

Kenny S. Crump

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Date of Birth: October 13, 1939
Place of Birth: Haynesville, Louisiana

Marital Status: Married
Children: Three

EDUCATION

1968 Ph.D., Mathematics
1963 M.A., Mathematics
1961 B.S., Electrical Engineering

Montana State University
University of Denver
Louisiana Tech University

HONORS

B.S. cum laude
Omicron Delta Kappa
Phi Kappa Phi
Tau Beta Pi
Eta Kappa Nu
Who's Who in American Colleges and Universities
Engineering Honor Freshman
Louisiana Tech Sigma Xi Research Award-1977
Sigma Pi Sigma
Fellow, American Statistical Association
Fellow, Society for Risk Analysis
Distinguished Achievement Medal, Section on Statistics and the Environment, American Statistical Association
Twentieth Century Distinguished Service Award for outstanding contribution to the development and direction of cross-disciplinary combination of practicality and scholarship for statistics, ecology, environment, and society in the form of Environmental Statistics.
Ninth Lukacs Symposium, Bowling Green State University, April 24, 1999
Society for Risk Analysis 2004 Distinguished Achievement Award
2019 Distinguished Alumnus Award Recipient for the Electrical Engineering Program in the College of Engineering and Science at Louisiana Tech University

RESEARCH INTERESTS

Application of statistics and stochastic processes to problems in biology and health.
Methodology for assessment of effects upon human health from environmental exposures.

PROFESSIONAL EXPERIENCE

1961 – 1963	Research Associate, Denver Research Institute
1963 – 1966	Instructor of Mathematics, Montana State University
1966 – 1980	Professor of Mathematics and Statistics, Louisiana Tech University
1967 – 1968	Research Associate, Department of Statistics, State University of New York at Buffalo (on leave)
1969 (summer)	Research Participant, Statistics Group, Mathematics Section, Oak Ridge National Laboratory, Oak Ridge, TN
1974 – 1975	Visiting Scientist, National Institute of Environmental Health Sciences, Research Triangle Park, NC (on leave)
1978 – 1986	President, K. S. Crump and Company, Inc., Ruston, LA
1986 – 2001	Senior Vice President, The K.S. Crump Group, Inc., ICF Consulting, Ruston, LA
1986 – Present	Adjunct Professor, Chemical Engineering, Louisiana Tech University
1989 – Present	Adjunct Professor of Toxicology, College of Pharmacy and Health Sciences, Northeast Louisiana University
2001 – 2007	Principal, Environ International Corporation, Ruston, LA; Monroe, LA.
2007 – 2010	Research Professor, Louisiana Tech University
2010-present	Private consultant
2017-present	Adjunct Professor, Louisiana Tech University

COMMITTEES AND OFFICES

1976 – 1979	Officer, Louisiana Chapter American Statistical Association: Secretary-Treasurer — 1976-1977; Vice-President — 1977-1978; President — 1978-1979.
1978 – 1979	United States Congress Office of Technology Assessment: Tolerance Advisory Panel — Environmental Contaminants in Food.
1979 – 1980	National Academy of Sciences: Diesel Impacts Study Committee and Panel on the Health Effects of Diesel Emissions.
1980 – 1983	American Statistical Association: Committee on Statistics and the Environment.
1981 – 1982	National Academy of Sciences: Committee on Institutional Means for the Assessment of Risk to Public Health.
1984 – 1987	Province of Ontario: Advisory Panel on 2,4-D.
1989 – 1993	National Research Council, Committee on Risk Assessment Methodology
1991 – 1995	National Center for Toxicological Research, Science Advisory Board
1991 – 1997	U.S. Environmental Protection Agency, Science Advisory Board, Committee on Environmental Health
1995 – 1996	California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Risk Assessment Methodology Review Committee
1995 – 1997	U.S. Environmental Protection Agency, Science Advisory Board, Research Strategies Advisory Committee
1995 – 1999	Mickey Leland National Urban Air Toxics Research Center, Science Advisory Panel
1995	National Institute of Environmental Health Sciences Board of Scientific Counselors, <i>Ad hoc</i> member
1996	Royal Society of Canada, Expert Panel on Asbestos
1997 – 2000	Louisiana Tech Engineering and Science Foundation Board of Directors

1998	Office of Science and Technology Policy, Workshop on Scientific Issues Relevant to Assessment of Health Effects from Exposure to Methylmercury, Design and Statistics Panel
2000 – 2001	U.S. Environmental Protection Agency, Science Advisory Board, Dioxin Reassessment Review Committee
2001	Food and Agriculture Organization of the United Nations/World Health Organization (FAO/WHO) Joint Expert Committee on Food Additives (JECFA), temporary advisor, fifty-seventh meeting, Rome, June 5-14
2005 – 2008	National Toxicology Program Board of Scientific Counselors
2006 – 2009	National Academies of Science Standing Committee on Risk Analysis Issues and Reviews, member
2007–2008	Health Canada Chrysotile Asbestos Expert Panel, Member
2014	Committee to Evaluate the Potential Exposure to Agent Orange/TCDD Residue and Level of Risk of Adverse Health Effects for Aircrews of Post-Vietnam C-123 Aircraft, Institute of Medicine of the National Academies
2015-2017	National Academies of Science ad hoc Committee on Assessing Toxicologic Risks to Human Subjects Used in Controlled Exposure Studies of Environmental Pollutants
2016-2020	ad-hoc member, US EPA FIFRA Scientific Advisory Panel

SELECTED TESTIMONY

Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario. August 13, 1981 (presented findings resulting from review of asbestos health effect literature, critiques of risk assessments carried out by other investigators, and independent risk calculations).

Congress of the United States, House of Representatives, Committee on Science and Technology. May 20, 1982 (reviewed EPA's carcinogenic risk assessment of formaldehyde).

Occupational Safety and Health Administration Hearing on Exposure to Inorganic Arsenic. June 18, 1982 (critiqued quantitative risk assessments and presented independent findings).

Occupational Safety and Health Administration Hearing on Ethylene Oxide. July 1983 (reviewed OSHA's quantitative risk assessments and presented independent findings).

Environmental Protection Agency Regional Hearing on Asbestos, Boston. June 1984 (reviewed risk assessments and presented independent findings).

Occupational Safety and Health Administration Hearing on Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite; Proposed Rule. February 7, 1991 (reviewed literature on exposure to asbestos in buildings).

PUBLICATIONS IN PEER REVIEWED JOURNALS

1. Crump KS, Mode C. 1968. A general age-dependent branching process I. *J Math Anal Appl* 24:494-508.
2. Crump KS, Mode C. 1969. A general age-dependent branching process II. *J Math Anal Appl* 25:8-17.
3. Crump KS, Mode C. 1969. An age-dependent branching process with correlations among sister cells. [*J Appl Prob* 6:205-210.](#)
4. Crump KS. 1970. On systems of renewal equations. [*J Math Anal Appl* 30:425-434.](#)
5. Crump KS. 1970. On systems of renewal equations: The reducible case. [*J Math Anal Appl* 30:517-528.](#)
6. Crump KS. 1970. Migratory populations in branching processes. [*J Appl Prob* 7:565-572.](#)
7. Crump KS, Hoel D. 1970. Some applications for renewal theory on the whole line. [*J Appl Prob* 7:734-746.](#)
8. Crump KS, Howe R. 1972. Nonparametric estimation of the age of a Galton-Watson branching process. [*Biometrika* 59:533-538.](#)
9. Hoel D, Crump KS. 1974. Estimating the generation-time of an age-dependent branching process. [*Biometrics* 30:125-235.](#)
10. Crump KS, Hoel D. 1974. Mathematical models for estimating mutation rates in cell populations. [*Biometrika* 61:237-252.](#)
11. Crump KS, Howe R. 1974. Estimating the age of a Bellman-Harris branching process. [*Math Biosci* 19:175-184.](#)
12. Crump KS. 1975. On point processes having an order statistic structure. [*Sankhya* 37, Series A, 396-404.](#)
13. Crump K. 1976. Numerical inversion of Laplace transforms using a Fourier series approximation. [*J Assoc Comput Machinery* 23:89-96.](#)
14. Crump KS, Hoel D, Langley C, Peto R. 1976. Fundamental carcinogenic processes and their implications to low dose risk assessment. [*Cancer Res* 36: 2973-2979.](#)
15. Crump KS, Gillespie J. 1976. The dispersion of a neutral allele considered as a branching process. [*J Appl Prob* 13:208-218.](#)
16. Crump KS. 1976. A birth-death-migration solution to the geographical distribution of a neutral allele in a continuous finite habitat. [*Math Biosci* 30:159-167.](#)
17. Guess H, Crump KS. 1976. Low-dose extrapolation of data from animal carcinogenesis experiments — analysis of a new statistical technique. [*Math Biosci* 32:15-36.](#)
18. Crump KS. 1977. Mathematical models for mutations in cultures of diploid cells. [*Math Biosci* 33:177-188.](#)
19. Crump KS, Guess H, Deal K. 1977. Confidence intervals and tests of hypotheses inferred from animal carcinogenicity data. [*Biometrics* 33:437-451.](#)
20. Crump KS, Gillespie J. 1977. The geographical distribution of a neutral allele. *Theor Popul Biol* 12:10-20.
21. Guess H, Crump KS, Peto R. 1977. Uncertainty estimates for low-dose extrapolations of animal carcinogenicity data. [*Cancer Res* 37:3475-3483.](#)
22. Crump KS. 1977. Open Query: Theoretical problems in the modified Mantel-Bryan procedure. [*Biometrics* 33:752-755.](#)
23. Guess H, Crump KS. 1978. Maximum likelihood estimation of dose-response functions subject to absolutely monotonic constraints. [*Ann Stat* 6:101-111.](#)
24. Guess H, Crump KS. 1978. Best-estimate low-dose extrapolation of carcinogenicity data. [*Environ Health Perspect* 22:149-152.](#)
25. Garner J, Crump KS, Stephenson J. 1978. Transient behavior to the single loop solute cycling model of the renal medulla. [*Bull Math Biol* 40:273-300.](#)
26. Crump KS. 1978. Low-dose extrapolations of animal carcinogenicity data (reply to the letter of Nathan Mantel). [*Cancer Res* 38 \(June issue\).](#)

27. Crump KS. 1978. Models for carcinogenic risk assessment (Technical Comment). [Science 202:1106.](#)
28. Crump KS, O'Young W. 1979. Some stochastic features of bacterial constraint growth apparatus. [Bull Math Biol 41:56-66.](#)
29. Crump KS. 1979. Dose response problems in carcinogenesis. [Biometrics 35:157-168.](#)
30. Daffer P, Crump KS, Masterman M. 1980. Asymptotic theory for analyzing dose response survival data with application to the low-dose extrapolation problem. [Math Biosci 50:207-230.](#)
31. Crump KS. 1982. Designs for discriminating between binary dose response models with applications to animal carcinogenicity experiments. *Commun Stat* 11:375-393.
32. Krewski D, Crump KS, Farmer J, Gaylor D, Howe R, Portier C, Salsburg D, Sielken R, Van Ryzin J. 1983. A comparison of statistical methods for low-dose extrapolation utilizing time-to-tumour data. *Fundam Appl Toxicol* 3:140-160.
33. Crump KS. 1983. Ranking carcinogens for regulation (letter to the editor). [Science 219:236-238.](#)
34. Crump KS, Howe R. 1984. The multistage model with a time-dependent dose pattern: Applications to carcinogenic risk assessment. [Risk Anal 4:163-176.](#)
35. Crump KS. 1984. An improved procedure for low-dose carcinogenic risk assessment from animal data. [J Environ Pathol Toxicol 5:339-348.](#)
36. Crump KS. 1984. A new method for determining allowable daily intakes. [Fundam Appl Toxicol 4:854-871.](#)
37. Chase G, Kotin P, Crump KS, Mitchell R. 1985. Evaluation for compensation of asbestos-exposed individuals. II. Apportionment of risk for lung cancer and mesothelioma. [J Occup Med 27:189-198.](#)
38. Crump KS, Crockett P. 1985. Improved confidence limits for low-dose carcinogenic risk assessment from animal data. [J Haz Matr 10:419-431.](#)
39. Crump KS. 1985. Response to letter to editor by Dourson, Hertzberg, and Stara regarding the paper: A new method for determining allowable daily intakes. [Fundam Appl Toxicol.](#)
40. Crump KS, Allen B. 1985. Methods for quantitative risk assessment using occupational studies. [Am Stat 39:442-450.](#)
41. Crump KS, Ng T, Cuddihy R. 1987. Cancer incidence patterns in the Denver metropolitan area in relation to the Rocky Flats plant. [Am J Epidemiol 126:127-135.](#)
42. Crump KS, Allen B, Howe R, Crockett P. 1987. Time-related factors in quantitative risk assessment. [J Chronic Dis 40\(Suppl 2\):101.](#)
43. Crump KS. 1988. A critical evaluation of Sielken's dose response assessment for TCDD. Letter to the Editor. *Food Chem Toxicol* 26(1).
44. Kipen H, Cody R, Crump KS, Allen B, Goldstein B. 1988. Hematologic effects of benzene: a thirty-five year longitudinal study of rubber workers. *Toxicol Ind Health* 4:411-430.
45. Farrar D, Crump KS. 1988. Exact statistical tests for any carcinogenic effect in animal bioassays. [Fundam Appl Toxicol 11:652-663.](#)
46. Allen B, Crump KS, Shipp A. 1988. Correlation between carcinogenic potency of chemicals in animals and humans. [Risk Anal 8:531-544.](#)
47. Shipp A, Crump KS, Allen B. 1988. Correlation between carcinogenic potency of chemicals in animals and humans. *Com Toxicol* 2:289-303.
48. Farrar D, Crump KS. 1989. Effects of erythrosine on basal and TRH-stimulated TSH levels: statistical re-evaluation of data from Gardner *et al.* (1987). [Toxicol Appl Pharmacol 9:362-367.](#)
49. Crump KS, Farrar D. 1989. Statistical analysis of data on airborne asbestos levels collected in an EPA survey of public buildings. [Reg Toxicol Pharmacol 10:51-62.](#)

50. Farrar D, Allen B, Crump KS, Shipp A. 1989. Evaluation of uncertainty in input parameters to pharmacokinetic models and the resulting uncertainty in output. [*Toxicol Lett* 37:371-385.](#)
51. Crump KS. 1989. Correlation of carcinogenic potency in animals and humans. [*Cell Biol Toxicol* 5:393-403.](#)
52. Crump KS, Allen B, Shipp A. 1990. An investigation of how well human carcinogenic risk from chemical exposure can be predicted by animal data, with emphasis upon selection of dose measure for extrapolation from animals to humans. [*Health Phys* 57\(Suppl 1\):387-393.](#)
53. Crump KS. 1990. Asbestos, carcinogenicity, and public policy. Letter to the Editor. [*Science* 248:799.](#)
54. Farrar D, Crump KS. 1990. Exact statistical tests for any carcinogenic effect in animal bioassays. II. Age-adjusted tests. [*Fundam Appl Toxicol* 15:710-721.](#)
55. Corn M, Crump KS, Farrar D, Lee R, McFee D. 1991. Airborne concentrations of asbestos in 71 school buildings. [*Reg Toxicol Pharmacol* 13:99-114.](#)
56. Crump KS. 1991. Comments on Chesson *et al.* Letter to the editor. [*Risk Anal* 11:367-369.](#)
57. Lee RJ, Van Orden DR, Corn M, Crump KS. 1992. Exposure to airborne asbestos in buildings. [*Reg Toxicol Pharmacol* 16:93-107.](#)
58. Price B, Crump KS, Baird EC. 1992. Airborne asbestos levels in buildings: maintenance worker and occupant exposures. [*J Expo Anal Environ Epidemiol* 2:357-374.](#)
59. Crump KS, Allen B, Clewell H. 1993. Limitations to benzene cancer risk assessment by Cox and Ricci. Letter to the editor. [*Risk Anal* 13\(2\):145-146.](#)
60. Crump KS, Gentry R. 1993. A response to OMB's comments regarding OSHA's risk assessment in support of OSHA's final rule on cadmium. Letter to the editor. [*Risk Anal* 13\(5\):487-489.](#)
61. Crump KS. 1994. Risk of benzene-induced leukemia: a sensitivity analysis of the Pliofilm cohort with additional follow-up and new exposure estimates. [*J Toxicol Environ Health* 42:219-242.](#)
62. Crump KS. 1994. Limitations of biological models of carcinogenesis for low-dose extrapolation. [*Risk Anal* 14\(6\):883-886.](#)
63. Crump KS. 1994. Use of mechanistic models to estimate low dose cancer risks. [*Risk Anal* 14:1033-1038.](#)
64. Crump KS. 1995. Calculation of benchmark doses from continuous data. [*Risk Anal* 15:79-89.](#)
65. Berman W, Crump KS, Chatfield E, Davis J, Jones A. 1995. The sizes, shapes and mineralogy of asbestos structures that induce lung tumors or mesothelioma in AF/HAN rats following inhalation. [*Risk Anal* 15:181-195.](#)
66. Gearhart J, Clewell H, Crump KS, Shipp A, Silvers A. 1995. Pharmacokinetic dose estimates of mercury in children and dose-response curves of performance tests in a large epidemiological study. *Water Air Soil Pollut* 80:49-58.
67. Crump KS, Viren J, Silvers A, Clewell H, Gearhart J, Shipp A. 1995. Reanalysis of dose-response data from the Iraqi methylmercury poisoning episode. *Risk Anal* 15:523-532.
68. Slikker Jr W, Crump KS, Andersen ME, Bellinger D. 1996. Biologically-based quantitative risk assessment of neurotoxicants. *Fundam Appl Toxicol* 29:18-30.
69. Allen BC, Crump KS. 1996. Application of the benchmark dose approach to glycol ethers risk assessment. *Occup Hyg* 2:427-437.
70. Crump KS, Clewell H, Andersen M. 1996. Cancer and noncancer risk assessment should be harmonized. [*BELLE Newsletter* 5:2-4.](#) Also reprinted in *Human Ecol Risk Assess* 3: 495-500, (1997) and *Comm Toxicol* 6(4): 277-282.
71. Crump KS. 1996. The linearized multistage model and the future of quantitative risk assessment. *Human Exp Toxicol* 15:787-798.

72. Crump KS. 1996. Risk of benzene-induced leukemia predicted from the Pliofilm cohort. *Environ Health Perspect* 104(Suppl 6):1437-1441.
73. Hochberg F, Miller G, Valenzuela R, McNelis S, Crump KS, Covington T, Valdivia G, Hochberg B, Trustman J. 1996. Late motor deficits of Chilean manganese miners: a blinded control study. *Neurology* 47:788-795.
74. Crump KS. 1997. Reply to paper by M. Crawford and R. Wilson, "Low-Dose Linearity: The Rule or the Exception?" *Belle Newsletter* 6:19-21.
75. Crump KS, Krewski D. 1998. Estimation of the number of studies with positive trends when studies with negative trends are present. *Canadian J Stat* 26: 643-655.
76. Crump KS, Krewski D, Wang Y. 1998. Estimates of the number of liver carcinogens in bioassays conducted by the National Toxicology Program. *Risk Anal* 18:299-308.
77. Crump KS. 1998. On summarizing group exposures: Is an arithmetic mean or a geometric mean more appropriate? *Risk Anal* 18:293-297.
78. Crump KS, Rousseau P. 1999. Results from eleven years of neurological health surveillance at a manganese oxide and salt producing plant. *NeuroToxicology* 20:273-286.
79. Gibbs JP, Ahmad R, Crump KS, Houck DH, Leveille TS, Findley JE, Francis M. 1998. Evaluation of a population with occupational exposure to airborne ammonium perchlorate for possible acute or chronic effects on thyroid function. *J Occup Environ Med* 40:.
80. Gibbs JP, Crump KS, Houck DP, Warren PA, Mosley WS. 1999. Focused Medical Surveillance: A search for subclinical movement disorders among a cohort of U.S. workers exposed to low levels of manganese dust. *NeuroToxicology* 20: 299-314.
81. Crump KS. 1999. Lung Cancer Mortality and Diesel Exhaust: Reanalysis of a Retrospective Cohort Study of U.S. Railroad Workers. *Inhalation Toxicology* 11:1-17.
82. Crump KS, Kjellström T, Shipp AM, Silvers A, Stewart A. 1999. Influence of Prenatal Mercury Exposure Upon Scholastic and Psychological Test Performance: Benchmark Analysis of a New Zealand Cohort. *Risk Analysis* 18: 701-713.
83. Crump KS, Krewski D, Van Landingham C. 1999. Estimates of the Proportion of Chemicals that were Carcinogenic or Anticarcinogenic in Bioassays Conducted by the National Toxicology Program. *Environmental Health Perspectives* 107:83-88.
84. Crump KS, Krewski D, Van Landingham, C. 1999. Estimates of the Proportions of Carcinogens and Anticarcinogens in Bioassays Conducted by the U.S. National Toxicology Program: Application of a New Meta-Analytic Approach. In: Uncertainty in the Risk Assessment of Environmental Hazards: An International Workshop. AJ Bailer, C Maltoni, JC Bailer III, F Belpoggi, JV Brazier and M Soffritti, eds. *Annals New York Academy of Sciences* 895:232-244.
85. Clewell HJ, Crump KS, Gentry PR, Shipp AM. 2000. Site-specific reference dose for methylmercury for fish-eating populations. *Fuel Processing Technology* 65-66:43-54.
86. Clewell HJ, Gearhart JM, Gentry PR, Covington TR, VanLandingham CB, Crump KS, Shipp AM. 1999. Evaluation of the uncertainty in an oral reference dose for methylmercury due to interindividual variability in pharmacokinetics. *Risk Analysis* 19: 547-558.
87. Crump KS, Van Landingham C, Shamlaye C, Cox C, Davidson PW, Myers GJ, Clarkson TW. 2000. Benchmark concentrations for methylmercury obtained from the Seychelles Child Development Study. *Environmental Health Perspectives* 108:257-263.
88. Crump, KS. 2000. Manganese Exposures in Toronto During Use of the Gasoline Additive, Methylcyclopentadienyl Manganese Tricarbonyl (MMT). *International Journal of Exposure Analysis and Environmental Epidemiology* 10:227-239.
89. Crump C, Michaud P, Téllez R, Reyes C, Gonzalez G, Montgomery EL, Crump KS, Lobo G, Becerra C, Gibbs JP. 2000. Does Perchlorate in Drinking Water Affect Thyroid Function in Newborns or School-age Children? *Journal of Occupational and Environmental Medicine* 42:603-612.

90. Crump KS. 2001. Evaluating the evidence for hormesis: a statistical perspective. [Critical Reviews in Toxicology 31:669-679](#); also appears in: *Human and Ecological Risk Assessment* 7:781-794.
91. Crump KS. 2001. Resolved: Biologically-based models are useful for analyzing radiation-epidemiological data: Con. *Radiation Research* 154:6. pp. 717.
92. Crump KS. 2002. Critical issues in benchmark calculations from continuous data. [Critical Reviews in Toxicology 32:133-153](#).
93. Shipp AM, Gentry PR, Lawrence G., Van Landingham C, Covington T, Clewell H, Gribben K, Crump, K. (2001). Determination of a site-specific reference dose for methylmercury for fish-eating populations. *Toxicology and Industrial Health* 16: No. 9-10: Nov.2000, pp. 335-438.
94. Crump KS, 2001. Invited Commentary: modeling lung cancer risk from diesel exhaust: suitability of the railroad worker cohort for quantitative risk assessment. [Risk Analysis 21: 19-24](#).
95. Van Landingham CB, Allen BC, Shipp, AM, Crump KS. 2001. Comparison of the EU TD25 single point estimation method to benchmark dose response modeling for estimating potency of carcinogens. [Risk Analysis 21:641-656](#).
96. Roberts RA, Crump KS, Lutz WK, Wiegand H-J, Williams GM, Harrison PTC, Purchase IFH. 2001. Scientific analysis of the proposed uses of the T25 dose descriptor in chemical carcinogen regulation. [Archives of Toxicology 75: 507-512](#).
97. Zeise L, Hattis D, Andersen M, Bailer AJ, Bayard S, Chen C, Clewell H, Conolly R, Crump K, Dunson D, Finkel A, Haber L, Jarabek A, Kodell R, Krewski D, Thomas D, Thorslund T, Wassell J. 2002. Research opportunities in dose response modeling to improve risk assessment. [Human and Ecological Risk Assessment 8: 1421-1444](#).
98. Crump C, Crump KS, Hack E, Panko J, Liebig E, Mundt KA, Luippold RS, Paustenbach DJ, Proctor DM. 2003. Dose-Response Assessment of Hexavalent Chromium and Lung Cancer Mortality. [Risk Analysis 23: 1147-1163](#).
99. Luippold RS, Austin RP, Mundt KA, Liebig E, Panko J, Crump C, Crump KS, Proctor DM. 2003. Lung Cancer Mortality Among Chromate Production Workers. [Occupational and Environmental Medicine 60: 451-457](#).
100. Crump KS, Canady R, Kogevinas M. 2003. Meta-Analysis of Dioxin Cancer Dose-Response for Three Occupational Cohorts *Environmental Health Perspectives* 111(5): 681-687.
101. Crump KS, Clewell HJ. 2003. Method for Identifying a Threshold is Flawed. [Toxicological Sciences 74: 485-488](#).
102. Crump KS. 2005. The effect of random error in exposure measurement upon the shape of the exposure response. [Dose Response Volume 3, Number 4: 456-464](#).
103. Clewell, HJ, Lawrence, GA, Calne, DB, Crump, KS. 2003. Determination of an occupational exposure guideline for manganese using the benchmark method. [Risk Analysis, 23\(5\):1031-1046](#).
104. Crump KS, Clewell HJ. 2004. Association between blood manganese and performance on motor and memory tests unlikely to be related to air manganese. Letter to the Editor. [Science 303: 169-171](#).
105. Crump KS. 2003. Quantitative risk assessment since the Red Book: Where have we come and where should we be going? [Human and Ecological Risk Assessment 9: 1105-1112](#).
106. Tonacchera M, Pinchera A, Dimida A, Ferrarini E, Agretti P, Vitti P, Santini F, Crump K, Gibbs J. 2004. Relative Potencies and Additivity of Perchlorate, Thiocyanate, Nitrate and Iodide on the Inhibition of Radioactive Iodide Uptake by the Human Sodium Iodide Symporter. [Thyroid 14: 1012-1018](#).
107. Clewell HA, Crump KS (2005) Quantitative Estimates of Risk for Non-Cancer Endpoints. [Risk Analysis 25: 285-290](#).

108. Crump KS, Gibbs JP (2005) Benchmark calculations for perchlorate from three human cohorts. [Environmental Health Perspectives 113: 1001-1008.](#)
109. Crump KS, Teeguarden JG (2009) Benchmark calculations from summarized data: an example. [Environmental and Ecological Statistics 16\(1\): page 13. \(published on line March 1, 2008\).](#) DOI: 10.1007/s10651-007-0077-1; ISSN: 1352-8505 (Print) 1573-3009 (Online).
110. Braverman LE, He XM, Pino S, Cross M, Magnani M, Lamm SH, Kruse MB, Engel A, Crump KS, Gibbs JP. (2005) The Effect of Perchlorate, Thiocyanate, and Nitrate on Thyroid Function in Workers Exposed to Perchlorate Long-Term. [Journal of Clinical Endocrinology and Metabolism 90\(2\): 700-706.](#)
111. Téllez RT, Chacón PM, Sótero del Río CRA, Blount BC, Van Landingham CB, Crump KS, Gibbs JP. (2005) Chronic Environmental Exposure To Perchlorate Through Drinking Water And Thyroid Function During Pregnancy And The Neonatal Period [Thyroid 15:963-975.](#)
112. Crump KS, Subramaniam RP, Van Landingham CB. (2005) A Numerical Solution to the Non-Homogeneous Two-Stage MVK Model of Cancer. [Risk Analysis, 25, 921-926.](#)
113. Sanchez CA, Gibbs JP, Crump KS, Krieger RI, Khandaker NR. (2005) Perchlorate and nitrate in leafy vegetables of North America. *Environmental Science & Technology* 39(24): 9391-9397.
114. Crump KS. (2006) Letter to the Editor: Setting the record straight. *International Journal of Occupational and Environmental Health.* 2006;12:2, 180-181.
115. Crump KS. (2007) Statistical issues with respect to workplace protection factors for respirators. [Journal of Occupational and Environmental Hygiene, 4: 208-214.](#)
116. Crump KS, Subramaniam RP, Van Landingham CB. (2006) Acknowledgment of prior solution to MVK cancer model. [Risk Analysis 26, 3-4.](#)
117. Stern BR, Solioz, M, Krewski D, Aggett P, Aw T-C, Baker S, Crump KS, Dourson M, Haber L, Hertzberg R, Keen CL, Meek B, Rudenko L, Schoeny R, Slob W, Starr T. (2007) Copper and Human Health: Biochemistry, Genetics and Strategies for Modeling Dose-Response Relationships. *Journal of Toxicology and Environmental Health B Critical Reviews* 10(3): 157-222.
118. Subramaniam RP, Crump KS, Van Landingham CB, White P, Chen C, Schlosser P. (2007) Uncertainties in the CIIT model for formaldehyde-induced carcinogenicity in the rat: a limited sensitivity analysis I. [Risk Analysis 27\(5\), 1237-1254.](#)
119. Crump KS. (2007) Limitations in the National Cancer Institute Antitumor Drug Screening Database for evaluating hormesis [Toxicological Sciences 98\(2\), 599-601.](#)
120. Clewell HJ, Thomas RS, Gentry R, Crump KS, Kenyon EM, El-Masri HA, Yager JW. (2007) Research toward the development of a biologically based dose response assessment for inorganic arsenic carcinogenicity: A progress report. [Toxicology and Applied Pharmacology 222: 3, 388-398.](#)
121. Subramaniam, R. P., Chen, C., Crump, K. S., Devoney, D., Fox, J. F., Portier, C. J., et al. (2008). Uncertainties in biologically-based modeling of formaldehyde-induced respiratory cancer risk: identification of key issues. *Risk Analysis*, 28(4), 907-923. doi: 10.1111/j.1539-6924.2008.01083.x.
122. Crump, K. S., Chen, C., Fox, J. F., Van Landingham, C., & Subramaniam, R. (2008). Sensitivity analysis of biologically motivated model for formaldehyde-induced respiratory cancer in humans. *Annals of Occupational Hygiene*, 52(6), 481-495. doi: 10.1093/annhyg/men038.
123. Berman DW, Crump KS. (2008) Update of potency factors for asbestos-related lung cancer and mesothelioma. *Critical Reviews in Toxicology* 38(1): 1-47.
124. Berman DW, Crump KS. (2008) A meta-analysis of asbestos-related cancer risk that addresses fiber size and mineral type. *Critical Reviews in Toxicology* 38(1): 49-73.
125. Crump KS, Duport P, Huixia J, Shilnikova NS, Krewski D, Zielenski JM. (2012) A meta-analysis of evidence for hormesis in animal radiation carcinogenesis, including a

- discussion of potential pitfalls in statistical analyses to detect hormesis. *Journal of Toxicology and Environmental Health, Part B* 15:210–231.
126. Crump KS, Chiu WA, and Ravi P. Subramaniam. 2010. Issues in using human variability distributions to estimate low-dose risk. *Environmental Health Perspectives* 118:387-393.
 127. Crump KS, Chen C, Chiu W, Louis TA, Portier CJ, Subramaniam RP, and White PD (2010) What Role for Biologically-Based Dose-Response Models in Estimating Low-Dose Risk? [Environmental Health Perspectives 118:585-588](#).
 128. Crump KS, Chen C, Louis TA. 2010. The future use of in vitro data in setting human exposure standards – challenging problems and familiar solutions. [Environmental Health Perspectives 118:1350-1354](#).
 129. Chiu WA, Crump KS. 2012. Using copulas to introduce dependence in dose-response modeling of multiple binary endpoints. [Journal of Agricultural, Biological, and Environmental Statistics 17, 107-127](#).
 130. Crump, Kenny S., and Bruce C. Allen. 2010. “Toward making epidemiologic data more useful for quantitative risk assessment.” *The Open Epidemiology Journal* 3:83-97.
 131. Crump, Kenny S. 2011. “Use of threshold and mode of action in risk assessment.” *Critical Reviews in Toxicology* 41(8), 637-650.
 132. Crump KS, Chen C, Fox JF, Subramaniam R, Van Landingham C. 2009. Reply to the letter by Conolly et al. *Annals of Occupational Hygiene* 53, 184-189.
 133. Crump, Kenny, and D. W. Berman. 2011. Counting rules for estimating concentrations of long asbestos fibers. *Annals of Occupational Hygiene* 55 (7), 723–735.
 134. Crump, Kenny S. and Cynthia Van Landingham. 2012. Evaluation of an Exposure Assessment Used in Epidemiological Studies of Diesel Exhaust and Lung Cancer in Underground Mines, *Critical Reviews in Toxicology* 42(7), 599-612.
 135. Crump, Kenny S. 2013. Letter to the Editor Regarding the Article by Bailey et al., 2009 *Chemical Research in Toxicology* 26, 1025-1026.
 136. Crump KS, Bowers TS, Cahoy D, Chandalia JK, Van Landingham C. 2013. A statistical reevaluation of the data used in the Lanphear et al. (2005) pooled-analysis that related low levels of blood lead to intellectual deficits in children. *Critical Reviews in Toxicology* 43(9), 785-799.
 137. Crump, KS. 2014. An attempt to estimate an exposure threshold is not a scientific exercise - example of silicosis from exposure to quartz dust. *Journal of Occupational and Environmental Medicine*.56(10), 1097/JOM.0000000000000194
 138. MacGregor JT, Frötschl R, White PA, Crump KS, Eastmond DA, Fukushima S, Guérard N, Hayashi M, Soeteman-Hernandez L, Kasamatsu T, Levy DD, Morita T, Müller L, Schoeny R, Schuler MJ, Thybaud V, Johnson GE. (2015) IWGT report on quantitative approaches to genotoxicity risk assessment I. Methods and metrics for defining exposure–response relationships and points of departure (PoDs). *Mutation Research* 783, 55-65.
 139. MacGregor JT, Frötschl R, White PA, Crump KS, Eastmond DA, Fukushima S, Guérard N, Hayashi M, Soeteman-Hernandez L, Johnson GE, Kasamatsu T, Levy DD, Morita T, Müller L, Schoeny R, Schuler MJ, Thybaud V. (2015) IWGT report on quantitative approaches to genotoxicity risk assessment II. Use of point-of-departure (PoD) metrics in defining acceptable exposure limits and assessing human risk. *Mutation Research* 783, 66-78.
 140. Crump, KS. 2014. Meta-Analysis of Lung Cancer Risk from Exposure to Diesel Exhaust: Study Limitations. *Environmental Health Perspectives* 122(9):A230.
 141. Moolgavkar SH, Chang ET, Luebeck G, Lau EC, Watson H, Crump K, McClellan R. (2014) Diesel Engine Exhaust and Lung Cancer Mortality: Time-Related Factors in Exposure and Risk. *Risk Analysis* 35(4), 663-675.
 142. Crump K, Van Landingham C, Moolgavkar SH, McClellan R. (2014) Reanalysis of the DEMS Nested Case-Control Study of Lung Cancer and Diesel Exhaust: Suitability for Quantitative Risk Assessment. *Risk Analysis* 35(4), 676-700.

143. Crump KS, Bussard DA, Chen C, Jinot J, Subramaniam R. (2014) The “bottom-up” approach does not necessarily bound low-dose risk. *Regulatory Toxicology and Pharmacology*. *Regulatory Toxicology and Pharmacology* 70(3) DOI: 10.1016/j.yrtph.2014.10.008.
144. Deborah M. Proctor, Mina Suh, Liz Mittal, Shawn Hirsch, Raydel Valdes Salgado, Chris Bartlett³, Cynthia Van Landingham, Annette Rohr and Kenny Crump. (2016) Inhalation cancer risk assessment of hexavalent chromium based on updated mortality for Painesville chromate production workers. *Journal of Exposure Science and Environmental Epidemiology* (2016) 26, 224–231.
145. Crump KS, Van Landingham C, McClellan RO. (2016) Influence of Alternative Exposure Estimates in DEMS Miners Study: Diesel Exhaust and Lung Cancer. Volume 36, Issue 9: 1803–1812.
146. Crump KS (2016) Bogen’s Critique of Linear-No-Threshold Default Assumptions. *Risk Analysis* 37 (10) (First published December 2016).
147. Chang E, Lau E, Van Landingham C, Crump K, McClellan R, Moolgavkar S. (2017) Reanalysis of diesel engine exhaust and lung cancer mortality in the Diesel Exhaust in Miners Study (DEMS) cohort using alternative exposure estimates and radon adjustment. *American Journal of Epidemiology* 187(6), 1210-1219.
148. Chang E, Lau E, Van Landingham C, Crump K, McClellan R, Moolgavkar S. (2018) Response to “Invited commentary: diesel exhaust and lung cancer -- aftermath of becoming an IARC Group 1 carcinogen” by Debra T. Silverman. *American Journal of Epidemiology* Mar 7. doi: 10.1093/aje/kwy036.
149. Chang E, Lau E, Van Landingham C, Crump K, McClellan R, Moolgavkar S. (2018) On the ongoing discussion about the risk of lung cancer due to diesel engine exhaust. *American Journal of Epidemiology*
150. Chang E, Lau E, Van Landingham C, Crump K, McClellan R, Moolgavkar S. (2019) Re: “diesel exhaust and lung cancer—aftermath of becoming an IARC group 1 carcinogen” *American Journal of Epidemiology*, Volume 188, Issue 2, 1 February 2019, Pp. 489–491, doi.org/10.1093/aje/kwy176
151. Crump KS. (2018) Cancer risk assessment and the biostatistical revolution of the 1970s—a reflection. *Dose-Response* 16(4).
152. Crump KS. (2020) The potential effects of recall bias and selection bias on the epidemiological evidence for the carcinogenicity of glyphosate. *Risk Analysis* 40(4): 696-704.
153. Crump KS, Crouch E, Zelterman D, Crump C, Haseman J. (2020) Accounting for multiple comparisons in statistical analysis of the extensive bioassay data on glyphosate. *Toxicological Sciences* 175(2): 156-167.
154. Crump KS, Crouch E, Zelterman D, Crump C, Haseman J. (2020) Correcting for Multiple Comparisons in Statistical Analysis of Animal Bioassay Data. *Toxicological Sciences* 177(2): 523-524.

OTHER PUBLICATIONS

155. Johnson A, Crump KS. 1976. Transient solution of a solute cycling model of a renal medulla using Laplace transforms. *Proceedings of the 1976 Summer Simulation Conference*. pp. 460-463.
156. Guess H, Crump KS. 1977. Can we use animal experiments to estimate ‘safe’ doses for chemical carcinogens? In: Whittemore A, ed. [*Environmental Health: Quantitative Methods*. SIAM: Philadelphia, PA. pp. 13-30.](#)
157. Langley C, Crump KS. 1977. Possible advantages and disadvantages of nontransmitted single-cell human mutagenesis assays. [*Zentrallaboratorium für Mutagenitätsprüfung. Conference on Population Monitoring Methods for Detecting Increased Mutation Rates. pp. 83-85.*](#)

158. Crump KS. 1977. Experimental design. *Proceedings for the Conference on TSCA Carcinogenicity Testing Methods*. Sponsored by National Center for Toxicological Research, Little Rock, AR. August 22-23. pp. 140-141.
159. Crump KS, Masterman M. 1979. Assessment of Carcinogenic Risks from PCBs in Food. Prepared for the U. S. Congress Office of Technology Assessment. *Environmental Contaminants in Food*, Volume II - Working Papers (available from NTIS).
160. Crump KS, Masterman M. 1979. Review and Evaluation of Methods of Determining Risks from Chronic Low Level Carcinogenic Insult. *Environmental Contaminants in Food*. U.S. Congress Office of Technology Assessment. Library of Congress Catalog Card No. 79-600207. pp. 154-165.
161. Hoel D, Crump KS. 1981. Waterborne carcinogens: A scientist's view. In: Crandall R, Lave L, eds. [The Scientific Basis of Health and Safety Regulation. The Brookings Institution. pp. 173-195.](#)
162. Crump KS. 1981. Statistical aspects of linear extrapolation. In: Richmond CR, Walsh P, Copenhaver D, eds. [Proceedings of the Third Life Sciences Symposium, Health Risk Analysis. Gatlinburg, TN. October, 1980. pp. 381-392.](#)
163. Crump KS. 1981. Chlorinated drinking water and cancer: the strength of the epidemiologic evidence. In: Jolley RL, et al., eds. [Water Chlorination: Environmental Impact and Health Effects, Volume 4, Book 2, Environment, Health and Risk. Ann Arbor Science Publishers, Ann Arbor, MI. pp. 1481-1491.](#)
164. Crump KS. 1984. Issues related to carcinogenic risk assessment from animal data. Proceedings of the NATO Advanced Study Institute on Technological Risk Assessment, Erice, Italy, May 20-31, 1981. In: Ricci P, ed. *NATO Advanced Science Institute Series E: Applied Sciences 81*. Martinus Nijhoff Publishers.
165. Crump KS, Guess H. 1982. Drinking water and cancer. In: Breslow L, Fielding JE, Lave LB, eds. [Annu Rev Public Health 3:339-357.](#)
166. Silvers A, Crump KS. 1985. Examination of risk estimation models. In: Milman H, Weisburger E, eds. *Handbook of Carcinogen Testing*. Noyes Publications, Park Ridge, NJ. pp. 502-525.
167. Crump KS. 1985. Mechanisms leading to dose-response models. In: Ricci P, ed. [Principles of Health Risk Assessment. Prentice-Hall. pp. 235-277.](#)
168. Crump KS. 1985. Methods for carcinogenic risk assessment. In: Ricci P, ed. [Principles of Health Risk Assessment. Prentice-Hall. pp. 279-319.](#)
169. Crump KS, Silvers A, Ricci P, Wyzga R. 1985. Inter-species comparison for carcinogenic potency to humans. In: Ricci P, ed. [Principles of Health Risk Assessment. Prentice-Hall. pp. 321-372.](#)
170. Crump KS, Howe R. 1985. Review of methods for calculating confidence limits in low dose extrapolation. In: Clayson D, Krewski D, Munro I, eds. *Toxicological Risk Assessment, Volume I*. 188-203 CRC Press, Inc, Boca Raton, FL.
171. Allen B, Crump KS. 1986. Aspects of quantitative risk assessment as applied to cancer. In: Humber and Almeder, eds. [Quantitative Risk Assessment. Biomedical Ethics Reviews 1986. Humana Press, Clifton, NJ. pp. 129-146.](#)
172. Crump KS, Allen B. 1987. Quantitative assessment of carcinogenic hazards using epidemiological data. In: McColl RS, ed. [Environmental Health Risks: Assessment and Management. University of Waterloo Press. pp. 133-158.](#)
173. Murdoch DJ, Krewski D, Crump KS. 1987. Quantitative theories of carcinogenesis. In: Thompson J, Brown B, eds. [Cancer Modeling. Marcel Dekker, Inc, New York.](#)
174. Allen B, Crump KS, Shipp A. 1988. Is it possible to predict the carcinogenic potency of a chemical in humans using animal data? [Banbury Report 31: Carcinogen Risk Assessment: New Directions in the Qualitative and Quantitative Aspects. Cold Spring Harbor Laboratory, New York. pp. 197-209.](#)

175. Haseman J, Hajian G, Crump KS, Selwyn M, Peace K. 1990. Dual control groups in rodent carcinogenicity studies. In: Peace K, ed. [*Statistical Issues in Pharmaceutical Drug Development*. Marcel Dekker, New York. pp. 351-361.](#)
176. Crump KS. 1991. Statistical issues in food safety assessment. In: Tweedy B, *et al.*, eds. *Pesticide Residues and Food Safety. A Harvest of Viewpoints*. ACS Symposium Series 446. American Chemical Society, Washington, DC. pp. 247-255.
177. Crump KS, Howe R, Kodell R. 1991. Permutation Tests for Detecting Teratogenic Effects. In: Krewski D, Franklin C, eds. [*Statistics in Toxicology*. Gordon and Breach Science Publishers, New York. pp. 349-377.](#)
178. Crump KS. 1992. Risk Assessment for Benzene-induced Leukemia — A Review. In: Zervos C, ed. [*Oncogene and Transgenics Correlates of Cancer Risk Assessments*](#). Plenum Publishing Corporation, New York. pp. 241-262.
179. Clewell, HJ, Shipp AM, Andersen ME, Yager JW and Crump KS. 1999. Application of the risk assessment approaches in the USEPA proposed cancer guidelines to inorganic arsenic. In: Chappel WR, Abernathy CO, and Calderon RL, eds. [*Arsenic Exposure and Health Effects*. Elsevier Science, Oxford, United Kingdom.](#)
180. Crump, K. S. (2002). Benchmark analysis. In Encyclopedia of Environmetrics, vol. 1, El-Shaarawi, A. H. and Piegorsch, W. W. (eds.), 163-170. Chichester: John Wiley & Sons.
181. Crump, K. S. (2006). Benchmark analysis. IN: Encyclopedia of Quantitative Risk Assessment

Unpublished Reports, Computer Programs, Testimony, Etc.

182. Crump KS. 1978. Estimates of Risks to Humans from Chemicals Residues in Meat. Prepared for the U.S. Congress Office of Technology Assessment. 72 pp.
183. Crump KS. 1978. Estimation of Mean Pesticide Concentrations When Observations are Detected Below the Quantification Limit. Prepared for the Food and Drug Administration. 15 pp.
184. Cohen A, Crump KS. 1978. Statistical Analysis of Radionuclide Levels in Food Commodities. Prepared for the Food and Drug Administration. 22 pp.
185. Crump KS, Watson W. 1979. GLOBAL79: A FORTRAN Program to Extrapolate Dichotomous Animal Carcinogenicity to Low Dose.
186. Crump KS, Howe R, Masterman M, Watson W. 1980. RANK: A FORTRAN Program for Risk Assessment Using Time-to-Occurrence Data.
187. Crump KS, Howe R. 1980. A Small Sample Study of Permutation Tests for Detecting Teratogenic Effects. Prepared for the Food and Drug Administration under Contract 223-79-2274. 50 pp.
188. Crump KS, Watson W. 1980. Water Quality Criteria Calculated from Multistage and One-Hit Models. Prepared for the U.S. Environmental Protection Agency, Cincinnati, OH. 43 pp.
189. Crump KS. 1980. Evaluation of Uncertainties in the Estimation of Carcinogenic Risks. Prepared for the American Petroleum Institute, Washington, DC. 46 pp.
190. Crump KS, Howe R. 1980. Carcinogenic, Mutagenic and Teratogenic Risk Assessment: An Annotated Bibliography. Prepared for the U.S. Environmental Protection Agency under Contract 68-01-5975. 30 pp.
191. Crump KS, Howe R. 1980. Approaches to Carcinogenic, Mutagenic and Teratogenic Risk Assessment. Prepared for the U.S. Environmental Protection Agency, Contract No. 68-01-5975, Task A, Subtask No. 5, Summary Report. 169 pp.
192. Crump KS. 1980. Carcinogen-based Criteria: Assessment of Uncertainties. Proceedings of Symposium on the Development, Use and Value of Water Quality Criteria and Standards, George Washington University, June 23-25. 18 pp.

193. Crump KS, Guess H. 1980. Drinking Water and Cancer: Review of Recent Findings and Assessment of Risks. Executive Office of the President, Council on Environmental Quality, Washington, DC. Contract No. EQ10ACO18. 109 pp.
194. Nisbet I, Crump KS, Paxton M, Turim J. 1980. Carcinogenic Risk Assessment of Hexachlorobenzene. Prepared for the U.S. Environmental Protection Agency. Contract No. 68-01-5824. 87 pp.
195. Crump KS, Howe R. 1980. A Small Sample Study of Some Multivariate and Dose Response Permutation Tests for Use with Teratogenesis or Carcinogenesis Data. Prepared for the Food and Drug Administration under contract to Ebon Research Systems. 34 pp.
196. Crump KS. 1981. Testimony in Toronto on Asbestos. 75 pp.
197. Crump KS, Howe R. 1982. Examination of Options for Calculating Daily Intake Levels (DILS). Prepared for the Environmental Protection Agency, Order No. C2171NAST. 56 pp.
198. Crump KS. 1982. Implications of the Multistage Model to Risks from Partial Lifetime Exposure. Prepared for the Environmental Protection Agency, Order No. C2171NASR. 26 pp.
199. Crump KS. 1982. The Scientific Basis for Health Risk Assessment. Presented at a seminar sponsored by George Washington University Graduate Program in Science, Technology, and Public Policy and by the Environmental Protection Agency, Washington, DC. March 2. 29 pp.
200. Howe R, Crump KS. 1982. GLOBAL 82: A Computer Program to Extrapolate Quantal Animal Toxicity Data to Low Doses. Prepared for the Office of Carcinogen Standards, OSHA, U.S. Department of Labor, Contract 41USC252C3.
201. Crump KS. 1982. Quantitative Assessment of Human Risk from Exposure to Carcinogens with Special Reference to Vinyl Chloride. Prepared for the Ontario Ministry of Labour, Occupational Safety and Health Division. 81 pp.
202. Crump KS. 1982. Methods for Estimating Human Cancer Risks from Non-Human Data. Presented at the Electric Power Research Institute Workshop on Extrapolation from Animal Studies to Man, Carmel, California, December 1-2.
203. Crump KS. 1982. Review of a Study of Asbestos in Drinking Water and Cancer in the San Francisco Bay Area. Prepared for the A/C Pipe Producers Association, Washington, DC. 31 pp.
204. Crump KS, Sims S. 1982. The quantitative effect of migration upon geographic studies (unpublished manuscript).
205. Crump KS. 1982. Testimony Before OSHA Hearings on the Inorganic Arsenic Standard. June, 1982. 37 pp.
206. Crump KS. 1982. Further Comments for the OSHA Hearing on Inorganic Arsenic. July, 1982. 15 pp.
207. Crump KS, Ng T-H. 1983. Quantitative Risk Assessment for Environmental Exposure to Inorganic Arsenic. Prepared for Environmental Protection Agency, Environmental Criteria Assessment Office, Contract No. 68-02-3111. 41 pp.
208. Crump KS. 1983. Limitations of Risk Assessment Models. Presented at Toxicokinetics in the Evaluation of Safety of Chemicals Workshop, Electric Power Research Institute, November 30, December 1-2, San Diego, CA.
209. Crump KS. 1983. Testimony at OSHA Hearings on Ethylene Oxide. July, 1983. 50 pp.
210. Crump KS, Allen B. 1984. Quantitative Estimates of Risk of Leukemia From Occupational Exposure to Benzene. Prepared under order #B9F46097 for the Occupational Safety and Health Administration, Washington, DC. 116 pp.
211. Crump KS. 1984. Testimony before OSHA on Behalf of the Alliance for Safe Buildings. July 6, 1984. 41 pp.
212. Crump KS. 1984. Oral Testimony Before OSHA Asbestos Hearing. July, 1984. 7 pp.

213. Crump KS. 1984. Testimony Regarding the New York State Draft Environmental Impact Statement for NTA. October 4, 1984. 27 pp.
214. Crump KS. 1984. Testimony on Behalf of the Asbestos Information Association/North America. OSHA Hearing on a Proposed Revision of the Asbestos Standard. Submitted May 15. 70 pp.
215. Crump KS, Ng T-H. 1984. Statistical Analyses of Cancer Incidence in the Denver SMSA in Relation to the Rocky Flats Plant. Report of research conducted under Department of Energy Contract #DE AC04-76EV01013, Subcontract 8115006 from Inhalation Toxicology Research Institute, Albuquerque, NM. 128 pp.
216. Shipp A, Hogg M, Crump KS, Kodell R. 1985. Worst Case Analysis Study on Forest Plantation Herbicide Use. Prepared for Forest Land Management Division, Department of Natural Resources, State of Washington.
217. Shipp A, Allen B, Crockett P, Crump KS, Hogg M, Tudor J, Keller B. 1986. Quantitative Risk Assessment for Occupational Exposures to Methylene Chloride. Prepared for Occupational Safety and Health Administration under contract to Meridian Research, Inc.
218. Crump KS. 1986. Asbestos Potency Assessment for EPA Hearing. Prepared for Asbestos Information Association/North America. 116 pp.
219. Crockett P, Crump KS, Van Landingham C. 1986. Empirical Investigation of Dose-Response Curves for Noncancer Toxic Effects. Prepared for Electric Power Research Institute. Contract RP 1816-17.
220. Crockett P, Crump KS, Van Landingham C, Corley R, Kilian B, Allen B, Howe R, Gajaria R, Henley R. 1986. Methods for Assessment of Non-Cancer Health Risks. Prepared for Electric Power Research Institute. Contract RP 1826-17.
221. Howe R, Crump KS, Van Landingham C. 1986. Global 86: A Computer Program to Extrapolate Quantal Animal Toxicity Data to Low Doses. Prepared for Environmental Protection Agency under Subcontract 2-251U-2745 to Research Triangle Institute.
222. Allen B, Shipp A, Crump KS, Kilian B, Hogg M, Tudor J, Keller B. 1987. Investigation of Cancer Risk Assessment Methods. Final Report. Prepared for Environmental Protection Agency under contract to Research Triangle Institute. Contract #68-01-6807.
223. Crump KS, Farrar D. 1987. Statistical Analysis of Airborne Asbestos Fiber Data Collected from Schools and Analyzed by Transmission Electron Microscope. In: *Comments of the National Gypsum Company*. Submitted to the Environmental Protection Agency in Regard to the Proposed Rule on Asbestos-Containing Materials in Schools, June 29, 1987. 19 pp.
224. Berman D, Crump KS. 1989. Relative potency of asbestos fibers of different lengths. Presented at Fourth Aspen Cancer Conference, Aspen, CO. Carcinogenesis: From Molecular Mechanisms to Molecular Epidemiology. July 23-26, 1989.
225. Crump KS, Shipp A. 1990. Relative toxicity of PCB congeners. Presented 83rd Annual Meeting of the Air & Waste Management Association, Pittsburgh, PA. June 24-29, 1990.
226. Crump KS. 1990. Testimony for OSHA Hearing on Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite; Proposed Rule. Submitted November 27, 1990.
227. Crump KS, Lambert T, Chen C. 1991. Assessment of Risk from Exposure to Diesel Engine Emissions. Contract 68-02-4601, Work Assignment #182. Prepared for Environmental Protection Agency, Washington, DC.
228. Crump KS, Howe R, Van Landingham C, Fuller W. 1992. TOX_RISK. Toxicological Risk Assessment Program. Developed by Clement International Corporation under contract to Electric Power Research Institute.
229. Price B, Crump KS. 1992. Exposure inferences from airborne asbestos measurements in buildings. Presented at IAQ 92: Environments for People, San Francisco, CA.
230. Crump KS, Allen B, Faustman E. 1995. The Use of the Benchmark Dose (BMD) Approach in Health Risk Assessment. Final report. EPA/630/R-94/007. Risk Assessment Forum, U.S. Environmental Protection Agency, Washington, DC. Prepared under contract to Eastern Research Group, Inc.

231. Crump KS, and Van Landingham C. 1996. BENCH_C: A Fortran Program to Calculate Benchmark Doses from Continuous Data. ICF Consulting, 602 East Georgia Avenue, Ruston, LA 71270.
232. Berman DW and Crump KS. 1999. Methodology for Conducting Risk Assessment at Asbestos Superfund Sites. Part 1: Protocol. Part 2: Technical Background Document. Final Interim Version. Prepared for: Kent Kitchingman, U.S. Environmental Protection Agency, Region 9, 75 Hawthorne, San Francisco, California 94105. Under EPA Review. February 15, 1999.
233. Berman DW and Crump KS. 2003. Technical Support Document For A Protocol To Assess Asbestos-Related Risk. Prepared for: Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, DC 20460. Under EPA Review.
234. Crump KS, Krewski D, Van Landingham C. 1999. Meta analysis of bioassay data from the U.S. National Toxicology Program. Proceedings of Statistics Canada Symposium 99.
235. Crump KS. 2004. Statistical Analysis of Expanded OSHA Database on Respirator Worker Protection Factors. Prepared for Occupational Safety and Health Administration (OSHA) under OSHA contract J-9-F-0-0051 Task Order No. 5, TC OSHA TO #33 with ToxaChemica, International, Inc. Gaithersburg, Maryland 20878.
236. Crump, Kenny S., Gary L. Ginsburg, and Dale Hattis. 2012. Instability in the Formaldehyde Biologically Based Model Limits Its Utility for Risk Assessment: A Rebuttal to the National Academy of Sciences 2011 Formaldehyde Report (unpublished manuscript).