

**APPROACHES FOR THE APPLICATION OF
PHYSIOLOGICALLY -BASED PHARMACOKINETIC
DATA AND MODELS IN RISK ASSESSMENT**

**APPENDIX 2: List
of publications
relevant to PBPK
modeling of
environmental
chemicals and its use**

Prepared by :
Dr. Kannan Krishnan

For

NATIONAL CENTER FOR ENVIRONMENTAL ASSESSMENT
OFFICE OF RESEARCH AND DEVELOPMENT
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

RFQ-DC-03-00328

1. Abbas, R., and Fisher, J. W. (1997). A physiologically based pharmacokinetic model for trichloroethylene and its metabolites, chloral hydrate, trichloroacetate, dichloroacetate, trichloroethanol, and trichloroethanol glucuronide in B6C3F1 mice. *Toxicology and Applied Pharmacology* **137**, 15-30.
2. Abbas, R., and Hayton, W. L. (1997). A physiologically based pharmacokinetic and pharmacodynamic model for paraxon in rainbow trout. *Toxicology and Applied Pharmacology* **145**, 192-201.
3. Abraham, M. H., Kamlet, M. J., Taft, R. W., Doherty, R. M., and Weathershy, P. K. (1985). Solubility properties in polymers and biological media. 2. The correlation and prediction of the solubilities of nonelectrolytes in biological tissues and fluids. *Journal of Medicinal Chemistry* **28**, 865-870.
4. Aggarwal, G., Kohn, M. C., and Melnick, R. L. Development of a physiologically based pharmacokinetic model for isoprene. Isoprene, NTP TR 486, H -1-H-17. 2000. National Institute of Environmental Health Sciences., North Carolina. Ref Type: Report
5. Albanese, R. A., Banks, H. T., Evans, M. V., and Potter, L. K. (2002). Physiologically based pharmacokinetic models for the transport of trichloroethylene in adipose tissue. *Bulletin of Mathematical Biology* **64**, 97-131.
6. Ali, N. T. R. (1999). Toxicokinetic modeling of the combined exposure to Toluene and N-Hexane in Rats and Humans. *J Occup Health* **41**, 95-103.
7. Allen, B. C., and Fisher, J. W. (1993). Pharmacokinetic modeling of trichloroethylene and trichloroacetic acid in humans. *Risk Analysis* **13**, 71-86.
8. Allen, B. C., Covington, T. R., and Clewell, H. J. I. (1996). Investigation of the impact of pharmacokinetic variability and uncertainty on risks predicted with a pharmacokinetic model for chloroform. *Toxicology* **111**, 289-303.
9. Altman, P. L., and Dittmer, D. S. (1961). *Blood and other body fluids*. Federation of American Society for Experimental Biology, Bethesda.
10. Andersen, M. E., Krewski, D., and Withey, J. R. (1993). Physiological pharmacokinetics and cancer risk assessment. *Cancer Lett.* **69**, 1-14.
11. Andersen, M. E., and Clewell, H. J. I. (1994). Gas uptake studies of deuterium isotope effects on dichloromethane metabolism in female B6C3F1 mice in vivo. *Toxicology and Applied Pharmacology* **128**, 158-165.
12. Andersen, M. E. (1995). Development of physiologically based pharmacokinetic and physiologically based pharmacodynamic models for applications in toxicology and risk assessment. *Toxicol Lett.* **79**, 35-44.

13. Andersen, M. E., Clewell, H. J. I., and Frederick, C. B. (1995). Applying simulation modeling to problems in toxicology and risk assessment—a short perspective. *Toxicology and Applied Pharmacology* **133**, 181-187.
14. Andersen, M. E., Clewell, H. J. I., Gearhart, J., Allen, B. C., and Barton, H. A. (1997). Pharmacodynamic model of the rat estrus cycle in relation to endocrine disruptors. *Journal of Toxicology and Environmental Health* 189-209.
15. Andersen, M. E., Eklund, C. R., Mills, J. J., Barton, H. A., and Birnbaum, L. S. (1997). A multicompartiment geometric model of the liver in relation to regional induction of cytochrome P450s. *Toxicol.Appl.Pharmacol.* **144**, 135-144.
16. Andersen, M. E., and Barton, H. A. (1999). Biological regulation of receptor-hormone complex concentrations in relation to dose-response assessments for endocrine-active compounds. *Toxicol.Sci.* **48**, 38-50.
17. Andersen, M. E., and Jarabek, A. M. (2001). Nasal tissue dosimetry—issues and approaches for "Category 1" gases: a report on a meeting held in Research Triangle Park, NC, February 11-12, 1998. *Inhal.Toxicol* **13**, 415-435.
18. Andersen, M. E., and Sarangapani, R. (2001). Physiologically based clearance/Extraction models for compounds metabolized in the Nose: An example with Methyl Methacrylate. *Inhal.Toxicol.* **13**, 397-414.
19. Andersen, M. E., Green, T., Frederick, C. B., and Bogdanffy, M. S. (2002). Physiologically based pharmacokinetic (PBPK) models for nasal tissue dosimetry of organic esters: assessing the state-of-knowledge and risk assessment applications with methyl methacrylate and vinyl acetate. *Regulatory Toxicology and Pharmacology* **36**, 234-245.
20. Andersen, M. E. (2003). Toxicokinetic modeling and its applications in chemical risk assessment. *Toxicol Lett.* **138**, 9-27.
21. Andersen, M. E. (2004). Computer demonstration of physiological-toxicokinetic models: demonstrating a computer model that simulates the estradiol (E2)-primed LH surge during proestrus in the rat. *Toxicol.Lett.* **138**, 179-182.
22. Andersen, M. E., Gargas, M. L., Jones, R. A., and Jenkins, L. J. (1980). Determination of the kinetic constants for metabolism of inhaled toxicants in vivo by gas uptake measurements. *Toxicology and Applied Pharmacology* **54**, 100-116.
23. Andersen, M. E. (1981). Pharmacokinetics of inhaled gases and vapors. *Neurobehavioral Toxicol.and Teratol.* **3**, 383-389.
24. Andersen, M. E. (1981). A physiologically based toxicokinetic description of the metabolism of inhaled gases and vapors: analysis at steady state. *Toxicology and Applied Pharmacology* **60**, 509-526.

25. Andersen, M. E. and Clewell, H. J. III. Pharmacokinetic interaction of mixtures. Dayton, O. H. Proceedings of the 14th Annual Conference on Environmental Toxicology , 221-238. 1983. AFAMRL-TR-83-099.
Ref Type: Abstract
26. Andersen, M. E., and Keller, W. C. (1984). Toxicokinetic principles in relation to percutaneous absorption and cutaneous toxicity. In Cutaneous Toxicity (V. A. Drill, and P. Lazar, Eds.), pp. 9-27. Raven Press, New York.
27. Andersen, M. E., Clewell, H. J. I., Gargas, M. L., Smith, F. A., and Reitz, R. H. (1987). Physiologically-based pharmacokinetics and risk assessment process for methylene chloride. Toxicology and Applied Pharmacology **87**, 185-205.
28. Andersen, M. E., Gargas, M. L., Clewell, H. J. I., and Severin, K. M. (1987). Quantitative evaluation of the metabolic interaction between trichloroethylene and 1,1-dichloroethylene in vivo using gas uptake methods. Toxicology and Applied Pharmacology **89**, 149-157.
29. Andersen, M. E., MacNaughton, M. G., Clewell, H. J. I., and Paustenbach, D. J. (1987). Adjusting exposure limits for long and short exposure period using a physiological pharmacokinetic model. American Industrial Hygiene Association Journal **48**, 335-343.
30. Andersen, M. E. (1988). Quantitative risk assessment and occupational carcinogens. Applied Industrial Hygiene **3**, 267-273.
31. Andersen, M. E. (1988). Quantitative risk assessment and occupational carcinogens. Applied Industrial Hygiene **3**, 267-273.
32. Andersen, M. E. (1991). Physiological modeling of organic chemicals. Annals of Occupational Medicine **35**, 305-321.
33. Andersen, M. E., Clewell, H. J. I., and Gargas, M. L. (1991). Physiologically-based pharmacokinetic modeling with dichloromethane, its metabolite carbon monoxide and blood carboxyhemoglobin in rats and humans. Toxicology and Applied Pharmacology **108**, 14-27.
34. Andersen, M. E., Krishnan, K., Conolly, R. B., and McClellan, R. O. (1992). Biologically based modeling in toxicology research. Arch.Toxicol Suppl **15**, 217-227.
35. Andersen, M. E., Krishnan, K., Conolly, R. B., and McClellan, R. O. (1992). Mechanistic toxicology research and biologically-based modeling: partners for improving quantitative risk assessments. Chemical Industry Institute of Toxicology **12**, 1-8.

36. Andersen, M. E., Mills, J. J., and Gargas, M. L. (1993). Modeling receptor-mediated processes with dioxin: Implications for pharmacokinetics and risk assessment. *Risk Analysis* **13**, 25-36.
37. Andersen, M. E., and Krishnan, K. (1994). Physiologically based pharmacokinetics and cancer risk assessment. *Environ. Health Perspect.* **102 Suppl 1**, 103-108.
38. Andersen, M. E., and Krishnan, K. (1995). Relating In Vitro to In Vivo Exposures with Physiologically Based Tissue Dosimetry and Tissue Response Models. In *Animal Test Alternatives: Refinement, Reduction, Replacement* (H. Salem, Ed.), pp. 9-25. Marcel Dekker, Inc., New York.
39. Andersen, M. E., Clewell, H. J. I., and Frederick, C. B. (1995). Contemporary issues in toxicology. Applying simulation modeling to problems in toxicology and risk assessment - a short perspective. *Toxicology and Applied Pharmacology* **133**, 181-187.
40. Andersen, M. E. (1995). Physiologically based pharmacokinetic (PB-PK) models in the study of the disposition and biological effects of xenobiotics and drugs. *Toxicology Letters* **82-83**, 341-348.
41. Andersen, M. E., Clewell, H., III, and Krishnan, K. (1995). Tissue dosimetry, pharmacokinetic modeling, and interspecies scaling factors. *Risk Anal.* **15**, 533-537.
42. Andersen, M. E., and Krishnan, K. (1995). Relating in vitro to in vivo exposures with physiologically-based models of tissue dosimetry and tissue response. In *Animal test alternatives: refinement, reduction and replacement*. (H. Salem, Ed.), pp. 9-25. Marcel Dekker, Inc., New York, Basel, Hong Kong.
43. Andersen, M. E., Birnbaum, L. S., Barton, H. A., and Eklund, C. R. (1997). Regional hepatic CYP1A1 and CYP1A2 induction with 2,3,7,8-tetrachlorodibenzo-p-dioxin evaluated with a multicompartement geometric model of hepatic zonation. *Toxicology and Applied Pharmacology* **144**, 145-155.
44. Andersen, M. E., Sarangapani, R., Gentry, P. R., Clewell, H. J. I., Covington, T. R., and Frederick, C. B. (1999). Application of a hybrid CFD-PBPK nasal dosimetry model in an inhalation risk assessment: an example with acrylic acid. *Toxicological Sciences* **57**, 312-325.
45. Andersen, M. E., and Sarangapani, R. (1999). Clearance concepts applied to the metabolism of inhaled vapors in tissues lining the nasal cavity. *Inhalation Toxicology* **11**, 873-897.

46. Andersen, M. E., Sarangapani, R., Frederick, C. B., and Kimbell, J. S. (2000). Dosimetric adjustment factors for methyl methacrylate derived from a steady-state analysis of a physiologically based clearance-extrapolation model. *Inhalation Toxicology* **11**, 899-926.
47. Andersen, M. E., Sarangapani, R., Reitz, R. H., Gallavan, R. H., Dobrev, I. D., and Plotzke, K. P. (2001). Physiological modeling reveals novel pharmacokinetic behavior for inhaled octamethylcyclotetrasiloxane in rats. *Toxicol Sci.* **60**, 214-231.
48. Andersen, M. E., and Dennison, J. E. (2001). Mode of action and tissue dosimetry in current and future risk assessments. *Science of the Total Environment* **274**, 3-14.
49. Anderson, M. W., Eling, T. E., Lutz, R. L., and Matthews, H. B. (1977). The construction of a pharmacokinetic model for the disposition of PCBs in the rat. *Clinical Pharmacology and Therapeutics* **22**, 765-773.
50. Angelo, M. J., and Pritchard, A. B. (1987). Route to route extrapolation of dichloromethane exposures using a physiological pharmacokinetic model. *Drinking Water and Health* **8**, 254-264.
51. Apostolou, A. (1998). What's in a name: toxicokinetics, pharmacokinetics, or just kinetics? *Regulatory Toxicology and Pharmacology* **27**, 82-83.
52. Arms, A. D. and Travis, C. C. Reference Physiological Parameters in Pharmacokinetic Modeling. Office of Health and Environmental Assessment. EPA. EPA/600/6-88/004, 1-1-7.16. 1988. Washington, DC., US EPA (United State Environmental Protection Agency).
Ref Type: Report
53. Asgharian, B., Wood, R., and Schlesinger, R. B. (1995). Empirical modeling of particle deposition in the alveolar region of the lungs: A basis for interspecies extrapolation. *Fundamental and Applied Toxicology* **27**, 232-238.
54. Auton, M. J., and Woollen, B. H. (1991). A physiologically based mathematical model for the human inhalation pharmacokinetics of 1,1,2-trichloro-1,2,2-trifluoroethane. *International Archives of Occupational and Environmental Health* **63**, 133-138.
55. Auton, T. R., Ramsey, J. D., and Wollen, B. H. (1993). Modelling dermal pharmacokinetics using in vitro data. Part II. Fluazifop-butyl in man. *Human & Experimental Toxicology* **12**, 207-213.
56. Auton, T. R., Ramsey, J. D., and Woollen, B. H. (1993). Modelling dermal pharmacokinetics using in vitro data. Part I. Fluazifop-butyl in the rat. *Human & Experimental Toxicology* **12**, 199-206.

57. Aylward, L. L., Hays, S. M., Karch, N. J., and Paustenbach, D. J. (1996). Relative susceptibility of animals and humans to the cancer hazard posed by 2,3,7,8-tetrachlorodibenzo-p-dioxin using internal measures of dose. *Environmental Science and Technology* **30**, 3534-3543.
58. Balaz, S., and Lukacova, V. (2000). A model-based dependence of the human tissue/blood partition coefficients of chemicals on lipophilicity and tissue composition. *Quantitative Structure-Activity Relationships* **18**, 361-368.
59. Ball, R., and Schwartz, S. L. (1994). Cmatrix: software for physiologically based pharmacokinetic modeling using a symbolic matrix representation system. *Computers in Biology and Medicine* **24**, 269-276.
60. Banks, H. T., Musante, C. J., and Tran, H. T. (1997). A dispersion model for the hepatic uptake and elimination of 2,3,7,8-tetrachlorodibenzo-p-dioxin. CRSC-TR97-29 1-24.
61. Barton, H. A., Creech, J. R., Godin, C. S., Randall, G. M., and Seckel, C. S. (1995). Chloroethylene mixtures: pharmacokinetic modeling and in vitro metabolism of vinyl chloride, trichloroethylene, and trans-1,2-dichloroethylene in rat. *Toxicology and Applied Pharmacology* **130**, 237-247.
62. Barton, H. A., and Andersen, M. E. (1998). A model for pharmacokinetics and physiological feedback among hormones of the testicular-pituitary axis in adult male rats: a framework for evaluating effects of endocrine active compounds. *Toxicological Sciences* **45**, 174-187.
63. Barton, H. A., and Clewell, H. J., III (2000). Evaluating noncancer effects of trichloroethylene: dosimetry, mode of action, and risk assessment. *Environ.Health Perspect.* **108 Suppl 2**, 323-334.
64. Basak, S. C., Mills, D., Hawkins, D. M., and El-Marsi, H. A. (2002). Prediction of tissue-air partition coefficients: A comparison of structure-based and property-based methods. *SAR QSAR Environ Res.* **13**, 649-665.
65. Basak, S. C., Mills, D., Hawkins, D. M., and El-Marsi, H. A. (2003). Prediction of human blood: air partition coefficient: a comparison of structure-based and property-based methods. *Risk.Anal.* **23**, 1173-1184.
66. Bass, L., and Keiding, S. (1988). Physiologically based models and strategic experiments in hepatic pharmacology. *Biochemical Pharmacology* **37**, 1425-1431.
67. Batterman, S., Zhang, L., Wang, S., and Franzblau, A. (2002). Partition coefficients for the trihalomethanes among blood, urine, water, milk and air. *Sci.Total Environ.* **284**, 237-247.

68. Baxter, L. T., Zhu, H., Mackensen, D. G., and Jain, R. K. (1994). Physiologically based pharmacokinetic model for specific and nonspecific monoclonal antibodies and fragments in normal tissues and human tumor xenografts in nude mice. *Cancer Research* **54**, 1517-1528.
69. Baxter, L. T., Zhu, H., Mackensen, D. G., Butler, W. F., and Jain, R. K. (1995). Biodistribution of monoclonal antibodies: scale-up from mouse to human using a physiologically based pharmacokinetic model. *Cancer Research* **55**, 4611-4622.
70. Beck, B. D., Mattuck, R. L., Bowers, T. S., Cohen, J. T., and O'Flaherty, E. (2001). The development of a stochastic physiologically-based pharmacokinetic model for lead. *Sci.Total Environ.* **274**, 15-19.
71. Beliles, R. P., and Totman, L. C. (1989). Pharmacokinetically based risk assessment of workplace exposure to benzene. *Regulatory Toxicology and Pharmacology* **9**, 186-195.
72. Beliveau, M., and Krishnan, K. (2000). Estimation of rat blood: air partition coefficients of volatile organic chemicals using reconstituted mixtures of blood components. *Toxicology Letters* **116**, 183-188.
73. Beliveau, M., Tardif, R., and Krishnan, K. (2003). Quantitative structure-property relationships for physiologically based pharmacokinetic modeling of volatile organic chemicals in rats. *J.Toxicol.Appl.Pharmacology.* **189**, 221-232.
74. Benignus, V. A., Boyes, W. K., and Bussnell, P. J. (1998). A dosimetric analysis of behavioral effects of acute toluene exposure in rats and humans. *Toxicological Sciences* **43**, 186-195.
75. Bernillon, P., and Bois, F. Y. (2000). Statistical issues in toxicokinetic modeling: a Bayesian perspective. *Environmental Health Perspectives Suppl* **108**, 883-893.
76. Béliveau, M., Charest-Tardif, G., and Krishnan, K. (2001). Blood: air partition coefficients of individual and mixtures of trihalomethanes. *Chemosphere* **44**, 377-381.
77. Birnbaum, L., Bischoff, K., Blancato, J., Clewell, H., Dedrick, R., Delp, M., Rhomberg, L., Schaeffer, V., Brown, R., Foran, J., Olin, S., and Robinson, D. Physiological parameter values for PBPK models. A report prepared by the international life sciences institute risk science institute. 1-137. 1994. U.S. Environmental Protection Agency, Office of Health and Environmental Assessment.
Ref Type: Report
78. Bischoff, K. B., Dedrick, R. L., Zaharko, D. S., and Longstreth, J. A. (1971). Methotrexate pharmacokinetics. *Journal of Pharmaceutical Sciences* **60**, 1128-1133.

79. Bischoff, K. B. (1987). Physiologically-based pharmacokinetic modeling. *Drinking Water and Health* **8**, 36-64.
80. Bjorkman, S. (2003). Reduction and lumping of physiologically based pharmacokinetic models: prediction of the disposition of fentanyl and pethidine in humans by successively simplified models. *J.Pharmacokinet.Pharmacodyn.* **30**, 285-307.
81. Bjorkman, S., Wada, R., and Stanski, D. R. (1998). Application of physiologic models to predict the influence of changes in body composition and blood flows on the pharmacokinetics of fentanyl and alfentanil in patients. *Anesthesiology* **88**, 657-667.
82. Bjorkman, S., Wada, R. D., Berling, B. M., and Benoni, G. (2001). Prediction of the disposition of midazolam in surgical patients by a physiologically based pharmacokinetic model. *Journal of Pharmaceutical Sciences* **90**, 1226-1241.
83. Blaauboer, B. J. (2004). The integration of data on physio-chemical properties, in vitro-derived toxicity data and physiologically based kinetic and dynamic as modelling a tool in hazard and risk assessment. A commentary. *Toxicol Lett.* **138**, 161-171.
84. Blakey, G. E., Nestorov, I. A., Arundel, P. A., Aarons, L. J., and Rowland, M. (1997). Quantitative structure-pharmacokinetics relationships: 1. Development of a whole-body physiologically based model to characterize changes in pharmacokinetics across a homologous series of barbiturates in the rat. *Journal of Pharmacokinetics and Biopharmaceutics* **25**, 277-312.
85. Blancato, J. N., and Bischoff, K. B. (1993). The application of pharmacokinetic models to predict target dose. In *Dermal risk assessment. Dermal and inhalation exposure and absorption of toxicants.* (R. G. M. Wang, J. B. Knaak, and H. I. Macbach, Eds.), pp. 31-46. CRC Press Inc..
86. Blancato, J. N., and Saleh, M. A. (1994). Physiologically based pharmacokinetic models. Examples of their use in exposure and risk assessment. In *Biomarkers of Human Exposure to Pesticides.* (M. A. Saleh, J. N. Blancato, and C. H. Nauman, Eds.), pp. 264-283. American Chemical Society, Washington, DC.
87. Blesch, K. S., Gieschke, R., Tsukamoto, Y., reigner, B. G., Burger, H. U., and Steimer, J. L. (2003). Clinical pharmacokinetic/pharmacodynamic and physiologically based pharmacokinetic modeling in new drug development: the capecitabine experience. *Invest New Drugs* **21**, 195-223.
88. Blumenthal, G. M., Kohn, M. C., and Portier, C. J. (1997). A mathematical model of production, distribution, and metabolism of melatonin in mammalian systems. *Toxicology and Applied Pharmacology* **147**, 83-92.

89. Bogaards, J. J., Freidig, A. P., and van Bladeren, P. J. (2001). Prediction of isoprene diepoxide levels in vivo in mouse, rat and man using enzyme kinetic data in vitro and physiologically-based pharmacokinetic modelling. *Chem.Biol.Interact.* **138**, 247-265.
90. Bogdanffy, M. S., and Sarangapani, R. (2003). Physiologically - based kinetic modeling of vapours toxic to the respiratory tract. *Toxicol.Lett.* **138**, 103-117.
91. Bogdanffy, M. S., Sarangapani, R., Kimbell, J. S., Frame, S. R., and Plowchalk, D. R. (1998). Analysis of vinyl acetate metabolism in rat and human nasal tissues by an in vitro gas uptake technique. *Toxicological Sciences* **46**, 235-246.
92. Bogdanffy, M. S., Sarangapani, R., Plowchalk, D. R., Jarabek, A. M., and Andersen, M. E. (1999). A biological risk assessment for vinyl acetate-induced cancer and noncancer inhalation toxicity. *Toxicological Sciences* **51**, 19-35.
93. Bogdanffy, M. S., Plowchalk, D. R., Sarangapani, R., Starr, T. B., and Andersen, M. E. (2001). Mode-of-Action-Based dosimeters for interspecies extrapolation on vinyl acetate inhalation risk. *Inhal.Toxicol.* **13**, 377-396.
94. Bogen, K. T. (1988). Pharmacokinetics for regulatory risk analysis: the case of trichloroethylene. *Regulatory Toxicology and Pharmacology* **8**, 447-466.
95. Bogen, K. T., and McKone, T. E. (1988). Linking indoor air and pharmacokinetic models to assess tetrachloroethylene risk. *Risk Analysis* **8**, 509-519.
96. Bogen, K. T., and Gold, L. S. (1997). Trichloroethylene cancer risk: simplified calculation of PBPK-Based MCLs for cytotoxic end points. *Regulatory Toxicology and Pharmacology* **25**, 26-43.
97. Bois, F. Y. (1999). Analysis of PBPK models for risk characterization. *Ann N Y Acad Sci.* **895**, 317-337.
98. Bois, F. Y., Zeise, L., and Tozer, T. N. (1990). Precision and sensitivity of pharmacokinetic models for cancer risk assessment. Tetrachloroethylene in mice, rats and humans. *Toxicology and Applied Pharmacology* **102**, 300-315.
99. Bois, F. Y., Smith, M. T., and Spear, R. C. (1991). Mechanism of benzene carcinogenesis. Application of a physiological model of benzene pharmacokinetics and metabolism. *Toxicology Letters* **56**, 283-298.
100. Bois, F. Y., Woodruff, T. J., and Spear, R. C. (1991). Comparison of three physiologically-based pharmacokinetic models for benzene disposition. *Toxicology and Applied Pharmacology* **110**, 79-88.
101. Bois, F. Y., and Paxman, D. G. (1992). An analysis of exposure rate effects for benzene using a physiologically based pharmacokinetic model. *Regulatory Toxicology and Pharmacology* **15**, 122-136.

102. Bois, F. Y., Gelman, A., Jiang, J., Maszle, D. R., Zeise, L., and Alexeef, G. (1996). Population toxicokinetics of tetrachloroethylene. *Archives of Toxicology* **70**, 347-355.
103. Bois, F. Y., Jackson, E. T., Pekari, K., and Smith, M. T. (1996). Population toxicokinetics of benzene. *Environmental Health Perspectives* **104**, 1405-1411.
104. Bois, F. Y. (2000). Statistical analysis of Fisher et al. PBPK model of trichloroethylene kinetics. *Environmental Health Perspectives* **108**, 275-282.
105. Bois, F. Y. (2000). Statistical analysis of Clewell et al. PBPK model of trichloroethylene kinetics. *Environmental Health Perspectives* **108**, 307-316.
106. Bois, F. Y. (2001). Applications of population approaches in toxicology. *Toxicol.Lett.* **120**, 385-394.
107. Bonate, H. A., Swann, A., and Silverman, P. B. (1996). Simulation of toluene kinetics in the rat by a physiologically based pharmacokinetic model with application of biotransformation parameters derived independently in vitro and in vivo. *Journal of Pharmaceutical Sciences* **85**, 878-883.
108. Bond, J. A., Himmelstein, M. W., Seaton, M., Boogaard, P., and Medinsky, M. A. (1996). Metabolism of butadiene by mice, rats, and humans: a comparison of physiologically based toxicokinetic model predictions and experimental data. *Toxicology* **113**, 48-54.
109. Bookout, R. L. J., McDaniel, C. R., and Quinn, D. W. M. J. H. (1996). Multilayered dermal subcompartments for modeling chemical absorption. *SAR QSAR Environ Res.* **5**, 133-150.
110. Boom, S. P. A., Meyer, I., Wouterse, A. C., and Russel, F. G. M. (1998). A physiologically based kidney model for the renal clearance of ranitidine and the interaction with cimetidine and probenecid in the dog. *Biopharmaceutics & Drug Disposition* **19**, 199-208.
111. Borghoff, et. al., Gargas, M. L., Andersen, M. E., and Conolly, R. B. (1995). Development of a Mechanism-Based Dosimetry Model for 2,4,4-Trimethyl-2-pentanol-Induced & 2U-Globulin Nephropathy in Male Fischer 344 Rats. *Fundam.Appl.Toxicol* **25**, 124-137.
112. Borghoff, S. J., Murphy, J. E., and Medinsky, M. A. (1996). Development of a physiologically based pharmacokinetic model for methyl tertiary-butyl ether and tertiary-butanol in male Fischer-344 rats. *Fundamental and Applied Toxicology* **30**, 264-275.
113. Bouchard, M., Brunet, R. C., Droz, P.-O., and Carrier, G. (2001). A Biologically based dynamic model for predicting the disposition of methanol and its metabolites in animals and humans. *Toxicol.Sci.* **64**, 169-184.

114. Bouchard, M., Gosselin, N. H., Brunet, R. C., Samuel, O., Dumoulin, M. J., and Carrier, G. (2003). A Toxicokinetic model of malathion and its metabolites as a tool to assess human exposure and risk through measurements of urinary biomarkers. *Toxicol.Sci.* 194.
115. Boxenbaum, H. (1992). Pharmacokinetics: philosophy of modeling. *Drug Metabolism and Disposition* **24**, 89-120.
116. Boyes, W. K., Bussnell, P. J., Crofton, K. M., Evans, M., and Simmons, J. E. (2000). Neurotoxic and pharmacokinetic responses to trichloroethylene as a function of exposure scenario. *Journal of Toxicology and Environmental Health* **108**, 317-322.
117. Brocklebank, J. R., Namdari, R., and Law, F. C. P. (1997). An oxytetracycline residue depletion study to assess the physiologically based pharmacokinetic (PBPK) model in farmed Atlantic salmon. *Canadian Veterinary Journal* **38**, 645-646.
118. Brodeur, J., Laparé, S., Krishnan, K., Tardif, R., and Goyal, R. (1990). Le problème de l'ajustement des valeurs limites d'exposition pour des horaires de travail non-conventionnels: utilité de la modélisation pharmacocinétique à base physiologique. *Travail et Santé* **6**, S11-16.
119. Brodeur, J., Tardif, R., Laparé, S., Charest-Tardif, G., and Krishnan, K. (1994). Use of kinetic modeling to predict metabolic interaction for combinations of binary mixtures of industrial solvents. In *Recent advances in researchs on the combined effects of environmental factors.* (M. Kasuya, Ed.), pp. 101-107. Toyama Medical & Pharmaceutical University Press, Toyama, Japan.
120. Bronaugh, R. L., Collier, S. W., Macpherson, S. E., and Kraeling, M. E. K. (1994). Influence of metabolism in skin on dosimetry after topical exposure. *Environmental Health Perspectives* **102** , 71-74.
121. Brown, E. A., Shelley, M. L., and Fisher, J. W. (1998). A pharmacokinetic study of occupational and environmental benzene exposure with regard to gender. *Risk Analysis* **18**, 205-213.
122. Brown, R. N. (1994). Analytic solution of a linear physiologically based pharmacokinetic model prototype useful in risk assessment. In *Biomarkers of human exposure to pesticides.* (M. A. Saleh, J. N. Blancato, and C. H. Nauman, Eds.), pp. 301-317. American Chemical Society, Washington.
123. Brown, R. P., Delp, M. D., Lindstedt, S. L., Rhomberg, L. R., and Beliles, R. P. (1997). Physiological parameter values for physiologically based pharmacokinetic models. *Toxicology and Industrial Health* **13**, 407-484.
124. Bruckner, J. V. (2000). Differences in sensitivity of children and adults to chemical toxicity: the NAS panel report. *Regul.Toxicol Pharmacol.* **31**, 280-285.

125. Buchanan, J. R., Burka, L. T., and Melnick, R. L. (1997). Purpose and guidelines for toxicokinetic studies within the National Toxicology Program. *Environmental Health Perspectives* **105**, 468-471.
126. Bucher, J. R., and Lucier, G. (1998). Current approaches toward chemical mixture studies at the National Institute of Environmental Health Sciences and the U.S. National Toxicology Program. *Environmental Health Perspectives* **106**, 1295-1298.
127. Buckley, L. A. (1995). Biologically-based models of dioxin pharmacokinetics. *Toxicology* **102**, 125-131.
128. Bungay, P. M., Dedrick, R. L., and Guarino, A. M. (1978). Pharmacokinetic modeling of the dogfish shark (*squalus acanthias*): distribution and urinary and biliary excretion of phenol red and its glucuronide. *Journal of Pharmacokinetics and Biopharmaceutics* **4**, 377-388.
129. Bungay, P. M., Dedrick, M. L., and Matthews, H. B. (1981). Enteric transport of chlordecone in the rat. *Journal of Pharmacokinetics and Biopharmaceutics* **9**, 309-341.
130. Bush, M. L., Frederick, C. B., Kimbell, J. S., and Ultman, J. S. (1998). A CFD-PBPK hybrid model for simulating gas and vapor uptake in the rat nose. *Toxicology and Applied Pharmacology* **150**, 133-145.
131. Byczkowski, J. Z., and Fisher, J. W. (1994). Lactational transfer of tetrachloroethylene in rats. *Risk Analysis* **14**, 339-349.
132. Byczkowski, J. Z., Kinkead, E. R., Leahy, H. F., Randall, G. M., and Fisher, J. W. (1994). Computer simulation of the lactational transfer of tetrachloroethylene in rats using a physiologically based model. *Toxicology and Applied Pharmacology* **125**, 228-236.
133. Byczkowski, J. Z., Gearhart, J., and Fisher, J. W. (1994). Occupational exposure of infants to toxic chemicals via breast milk. *Nutrition* **10**, 43-48.
134. Byczkowski, J. Z., and Fisher, J. W. (1995). A computer program linking physiologically based pharmacokinetic model with cancer risk assessment for breast-fed infants. *Computer Methods and Programs in Biomedicine* **46**, 155-163.
135. Byczkowski, J. Z., and Lipscomb, J. C. (2001). Physiologically based pharmacokinetic modeling of the lactational transfer of methylmercury. *Risk Anal.* **21**, 869-882.
136. Cahill, T. M., Cousins, I., and Mackay, D. (2003). Development and application of a generalized physiologically based pharmacokinetic model for multiple environmental contaminants. *Environmental Toxicology and Chemistry* **22**, 26-34.

137. Calabrese, E. J., and Baldwin, L. A. (1995). A Toxicological basis to derive generic interspecies uncertainty factors for application in human and ecological risk assessment. *Human & Ecological Risk Assessment*. **1**, 555-564.
138. Cantoreggi, S., and Keller, D. A. (1997). Pharmacokinetics and metabolism of vinyl fluoride in vivo and in vitro. *Toxicology and Applied Pharmacology* **143**, 130-139.
139. Canuel, G., Viau, C., and Krishnan, K. A modeling framework for back-calculating ambient concentrations from data on biomarkers.. The Society for Computer Simulation International. Proceeding of the International Conference on Health Sciences Simulation , 97-102. 2000. San Diego, CA.
Ref Type: Conference Proceeding
140. Cardus, J., Burgos, F., Diaz, O., Roca, J., Barbera, J. A., Marrades, R. M., Rodriguez-Roisin, R., and Wagner, P. D. (1997). Increase in pulmonary ventilation-perfusion inequality with age in healthy individuals. *Am.J.Respir.Crit.Care.Med.* **156**, 648-653.
141. Carfagna, M. A., and Kedderis, G. L. (1992). Isolated hepatocytes as in vitro models for the biotransformation and toxicity of chemicals in vivo. *CIIT Activities* **12**, 1-6.
142. Carlton, L. D., Pollack, G. M., and Brouwer, K. L. R. (1996). Physiologic pharmacokinetic modeling of gastrointestinal blood flow as a rate-limiting step in the oral absorption of digoxin: implications for patients with congestive heart failure receiving epoprostenol. *Journal of Pharmaceutical Sciences* **85**, 473-477.
143. Carpenter, R. L. (1999). Aerosol deposition modeling using ACSL. *Drug and Chemical Toxicology* **22**, 73-90.
144. Carpenter, R. L., Eger, E. I., Johnson, B. H., Unadkat, J. D., and Sheiner, L. B. (1987). Does the duration of anesthetic administration affect the pharmacokinetic or metabolism of inhaled anaesthetics in humans? *Anesthesiology and Analgesia* **66**, 1-8.
145. Carrier, G., Brunet, R. C., and Brodeur, J. (1995). Modeling of the toxicokinetics of polychlorinated dibenzo-p-dioxins and dibenzofurans in mammals, including Humans. *Toxicol.Appl.Pharmacol.* **131**, 267-276.
146. Carrier, G., Brunet, R. C., and Brodeur, J. (1995). Modeling of the toxicokinetics of polychlorinated dibenzo-p-dioxins and dibenzofurans in mammals, including Humans. I. Nonlinear distribution of PCDD/PCDF body burden between liver and adipose tissues. *Toxicol.Appl.Pharmacol.* **131**, 253-266.

147. Carrier, G., and Brunet, R. C. (1995). A toxicokinetic model to assess the risk of azinphosmethyl exposure in humans through measures of urinary elimination of alkylphosphates. *Toxicological Sciences* **47**, 23-32.
148. Casanova, M., Conolly, R. B., and Heck, H. d. (1996). DNA-protein cross-links (DPX) and cell proliferation in B6C3F1 mice but not Syrian golden hamsters exposed to dichloromethane: pharmacokinetics and risk assessment with DPX as dosimeter. *Fundamental and Applied Pharmacology* **31**, 103-116.
149. Caster, W. O., Poncelet, J., Simon, A. B., and Armstrong, W. B. (1956). Tissue weights of the rat. I. Normal values determined by dissection and chemical methods. *Proceedings of the Society for Experimental Biology and Medicine* **91**, 122-126.
150. Chan, K. K., Cohen, J. L., Gross, J. F., Himmelstein, K. J., Bateman, J. R., Tsu-Lee, Y., and Marlis, A. S. (1978). Prediction of adriamycin disposition in cancer patients using a physiologic pharmacokinetic model. *Cancer Treatment Report* **62**, 1161-1171.
151. Chapel, A. M., and Sanders, P. (1996). Physiologically-based pharmacokinetic modelling in veterinary medicine. *Revue de Medecine Veterinaire* **147**, 359-366.
152. Charnick, S. B., Kawai, R., Nedelman, J. R., Lemaire, M., Niederberger, W., and Sato, H. (1995). Perspectives in pharmacokinetics. Physiologically based pharmacokinetic modeling as a tool for drug development. *Journal of Pharmacokinetics and Biopharmaceutics* **23**, 217-229.
153. Chen, C. W. (1993). Armitage-Doll Two-Stage Model: Implications and Extension. *Risk Anal.* **13**, 273-279.
154. Chen, H. S. G., and Gross, J. F. (1979). Estimation of tissue to plasma partition coefficients used in physiological pharmacokinetic models. *Journal of Pharmacokinetics and Biopharmaceutics* **7**, 117-125.
155. Chow, H. H. (1997). A physiologically based pharmacokinetic model of zidovudine (AZT) in the mouse - model development and scale-up to humans. *Journal of Pharmaceutical Sciences* **86**, 1223-1228.
156. Clarke, D. O., Elswick, B. A., Welsch, F., and Conolly, R. B. (1993). Pharmacokinetics of 2-methoxyethanol and 2-methoxyacetic acid in the pregnant mouse: a physiologically-based mathematical model. *Toxicology and Applied Pharmacology* **121**, 239-252.
157. Clausen, J., and Bickel, M. H. (1993). Prediction of drug distribution in dialysis and in vivo from binding to tissues and blood. *Journal of Pharmaceutical Sciences* **82**, 345-349.

158. Clewell, H. J. I., Lee, T. S., and Carpenter, R. L. (1994). Sensitivity of physiologically based pharmacokinetic models to variation in model parameters - methylene chloride. *Risk Analysis* **14**, 521-531.
159. Clewell, H. J. I., Gentry, P. R., Gearhart, J. M., Allen, B. C., and Andersen, M. E. (1995). Considering pharmacokinetic and mechanistic information in cancer risk assessments for environmental contaminants: examples with vinyl chloride and trichloroethylene. *Chemosphere* **31**, 2561-2578.
160. Clewell, H. J. I. (1995). The application of physiologically based pharmacokinetic modeling in human health risk assessment of hazardous substances. *Toxicology Letters* **79**, 207-217.
161. Clewell, H. J. I., Gentry, P. R., and Gearhart, J. M. (1997). Investigation of the potential impact of benchmark dose and pharmacokinetic modeling in noncancer risk assessment. *Journal of Toxicology and Environmental Health* **52**, 475-515.
162. Clewell, H. J. I., Gentry, P. R., Covington, T. R., and Gearhart, J. M. (2000). Development of a physiologically based pharmacokinetic model of trichloroethylene and its metabolites for use in risk assessment. *Environmental Health Perspectives* **108**, 283-305.
163. Clewell, H. J. I., Gentry, P. R., Gearhart, J. M., Allen, B. C., and Andersen, M. E. (2001). Comparison of cancer risk estimates for vinyl chloride using animal and human data with a PBPK model. *Sci.Total Environ.* **274**, 37-66.
164. Clewell, H. J. I., Teeguarden, J. G., McDonald, T., Sarangapani, R., Lawrence, G. S., Covington, T. R., Gentry, R., and Shipp, A. (2002). Review and evaluation of the potential impact of age- and gender-specific pharmacokinetic differences on tissue dosimetry. *Critical Reviews in Toxicology* **32**, 329-389.
165. Clewell, H. J., III, Gentry, P. R., Gearhart, J. M., Covington, T. R., Banton, M. I., and Andersen, M. E. (2001). Development of a physiologically based pharmacokinetic model of isopropanol and its metabolite acetone. *Toxicol Sci.* **63**, 160-172.
166. Clewell, H. J. I., and Andersen, M. E. (1987). Dose, species and route extrapolation using physiologically-based pharmacokinetic models. *Drinking Water and Health* **8**, 159-182.
167. Clewell, H. J. I. (1993). Coupling of computer modeling with in vitro methodologies to reduce animal usage in toxicity testing. *Toxicology Letters* **68**, 101-117.
168. Clewell, H. J. I., and Jarnot, B. M. (1994). Incorporation of pharmacokinetics in noncancer risk assessment: example with chloropentafluorobenzene. *Risk Analysis* **14**, 265-276.

169. Clewell, H. J. I., and Andersen, M. E. (1994). Physiologically-based pharmacokinetic modeling and bioactivation of xenobiotics. *Journal of Toxicology and Environmental Health* **10**, 1-24.
170. Clewell, H. J. I., and Andersen, M. E. (1996). Use of physiologically-based pharmacokinetic modeling to investigate individual versus population risk. *Toxicology* **111**, 315-329.
171. Clewell, H. J. I., Andersen, M. E., Wills, R. J., and Latriano, L. (1997). A physiologically based pharmacokinetic model for retinoic acid and its metabolites. *Journal of American Academy of Dermatology* **36**, S77-S85.
172. Clewell, H. J. I., Gearhart, J. M., Gentry, P. R., Covington, T. R., VanLandingham, C. B., Crump, K. S., and Shipp, A. M. (1999). Evaluation of the uncertainty in an oral reference dose for methylmercury due to interindividual variability in pharmacokinetics. *Risk Anal.* **19**, 547-558.
173. Clewell, H. J. I., Andersen, M. E., and Barton, H. A. (2002). A Consistent Approach for the Application of Pharmacokinetic Modeling in Cancer and Noncancer Risk Assessment. *Environmental Health Perspectives* **110**, 85-93.
174. Clewell, R. A., Merrill, E. A., and Robinson, P. J. (2001). The use of physiologically based models to integrate diverse data sets and reduce uncertainty in the prediction of perchlorate and iodide kinetics across life stages and species. *Toxicology and Industrial Health* **17**, 210-222.
175. Clewell, R. A., and Gearhart, J. M. (2002). Pharmacokinetics of toxic chemicals in breast milk: use of PBPK models to predict infant exposure. *Environmental Health Perspectives* **110**, A333-A337.
176. Clewell, R. A., Merrill, E. A., Yu, K. O., Mahle, D. A., Sterner, T. R., Fisher, J. W., and Gearhart, J. M. (2003). Predicting neonatal perchlorate dose and inhibition of iodide uptake in the rat during lactation using physiologically-based pharmacokinetic modeling. *Toxicol Sci.* **74**, 416-436.
177. Clewell, R. A., Merrill, E. A., Yu, K. O., Mahle, D. A., Sterner, T. R., Mattie, D. R., Robinson, P. J., Fisher, J. W., and Gearhart, J. M. (2003). Predicting fetal perchlorate dose and inhibition of iodide kinetics during gestation: a physiologically-based pharmacokinetic analysis of perchlorate and iodide kinetics in the rat. *Toxicol.Sci.* **73**, 235-255.
178. Cohen, S. M., and Ellwein, L. B. (1990). Cell proliferation in carcinogenesis. *Science* **249**, 1007-1011.
179. Cohn, M. S. (1987). Sensitivity analysis in pharmacokinetic modeling. *Drinking Water and Health* **8**, 265-272.

180. Cole, C. E., Tran, H. T., and Schlosser, P. M. (2001). Physiologically based pharmacokinetic modeling of benzene metabolism in mice through extrapolation from in vitro to in vivo. *Journal of Toxicology and Environmental Health* **62**, 439-465.
181. Collins, A. S., Sumner, S. C. J., Borghoff, S. J., and Medinsky, M. A. (1999). A physiological model for tert-amyl methyl ether and tert-amyl alcohol: hypothesis testing of model structures. *Toxicological Sciences* **49**, 15-28.
182. Collins, J. M., Dedrick, R. L., Flessner, M. F., and Guarino, A. M. (1982). Concentration dependent disappearance of fluorouracil from peritoneal fluid in the rat: Experimental observations and distributed modeling. *Journal of Pharmaceutical Sciences* **71**, 735-738.
183. Collins, J. M., and Dedrick, M. L. (1982). Contribution of lungs to total body clearance: linear and nonlinear effects. *Journal of Pharmaceutical Sciences* **71**, 66-69.
184. Connell, D. W., Braddock, R. D., and Mani, S. V. (1993). Prediction of the partition coefficient of lipophilic compounds in the air-mammal tissue system. *Sci.Total.EnvIRON.SUPPLEMENT*. 1383-1396.
185. Conolly, R. B., and Kimbell, J. S. (1994). Computer simulation of cell growth governed by stochastic processes: Application to clonal growth cancer models. *Toxicology and Applied Pharmacology* **124**, 284-295.
186. Conolly, R. B., and Butterworth, B. E. (1995). Biologically based dose response model for hepatic toxicity: a mechanistically based replacement for traditional estimates of noncancer risk. *Toxicol.Lett.* **82/83**, 901-906.
187. Conolly, R. B., Limbell, J. S., Janszen D, Schlosser, P. M., Kalisak, D., Preston, J., and Miller, F. J. (2003). Biologically motivated computational modeling of formaldehyde carcinogenicity in the F344 Rat. *Toxicol.Sci.* **75**, 432-447.
188. Conolly, R. B., Reitz, R. H., Clewell, H. J. I., and Andersen, M. E. (1988). Pharmacokinetics, biochemical mechanism and mutation accumulation: a comprehensive model of chemical carcinogenesis. *Toxicology Letters* **43**, 189-200.
189. Conolly, R. B., and Andersen, M. E. (1991). Biologically Based Pharmacodynamic Models: Tools for Toxicological Research And Risk Assessment. *Annu.Rev.Pharmacol.Toxicol.* **31**, 303-323.
190. Conolly, R. B., Krishnan, K., and Andersen, M. E. (1992). An overview of the outstanding issues in the risk assessment of methylene chloride. In *Oncogene and transgenics correlates of cancer risk assessment*. (C. Zervos, Ed.), pp. 217-229. Plenum Press, New York.

191. Conolly, R. B., Lilly, P. D., and Kimbell, J. S. (2000). Simulation modeling of the tissue disposition of formaldehyde to predict nasal DNA-protein cross-links in Fischer 344 rats, rhesus monkeys, and humans. *Environ. Health Perspect.* **108 Suppl 5**, 919-924.
192. Conolly, R. B. (2001). Biologically motivated quantitative models and the mixture toxicity problem. *Toxicol. Sci.* **63**, Review.
193. Corley, R. A., Mast, T. J., Carney, E. W., Rogers, J. M., and Daston, G. P. (2003). Evaluation of physiologically based models of pregnancy and lactation for their application in children's health risk assessments. *Critical Reviews in Toxicology* **33**, 137-211.
194. Corley, R. A., Mandrela, A. L., and Smith, F. A. (1990). Development of a physiologically-based pharmacokinetic model for chloroform. *Toxicology and Applied Pharmacology* **103**, 512-527.
195. Corley, R. A., Bormett, G. A., and Ghanayem, B. I. (1994). Physiologically based pharmacokinetics of 2-butoxyethanol and its major metabolite, 2-butoxyacetic acid, in rats and humans. *Toxicology and Applied Pharmacology* **129**, 61-79.
196. Corley, R. A., Markham, D. A., Banks, C., Delorme, P., Masterman, A., and Houle, J. M. (1997). Physiologically based pharmacokinetics and the dermal absorption of 2-butoxyethanol vapor by humans. *Fundamental and Applied Toxicology* **39**, 120-130.
197. Corley, R. A., Gordon, S. M., and Wallace, L. A. (2000). Physiologically based pharmacokinetic modeling of the temperature-dependent dermal absorption of chloroform by humans following bath water exposures. *Toxicological Sciences* **53**, 13-23.
198. Corley, R. A., English, J. C., Hill, T. S., Fiorica, L. A., and Morgott, D. A. (2000). Development of a physiologically based pharmacokinetic model for hydroquinone. *Toxicology and Applied Pharmacology* **165**, 163-174.
199. Cox Jr L.A (1996). Reassessing benzene risks using internal doses and Monte-Carlo uncertainty analysis. *Environmental Health Perspectives* **104**, 1413-1429.
200. Cox, L. A. Jr., and Ricci, P. F. (1992). Reassessing benzene cancer risks using internal doses. *Risk Analysis* **12**, 401.
201. Cox, L. A. Jr. (1995). Simple relations between administered and internal doses in compartmental flow models. *Risk Analysis* **15**, 197-204.
202. Craigmill, A. L. (2003). A physiologically based pharmacokinetic model for oxytetracycline residues in sheep. *J Vet Pharmacol Ther.* **26**, 55-63.

203. Crank, W. D., and Vinegar, A. (1992). A physiologically-based pharmacokinetic model for chloropentafluorobenzene in primates to be used in the evaluation of protective equipment against toxic gases. *Toxicology and Industrial Health* **8**, 21-35.
204. Cronin, W. J., Oswald, E. J., Shelley, M. L., Fisher, J. W., and Flemming, C. D. (1995). A trichloroethylene risk assessment using a Monte Carlo analysis of parameter uncertainty in conjunction with physiologically based pharmacokinetic modeling. *Risk Analysis* **15**, 555-565.
205. Cruzen, G., Carlson, G. P., Johnson, K. A., Andrews, L. S., Banton, M. I., Bevan, C., and Cushman, J. R. (2002). Styrene respiratory tract toxicity and mouse lung tumors are mediated by CYP2F-generated metabolites. *Regulatory Toxicology and Pharmacology* **35**, 308-319.
206. Csanady, G. A., and Laib, R. J. (1990). Use of linear free energy relationships in toxicology: prediction of partition coefficients of volatile lipophilic compounds. *Arch. Toxicol.* **64**, 594-596.
207. Csanady, G. A., Laib, R. J., and Filser, J. G. (1995). Metabolic transformation of halogenated and other alkenes- a theoretical approach, Estimation of metabolic reactivities for in vivo conditions. *Toxicol.Lett.* **75**, 217-223.
208. Csanady, G. A., Kessler, W., Hoffmann, H. D., and Filser, J. G. (2003). A toxicokinetic model for styrene and its metabolite styrene - 7,8-oxide in mouse, rat and human with special emphasis on the lung. *Toxicol.Lett.* **138**, 75-102.
209. Csanady, G. A., Mendrala, A. L., Nolan, R. J., and Filser, J. G. (1994). A physiologic pharmacokinetic model for styrene and styrene-7,8-oxide in mouse, rat and man. *Archives of Toxicology* **68**, 143-157.
210. Csanady, G. A., Kreuzer, P. E., Baur, C., and Filser, J. G. (1996). A physiological toxicokinetic model for 1,3-butadiene in rodents and man: blood concentrations of 1,3-butadiene, its metabolically formed epoxides, and of haemoglobin adducts - relevance of glutathione depletion. *Toxicology* **113**, 300-305.
211. Csanady, G. A., Denk, B., Putz, C., Kreuzer, P. E., Kessler, W., Baur, C., Gargas, M. L., and Filser, J. G. (2000). A physiological toxicokinetic model for exogenous and endogenous ethylene and ethylene oxide in rat, mouse, and human: formation of 2-hydroxyethyl adducts with hemoglobin and DNA. *Toxicology and Applied Pharmacology* **165**, 1-26.
212. Cuddihy R.G., Griffith, W. C., and Boecker, B. B. Tissue weight in adult beagle dogs. Lovelage foundation for medical education and research. november 1972, 106-111. 1971. Albuquerque ,New Mexico., Staff of the fission product inhalation program. Fission product inhalation program annual report.
Ref Type: Report

213. Cuddihy R.G., Hall, R. P., Hobbs, C. H., Boecker, B. B., and Muggenburg, B. A. Tissue blood volumes and weights in adult beagle dogs. Lovelage foundation for medical education and research. november 1972, 119-134. 1971. Albuquerque, New Mexico, Staff of the fission product inhalation program. Fission product inhalation program annual report.
Ref Type: Report
214. D'Souza, R. W., and Andersen, M. E. (1988). Physiologically-based pharmacokinetic model for vinylidene chloride. *Toxicology and Applied Pharmacology* **95**, 230-240.
215. D'Souza, R. W., Francis, W. R., and Andersen, M. W. (1988). Physiological model for tissue glutathione depletion and increased resynthesis after ethylene dichloride exposures. *Journal of Pharmacology and Experimental Therapeutics* **245**, 563-568.
216. D'Souza, R. W., Francis, W. R., Bruce, R. D., and Andersen, M. E. (2000). Physiologically based pharmacokinetic model for ethylene dichloride and its application in risk assessment. *inconnu* 286-301.
217. da Silva, M. L., Charest-Tardif, G., Krishnan, K., and Tardif, R. (1999). Influence of oral administration of a quaternary mixture of trihalomethanes on their blood kinetics in the rat. *Toxicology Letters* **106**, 49-57.
218. da Silva, M. L., Charest-Tardif, G., Krishnan, K., and Tardif, R. (2000). Evaluation of the pharmacokinetic interactions between orally administered trihalomethanes in the rat. *Journal of Toxicology and Environmental Health* **60**, 343-353.
219. Dallas, C. E., Bruckner, J. V., Megden, J. L., and Weir, F. W. (1986). A method for direct measurement of systemic uptake and elimination of volatile organics in small mammals. *Journal of Pharmacological Methods* **16**, 239-250.
220. Dallas, C. E., Ramanathan, R., Muralidhara, S., Gallo, G. M., and Bruckner, J. V. (1989). The uptake and elimination of 1,1,1-trichloroethane during the following inhalation exposures in rats. *Toxicology and Applied Pharmacology* **98**, 385-397.
221. Dallas, C. E., Gallo, J. M., Ramanathan, R., Muralidhara, S., and Bruckner, J. V. (1991). Physiological pharmacokinetic modeling of inhaled trichloroethylene in rats. *Toxicology and Applied Pharmacology* **110**, 303-314.
222. Dallas, C. E., Muralidhara, S., Chen, X. M., Ramanathan, R., Varkonyl, P., Gallo, J. M., and Bruckner, J. V. (1994). Use of a physiologically based model to predict systemic uptake and respiratory elimination of perchloroethylene. *Toxicology and Applied Pharmacology* **128**, 60-68.

223. Dallas, C. E., Chen, X. M., O'Barr, K., Muralidhara, S., Varkonyl, P., and Bruckner, J. V. (1994). Development of a physiologically based pharmacokinetic model for perchloroethylene using tissue concentration-time data. *Toxicology and Applied Pharmacology* **128**, 50-59.
224. Dallas, C. E., Chen, X. M., Muralidhara, S., Varkonyl, P., Tackett, R. L., and Bruckner, J. V. (1994). Use of tissue disposition data from rats and dogs to determine species differences for a physiological model for perchloroethylene. *Environmental Research* **67**, 54-67.
225. Dallas, C. E., Chen, X. M., Muralidhara, S., Varkonyl, P., Tackett, L., and Bruckner, J. V. (1995). Physiologically based pharmacokinetic model useful in prediction of the influence of species, dose, and exposure route on perchloroethylene pharmacokinetics. *Journal of Toxicology and Environmental Health* **44**, 301-317.
226. Dalley, J. W., Gupta, P. K., and Hung, C. T. (1990). A physiological pharmacokinetic model describing the disposition of lead in the absence and presence of l-ascorbic acid in rats. *Toxicology Letters* **50**, 337-348.
227. Dankovic, D. A., and Bailer, A. J. (1994). The impact of exercise and intersubject variability on dose estimates for dichloromethane derived from a physiologically based pharmacokinetic model. *Fundamental and Applied Toxicology* **22**, 20-25.
228. Davies, B., and Morris, T. (1993). Physiological parameters in laboratory animals and humans. *Pharmaceutical Research* **10**, 1093-1095.
229. Davis, N. R., and Mapleson, W. W. (1993). A physiological model for the distribution of injected agents, with special reference to pethidine. *British Journal of Anaesthesia* **70**, 248-258.
230. de Jongh, J., and Blaauboer, B. J. (1996). In vitro-based and in vivo-based simulations of benzene uptake and metabolism in rats. *ALTA* **24**, 179-190.
231. de Jongh, J., and Blaauboer, B. J. (1996). Simulation of toluene kinetics in the rat by a physiologically based pharmacokinetic model with application of biotransformation parameters derived independently in vitro and in vivo. *Fundamental and Applied Toxicology* **32**, 260-268.
232. de Jongh, J., and Blaauboer, B. J. (1997). Simulation of lindane kinetics in rats. *Toxicology* **122**, 1-9.
233. de Jongh, J., and Blaauboer, B. J. (1997). Evaluation of in vitro-based simulations of toluene uptake and metabolism in rats. *Toxicology in Vitro* **11**, 485-489.
234. de Jongh, J., Verhaar, H. J. M., and Hermens, J. L. M. (1998). Role of kinetic in acute lethality of nonreactive volatile organic compounds (VOCs). *Toxicological Sciences* **45**, 26-32.

235. Dedrick, R. L., and Bischoff, K. B. (1968). Pharmacokinetics in applications of the artificial kidney. *Chemical Engineering Progress Symposium Series* **64**, 32-44.
236. Dedrick, R. L., Forrester, D. D., and Ho, D. H. W. (1972). In vitro-in vivo correlation of drug metabolism: Deamination of 1- β -D-arabinosyl cytosine. *Biochemical Pharmacology* **21**, 1-16.
237. Dedrick, R. L., Zaharko, D. S., and Lutz, R. J. (1973). Transport and binding of methotrexate in vivo. *Journal of Pharmaceutical Sciences* **62**, 882-890.
238. Delic, J. I., Lilly, P. D., MacDonald, A. J., and Loizou, G. D. (2000). The utility of PBPK in the safety assessment of chloroform and carbon tetrachloride. *Regulatory Toxicology and Pharmacology* **32**, 144-155.
239. Delp, M. D., Manning, R. O., Bruckner, J. V., and Armstrong, R. B. (1991). Distribution of cardiac output during diurnal changes of activity in rats. *American Journal of Physiology* **261**, H1487-1493.
240. Dennison, J. E., Andersen, M. E., and Yang, R. S. (2003). Characterization of the pharmacokinetics of gasoline using PBPK modeling with a complex mixtures chemical lumping approach. *Inhal.Toxicol.* **15**, 961-986.
241. Derks, H. J. G. M., Berende, P. L. M., Olling, M., Everts, H., Liem, A. K. D., and de Jongh, A. P. J. M. (1994). Pharmacokinetic modeling of polychlorinated dibenzo-p-dioxins (PCDDs) and furans (PCDFS) in cows. *Chemosphere* **28**, 711-715.
242. Derr, R. F. (1993). Simulation studies on ethanol metabolism in different human populations with a physiological pharmacokinetic model. *Journal of Pharmaceutical Sciences* **82**, 677-682.
243. Dietz, K. F., Rodriguez-Giaxola, M., Traiger, G. J., Stella, V. J., and Himmelstein, K. J. (1981). Pharmacokinetics of 2-butanol and its metabolites in the rat. *Journal of Pharmacokinetics and Biopharmaceutics* **9**, 553-576.
244. Dills, R. L., Ackerlund, W. S., Kalman, D. A., and Morgan, M. S. (1993). Blood/air partition coefficient determinations: automation and improvement of the equilibrium partitioning in closed systems method. *J.Exposure Analysis.Environ.Epidemiology.* **3**, 471-489.
245. Dills, R. L., Enderlein, C., Ackerlund, W. S., Kalman, D. A., and Morgan, M. S. (1994). Investigation of the relationship between chemical concentration and the blood/air partition coefficient. *J.Exposure Analysis.Environ.Epidemiology.* **4**, 343-353.

246. Dills, R. L., Ackerlund, W. S., Kalman, D. A., and Morgan, M. S. (1994). Inter-individual variability in blood/air partitioning of volatile organic compounds and correlation with blood chemistry. *Journal of Exposure Analysis and Environmental Epidemiology* **4**, 229-245.
247. DiStefano, J. J. I. (1982). Noncompartmental vs. compartmental analysis: some basis for choice. *American Journal of Physiology* **243**, R1-R6.
248. Do Luu, H. M., and Hutter, J. C. (2000). Pharmacokinetic modeling of 4,4'-methylenedianiline released from reused polyurethane dialyzer potting materials. *Journal of Biomedical Materials Research* **53**, 276-286.
249. Dobbs, A. J., and Williams, N. (1983). Fat solubility : a property of environmental relevance? *Chemosphere* **12** , 97-104.
250. Dobrev, I. D., Andersen, M. E., and Yang, R. S. (2002). In silico toxicology: simulating interaction thresholds for human exposure to mixtures of trichloroethylene, tetrachloroethylene, and 1,1,1-trichloroethane. *Environmental Health Perspectives* **110**, 1031-1039.
251. Dobrev, I. D., Reddy, M. B., Plotzke, K. P., Varaprath, S., McNett, D. A., Durham, J., and Andersen, M. E. (2003). Closed- chamber inhalation pharmacokinetic studies with hexamethyldisiloxane in the rat. *Inhal.Toxicol* **15**, 589-617.
252. Dobrev, I. D., Andersen, M. E., and Yang, R. S. (2001). Assessing interaction thresholds for trichloroethylene in combination with tetrachloroethylene and 1,1,1-trichloroethane using gas uptake studies and PBPK modeling. *Arch.Toxicol* **75**, 134-144.
253. Domenech, R. J., Hoffman, J. E., Noble, M. M., Saunder, K. B., Hensen, J. R., and Subijanto, S. (1969). Total and regional coronary blood flow measured by radioactive microsphere in conscious and anesthetized dogs. *Circulation Research* **25**, 581-596.
254. Dong, M. H. (1994). Microcomputer programs for physiologically-based pharmacokinetic (PB-PK) modelling. *Computer Methods and Programs in Biomedecine* **45**, 213-221.
255. Dorne, J. L. C. M., Walton, K., and Renwick, A. G. (2001). Uncertainty factors for chemical risk assesement: human variability in the pharmacokinetics of CYP1A2 probe substrates. *Food and Chemical Toxicology* **39**, 681-696.
256. Dorne, J. L. C. M., Walton, K., and Renwick, A. G. (2001). Human variability in glucuronidation in relation to uncertainty factors for risk assessment. *Food and Chemical Toxicology* **39**, 1153-1173.

257. Dorne, J. L. C. M., Walton, K., Slob, W., and Renwick, A. G. (2002). Human variability in polymorphic CYP2D6 metabolism: is the kinetic default uncertainty factor adequate? *Food and Chemical Toxicology* **40**, 1633-1656.
258. Dourson, M. L., Felter, S. P., and Robinson, D. (1996). Evolution of science-based uncertainty factors in noncancer risk assessment. *Regulatory Toxicology and Pharmacology* **24**, 108-120.
259. Dourson, M. L., Andersen, M. E., Erdreich, L. S., and MacGregor, J. A. (2001). Using human data to protect the public's health. *Regulatory Toxicology and Pharmacology* **33**, 234-256.
260. Droz, P. O. (1986). Simulation models for organic solvents. In *Progress in clinical and biological research*. pp. 73-87. Alan R. Liss Inc., New York.
261. Droz, P. O., Berode, M., and Jang, J. Y. (1999). Biological monitoring of tetrahydrofuran: contribution of a physiologically based pharmacokinetic model. *American Industrial Hygiene Association Journal* **60**, 243-248.
262. Dunn, W. J., and Wold, S. (1978). Statistical analysis of the partition coefficient. *Acta Chemica Scandinavia* **B32**, 536-542.
263. Dybing, E. (2003). Panel discussion: application of physiological-toxicokinetic modelling. *Toxicol Lett.* **138**, 173-178.
264. Easterling, M. R., Evans, M. V., and Kenyon, E. M. (2000). Comparative analysis of software for physiologically based pharmacokinetic modeling : simulation, optimization, and sensitivity analysis. *Toxicology Methods* **10**, 203-229.
265. Ebling, W. F., Wada, D. R., and Stanski, D. R. (1994). From piecewise to full physiologic pharmacokinetic modeling - Applied to thiopental disposition in the rat. *Journal of Pharmacokinetics and Biopharmaceutics* **22**, 259-292.
266. Edler, L. (1999). Uncertainty in biomonitoring and kinetic modeling. *Ann N Y Acad Sci.* **895**, 80-100.
267. Edler, L., and Portier, C. J. (1992). Uncertainty in physiological pharmacokinetic modeling and its impact on statistical risk estimation of 2,3,7,8-TCDD. *Chemosphere* **25**, 239-242.
268. El-Marsi, H. A., Reardon, K. F., and Yang, R. S. H. (1997). Integrated approaches for the analysis of toxicologic interactions of chemical mixtures. *Critical Reviews in Toxicology* **27**, 175-197.
269. El-Masri, H. A., Bell, D. A., and Portier, C. J. (1999). Effects of glutathione transferase theta polymorphism on the risk estimates of dichloromethane to humans. *Toxicology and Applied Pharmacology* **158**, 221-230.

270. El-Masri, H. A., Thomas, R. S., Benjamin, S. A., and Yang, R. S. H. (1995). Physiologically based pharmacokinetic/pharmacodynamic modeling of chemical mixtures and possible applications in risk assessment. *Toxicology* **105**, 275-282.
271. El-Masri, H. A., Thomas, R. S., Sabados, G. R., Phillips, J. K., Constan, A. A., Benjamin, S. A., Andersen, M. E., Mehendale, H. M., and Yang, R. S. H. (1996). Physiologically based pharmacokinetic/pharmacodynamic modeling of the toxicologic interaction between carbon tetrachloride and kepone. *Archives of Toxicology* **70**, 704-713.
272. El-Masri, H. A., Tessari, J. D., and Yang, R. S. H. (1996). Exploration of an interaction threshold for the joint toxicity of trichloroethylene and 1,1-dichloroethylene: utilization of a PBPK model. *Archives of Toxicology* **70**, 527-539.
273. El-Masri, H. A., Constan, A. A., Ramsdell, H. S., and Yang, R. S. H. (1996). Physiologically based pharmacokinetic modeling of an interaction threshold between trichloroethylene and 1,1-dichloroethylene in Fisher 344 rats. *Toxicology and Applied Pharmacology* **141**, 124-132.
274. El-Masri, H. A., and Portier, C. J. (1998). Physiologically based pharmacokinetics models of primidone and its metabolites phenobarbital and phenylethymalonamide in humans, rats, and mice. *Drug Metabolism and Disposition* **26**, 585-594.
275. Ellis, M. K., Trebilcock, R., Naylor, J. L., Tseung, K., Collins, M. A., Hext, P. M., and Green, T. (1996). The inhalation toxicology, genetic toxicology, and metabolism of difluoromethane in the rat. *Fundamental and Applied Toxicology* **31**, 243-251.
276. Erickson, R. J., and McKim, J. M. (1990). A simple flow-limited model for exchange of organic chemicals at fish gills. *Environmental Toxicology and Chemistry* **9**, 159-165.
277. Evans, M. V., Boyes, W. K., Simmons, J. E., Litton, D. K., and Easterling, M. R. (2002). A comparison of Haber's rule at different ages using a physiologically based pharmacokinetic (PBPK) model for chloroform in rats. *Toxicology* **176**, 11-23.
278. Evans, M. V., Crank, W. D., Yang, H. M., and Simmons, J. E. (1994). Applications of sensitivity analysis to a physiologically based pharmacokinetic model for carbon tetrachloride in rats. *Toxicology and Applied Pharmacology* **128**, 36-44.
279. Evans, M. V., and Andersen, M. E. (1995). Sensitivity analysis and the design of gas uptake inhalation studies. *Inhalation Toxicology* **7**, 1075-1094.

280. Evans, M. V., and Simmons, J. E. (1996). Physiologically based pharmacokinetic estimated metabolic constants and hepatotoxicity of carbon tetrachloride after methanol pretreatment in rats. *Toxicology and Applied Pharmacology* **140**, 245-253.
281. Evans, M. V., and Andersen, M. E. (2000). Sensitivity analysis of a physiological model for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD): assessing the impact of specific model parameters on sequestration in liver and fat in the rat. *Toxicological Sciences* **54**, 71-80.
282. Evelo, C. T., Oostendorp, J. G., ten Berge, W. F., and Borm, P. J. (1993). Physiologically based toxicokinetic modeling of 1,3-butadiene lung metabolism in mice becomes more important at low doses. *Environmental Health Perspectives* **101**, 496-502.
283. Farrar, D., Allen, B., Crump, K., and Shipp, A. (1989). Evaluation of uncertainty in input parameters to pharmacokinetic models and the resulting uncertainty in output. *Toxicology Letters* **49**, 371-385.
284. Farris, F. F., Dedrick, R. L., and King, F. G. (1988). Cisplatin pharmacokinetics: Applications of a physiological model. *Toxicology Letters* **43**, 117-137.
285. Farris, F. F., Dedrick, R. L., Allen, P. V., and Smith, J. C. (1993). Physiological model for the pharmacokinetics of methylmercury in the growing rat. *Toxicology and Applied Pharmacology* **119**, 74-90.
286. Faustman, E. M., Lewandowski, T. A., Ponce, R. A., and Bartell, S. M. (1999). Biologically based dose-response models for developmental toxicants: lessons from Methylmercury. *Inhal.Toxicol* **11** , 559-572.
287. Fernandez, J. G., Droz, P. O., Humbert, B. E., and Caperos, J. R. (1977). Trichloroethylene exposure simulation of uptake, excretion and metabolism using a mathematical model. *British Journal of Industrial Medicine* **34**, 43-55.
288. Filser, J. G., and Bolt, H. M. (1981). Inhalation pharmacokinetics based on gas uptake studies. I. Improvement of kinetic models. *Archives of Toxicology* **47**, 279-292.
289. Filser, J. G., Johanson, G., Kessler, W., Kreuzer, P. E., Stei, P., Baur, C., and Csanady, G. A. (1993). A pharmacokinetic model to describe toxicokinetic interactions between 1,3-butadiene and styrene in rats: predictions for human exposure. *IARC Scientific Publications* **127**, 65-78.
290. Filser, J. G., Csanady, G. A., Kreuzer, P. E., and Kessler, W. (1995). Toxicokinetic models for volatile industrial chemicals and reactive metabolites. *Toxicology Letters* **82/83**, 357-366.

291. Filser, J. G., Csanady, G. A., Denk, B., Hartmann, M., Kauffman, A., Kessler, W., Kreuzer, P. E., Putz, C., Shen, J. H., and Stei, P. (1996). Toxicokinetics of isoprene in rodents and humans. *Toxicology* **113**, 278-287.
292. Filser, J. G., Schmidbauer, R., Rampf, F., Baur, C. M., Putz, C., and Csanady, G. A. (2000). Toxicokinetics of inhaled propylene in mouse, rat, and human. *Toxicology and Applied Pharmacology* **169**, 40-51.
293. Fiserova-Bergerova, V. (1975). Mathematical modeling of inhalation exposure. *Journal of Combustion Toxicology* **32**, 201-210.
294. Fiserova-Bergerova, V., Tichy, M., and Di Carlo, F. J. (1984). Effects of biosolubility on pulmonary uptake and disposition of gases and vapors of lipophilic chemicals. *Drug Metabolism Reviews* **15**, 1033-1070.
295. Fiserova-Bergerova, V. Toxicokinetics of organic solvents. *Scandinavian Journal of Work Environment and Health* 11(suppl. 1), 7-21. 1985.
Ref Type: Abstract
296. Fiserova-Bergerova, V., and Diaz, M. L. (1986). Determination and prediction of tissue-gas partition coefficients. *International Archives of Occupational and Environmental Health* **58**, 75-87.
297. Fiserova-Bergerova, V. (1992). Inhalation anesthesia using physiologically based pharmacokinetic models. *Drug Metabolism Reviews* **24**, 531-557.
298. Fiserova-Bergerova, V. (1995). Extrapolation of physiological parameters for physiologically based simulation models. *Toxicology Letters* **79**, 77-86.
299. Fisher, D. M. (1996). (Almost) Everything You Learned About Pharmacokinetics Was (Somewhat) Wrong ! *Anesthesiology and Analgesia* **83**, 901-903.
300. Fisher, J., Mahle, D., Bankston, L., Greene, R., and Gearhart, J. (1997). Lactational transfer of volatile chemicals in breast milk. *Industrial Hygiene Association Journal* **58**, 425-431.
301. Fisher, J. W. (2003). PBPK modeling advances understanding of D4 Pharmacokinetics. *Toxicol Sci.* **72**, 2.
302. Fisher, J. W., Whittaker, T. A., Taylor, D. H., Clewell, H. J., and Andersen, M. E. (1989). Physiologically-based pharmacokinetic modeling of the pregnant rat: Multiroute exposure model for trichloroethylene and trichloroacetic acid. *Toxicology and Applied Pharmacology* **99**, 395-414.
303. Fisher, J. W., Whittaker, T. A., Taylor, D. H., Clewell, H. J., and Andersen, M. E. (1990). Physiologically-based pharmacokinetic modeling of the lactating rat and nursing pup: a multiroute exposure model for trichloroethylene and its metabolite, trichloroacetic acid. *Toxicology and Applied Pharmacology* **102**, 497-513.

304. Fisher, J. W., Gargas, M. L., Jepson, G. W., Allen, B., and Andersen, M. E. (1991). Physiologically-based pharmacokinetic modeling with trichloroethylene and its metabolite, trichloroacetic acid in the rat and mouse. *Toxicology and Applied Pharmacology* **109**, 183-195.
305. Fisher, J. W., and Allen, B. C. (1993). Evaluating the risk of liver cancer in human exposed to trichloroethylene using physiological models. *Risk Analysis* **13**, 87-95.
306. Fisher, J. W., Mahle, D., and Abbas, R. (1998). A human physiologically based pharmacokinetic model for trichloroethylene and its metabolites, trichloroacetic acid and free trichloroethanol. *Toxicology and Applied Pharmacology* **152**, 339-359.
307. Fisher, J. W. (2000). Physiologically based pharmacokinetic models for trichloroethylene and its oxidative metabolites. *Environmental Health Perspectives* **108**, 265-273.
308. Fisher, J. W. (2003). PBPK modeling advances understanding of D4 pharmacokinetics. *Toxicol.Sci.* **72**, 1-2.
309. Flemming, D. E. B., Chettle, D. R., Webber, C. E., and O'Flaherty, E. J. (1999). The O'Flaherty model of lead kinetics: an evaluation using data from a lead smelter population. *Toxicology and Applied Pharmacology* **161**, 100-109.
310. Fouchecourt, M. O., Beliveau, M., and Krishnan, K. (2001). Quantitative structure-pharmacokinetic relationship modelling. *Sci.Total Environ.* **274**, 125-135.
311. Frederick, C. B. (1995). Summary of panel discussion on the advantages/limitations/uncertainties in the use of physiologically based pharmacokinetic and pharmacodynamic models in hazard identification and risk assessment of toxic substances. *Toxicol.Lett.* **79**, 201-209.
312. Frederick, C. B., Lomax, L. G., Black, K. A., Finch, L., Scribner, H. E., Kimbell, J. S., Morgan, K., Subramaniam, R. P., and Morris, J. B. (2002). Use of a hybrid computational fluid dynamics and physiologically based inhalation model for interspecies dosimetry comparisons of ester vapors. *Toxicology and Applied Pharmacology* **183**, 23-40.
313. Frederick, C. B., Potter, D. W., Chang-Mateu, M. I., and Andersen, M. E. (1992). A physiologically-based pharmacokinetic and pharmacodynamic model to describe the oral dosing of rats with ethyl acrylate and its implications for risk assessment. *Toxicology and Applied Pharmacology* **114**, 246-260.
314. Frederick, C. B. (1993). Limiting the uncertainty in risk assessment by the development of physiologically based pharmacokinetic and pharmacodynamic models. *Toxicology Letters* **68**, 159-175.

315. Frederick, C. B., Morris, J. B., Kimbell, J. S., Morgan, K. T., and Scherer, P. W. (1994). Comparison of four biologically based dosimetry models for the deposition of rapidly metabolized vapors in the rodent nasal cavity. *Inhalation Toxicology* **6**, 135-157.
316. Frederick, C. B., Bush, M. L., Lomax, L. M., Black, K. A., Finch, L., Kimbell, J. S., Morgan, K. T., Subramaniam, R. P., Morris, J. B., and Ultman, J. S. (1998). Application of a hybrid computational fluid dynamics and physiologically based inhalation model for interspecies dosimetry extrapolation of acidic vapors in the upper airways. *Toxicology and Applied Pharmacology* **152**, 211-231.
317. Frederick, C. B., Gentry, P. R., Bush, M. L., Lomax, L. G., Black, K. A., Finch, L., Kimbell, J. S., Morgan, K. T., Subramaniam, R. P., Morris, J. B., and Ultman, J. S. (2001). A hybrid computational fluid dynamics and physiologically based pharmacokinetic model for comparison of predicted tissue concentrations of acrylic acid and other vapors in the rat and human nasal cavities following inhalation exposure. *Inhal. Toxicol* **13** , 359-376.
318. Freeman, R. A., Rozman, K. K., and Wilson, A. G. E. (1989). Physiological pharmacokinetic model of hexachlorobenzene in the rat. *Health Physics* **57**, 139-147.
319. Furtaw, E. J. Jr. (2001). An overview of human exposure modeling activities at the USEPA's National Exposure Research Laboratory. *Toxicology and Industrial Health* **17**, 302-314.
320. Gabrielsson, J., and Bondesson, U. (1987). Constant-rate infusion of nicotine and cotinine. 1. A physiological pharmacokinetic analysis of the cotinine disposition, and effects on clearance and distribution in the rat. *Journal of Pharmacokinetics and Biopharmaceutics* **15**, 583-599.
321. Gabrielsson, J. L., Paalkow, L. K., and Nordstrom, L. (1987). A physiologically-based pharmacokinetic model for theophylline disposition in the pregnant and nonpregnant rat. *Journal of Pharmacokinetics and Biopharmaceutics* **12**, 149-165.
322. Gallo, J. M., Lam, F. C., and Perrier, D. G. (1987). Area method for the estimation of partition coefficients for physiological pharmacokinetic models. *Journal of Pharmacokinetics and Biopharmaceutics* **15**, 271-280.
323. Gallo, J. M., Cheung, L. L., Kim, H. J., Bruckner, J. V., and Gillespie, W. R. (1993). A physiological and system analysis hybrid pharmacokinetic model to characterize carbon tetrachloride blood concentrations following administration in different oral vehicles. *Journal of Pharmacokinetics and Biopharmaceutics* **21**, 551-574.
324. Gargas, M. L., Andersen, M. E., and Clewell, H. J. (1986). A physiologically-based simulation approach for determining metabolic rate constants from gas uptake data. *Toxicology and Applied Pharmacology* **86**, 341-352.

325. Gargas, M. L., Clewell, H. J., and Andersen, M. E. (1986). Metabolism of inhaled dihalomethanes in vivo: Differentiation of kinetic constants for two independent pathways. *Toxicology and Applied Pharmacology* **82**, 211-223.
326. Gargas, M. L., Seybold, P. G., and Andersen, M. E. (1988). Modeling the tissue solubilities and metabolic rate constants (V_{max}) of halogenated methanes, ethanes and ethylenes. *Toxicology Letters* **43**, 235-256.
327. Gargas, M. L., and Andersen, M. E. (1988). Physiologically based approaches for examining the pharmacokinetics of inhaled vapors. In *Toxicology of the lung*. (D. E. Gardner, J. D. Crapo, and E. J. Massaro, Eds.), pp. 449-476. Raven Press, New York.
328. Gargas, M. L., and Andersen, M. E. (1989). Determinating the kinetic constants of chlorinated ethane metabolism in the rat from rates of exhalation. *Toxicology and Applied Pharmacology* **99**, 344-353.
329. Gargas, M. L., Burgess, R. J., Voisard, D. E., Cason, G. H., and Andersen, M. E. (1989). Partition coefficients of low molecular weight volatile chemicals in various liquids and tissues. *Toxicology and Applied Pharmacology* **98**, 87-99.
330. Gargas, M. L. (1990). An exhaled breath chamber system for assessing rates of metabolism and rates of gastrointestinal absorption with volatile chemicals. *Journal of American College of Toxicology* **9**, 447-453.
331. Gargas, M. L., Clewell, H. J., and Andersen, M. E. (1990). Gas uptake inhalation techniques and the rates of metabolism of chloromethanes, chloroethanes and chloroethylenes in the rat. *Inhalation Toxicology* **2**, 295-319.
332. Gargas, M. L., Medinsky, M. A., and Andersen, M. E. (1995). Pharmacokinetic modeling approaches for describing the uptake, systemic distribution, and disposition of inhaled chemicals. *Critical Reviews in Toxicology* **25**, 237-254.
333. Gargas, M. L., Andersen, M. E., Teo, S. K., Batra, R., Fennell, T. R., and Kedderis, G. L. (1995). A physiologically based dosimetry description of acrylonitrile and cyanoethylene oxide in the rat. *Toxicology and Applied Pharmacology* **134**, 185-194.
334. Gargas, M. L., Tyler, T. R., Sweeney, L. M., Corley, R. A., Weitz, K. K., Mast, T. J., Paustenbach, D. J., and Hays, S. M. (2000). A toxicokinetic study of inhaled ethylene glycol monomethyl ether (2-ME) and validation of a physiologically based pharmacokinetic model for the pregnant rat and human. *Toxicology and Applied Pharmacology* **165**, 53-62.

335. Gargas, M. L., Tyler, T. R., Sweeney, L. M., Corley, R. A., Weitz, K. K., Mast, T. J., Paustenbach, D., and Hays, S. M. (2000). A toxicokinetic study of inhaled ethylene glycol ethyl ether acetate and validation of a physiologically based pharmacokinetic model for rat and human. *Toxicology and Applied Pharmacology* **165**, 63-73.
336. Gear, C. W. (1971). *Numerical Initial Value Problems in Ordinary Differential Equations*. Prentice-Hall, Englewoods Cliffs.
337. Gearhart, J. M., Jepson, G. W., Clewell, H. J., Andersen, M. E., and Conolly, R. B. (1990). Physiologically based pharmacokinetic and pharmacodynamic model for the inhibition of acetylcholinesterase by diisopropylfluorophosphate. *Toxicology and Applied Pharmacology* **106** , 295-310.
338. Gearhart, J. M., Mahle, D. A., Greene, R. J., Seckel, C. S., Flemming, C. D., Fisher, J. W., and Clewell, H. J. I. (1993). Variability of physiologically based pharmacokinetic (PBPK) model parameters and their effects on PBPK model predictions in risk assessment for perchloroethylene (PCE). *Toxicology Letters* **68**, 131-144.
339. Gearhart, J. M., Seckel, C., and Vinegar, A. (1993). In vivo metabolism of chloroform in B6C3F1 mice determined by the method of gas uptake: the effects of body temperature on tissue partition coefficients and metabolism. *Toxicology and Applied Pharmacology* **119**, 258-266.
340. Gearhart, J. M., Jepson, G. W., Clewell, H. J., Andersen, M. E., and Conolly, R. B. (1994). Physiologically based pharmacokinetic model for the inhibition of acetylcholinesterase by organophosphate esters. *Environmental Health Perspectives* **102**, 51-60.
341. Gearhart, J. M., Clewell, H. J. I., Crump, K. S., Shipp, A. M., and Silvers, A. (1995). Pharmacokinetic dose estimates of mercury in children and dose-response curves of performance tests in a large epidemiological study. *Water, Air, and Soil Pollution* **80**, 49-58.
342. Gelman, A., Bois, F., and Jiang, J. (1996). Physiological pharmacokinetic analysis using population modeling and informative prior distributions. *Journal of the American Statistical Association* **91**, 436.
343. Gentry, P. R., Covington, T. R., Andersen, M. E., and Clewell, H. J. I. (2002). Application of a physiologically based pharmacokinetic model for isopropanol in the derivation of a reference dose and reference concentration. *Regulatory Toxicology and Pharmacology* **36**, 51-68.
344. Gentry, P. R., Covington, T. R., Clewell, H. J. I., and Andersen, M. E. (2003). Application of a physiologically based pharmacokinetic model for reference dose and reference concentration estimation for acetone. *J. Toxicol Environ. Health A* **66**, 2209-2225.

345. Gentry, P. R., Covington, T. R., and Clewell, H. J. I. (2003). Evaluation of the potential impact of pharmacokinetic differences on tissue dosimetry in offspring during pregnancy and lactation. *Regulatory Toxicology and Pharmacology* **38**, 1-16.
346. Gentry, P. R., Covington, T. R., Mann, S., Shipp, A. M., Yager, J. W., and Clewell, H. J., III (2004). Physiologically based pharmacokinetic modeling of arsenic in the mouse. *J.Toxicol Environ.Health A* **67**, 43-71.
347. Georgopoulos, P. G., Roy, A., and Gallo, M. A. (1994). Reconstruction of short-term multi-route exposure to volatile organic compounds using physiologically based pharmacokinetic models. *Journal of Exposure Analysis and Environmental Epidemiology* **4**, 309-328.
348. Georgopoulos, P. G., Walia, A., Roy, A., and Liroy, P. J. (1997). Integrated exposure and dose modeling and analysis system. I. Formulation and testing of microenvironmental and pharmacokinetic components. *Environmental Science and Technology* **31**, 17-27.
349. Gerde, P., and Dalh, A. R. (1991). A model for the uptake of inhaled vapors in the nose of the dog during cyclic breathing. *Toxicology and Applied Pharmacology* **109**, 276-288.
350. Gerde, P., Muggenburg, B. A., Sabourin, P. J., Harkema, J. R., Hotchkiss, J. A., Hoover, M. D., and Henderson, R. F. (1993). Disposition of polycyclic aromatic hydrocarbons in the respiratory tract of the beagle dog. II. The conducting airways. *Toxicology and Applied Pharmacology* **121**, 319-327.
351. Gerde, P., Muggenburg, B. A., Hoover, M. D., and Henderson, R. F. (1993). Disposition of polycyclic aromatic hydrocarbons in the respiratory tract of the beagle dog. I. The alveolar region. *Toxicology and Applied Pharmacology* **121**, 313-318.
352. Gerde, P., Muggenburg, B. A., and Henderson, R. F. (1993). Disposition of Polycyclic Aromatic Hydrocarbons in the Respiratory Tract of the Beagle Dog. III Mechanism of the Dosimetry. *Toxicology and Applied Pharmacology* **121**, 328-334.
353. Gerlowski, L. E., and Jain, R. K. (1983). Physiologically based pharmacokinetic modeling principles and applications. *Journal of Pharmaceutical Sciences* **72**, 1103-1127.
354. Ghanem, A., and Shuler, M. L. (2000). Combining cell culture analogue reactor designs and PBPK models to probe mechanisms of naphtalene toxicity. *Biotechnology Progress* **16**, 334-345.

355. Gibaldi, M., and Perrier, D. (1982). *Pharmacokinetics*. New York.
356. Ginsberg, G., Hattis, D., Sonawane, B., Russ, A., Banati, P., Kozlak, M., Smolenski, S., and Goble, R. (2002). Evaluation of child/adult pharmacokinetic differences from a database derived from the therapeutic drug literature. *Toxicol.Sci.* **66**, 185-200.
357. Ginsberg, G., Hattis, D., Russ, A., and Sonawane, B. (2004). Physiologically based pharmacokinetic (PBPK) modeling of caffeine and theophylline in neonates and adults: implications for assessing children's risks from environmental agents. *J.Toxicol Environ.Health A* **67** , 297-329.
358. Goldstein, A., Arovow, L., and Kalman, S. M. (1974). The absorption,distribution, and elimination of drugs. In *Principles of drug action: the basis of pharmacology*. pp. 129-225. John Wiley & Sons., New York, London, Sydney, Toronto.
359. Grass, G. M., and Sinko, P. J. (2002). Physiologically-based pharmacokinetic simulation modelling. *Adv.Drug Deliv.Rev.* **54**, 433-451.
360. Gray, D. G. (1995). A physiologically based pharmacokinetic model for methyl mercury in the pregnant rat and fetus. *Toxicology and Applied Pharmacology* **132**, 91-102.
361. Green, T. (1997). Methylene chloride induced mouse liver and lung tumours: An overview of the role of mechanistic studies in human safety assessment. *Human & Experimental Toxicology* **16**, 3-13.
362. Greenberg, M. S., Burton, G. A., and Fisher, J. W. (1999). Physiologically based pharmacokinetic modeling of inhaled trichloroethylene and its oxidative metabolites in B6C3F1 mice. *Toxicology and Applied Pharmacology* **154**, 264-278.
363. Greene, D. S., Quintiliani, R., and Nightingale, G. H. (1978). Physiological perfusion model for cephalosporin antibiotics 1: model selection based on blood drug concentrations. *Journal of Pharmaceutical Sciences* **67**, 191-196.
364. Greim, H. (2003). Mechanistic and toxicokinetic data reducing uncertainty in risk assessment. *Toxicol.Lett.* **138**, 1-8.
365. Grillo, J. A., Venitz, J., and Ornato, J. P. (2001). Prediction of lidocaine tissue concentrations following different dose regimes during cardiac arrest using a physiologically based pharmacokinetic model. *Resuscitation* **50**, 331-340.
366. Gundert-Remy, U., Sonich-Mullin, C., and IPCS Uncertainty and Variability Planning Workgroup and Drafting Group. (2002). The use of toxicokinetic and toxicodynamic data in risk assessment: an international perspective. *Science of the Total Environment* **288**, 3-11.

367. Haber, L. T., Maier, A., Gentry, P. R., Clewell, H. J., and Dourson, M. L. (2002). Genetic polymorphisms in assessing interindividual variability in delivered dose. *Regulatory Toxicology and Pharmacology* **35**, 177-197.
368. Haddad, S., Gad, S. C., Tardif, R., and Krishnan, K. Statistical approaches for the validation of physiologically-based pharmacokinetic (PBPK) models. *The Toxicologist* 15(1), 48. 1995.
Ref Type: Abstract
369. Haddad, S., Pelekis, M., and Krishnan, K. (1996). A methodology for solving physiologically based pharmacokinetic models without the use of simulation softwares. *Toxicology Letters* **85**, 113-126.
370. Haddad, S., and Krishnan, K. (1998). Physiological modeling of toxicokinetic interactions: implications for mixture risk assessment. *Environmental Health Perspectives* **106**, 1377-1384.
371. Haddad, S., Tardif, R., and Krishnan, K. Physiological modeling of higher order interactions in complex chemical mixtures. Anderson, J. G. and Katzper, M. 110-115. 1998. The Society for Computer Simulation International. 1998 Medical Sciences Simulation Conference.
Ref Type: Conference Proceeding
372. Haddad, S., Withey, J. R., Laparé, S., Law, F. C. P., and Krishnan, K. (1998). Physiologically-based pharmacokinetic modeling of pyrene in the rat. *Environmental Toxicology and Pharmacology* **5**, 245-255.
373. Haddad, S., Tardif, R., Viau, C., and Krishnan, K. (1999). A modeling approach to account for toxicokinetic interactions in the calculation of biological hazard index for chemical mixtures. *Toxicology Letters* **108**, 303-308.
374. Haddad, S., Tardif, R., Charest-Tardif, G., and Krishnan, K. (1999). Physiological modeling of the toxicokinetic interactions in a quaternary mixture of aromatic hydrocarbons. *Toxicology and Applied Pharmacology* **161**, 249-257.
375. Haddad, S., Charest-Tardif, G., Tardif, R., and Krishnan, K. (2000). Validation of a physiological modeling framework for simulating the toxicokinetics of chemicals in mixtures. *Toxicology and Applied Pharmacology* **167**, 199-209.
376. Haddad, S., Charest-Tardif, G., and Krishnan, K. (2000). Physiologically based modeling of the maximal effect of metabolic interactions on the kinetics of components of complex chemical mixtures. *Journal of Toxicology and Environmental Health* **61 Part A**, 209-223.
377. Haddad, S., Beliveau, M., Tardif, R., and Krishnan, K. (2001). A pbpk modeling-based approach to account for interactions in the health risk assessment of chemical mixtures. *Toxicol Sci.* **63** , 125-131.

378. Haenen, B., Rompelberg, C., Van Twillert, K., Hamzink, M., Dorman, J., and Van Eijkeren, J. (2002). Utility of rat liver slices to estimate hepatic clearance for application in physiologically based pharmacokinetic modeling: a study with tolbutamide, a compound with low extraction efficiency. *Drug Metabolism and Disposition* **30**, 307-313.
379. Haggard, H. W. (1924). The absorption, distribution and elimination of ethyl ether. Analysis of the mechanism of the absorption and elimination of such a gas or vapor as ethyl ether. *Journal of Biological Chemistry* **59**, 753-770.
380. Hallenbeck, W. H. (1992). Cancer risk assessment for the inhalation of 1,3-butadiene using PBPK modeling. *Bulletin of Environmental Contamination and Toxicology* **49**, 66-70.
381. Hallier, E., Filser, J. G., and Bolt, H. M. (1981). Inhalation pharmacokinetics based on gas uptake studies. II. Pharmacokinetics of acetone in rats. *Archives of Toxicology* **47**, 293-304.
382. Hanano, M., Sawada, Y., Iga, T., and Sugiyama, Y. (1987). The integration of in vitro data with physiological data. pp. 63-77.
383. Hanna, L. M., and Lou, S.-R. S. S. (2001). Mass Transport Analysis: Inhalation RFC methods framework for interspecies dosimetry adjustment. *Inhal.Toxicol* **13**, 437-463.
384. Harashima, H., Sawada, Y., Sugiyama, Y., Iga, T., and Hanano, M. (1985). Analysis of nonlinear tissue distribution of quinidine in rats by physiologically based pharmacokinetics. *Journal of Pharmacokinetics and Biopharmaceutics* **13**, 425-440.
385. Harashima, H., Sawada, Y., Sugiyama, Y., Iga, T., and Hanano, M. (1986). Prediction of serum concentration time course of quinidine in human using a physiologically based pharmacokinetic model developed from the rat. *Journal of Pharmacobio-Dynamics* **9**, 132-138.
386. Hattis, D., Banati, P., Goble, R., and Burnmaster, D. E. (1999). Human interindividual variability in parameters related to health risks. *Risk.Anal.* **19**, 711-726.
387. Hattis, D., Ginsberg, G., Sonawane, B., Smolenski, S., Russ, A., Kozlak, M., and Goble, R. (2003). Differences in pharmacokinetics between children and adults - II. Children's variability in drug elimination half-lives and in some parameters needed for physiologically-based pharmacokinetic modeling. *Risk.Anal.* **23**, 117-142.

388. Hattis, D., White, P., Marmorstein, L., and Koch, P. (1990). Uncertainties in pharmacokinetics modeling for perchloroethylene. I. Comparison of model structure, parameters, and predictions for low dose metabolic rates for models by different authors. *Risk Analysis* **10**, 449-458.
389. Hattis, D. (1990). Pharmacokinetics principles for dose-rate extrapolation of carcinogenic risk from genetically active agents. *Risk Analysis* **10**, 303-316.
390. Hattis, D., White, P., and Koch, P. (1993). Uncertainties in pharmacokinetic modeling for perchloroethylene .2. comparison of model predictions with data for a variety of different parameters. *Risk Analysis* **13**, 599-610.
391. Hays, S. M., Aylward, L. L., Karch, N. J., and Paustenbach, D. J. (1997). The relative susceptibility of animals and humans to the carcinogenic hazard posed by exposure to 2,3,7,8-TCDD: an analysis using standard and internal measures of dose. *Chemosphere* **34**, 1507-1522.
392. Hays, S. M., Elswick, B. A., Blumenthal, G. M., Welsch, F., Conolly, R. B., and Gargas, M. L. (2000). Development of a physiologically based pharmacokinetic model of 2-methoxyethanol and 2-methoxyacetic acid disposition in pregnant rats. *Toxicology and Applied Pharmacology* **163**, 67-74.
393. Hetrick, D. M., Jarabek, A. M., and Travis, C. C. (1991). Sensitivity analysis for physiologically-based pharmacokinetic models. *Journal of Pharmacokinetics and Biopharmaceutics* **19**, 1-20.
394. Hilderbrand, R. L., Andersen, M. E., and Jensen, L. J. (1981). Prediction of in vivo kinetic constants for metabolism of inhaled vapors from kinetic constants measured in vitro. *Fundamental and Applied Toxicology* **1**, 403-409.
395. Hiramatsu, Y., Nagler, R. M., Fox, P. C., and Baum, B. J. (1994). Rat salivary gland blood flow and blood-to-tissue partition coefficients following x-irradiation. *Archs.oral.Biol.* **39**, 77-80.
396. Hissink, A. M., Van Ommen, B., Kruse, J., and van Bladeren, P. J. (1997). A physiologically based pharmacokinetic (PB-PK) model for 1,2-dichlorobenzene linked to two possible parameters of toxicity. *Toxicology and Applied Pharmacology* **145**, 301-310.
397. Hissink, E. M., Bogaards, J. J. P., Freidig, A. P., Commandeur, J. N. M., Vermeulen, N. P. E., and van Bladeren, P. J. (2002). The use of in vitro metabolic parameters and physiologically based pharmacokinetic (PBPK) modeling to explore the risk assessment of trichloroethylene. *Environ.Toxicol.Pharmacol.* **11**, 259-271.
398. Hoang, K. C. T. (1995). Physiologically based pharmacokinetic models - Mathematical fundamentals and simulation implementations. *Toxicology Letters* **79**, 87-98.

399. Hoener, B. A. (1994). Predicting the hepatic clearance of xenobiotics in humans from in vitro data. *Biopharmaceutics & Drug Disposition* **15**, 295-304.
400. Hoffman, A. D., Bertelsen, S. L., and Gargas, M. L. (1992). An in vitro equilibration method for determination of chemical partition coefficients in fish. *Comparative Biochemistry and Physiology* **101A**, 47-51.
401. Hogan, K., Marcus, A., Smith, R., and White, P. (1998). Integrated exposure uptake biokinetic model for lead in children: empirical comparisons with epidemiologic data. *Environmental Health Perspectives Suppl* **106**, 1557-1567.
402. Holford, N. H. G. (1995). The target concentration approach to clinical drug development. *Clinical Pharmacokinetics* **29**, 287-291.
403. Holman, H.-Y. N., Goth-Goldstein, R., Aston, D., Yun, M., and Kengsoontra, J. (2002). Evaluation of Gastrointestinal Solubilization of Petroleum hydrocarbon residues in soil using an IN Vitro Physiologically Based Model. *Environmental Science and Technology* **36**, 1281-1286.
404. Holmes, S. L., Ward, R. C., Galambos, J. D., and Strickler, D. J. (2000). A method for optimization of pharmacokinetic models. *Toxicology Methods* **10**, 41-53.
405. Hopkins, J. C., and Leipold, R. J. (1996). On the dangers of adjusting the parameter values of mechanism-based mathematical models. *Journal of Theoretical Biology* **183**, 417-427.
406. Horton, V. L., Higuchi, M. A., and Rickert, D. E. (1992). Physiologically based pharmacokinetic model for methanol in rats, monkeys and humans. *Toxicology and Applied Pharmacology* **117**, 26-36.
407. Houston, J. B., and Carlile, D. J. (1997). Incorporation of in vitro drug metabolism data into physiologically-based pharmacokinetic models. *Toxicology in Vitro* **11**, 473-478.
408. Hull, C. J. (1998). How far can we go with compartmental models? *Anesthesiology* **72**, 399-402.
409. Hurst, C. H., DeVito, M. J., Setzer, R. W., and Birnbaum, L. S. (2000). Acute administration of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in pregnant long evans rats: association of measured tissue concentrations with developmental effects. *Toxicological Sciences* **53**, 411-420.
410. Hutter, J. C., Luu, H. M. D., Mehlhaff, P. M., Killam, A. L., and Dittrich, H. C. (1999). Physiologically based pharmacokinetic model for fluorocarbon elimination after the administration of an octafluoropropane-albumin microsphere sonographic contrast agent. *Journal of Ultrasound in Medicine* **18**, 1-11.

411. Hwang, I. Y., Reardon, K. F., Tessari, J. D., and Yang, R. S. H. (1996). A gas-liquid system for enzyme kinetic studies of volatile organic chemicals. Determination of enzyme kinetic constants and partition coefficients of trichloroethylene. *Drug Metabolism and Disposition* **24**, 377-382.
412. ICRP (1975). *International Commission on Radiation Protection: Report of the task group on reference man*. Pergamon Press, New York.
413. Igari, Y., Sugiyama, Y., Sawada, Y., Iga, Y., and Hanano, M. (1983). Prediction of diazepam disposition in rat and man by a physiologically-based pharmacokinetic model. *Journal of Pharmacokinetics and Biopharmaceutics* **11**, 577-593.
414. Iman, R., and Helton, J. (1988). An investigation of uncertainty and sensitivity analysis techniques for computer models. *Risk Analysis* **8**, 71-90.
415. Ishida, S., Sakiya, Y., Ichikawa, T., Taira, Z., and Awazu, S. (1990). Prediction of glycyrrhizin disposition in rat and man with liver failure by a physiologically based pharmacokinetic model. *Journal of Pharmacobio-Dynamics* **13**, 142-157.
416. Ishida, S., Sakiya, Y., Ichikawa, T., Taira, Z., and Awazu, S. (1990). Prediction of glycyrrhizin disposition in rat and man by a physiologically based pharmacokinetic model. *Chemical and Pharmaceutical Bulletin* **38**, 212-218.
417. Ishizaki, J., Nakashima, E., Yokogawa, K., Nagano, T., Takayasu, T., and Ichimura, F. (1992). A physiologically based pharmacokinetic model for (-)-quinuclidinyl benzylate using nonlinear irreversible tissue binding parameters in rats. *Drug Metabolism and Disposition* **20**, 485-489.
418. Ishizaki, J., Yokogawa, K., Nakashima, E., and Ichimura, F. (1997). Relationships between the hepatic intrinsic clearance or blood cell-plasma partition coefficient in the rabbit and the lipophilicity of basic drugs. *Journal of Pharmacy and Pharmacology* **49**, 768-772.
419. Ishizaki, J., Yokogawa, K., Nakashima, E., and Ichimura, F. (1997). Prediction of changes in the clinical pharmacokinetic of basic drugs on the basis of octanol-water partition coefficients. *Journal of Pharmacy and Pharmacology* **49**, 762-767.
420. Islam, M. S., Zhao, L., Zhou, J., Dong, L., McDougal, J. N., and Flynn, G. L. (1996). Systemic uptake and clearance of chloroform by hairless rats following dermal exposure. I. Brief exposure to aqueous solutions. *Risk Analysis* **16**, 349-357.
421. Isukapalli, S. S., Roy, A., and Georgopoulos, P. G. (1998). Stochastic response surface methods (SRSMs) for uncertainty propagation: application to environmental and biological systems. *Risk Analysis* **18**, 351-363.

422. Ito, K., Iwatsubo, T., Kanamitsu, S., Nakajima, Y., and Sugiyama, Y. (1998). Quantitative prediction of in vivo drug clearance and drug interactions from in vitro data on metabolism, together with binding and transport. *Annu.Rev.Pharmacol.Toxicol.* **38**, 461-499.
423. Iwatsubo, T., Hiriko, N., Ooie, T., Suzuki, H., and Sugiyama, Y. (1996). Prediction of in vivo drug disposition from in vitro data based on physiological pharmacokinetics. *Biopharmaceutics & Drug Disposition* **17**, 273-310.
424. Iyengar, S., and Rao, M. S. (1983). Statistical techniques in modeling of complex systems: single versus multiresponse models. *IEEE Trans.Syst.Man.Cybernet.* **13**, 175-189.
425. Jain, R. K., Gerlowski, L. E., Weissbrod, J. M., Wang, J., and Pierson, R. N. (1982). Kinetics of uptake, distribution and excretion of zinc in rats. *Annals of Biomedical and Engineering* **9**, 347-361.
426. Jang, J. Y., and Droz, P. O. (1996). Simulation of toluene in venous blood with a physiologically based pharmacokinetic model: its application to biological exposure index development. *Applied Occupational Environmental Hygiene* **11**, 1092-1095.
427. Jang, J. Y., and Droz, P. O. (1997). Ethnic differences in biological monitoring of several organic solvents II. A simulation study with a physiologically based pharmacokinetic model. *International Archives of Occupational and Environmental Health* **70**, 41-50.
428. Jang, J. Y., Droz, P. O., and Chung, H. K. (1999). Uncertainties in physiologically based pharmacokinetic models caused by several input parameters. *International Archives of Occupational and Environmental Health* **72**, 247-254.
429. Jang, J. Y., Droz, P. O., and Kim, S. (2001). Biological monitoring of workers exposed to ethylbenzene and c0-exposed to xylene. *Int.Arch.Occup.Environ.Health* **74**, 31-37.
430. Jarabek, A. M. (1995). Interspecies extrapolation based on mechanistic determinants of chemical disposition. *Human & Ecological Risk Assessment.* **1**, 641-662.
431. Jarabek, A. M. (1994). Inhalation RfC methodology: dosimetric adjustments and dose-response estimation of non-cancer toxicity in the upper respiratory tract. *Inhalation Toxicology* **6**, 301-325.
432. Jarabek, A. M., Fisher, J. W., Rubenstein, R., Lipscomb, J. C., Wills, R. J., Vinegar, A., and McDougal, J. N. (1994). Mechanistic insinghts aid the search for CFC substitutes:risk assessment of HCFC-123 as an example. *Risk Analysis* **14**, 231-250.

433. Jarabek, A. M. (1995). The application of dosimetry models to identify key processes and parameters for default dose-response assessment approaches. *Toxicology Letters* **79**, 171-184.
434. Jarnberg, J., and Johanson, G. (1995). Liquid/air partition coefficients of the trimethylbenzenes. *Toxicol.Ind.Health.* **11**, 81-88.
435. Jarnberg, J. (1998). *Toxicokinetics of inhaled trimethylbenzenes in man*. Uppsala Universitet.
436. Jarnberg, J., and Johanson, G. (1999). Physiologically based modeling of 1,2,4-trimethylbenzene inhalation toxicokinetics. *Toxicology and Applied Pharmacology* **155**, 203-214.
437. Jepson, G. W., Hoover, D. K., Black, R. K., McCafferty, J. D., Mahle, D. A., and Gearhart, J. M. (1994). A partition coefficient determination method for nonvolatile chemicals in biological tissues. *Fundamental and Applied Toxicology* **22**, 519-524.
438. Jepson, G. W., and McDougal, J. N. (1999). Predicting vehicle effects on the dermal absorption of halogenated methanes using physiologically based modeling. *Toxicological Sciences* **48**, 180-188.
439. Johanson, G. (1986). Physiologically-based pharmacokinetic modeling of inhaled 2-butoxyethanol in man. *Toxicology Letters* **34**, 23-31.
440. Johanson, G., and Dynesius, B. (1988). Liquid: air partition coefficients for six commonly used glycol ethers. *British Journal of Industrial Medicine* **45**, 561-564.
441. Johanson, G., and Naslund, P. H. (1988). Spreadsheet programming: A new approach in physiologically based modeling of solvent toxicokinetics. *Toxicology Letters* **41**, 115-127.
442. Johanson, G. (1991). Modelling of respiratory exchange of polar solvents. *Annals of Occupational Hygiene* **35**, 323-339.
443. Johanson, G., and Filser, J. G. (1992). Experimental data from closed chamber gas uptake studies in rodents suggest lower uptake rate of chemical than calculated from literature values on alveolar ventilation. *Archives of Toxicology* **66**, 291-295.
444. Johanson, G., and Filser, J. G. (1993). A physiologically based pharmacokinetic model for butadiene and its metabolite butadiene monoxide in rat and mouse and its significance for risk extrapolation. *Archives of Toxicology* **67**, 151-163.
445. Johanson, G., and Filser, J. G. (1996). PBPK model for butadiene metabolism to epoxides: quantitative species differences in metabolism. *Toxicology* **113**, 40-47.

446. Johanson, G., Jonsson, F., and Bois, F. (1999). Development of new technique for risk assessment using physiologically based toxicokinetic models. *American Journal of Industrial Medicine Suppl* **1**, 101-103.
447. Johanson, G. (2000). Toxicity review of ethylene glycol monomethyl ether and its acetate ester. *Critical Reviews in Toxicology* **30**, 307-345.
448. Jonsson, F., and Johanson, G. (2001). Bayesian estimation of variability in adipose tissue blood flow in man by physiologically based pharmacokinetic modeling of inhalation exposure to toluene. *Toxicology* **157**, 177-193.
449. Jonsson, F., Bois, F., and Johanson, G. (2001). Physiologically based pharmacokinetic modeling of inhalation exposure of humans to dichloromethane during moderate to heavy exercise. *Toxicol.Sci* **59**, 209-218.
450. Jonsson, F., and Johanson, G. (2002). Physiologically based modeling of the inhalation kinetics of styrene in humans using a bayesian population approach. *Toxicology and Applied Pharmacology* **179**, 35-49.
451. Jonsson, F., and Johanson, G. (2003). The bayesian population approach to physiological toxicokinetic - toxicodynamic models - an example using the MCSim software. *Toxicol.Lett.* 143-150.
452. Jonsson, F., Sandborgh-Englund, G., and Johanson, G. (1999). A compartmental model for the kinetics of mercury vapor in humans. *Toxicology and Applied Pharmacology* **155**, 161-168.
453. Jonsson, F., and Johanson, G. (2001). A Bayesian analysis of the influence of GSTT1 polymorphism on the cancer risk estimate for dichloromethane. *Toxicology and Applied Pharmacology* **174**, 99-112.
454. Jonsson, F. (2001). *Physiologically based pharmacokinetic modeling in risk assessment. Development of Bayesian population methods*. National Institute for Working Life, Stockholm.
455. Jonsson, F., Bois, F. Y., and Johanson, G. (2001). Assessing the reliability of PBPK models using data from methyl chloride-exposed, non-conjugating human subjects. *Arch.Toxicol* **75**, 189-199.
456. Jonsson, F., and Johanson, G. (2002). Physiologically based modeling of the inhalation kinetics of styrene in humans using a bayesian population approach. *Toxicol Appl.Pharmacol.* **179**, 35-49.
457. Kac, M. (1969). Some mathematical models in science. *Science* **166**, 695-699.
458. Kamrin, M. A., Fischer, L. J., Suk, W. A., Fouts, J. R., Pellizzari, A., and Thornton, K. (1994). Assessment of human exposure to chemicals from Superfund sites. *Environmental Health Perspectives* **102**, 221-228.

459. Kanamitsu, S., Ito, K., and Sugiyama, Y. (2000). Quantitative prediction of in vivo drug-drug interactions from in vitro data based on physiological pharmacokinetics: use of maximum unbound concentration of inhibitor at the inlet to the liver. *Pharm.Res.* **17**, 336-343.
460. Kaneko, T., Wang, P. Y., and Sato, A. (2000). Relationship between blood/air partition coefficients of lipophilic organic solvents and blood triglyceride levels. *Toxicology* **143**, 208.
461. Kaneko, T., Endoh, K., and Sato, A. (1991). Biological monitoring of exposure to organic solvent vapors. I. A physiological simulation model of m-xylene pharmacokinetics in man. *Yamanashi Medicine Journal* **6**, 137-149.
462. Kaneko, T., Wang, P. Y., and Sato, A. (1994). Partition coefficients of some acetate esters and alcohols in water, blood, olive oil, and rat tissues. *Occupational and Environmental Medicine* **51**, 68-72.
463. Kaneko, T., Horiuchi, J., and Sato, A. (2000). Development of a physiologically based pharmacokinetic model of organic solvent in rats. *Pharmaceutical Research* **42**, 465-470.
464. Kang, H. J. K., Wientjes, M. G., and Au, J. L. S. (1997). Physiologically based pharmacokinetic models of 2',3'-dideoxynosine. *Pharmaceutical Research* **14**, 337-344.
465. Karba, R., Zupancic, B., and Bremsak, F. (1990). Simulation tools in pharmacokinetic modelling. *Acta Pharm Jugosl* **40**, 247-262.
466. Katayama, K., Ohtani, H., Murai, A., Kakemi, M., and Koizumi, T. (1990). Kinetic studies on drug disposition in rabbits. II. Dose dependent pharmacokinetics of sulfamethizole. *Journal of Pharmacobio-Dynamics* **13**, 142-157.
467. Kawahara, M., Nanbo, T., and Tsuji, A. (1998). Physiologically based pharmacokinetic prediction of p-phenylbenzoic acid disposition in the pregnant rat. *Biopharmaceutics & Drug Disposition* **19**, 445-453.
468. Kawahara, M., Sakata, A., Miyashita, T., Tamai, I., and Tsuji, A. (1999). Physiologically based pharmacokinetics of digoxin in mdr1a knockout mice. *Journal of Pharmaceutical Sciences* **88**, 1281-1287.
469. Kawai, R., Mathew, D., Tanaka, C., and Rowland, M. (1998). Physiologically based pharmacokinetics of cyclosporine A: extension to tissue distribution kinetics in rats and scale-up to human. *Journal of Pharmacology and Experimental Therapeutics* **287**, 457-469.

470. Kedderis, G. L., and Lipscomb, J. C. (2001). Application of in vitro biotransformation data and pharmacokinetic modeling to risk assessment. *Toxicology and Industrial Health* **17**, 315-321.
471. Kedderis, G. L., Carfagna, M. A., Held, S. D., Batra, R., Murphy, J. E., and Gargas, M. L. (1993). Kinetic analysis of furan biotransformation by F-344 rats in vivo and in vitro. *Toxicol Appl.Pharmacol.* **123**, 274-282.
472. Kedderis, G. L., and Held, S. D. (1996). Prediction of furan pharmacokinetics from hepatocyte studies: comparison of bioactivation and hepatic dosimetry in rats, mice, and humans. *Toxicology and Applied Pharmacology* **140**, 124-130.
473. Kedderis, G. L., Teo, S. K., Batra, R., Held, S. D., and Gargas, M. L. (1996). Refinement and verification of the physiologically based dosimetry description for acrylonitrile in rats. *Toxicology and Applied Pharmacology* **140**, 422-435.
474. Kedderis, L. B., Mills, J. J., Andersen, M. E., and Birnbaum, L. S. (1993). A physiologically-based pharmacokinetic model of 2,3,7,8-tetrabromo dibenzo-p-dioxin (TBDD) in the rat: Tissue distribution and CYP1A induction. *Toxicology and Applied Pharmacology* **121**, 87-98.
475. Keller, F., Emde, C., and Schwarz, A. (1988). Exponential function for calculating saturable enzyme kinetics. *Clinical Chemistry* **34**, 2486-2489.
476. Kenyon, E. M., Kraichely, R. E., Hudson, K. T., and Medinsky, M. A. (1996). Differences in rates of benzene metabolism correlate with observed genotoxicity. *Toxicology and Applied Pharmacology* **136**, 49-56.
477. Kety, S. S. (1951). The theory and application of the exchange of inert gas at the lungs. *Pharmacological Reviews* **3**, 1-41.
478. Keys, D. A., Bruckner, J. V., Muralidhara, S., and Fisher, J. W. (2003). Tissue dosimetry expansion and cross-validation of rat and mouse physiologically based pharmacokinetic models for trichloroethylene. *Toxicol.Sci.* **76**, 35-50.
479. Keys, D. A., Wallace, D. G., Kepler, T. B., and Conolly, R. B. (1999). Quantitative evaluation of alternative mechanisms of blood and testes disposition of di(2-ethylhexyl) phthalate and mono(2-ethylhexyl) phthalate in rats. *Toxicological Sciences* **49**, 172-185.
480. Khor, S. P., and Mayersohn, M. (1991). Potential error in the measurement of tissue to blood distribution coefficients in physiological pharmacokinetic modeling: residual tissue blood. I. Theoretical considerations. *Drug Metabolism and Disposition* **19**, 478-485.

481. Kim, A. H., Kohn, M. C., Portier, C. J., and Walker, N. J. (2002). Impact of physiologically based pharmacokinetic modeling on benchmark dose calculations for TCDD-induced biochemical responses. *Regulatory Toxicology and Pharmacology* **36**, 287-296.
482. Kim, C., Manning, R. O., Brown, R. P., and Bruckner, J. V. (1996). Use of vial equilibration technique for determination of metabolic rate constants for dichloromethane. *Toxicology and Applied Pharmacology* **139**, 243-251.
483. Kim, C. S., Binienda, Z., and Sandberg, J. A. (1996). Construction of a physiologically based pharmacokinetic model for 2,4-dichlorophenoxyacetic acid dosimetry in the developing rabbit brain. *Toxicology and Applied Pharmacology* **136**, 250-259.
484. Kim, C. S., Gargas, M. L., and Andersen, M. E. (1994). Pharmacokinetic modeling of 2,4-dichlorophenoxyacetic acid (2,4-D) in rat and in rabbit brain following single dose administration. *Toxicology Letters* **74**, 189-201.
485. Kim, C. S., Slikker, W., Ninienda, Z., Gargas, M. L., and Andersen, M. E. (1995). Development of a physiologically based pharmacokinetic model for 2,4-dichlorophenoxyacetic acid dosimetry in discrete areas of the rabbit brain. *Neurotoxicology and Teratology* **17**, 111-120.
486. Kim, C. S., Ross, I. A., Sandberg, J. A., and Preston, E. (1998). Quantitative low-dose assessment of seafood toxin, domoic acid, in the rat brain - application of physiologically-based pharmacokinetic (PBPK) modeling. *Environmental Toxicology and Pharmacology* **6**, 49-58.
487. Kim, C. S., Sandberg, J. A., Slikker, W., Binienda, Z., Schlosser, P. M., and Patterson, T. A. (2001). Quantitative exposure assessment: application of physiologically-based pharmacokinetic (PBPK) modeling of low-dose, long-term exposures of organic acid toxicant in the brain. *Environmental Toxicology and Pharmacology* **9**, 153-160.
488. Kimbell, J. S., Gross, E. A., Joyner, D. R., Godo, M. N., and Morgan, K. T. (1993). Application of computational fluid dynamics to regional dosimetry of inhaled chemicals in the upper respiratory tract of the rat. *Toxicology and Applied Pharmacology* **121**, 253-263.
489. Kimbell, J. S., Godo, M. N., Gross, E. A., Joyner, D. R., Richardson, R. B., and Morgan, K. T. (1997). Computer simulation of inspiratory airflow in all regions of the F344 rat nasal passages. *Toxicology and Applied Pharmacology* **145**, 388-398.
490. Kimbell, J. S., and Subramaniam, R. P. (2001). Use of computational fluid dynamics models for dosimetry of inhaled gases in the nasal passages. *Inhal. Toxicol* **13**, 325-334.

491. Kimmel, E. C., Carpenter, R. L., Smith, E. L., Reboulet, J. E., and Black, B. H. (1998). Physiologic models for comparison of inhalation dose between laboratory and field-generated atmospheres of a dry powder fire suppressant. *Inhalation Toxicology* **10**, 905-922.
492. King, F. G., Dedrick, R. L., Collins, J. M., Matthews, H. B., and Birnbaum, L. G. (1983). Physiological model for the pharmacokinetics of 2,3,7,8-tetra-chloro dibenzofuran in several species. *Toxicology and Applied Pharmacology* **67**, 390-400.
493. Kinkead, E. R., Wall, H. G., Hixson, C. J., Tice, R. R., Kutzman, R. S., and Vinegar, A. (1990). Chloropentafluorobenzene: short-term inhalation toxicity, genotoxicity and physiologically-based pharmacokinetic model development. *Toxicology and Industrial Health* **6**, 533-550.
494. Kiriya, A., Nishiura, T., Yamaji, H., and Takada, K. (1999). Physiologically based pharmacokinetics of KNI-272, a tripeptide HIV-1 protease inhibitor. *Biopharmaceutics & Drug Disposition* **20**, 199-205.
495. Kirman, C. R., Sweeney, L. M., Meek, M. E., and Gargas, M. L. (2003). Assessing the dose-dependency of allometric scaling performance using physiologically based pharmacokinetic modeling. *Regulatory Toxicology and Pharmacology* **38**, 345-367.
496. Kirman, C. R., Gargas, M. L., Deskin, R., Tonner-Navarro, L., and Andersen, M. E. (2003). A physiologically based pharmacokinetic model for acrylamide and its metabolite, glycidamide, in the rat. *J. Toxicol Environ. Health A* **66**, 235-274.
497. Kirman, C. R., Hays, S. M., Kedderis, G. L., Gargas, M. L., and Strother, D. E. (2000). Improving cancer dose-response characterization by using physiologically based pharmacokinetic modeling: an analysis of pooled data for acrylonitrile-induced brain tumors to assess cancer potency in the rat. *Risk Analysis* **20**, 135-151.
498. Kissel, J. C., and Robarge, G. M. (1998). Assessing the elimination of 2,3,7,8-TCDD from humans with a physiologically based pharmacokinetic model. *Chemosphere* **17**, 2017-2027.
499. Klein, M. T., Hou, G., Quann, R. J., Wei, W., Liao, K. H., Yang, R. S., Campain, J. A., Mazurek, M. A., and Broadbelt, L. J. (2002). Bio MOL: a computer-assisted biological modeling tool for complex chemical mixtures and biological processes at the molecular level. *Environmental Health Perspectives* **110**, 1025-1029.
500. Knaak, J. B., Al-Bayati, M. A., and Raabe, O. G. (1995). Development of partition coefficients, Vmax and Km values, and allometric relationships. *Toxicology Letters* **79**, 87-98.

501. Knaak, J. B., Smith, L. W., Fitzpatrick, R. D., Olson, J. R., and Newton, P. E. (1998). In vitro hepatic metabolism of PCBTF: development of Vmax and Km values and partition coefficients and their use in an inhalation PBPK. *Inhalation Toxicology* **10**, 65-85.
502. Kohn, M. C., Sewall, C. H., Lucier, G. W., and Portier, C. J. (1996). A mechanistic model of effects of Dioxin on Thyroid Hormones in the Rat. *Toxicol Appl.Pharmacol.* **136**, 29-48.
503. Kohn, M. C., and Melnick, R. L. (1993). Species differences in the production and clearance of 1,3-butadiene metabolites: A mechanistic model indicates predominantly physiological, not biochemical control. *Carcinogenesis* **14**, 619-628.
504. Kohn, M. C., Lucier, G. W., Clark, G. C., Sewall, C., Tritscher, A. M., and Portier, C. J. (1993). A Mechanistic model of effects of dioxin on gene expression in the rat liver. *Toxicology and Applied Pharmacology* **120**, 138-154.
505. Kohn, M. C., and Portier, C. J. (1993). Effects of the mechanism of receptor-mediated gene expression on the shape of the dose-response curve. *Risk Analysis* **13**, 565-572.
506. Kohn, M. C. (1995). Achieving credibility in risk assessment models. *Toxicology Letters* **79**, 107-114.
507. Kohn, M. C., and Melnick, R. L. (1996). Effects of the structure of a toxicokinetic model of butadiene inhalation exposure on computed production of carcinogenic intermediates. *Toxicology* **113**, 31-39.
508. Kohn, M. C. (1997). The importance of anatomical realism for validation of physiological models of disposition of inhaled toxicants. *Toxicology and Applied Pharmacology* **147**, 448-458.
509. Kohn, M. C., and Melnick, R. L. (1999). A physiological model for ligand-induced accumulation of alpha 2u globulin in male rat kidney: roles of protein synthesis and lysosomal degradation in the renal dosimetry of 2,4,4-trimethyl-2-pentanol. *Toxicology* **136**, 89-105.
510. Kohn, M. C., and Melnick, R. L. (2000). The privileged access model of 1,3-butadiene disposition. *Environmental Health Perspectives Suppl* **108**, 911-917.
511. Kohn, M. C. (2000). Current directions in physiological modeling for environmental health sciences: an overview. *Environ.Health Perspect.* **108 Suppl 5**, 857-859.
512. Kohn, M. C., and Melnick, R. L. (2001). Physiological modeling of butadiene disposition in mice and rats. *Chem.Biol.Interact.* **135-136**, 285-301.

513. Koizumi, A. (1989). Potential of physiological pharmacokinetics to amalgamate kinetic data of trichloroethylene and tetrachloroethylene obtained in rats and man. *British Journal of Industrial Medicine* **46**, 239-249.
514. Kootsey, J. M., Kohn, M. C., Feezor, M. D., Mitchell, G. R., and Fletcher, P. R. (1986). SCoP: an interactive simulation control program for micro-and minicomputers. *Bulletin of Mathematical Biology* **48**, 427-441.
515. Kousba, A., A, Poet, T. S., and Timchalk, C. (2004). Characterization of the in vitro kinetic interaction of chlorpyrifos-oxon with rat salivary cholinesterase: A potential biomonitoring matrix. *Toxicology* **188**, 219-232.
516. Krewski, D., Whithy, J. R., Ku, L. F., and Andersen, M. E. (1994). Applications of physiologic pharmacokinetic modeling in carcinogenic risk assessment. *Environmental Health Perspectives Suppl* **102**, 37-50.
517. Krewski, D., Wang, Y., Bartlett, S., and Krishnan, K. (1995). Uncertainty, variability, and sensitivity analysis in physiological pharmacokinetic models. *J.Biopharm.Stat.* **5**, 245-271.
518. Krishnan, K., Haddad, S., Béliveau, M., and Tardif, R. (2002). Physiological modeling and extrapolation of pharmacokinetic interactions from binary to more complex chemical mixtures. *Environmental Health Perspectives* **110**, 989-994.
519. Krishnan, K., and Andersen, M. E. (1991). Interspecies scaling in pharmacokinetics. In *New Trends in Pharmacokinetics* (A. Rescigno, and A. K. Thakur, Eds.), pp. 203-226. Plenum Press, New York.
520. Krishnan, K., Gargas, M. L., Fennell, T. R., and Andersen, M. E. (1991). Ethylene oxide risk assessment : incorporating dosimetry and mechanistic information. *Chemical Industry Institute of Toxicology* **11**, 1-8.
521. Krishnan, K., and Andersen, M. E. (1991). The role of physiological modeling in reducing animal use in toxicology research. In *In vitro toxicology: mechanisms and new technology*. (A. M. Goldberg, Ed.), pp. 113-133. Mary Ann Liebert, Inc, New York.
522. Krishnan, K., and Andersen, M. E. (1991). Physiological modeling and cancer risk assessment. In *New Trends in Pharmacokinetics* (A. Rescigno, and A. K. Thakur, Eds.), pp. 335-354. Plenum Press, New York.
523. Krishnan, K., Gargas, M. L., Fennell, T. R., and Andersen, M. E. (1992). A physiologically-based description of ethylene oxide dosimetry in the rat. *Toxicology and Industrial Health* **8**, 121-140.

524. Krishnan, K., Conolly, R. B., and Andersen, M. E. Biologically based models in risk assessment. Clewell, H. J. 109-115. 1992. Cincinnati, OH., American Conference of Governmental Industrial Hygienists (ACGIH).
Ref Type: Conference Proceeding
525. Krishnan, K., Gargas, M. L., and Andersen, M. E. (1993). In vitro toxicology and risk assessment. *Alternative Methods in Toxicology* **9**, 185-203.
526. Krishnan, K., and Andersen, M. E. (1993). Pharmacokinetics, individual differences. In *Handbook of Hazardous Materials* pp. 577-589. Academic Press.
527. Krishnan, K., Andersen, M. E., Clewell, H. J. I., and Yang, R. S. H. (1994). Physiologically-based pharmacokinetic modeling of chemical mixtures. In *Toxicology of Chemical Mixtures*. (R. S. A. Yang, Ed.), Academic Press, New York.
528. Krishnan, K., Clewell, H. J. I., and Andersen, M. E. (1994). Physiologically based pharmacokinetic analysis of simple mixtures. *Environmental Health Perspectives* **102**, 151-155.
529. Krishnan, K., and Andersen, M. E. (1994). Physiologically based pharmacokinetic modeling in toxicology. In *Principles and methods of toxicology* (A. W. Hayes, Ed.), pp. 149-188. Raven Press, New York.
530. Krishnan, K., and Pelekis, M. (1995). Hematotoxic interactions: occurrence, mechanisms and predictability. *Toxicology* **105**, 355-364.
531. Krishnan, K., Haddad, S., and Pelekis, M. (1995). A simple index for representing the discrepancy between simulations of physiological pharmacokinetic models and experimental data. *Toxicol Ind. Health* **11**, 413-422.
532. Krishnan, K., and Andersen, M. (1998). Physiologically based pharmacokinetic models in the risk assessment of developmental neurotoxicants. In *Handbook of Developmental Neurotoxicology* (W. Slikker, Ed.), pp. 709-725. Academic Press.
533. Krishnan, K., and Andersen, M. E. (2001). Physiologically based pharmacokinetic modeling in toxicology. In *Principles and methods of toxicology* (A. W. Hayes, Ed.), pp. 193-241. Taylor & Francis, Philadelphia.
534. Kubic, V. L., Anders, M. W., Engel, R. R., Barlow, C. H., and Caughey, W. S. (1974). Metabolism of dihalomethanes to carbon monoxide. *Drug Metabolism and Disposition* **2**, 53-57.
535. Kuempel, E. D., Tran, C. L., Bailer, A. J., Smith, R. J., Dankovic, D. A., and Stayner, L. T. (2001). Methodological issues of using observational human data in lung dosimetry models for particulates. *Science of the Total Environment* **274**, 67-77.

536. Kumagai, S., Matsunaga, I., and Tabuchi, T. (1998). Effects of variation in exposure to airborne acetone and difference in work load on acetone concentration in blood, urine, and exhaled air. *American Industrial Hygiene Association Journal* **59**, 242-251.
537. Kumagai, S., and Matsunaga, I. (1995). Effect of variation of exposure to airborne chlorobenzene on internal exposure and concentrations of urinary metabolite. *Occupational and Environmental Medicine* **52**, 65-70.
538. Kumagai, S., and Matsunaga, I. (1995). Physiologically based pharmacokinetic model for acetone. *Occupational and Environmental Medicine* **52**, 344-352.
539. Kumagai, S., and Matsunaga, I. (2000). A lung model describing uptake of organic solvents and roles of mucosal blood flow and metabolism in the bronchioles. *Inhal.Toxicol* **12**, 491-510.
540. Lam, C. W., Galen, T. J., Boyd, J. F., and Pierson, D. L. (1990). Mechanism of transport and distribution of organic solvents in blood. *Toxicology and Applied Pharmacology* **104**, 117-129.
541. Lam, G., Chen, M. L., and Chiou, W. L. (1982). Determination of tissue: blood partition coefficients in physiologically-based pharmacokinetic models. *Journal of Pharmaceutical Sciences* **71**, 454-456.
542. Laparé, S., Tardif, R., and Brodeur, J. (1993). Effect of various exposure scenarios on the biological monitoring of organic solvents. I. Toluene and xylene. *International Archives of Occupational and Environmental Health* **64**, 569-580.
543. Laparé, S., Tardif, R., and Brodeur, J. (1995). Effect of various exposure scenarios on the biological monitoring of organic solvents in alveolar air. II. 1,1,1-trichloroethane and trichloroethylene. *International Archives of Occupational and Environmental Health* **67** , 375-394.
544. Law, F. C. P., Abeini, S., and Kennedy, C. J. (1991). A biologically-based toxicokinetic model for pyrene in rainbow trout. *Toxicology and Applied Pharmacology* **110**, 390-402.
545. Lawrence, G. S., and Gobas, F. A. P. C. (1997). A pharmacokinetic analysis of interspecies extrapolation in dioxin risk assessment. *Chemosphere* **35**, 427-452.
546. Leavens, T. L., and Bond, J. A. (1996). Pharmacokinetic model describing the disposition of butadiene and styrene in mice. *Toxicology* **113**, 310-313.
547. Leavens, T. L., Moss, D. R., and Bond, J. A. (1996). Dynamic inhalation system for individual whole-body exposure of mice to volatile organic chemicals. *Inhalation Toxicology* **8**, 655-677.

548. Lee, K. M., Bruckner, J. V., Muralidhara, S., and Gallo, J. M. (1996). Characterization of Presystemic elimination of trichloroethylene and its nonlinear kinetics in rats. *Toxicology and Applied Pharmacology* **139**, 262-271.
549. Lee, K. M., Muralidhara, S., Dallas, C. E., and Bruckner, J. V. (1997). Lack of volatilization and escape of orally administered trichloroethylene from the gastrointestinal tract of rats. *Toxicology and Industrial Health* **13**, 81-89.
550. Lee, K. M., Dill, J. A., Chou, B. J., and Roycroft, J. H. (1998). Physiologically based pharmacokinetic model for chronic inhalation of 2-butoxyethanol. *Toxicology and Applied Pharmacology* **153**, 211-226.
551. Lee, S. K., Ou, Y. C., and Yang, R. S. (2002). Comparison of Pharmacokinetic Interactions and Physiologically Based Pharmacokinetic Modeling of PCB 153 and PCB 126 in Nonpregnant Mice, Lactating Mice, and Suckling Pups. *Toxicol Sci.* **65**, 26-34.
552. Leggett, R. W., and Willams, L. R. (1991). Suggested reference values for regional blood volumes in humans. *Health Physics* **60**, 139-154.
553. Lerou, J. G., and Booi, L. H. (2001). Model-based administration of inhalation anaesthesia. 1. Developing a system model. *Br.J.Anaesth.* **86**, 12-28.
554. Leung, H. W., and Paustenbach, D. J. (1995). Physiologically based pharmacokinetic and pharmacodynamic modeling in health risk assessment and characterization of hazardous substances. *Toxicol.Lett.* **79**, 55-65.
555. Leung, H. W., Ku, R. H., Paustenbach, D. J., and Andersen, M. E. (1988). A physiologically-based pharmacokinetic model for 2,3,7,8-tetrachloro dibenzo-p-dioxin in C57BL/6J and DBA/2J mice. *Toxicology Letters* **42**, 15-28.
556. Leung, H. W., and Paustenbach, D. J. (1990). Cancer risk assessment for dioxane based upon a physiologically-based pharmacokinetic modeling approach. *Toxicology Letters* **51**, 147-162.
557. Leung, H. W., Paustenbach, D. J., Murray, F. J., and Andersen, M. E. (1990). A physiologically-based pharmacokinetic description and enzyme-inducing properties of 2,3,7,8-tetrachlorodibenzo-p-dioxin in the rat. *Toxicology and Applied Pharmacology* **103**, 399-410.
558. Leung, H. W., Poland, A. P., Paustenbach, D. J., and Andersen, M. E. (1990). Dose-dependent pharmacokinetics of (125-1)-2-iodo-3,7,8-trichlorodibenzo-p-dioxin in mice: Analysis with a physiological modeling approach. *Toxicology and Applied Pharmacology* **103**, 411-419.
559. Leung, H. W. (1991). Development and utilization of physiologically based pharmacokinetic models for toxicological applications. *Journal of Toxicology and Environmental Health* **32**, 247-267.

560. Leung, H. W. (1992). Use of physiologically based pharmacokinetic models to establish biological exposure indexes. *American Industrial Hygiene Association Journal* **53**, 369-374.
561. Leung, H. W. (1993). Physiologically-based pharmacokinetic modelling. In *General & applied toxicology*. (B. Ballantyne, T. Marrs, and P. Turner, Eds.), pp. 153-164. M. Stockton Press.
562. Levesque, B., Ayotte, P., Tardif, R., Charest-Tardif, G., Dewailly E, P. D., Gingras, G., Allaire, S., and Lavoie, R. (2000). Evaluation of the health risk associated with exposure to chloroform in indoor swimming pools. *Journal of Toxicology and Environmental Health* **61**, 225-243.
563. Levitt, D. G. (2002). PK-Quest: volatile solutes - application to enflurane, nitrous oxide, halothane, methoxyflurane and toluene pharmacokinetics. *BMC Anesthesiol* **2**, 5.
564. Levitt, D. G. (2002). PK Quest: measurement of intestinal absorption and first pass metabolism - application to human ethanol pharmacokinetics. *BMC Clin.Pharmacol.* **2**, 4.
565. Levitt, D. G. (2002). PK Quest: a general physiologically based pharmacokinetic model. Introduction and application to propranolol. *BMC Clin.Pharmacol.* **2**, 5.
566. Levitt, D. G. (2003). The pharmacokinetics of the interstitial space in humans. *BMC Clin.Pharmacol.* **3**, 3.
567. Levitt, D. G. (2003). The use of a physiologically based pharmacokinetic model to evaluate deconvolution measurements of systemic absorption. *BMC Clin.Pharmacol.* **3**, 1.
568. Li, H., Watanbe, K., Auslander, D., and Spear, C. R. (1994). Model parameter estimation and analysis: understanding parametric structure. *Annals of Biomedical and Engineering* **22**, 97-111.
569. Liao, K. H., Dobrev, I. D., Dennison, J. E. J., Andersen, M. E., Reisfeld, B., Reardon, K. F., Campain, J. A., Wei, W., Klein, M. T., Quann R.J, and Yang, R. S. (2002). Application of biologically based computer modeling to simple or complex mixtures. *Environmental Health Perspectives* **110**, 957-963.
570. Licata, A. C., Dekant, W., Smith, C. E., and Borghoff, S. J. (2001). A physiologically based pharmacokinetic model for methyl tert-butyl ether in humans: implementing sensitivity and variability analyses. *Toxicol Sci.* **62**, 191-204.

571. Lien, G. J., Nichols, J. W., McKim, J. M., and Gallinat, C. A. (1994). Modeling the accumulation of three waterborne chlorinated ethanes in fathead minnow (*Pimephales promelas*): a physiologically based approach. *Environmental Toxicology and Chemistry* **13**, 1195-1205.
572. Lien, G. J., McKim, J. M., Hoffman, A. D., and Jenson, C. T. A physiologically based toxicokinetic model for lake trout (*salvelinus namaycush*). *Aquatic Toxicology* **51**, 335-350. 2001.
Ref Type: Abstract
573. Liira, J., Johanson, G., and Riihimaki, V. (1990). Dose-dependent kinetics of inhaled methylethylketone in man. *Toxicol Lett.* **50**, 195-201.
574. Lilly, P. D., Andersen, M. E., Ross, T. M., and Pegram, R. A. (1997). Physiologically based estimation of in vivo rates of bromodichloromethane metabolism. *Toxicology* **124**, 141-152.
575. Lilly, P. D., Andersen, M. E., Ross, T. M., and Pegram, R. A. (1998). A physiologically based pharmacokinetic description of the oral uptake, tissue dosimetry, and rates of metabolism of bromodichloromethane in the male rat. *Toxicology and Applied Pharmacology* **150**, 205-217.
576. Lin, J. H. (1995). Species similarities and differences in pharmacokinetics. *Am.Society.Pharam.Experimental Therap.* **23**, 1008-1021.
577. Lin, J. H., Hayashi, M., Awazu, S., and Hanano, M. (1978). Correlation between in vitro and in vivo drug metabolism rate: Oxidation of ethoxybenzamide in rat. *Journal of Pharmacokinetics and Biopharmaceutics* **6**, 327-337.
578. Lin, J. H., Sugiyama, Y., Awazu, S., and Hanano, M. (1982). In vitro and in vivo evaluation of the tissue to blood partition coefficients for physiological pharmacokinetic models. *Journal of Pharmacokinetics and Biopharmaceutics* **10**, 637-647.
579. Lin, J. H., Sugiyama, Y., Awazu, S., and Hanano, M. (1982). Physiological pharmacokinetics of ethoxybenzamine based on biochemical data obtained in vitro as well as on physiological data. *Journal of Pharmacokinetics and Biopharmaceutics* **10**, 649-661.
580. Lin, Y.-S., Smith, T. J., Wypij, D., Kelsey K.T, and Sacks, F. M. (2002). Association of the blood/airpartition coefficient of 1,3-butadiene with blood lipids and albumin. *Environmental Health Perspectives* **110**, 165-168.
581. Linstrom, F. T., Gillette, J. W., and Rodecap, S. E. (1974). Distribution of HEOD (dieldrin) in mammals. I. Preliminary model. *Archives of Environmental Contamination and Toxicology* **2**, 9-42.

582. Lipscomb, J. C., and Kedderis, G. L. (2002). Incorporating human interindividual biotransformation variance in health risk assessment. *Science of the Total Environment* **288**, 13-21.
583. Lipscomb, J. C., Fisher, J. W., Confer, P. D., and Byczkowski, J. Z. (1998). In vitro to in vivo extrapolation for trichloroethylene metabolism in humans. *Toxicology and Applied Pharmacology* **152**, 376-387.
584. Lipscomb, J. C., Teuschler, L. K., Swartout, J., Popken, D., Cox, T., and Kedderis, G. L. (2003). The impact of cytochrome P450 2E1-dependent metabolic variance on a risk-relevant pharmacokinetic outcome in humans. *Risk Analysis* **6**, 1221-1238.
585. Loizou, G. D., Urban, G., Dekant, W., and Anders, M. W. (1994). Gas-uptake pharmacokinetics of 2,2-dichloro-1,1,1-trifluoroethane (HCFC-123). *Drug Metabolism and Disposition* **22**, 511-517.
586. Loizou, G. D., and Anders, M. W. (1995). Gas-uptake pharmacokinetics and metabolism of 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124) in the rat, mouse, and hamster. *Drug Metabolism and Disposition* **23**, 875-880.
587. Loizou, G. D., Eldirdiri, N. I., and King, L. J. (1996). Physiologically based pharmacokinetics of uptake by inhalation of a series of 1,1,1-trihaloethanes: correlation with various physicochemical parameters. *Inhalation Toxicology* **8**, 1-19.
588. Loizou, G. D., Tran, C. L., and Anders, M. W. (1997). Physiologically based pharmacokinetic analysis of the concentration-dependent metabolism of halothane. *Xenobiotica* **27**, 87-100.
589. Loizou, G. D., Jones, K., Akrill, P., Dyne, D., and Cocker, J. (1999). Estimation of the dermal absorption of m-xylene vapor in humans using breath sampling and physiologically based pharmacokinetic analysis. *Toxicological Sciences* **48**, 170-179.
590. Loizou, G. D. (2001). The application of physiologically based pharmacokinetic modelling in the analysis of occupational exposure to perchloroethylene. *Toxicol Lett.* **124**, 59-69.
591. Lorber, M. A pharmacokinetic model for estimating exposure of Americans to dioxins-like compounds in the past, present, and future. *Sci.Total Environ.* **288**, 81-95. 2002.
Ref Type: Abstract
592. Ludbrook, G. L., and Upton, R. N. (1997). A physiological model of induction of anaesthesia with propofol in sheep. 2. Model analysis and implications for dose requirements. *British Journal of Anaesthesia* **79**, 505-513.

593. Luebeck, E. G., Moolgavkar, S. H., Buchmann, A., and Schwarz, M. (1991). Effects of polychlorinated biphenyls in rat liver: Quantitative analysis of enzyme-altered foci. *Toxicology and Applied Pharmacology* **111**, 469-484.
594. Luecke, R. H., Wosilait, W. D., Pearce, B. A., and Young, J. F. (1994). A physiological based pharmacokinetic computer model for human pregnancy. *Teratology* **49**, 90-103.
595. Luecke, R. H., Wosilait, W. D., and Young, J. F. (1997). Mathematical analysis for teratogenic sensitivity. *Teratology* **55**, 373-380.
596. Luecke, R. H., Wosilait, W. D., Pearce, B. A., and Young, J. F. (1997). A computer model and program for xenobiotic disposition during pregnancy. *Computer Methods and Programs in Biomedecine* **53**, 201-224.
597. Luttringer, O., Theil, F. P., Poulin, P., Schmitt-Hoffmann, A. H., Guentert, T. W., and Lave, T. (2003). Physiologically based pharmacokinetic (PBPK) modeling of disposition of epiroprim in humans. *Journal of Pharmaceutical Sciences* **92**, 1990-2007.
598. Lutz, R. J., Dedrick, R. L., Matthews, H. B., Eling, T. E., and Anderson, M. W. (1977). A preliminary pharmacokinetic model for several chlorinated biphenyls in the rat. *Drug Metabolism and Disposition* **5**, 386-396.
599. Lutz, R. J., Dedrick, R. L., Tuey, D., Sipes, I. G., Andersen, M. W., and Matthews, H. B. (1984). Comparison of the pharmacokinetics of several polychlorinated biphenyls in the mouse, rat, dog, and monkey by means of a physiological pharmacokinetic model. *Drug Metabolism and Disposition* **12**, 527-535.
600. Lutz, R. J., and Dedrick, R. L. (1985). Physiological pharmacokinetics: relevance to human risk assessment. In *New Approaches in Toxicity Testing and Their Application in Human Risk Assessment*. (A. P. Li, Ed.), p. 129. Raven Press, New York.
601. Luu, H. M., and Hutter, J. C. (2001). Bioavailability of octamethylcyclotetrasiloxane (D(4)) after exposure to silicones by inhalation and implantation. *Environ.Health Perspect.* **109**, 1095-1101.
602. Luu, H. M. D., Hutter, J. C., and Bushar, H. F. (1998). A physiologically based pharmacokinetic model for 2,4-toluenediamine leached from polyurethane foam-covered breast implants. *Environmental Health Perspectives* **106**, 393-400.
603. MacDonald, A. J., Rostami-Hodjegan, A., Tucker, G. T., and Linkens, D. A. (2002). Analysis of solvent central nervous system toxicity and ethanol interactions using a human population physiologically based kinetic and dynamic model. *Regulatory Toxicology and Pharmacology* **35**, 165-176.

604. Macpherson, S. E., Barton, C. N., and Bronaugh, R. L. (1996). Use of in vitro skin penetration data and a physiologically based model to predict in vivo blood levels of benzoic acid. *Toxicology and Applied Pharmacology* **140**, 436-443.
605. Mann, S., Droz, P. O., and Vahter, M. (1996). A physiologically based pharmacokinetic model for arsenic exposure. I. Development in hamsters and rabbits. *Toxicology and Applied Pharmacology* **137**, 8-22.
606. Mann, S., Droz, P. O., and Vahter, M. (1996). A physiologically based pharmacokinetic model for arsenic exposure. II. Validation and application in humans. *Toxicology and Applied Pharmacology* **140**, 471-486.
607. Manuilov, K. K. (1992). Use of a physiologically-based pharmacokinetic model for analysis of antibiotic distribution in tissue. *International Journal of Clinical Pharmacology, Therapy and Toxicology* **30**, 548-549.
608. Mapleson, W. W. (1963). An electric analog for uptake and elimination in man. *Journal of Applied Physiology* **18**, 197-204.
609. Mapleson, W. W. (1972). KINETICS. Absorption, distribution and excretion. In *Handbook of experimental pharmacology . Modern inhalation anesthetics.* (M. B. Chenoweth, Ed.), pp. 326-344. Springer-Verlag, Berlin-Heidelberg, New York.
610. Mapleson, W. W. (1973). Circulation-time models of the uptake of inhaled anaesthetics and data for quantifying them. *British Journal of Anaesthesia* **45**, 319-334.
611. Mari, A. (1993). Circulatory models of intact-body kinetics and their relationship with compartmental and non-compartmental analysis. *Journal of Theoretical Biology* **160**, 509-531.
612. Maruyama, W., Yoshida, K., Tanaka, T., and Nakanishi, J. (2002). Possible range of dioxin concentration in human tissues: simulation with a physiologically based model. *J.Toxicol Environ.Health A* **65**, 2053-2073.
613. Maruyama, W., Yoshida, K., Tanaks, T., and Nakanishi, J. (2003). Simulation of dioxin accumulation in human tissues and analysis of reproductive risk. *Chemosphere* **53**, 301-313.
614. Maruyama, W., Yoshida, K., Tanaka, T., and Nakanishi, J. (2002). Determination of tissue-blood partition coefficients for a physiological model for humans, and estimation of dioxin concentration in tissues. *Chemosphere* **46**, 975-985.
615. Mason, H., and Wilson, K. (1999). Biological monitoring: the role of toxicokinetics and physiologically based pharmacokinetic modeling. *American Industrial Hygiene Association Journal* **60**, 237-242.

616. Mattie, D. R., Grabau, J. H., and McDougal, J. N. (1994). Significance of the dermal route of exposure to risk assessment. *Risk.Anal.* **14**, 277-284.
617. Mauderly, J. L. (1990). Measurement of respiration and respiratory responses during inhalation exposures. *Journal of American College of Toxicology* **9**, 397-406.
618. Mayer, J. M., and Van de Waterbeemd, H. (1985). Development of quantitative structure-pharmacokinetic relationships. *Environmental Health Perspectives* **61**, 295-306.
619. McCarley, K. D., and Bunge, A. L. (1998). Physiologically relevant one-compartment pharmacokinetic models for skin. 1. Development of models. *Journal of Pharmaceutical Sciences* **87**, 470-481.
620. McDougal, J. N., and Robinson, P. J. (2002). Assessment of dermal absorption and penetration of components of a fuel mixture (JP-8). *The Science of the Tot.Envir.* **288**, 23-30.
621. McDougal, J. N., Jepson, G. W., Clewell, H. J., and Andersen, M. E. (1985). Dermal absorption of dihalomethane vapors. *Toxicology and Applied Pharmacology* **79**, 150-158.
622. McDougal, J. N., Jepson, G. W., Clewell, H. J., MacNaughton, M. G., and Andersen, M. E. (1986). A physiological pharmacokinetic model for dermal absorption of vapors in the rat. *Toxicology and Applied Pharmacology* **85**, 286-294.
623. McKim, J., Schieder, P., and Veith, G. (1985). Absorption dynamics of organic chemical transport across trout gills as related to octanol-water partition coefficient. *Toxicology and Applied Pharmacology* **77**, 1-10.
624. McKim, J. M., and Goeden, H. M. (1982). A direct measure of the uptake efficiency of a xenobiotic chemical across the gills of brook trout (*salvelinus fontinalis*) under normoxic and hypoxic conditions. *Comparative Biochemistry and Physiology* **72C**, 65-74.
625. McKim, J. M., Nichols, J. W., Lien, G. J., Hoffman, A. D., Gallinat, C. A., and Stokes, G. N. (1996). Dermal absorption of three waterborne chloroethanes in rainbow trout (*Oncorhynchus mykiss*) and channel catfish (*Ictalurus punctatus*). *Fundam.Appl.Toxicol* **31**, 218-228.
626. McKone, T. E. (1993). Linking a PBPK model for chloroform with measured breath concentrations in showers: implications for dermal exposure models. *Journal of Exposure Analysis and Environmental Epidemiology* **3**, 339-365.

627. McMahon, T. F., Medinsky, M. A., and Birnbaum, L. S. (1994). Age-related changes in benzene disposition in male C57BL/6N mice described by a physiologically based pharmacokinetic model. *Toxicology Letters* **74**, 241-253.
628. Medinsky, M. A., Bechtold, W. E., Birnbaum, L. S., Chico, D. M., Gerlach, F. G., and Henderson, R. F. (1988). Uptake of vinylidene fluoride in rats simulated by a physiological model. *Fundamental and Applied Toxicology* **11**, 250-260.
629. Medinsky, M. A., Sabourin, P. J., Lucier, G., Birnbaum, L. S., and Henderson, R. F. (1989). A physiological model for simulation of benzene by rats and mice. *Toxicology and Applied Pharmacology* **99**, 193-206.
630. Medinsky, M. A., Bond, J. A., Hunsberger, S., and Griffith, W. C. Jr. (1989). A physiologically based model of 1-nitropyrene metabolism after inhalation or ingestion. *Health Physics* **57**, 149-155.
631. Medinsky, M. A., Kimbell, J. S., Morris, J. B., Gerde, P., and Overton, J. H. (1993). Advances in biologically based models for respiratory tract uptake of inhaled volatiles. *Fundamental and Applied Toxicology* **20**, 265-272.
632. Medinsky, M. A., Leavens, T. L., Csanady, G. A., Gargas, M. L., and Bond, J. A. (1994). In vivo metabolism of butadiene by mice and rats: a comparison of physiological model predictions and experimental data. *Carcinogenesis* **15**, 1329-1340.
633. Medinsky, M. A. (1995). The application of physiologically based pharmacokinetic/pharmacodynamic (PBPK/PD) modeling to understanding the mechanism of action of hazardous substances. *Toxicology Letters* **79**, 185-191.
634. Medinsky, M. A., Kenyon, E. M., Seaton, M. J., and Schlosser, P. M. (1996). Mechanistic considerations in benzene physiological model development. *Environmental Health Perspectives* **104**, 1399-1404.
635. Meek, B., Renwick, A., and Sonich-Mullin, C. (2003). Practical application of kinetic data in risk assessment - an IPCS initiative. *Toxicol.Lett.* **138**, 151-160.
636. Melnick, R. L., and Kohn, M. C. (2000). Dose-response analyses of experimental cancer data. *Drug.metab.Reviews.* **32**, 193-209.
637. Menzel, D. B., Wolpert, R. L., Boger, J. R., and Kootsey, J. M. (1987). Resources available for simulation in toxicology: specialized computers, generalized software and communication networks. *Drinking Water and Health* **8**, 229-254.
638. Menzel, D. B. (1988). Planning and using PBPK models: An integrated inhalation and distribution model for nickel. *Toxicology Letters* **43**, 67-83.

639. Merrill, E. A., Clewell, R. A., Gearhart, J. M., Robinson, P. J., Sterner, T. R., Yu K.O, Mattie, D. R., and Fisher, J. W. (2003). PBPK predictions of perchlorate distribution and its effect on thyroid uptake of radioiodide in the male rat. *Toxicol.Sci.* **73**, 256-269.
640. Miller, F. J., Overton, J. H., Jaskot, R. H., and Menzel, D. B. (1985). A model for the regional uptake of gaseous pollutants in the lung. I. The sensitivity of the uptake of ozone in the human lung to lower respiratory tract secretions and exercise. *Toxicology and Applied Pharmacology* **79**, 11-27.
641. Miller, S. C., Himmelstein, K. J., and Patton, T. F. (1981). A physiologically based pharmacokinetic model for the intraocular distribution of pilocarpine in rabbits. *Journal of Pharmacokinetics and Biopharmaceutics* **9**, 653-677.
642. Mills, J. J., and Andersen, M. E. (1993). Dioxin hepatic carcinogenesis: Biologically motivated modeling and risk assessment. *Toxicology Letters* **68**, 177-189.
643. Molino, G., Avagnina, P., Belforte, G., and Bircher, J. (1998). Assessment of the hepatic circulation in humans: New concepts based on evidence derived from a D-sorbitol clearance method. *Journal of laboratory and clinical medicin* **131**, 393-405.
644. Monro, A. (1994). Drug toxicokinetics: Scope and limitations that arise from species differences in pharmacodynamic and carcinogenic responses. *J.Pharam.Biopharm.* **22**, 41-57.
645. Moolgavkar, S. H., and Luebeck, G. (1990). Two-Event model for carcinogenesis: Biological, Mathematical, and Statistical Considerations. *Risk Anal.* **10**, 323-341.
646. Morris, J. B., Hassett, D. N., and Blanchard, K. T. (1993). A physiologically based pharmacokinetic model for nasal uptake and metabolism of nonreactive vapors. *Toxicology and Applied Pharmacology* **123**, 120-129.
647. Mortensen, B., and Nilsen, O. G. (1997). Optimization and application of the head space liver S9 equilibration technique for metabolic studies of organic solvents. *Pharm.Toxicol.* **82**, 142-146.
648. Mortensen, B., and Nilsen, O. G. (1997). Allometric species comparison of toluene and n-haxane metabolism: Prediction of hepatic clearance in man from experiments with rodent liver S9 in a head space vial equilibration system. *Pharm.Toxicol.* **82**, 183-188.
649. Mortensen, B., Osvoll, P. O., Woldbaek, T., Zahlsten, K., Eide, I., and Nilsen, O. G. (1998). In vitro screening for metabolic interactions among frequently occurring binary mixtures of volatile organic chemicals in norwegian occupational atmosphere. *Pharmacol.Toxicol.* **83**, 49-56.

650. Mortensen, B., Zahlsen, K., and Nilson, O. G. (1998). Metabolic interaction of n-hexane and methyl ethyl ketone in vitro in a head space rat liver S9 vial equilibration system. *Pharmacol.Toxicol.* **82**, 67-73.
651. Morzorati, S. L., Ramchandani, V. A., Li, T. K., and O'Connor, S. (2002). Maintaining steady state arterial alcohol levels in rats by using a physiologically based pharmacokinetic model. *Alcohol* **28**, 189-195.
652. Murphy, J. E., Janszen, D. B., and Gargas, M. L. (1995). An in vitro method for determination of tissue partition coefficients of non-volatile chemicals such as 2,3,7,8-tetrachlorodibenzo-p-dioxin and estradiol. *Journal of Applied Toxicology* **15**, 147-152.
653. Nagata, O., Murata, M., Kato, H., Terasaki, T., Sato, H., and Tsuji, A. (1990). Physiological pharmacokinetics of a new muscle-relaxant, inaperisone, combined with its pharmacological effects on blood flow rate. *Drug Metabolism and Disposition* **18**, 902.
654. Nakajima, Y., Hattori, K., Shinsei, M., Matsunaga, N., Iizasa, H., Sasabe, H., Akiyama, H., Miyamoto, G., and Nakashima, E. (2000). Physiologically-based pharmacokinetic analysis of grepafloxacin. *Biological and Pharmaceutical Bulletin* **23**, 1077-1083.
655. Nakashima, E., Yokogawa, K., Ichimura, F., Kurata, K., Kido, H., Yamaguchi, N., and Yamana, T. (1987). A physiologically based pharmacokinetic model for biperiden in animals and its extrapolation to humans. *Chemical and Pharmaceutical Bulletin* **35**, 718-725.
656. Naumann, B. D., Silverman, K. C., Dixit, R., Faria, E. C., and Sargent, E. V. (2001). Case studies of categorical data-derived adjustment factors. *Human and Ecological Risk Assessment* **7**, 61-105.
657. Nestorov, I. (2001). Modelling and simulation of variability and uncertainty in toxicokinetics and pharmacokinetics. *Toxicol Lett.* **120**, 411-420.
658. Nestorov, I. (2003). Whole body pharmacokinetic models. *Clinical Pharmacokinetics* **42**, 883-908.
659. Nestorov, I. A., Aarons, L. J., and Rowland, M. (1997). Physiologically based pharmacokinetic modeling of a homologous series of barbiturates in the rat: a sensitivity analysis. *Journal of Pharmacokinetics and Biopharmaceutics* **25**, 413-447.
660. Nestorov, I. A., Aarons, L. J., Arundel, P. A., and Rowland, M. (1998). Lumping of whole-body physiologically based pharmacokinetic models. *Journal of Pharmacokinetics and Biopharmaceutics* **26**, 21-46.

661. Nestorov, I. A., and Rowland, M. (1998). Quantitative structure-pharmacokinetics relationships: II. A mechanistically based model to evaluate the relationship between tissue distribution parameters and compound lipophilicity. *Journal of Pharmacokinetics and Biopharmaceutics* **26**, 521-545.
662. Nestorov, I. A. (1998). A WWW resource for physiologically based modelling in pharmacokinetics, pharmacodynamics, toxicology and risk assessment. *Med.Inform.(Lond)* **23**, 193-198.
663. Nestorov, I. A. (1999). Sensitivity analysis of pharmacokinetic and pharmacodynamic systems: I. A structural approach to sensitivity analysis of physiologically based pharmacokinetic models. *J.Pharmacokinet.Biopharm.* **27**, 577-596.
664. Nichlos, J. W., Fitzsimmons, P. N., and Whiteman, F. W. (2004). A Physiologically Based Toxicokinetic Model for Dietary Uptake of Hydrophobic Organic Compounds by Fish. II. Simulation of chronic Exposure Scenarios. *Toxicol.Sci.* **77**, 219-229.
665. Nichols, J., Rheingans, P., Lothenbach, D., McGeachie, R., Skow, L., and McKim, J. (1994). Three-Dimensional Visualization of Physiologically Based Kinetic Model Outputs. *Environmental Health Perspectives* **102**, 952-956.
666. Nichols, J. W., Fitzsimmons, P. N., Whiteman, F. W., Dawson, T. D., Babeu, L., and Juenemann, J. (2004). A physiologically Based Toxicokinetic Model for Dietary Uptake of Hydrophobic Organic Compounds by Fish. 1. Feeding Studies with 2,2', 5,5' - Tetrachlorobiphenyl. *Toxicol.Sci.* **77**, 206-218.
667. Nichols, J. W., McKim, J. M., Andersen, M. E., Gargas, M. L., Clewell, H. J., III, and Erickson, R. J. (1990). A physiologically based toxicokinetic model for the uptake and disposition of waterborne organic chemicals in fish. *Toxicol Appl.Pharmacol.* **106**, 433-447.
668. Nichols, J. W., McKim, J. M., Lien, G. J., Hoffman, A. D., and Bertelsen, S. L. (1991). Physiologically based toxicokinetic modeling of three waterborne chloroethanes in rainbow trout. *Toxicology and Applied Pharmacology* **110**, 374-389.
669. Nichols, J. W., McKim, J. M., Lien, G. J., Hoffman, A. D., Bertelsen, S. L., and Gallinat, C. A. (1993). Physiologically-based toxicokinetic and modeling of three waterborne chloroethanes in channel catfish, *Ictalurus punctatus*. *Aquatic Toxicology* **27**, 83-112.
670. Nichols, J. W., McKim, J. M., Lien, G. J., Hoffman, A. D., Bertelsen, S. L., and Elswick, B. A. (1996). A physiologically based toxicokinetic model for dermal absorption of organic chemicals by fish. *Fundamental and Applied Toxicology* **31**, 229-242.

671. Nichols, J. W., Jensen, K. M., Tietge, J. E., and Johnson, R. D. (1998). Physiologically based toxicokinetic model for maternal transfer of 2,3,7,8-tetrachlorodibenzo-p-dioxin in brook trout (*salvelinus fontinalis*). *Environmental Toxicology and Chemistry* **17**, 2422-2434.
672. Nihlen, A., Lof, A., and Johanson, G. (1995). Liquid/air partition coefficients of methyl and ethyl t-butyl ethers, t-amyl methyl ether, and t-butyl alcohol. *Journal of Exposure Analysis and Environmental Epidemiology* **5**, 573-582.
673. Nihlen, A., and Johanson, G. (1999). Physiologically based toxicokinetic modeling of inhaled ethyl ternary-butyl ether in humans. *Toxicological Sciences* **51**, 184-194.
674. O'Flaherty, E. J. (1981). *Toxicant and Drugs: Kinetics and Dynamics*. New York.
675. O'Flaherty, E. J. (1991). Physiologically-based models for bonesseeking elements. II. Kinetics of lead disposition in rats. *Toxicology and Applied Pharmacology* **111**, 313-331.
676. O'Flaherty, E. J. (1991). Physiologically based models for bone-seeking elements. I. Rat skeletal and bone growth. *Toxicol Appl.Pharmacol.* **111**, 299-312.
677. O'Flaherty, E. J. (1991). Physiologically Based Models for Bone-Seeking Elements. 111. Human Skeletal and Bone Growth. *Toxicology and Applied Pharmacology* **111**, 332-341.
678. O'Flaherty, E. J., Scott, W., Schreiner, C., and Beliles, R. P. (1992). A physiologically-based kinetic model of rat and mouse gestation: Disposition of a weak acid. *Toxicology and Applied Pharmacology* **112**, 245-256.
679. O'Flaherty, E. J. (1993). A pharmacokinetic model for chromium. *Toxicology Letters* **68**, 145-158.
680. O'Flaherty, E. J. (1993). Physiologically based models for bone-seeking elements. IV. Kinetics of lead disposition in humans. *Toxicology and Applied Pharmacology* **118**, 16-29.
681. O'Flaherty, E. J. (1994). Physiologic changes during growth and development. *Environmental Health Perspectives Suppl* **102**, 103-106.
682. O'Flaherty, E. J. (1994). Physiologically based pharmacokinetic models in developmental toxicology. *Risk Analysis* **14**, 605-611.
683. O'Flaherty, E. J. (1995). PBK modeling for metals. Examples with lead, uranium, and chromium. *Toxicology Letters* **82-83**, 367-372.

684. O'Flaherty, E. J., Nau, H., McCandless, D., Beliles, R. P., Schreiner, C. M., and Scott, W. J. Jr. (1995). Physiologically based pharmacokinetics of methoxyacetic acid: dose-effect considerations in C57BL/6 mice. *Teratology* **52**, 78-89.
685. O'Flaherty, E. J. (1995). Physiologically based models for bone-seeking elements. V. Lead absorption and disposition in childhood. *Toxicology and Applied Pharmacology* **131**, 297-308.
686. O'Flaherty, E. J. (1996). A physiologically based model of chromium kinetics in the rat. *Toxicology and Applied Pharmacology* **138**, 54-64.
687. O'Flaherty, E. J. (1998). Physiologically based models of metal kinetics. *Critical Reviews in Toxicology* **28**, 271-317.
688. O'Flaherty, E. J. (1998). A physiologically based kinetic model for lead in children and adults. *Environmental Health Perspectives Suppl* **106**, 1495-1503.
689. O'Flaherty, E. J., Inskip, M. J., Franklin, C. A., Durbin, P. W., Manton, W. I., and Bacchanale, C. L. (1998). Evaluation and modification of a physiologically based model of lead kinetics using data from a sequential isotope study in cynomolgus monkeys. *Toxicology and Applied Pharmacology* **149**, 1-16.
690. Oliver, R. E., Jones, A. F., and Rowland, M. (2001). A whole - body physiologically based pharmacokinetic model incorporating dispersion concepts: short and long time characteristics. *Journal of Pharmacokinetics and Biopharmaceutics* **28**, 27-55.
691. Overton, J. H., Kimbell, J. S., and Miller, F. J. (2001). Dosimetry modeling of inhaled formaldehyde: the human respiratory tract. *Toxicol Sci.* **64**, 122-134.
692. Overton, J. H., Graham, R. C., and Miller, F. J. (1987). Mathematical modeling of ozone absorption in the lower respiratory tract. *Drinking Water and Health* **8**, 302-311.
693. Overton, J. H., Graham, R. C., and Miller, F. J. (1987). A model of the regional uptake of gaseous pollutants in the lung.II. The sensitivity of ozone uptake in laboratory animal lungs to anatomical and ventilatory parameters. *Toxicology and Applied Pharmacology* **88**, 418-432.
694. Overton, J. H., and Jarabek, A. M. (1989). Estimating equivalent human concentrations of no observed adverse effect levels: a comparison of several methods. *Experimental Pathology* **37**, 89-94.
695. Parham, F. M., Kohn, M. C., Matthews, H. B., DeRosa, C., and Portier, C. J. (1997). Using structural information to create physiologically based pharmacokinetic models for all polychlorinated biphenyls. I. Tissue: blood partition coefficients. *Toxicology and Applied Pharmacology* **144**, 340-347.

696. Parham, F. M., and Portier, C. J. (1998). Using structural information to create physiologically based pharmacokinetic models for all polychlorinated biphenyls. II. Rates of metabolism. *Toxicology and Applied Pharmacology* **151**, 110-116.
697. Parham, F. M., Matthews, H. B., and Portier, C. J. (2002). A physiologically based pharmacokinetics model of p,p'-dichlorodiphenylsulfone. *Toxicology and Applied Pharmacology* **181**, 153-163.
698. Pastino, G. M., Sultatos, L. G., and Flynn, E. J. (1996). Development and application of a physiologically-based pharmacokinetic model for ethanol in the mouse. *Alcohol and Alcoholism* **31**, 365-374.
699. Pastino, G. M., Asgharian, B., Roberts, K., Medinsky, M. A., and Bond, J. A. (1997). A comparison of physiologically based pharmacokinetic model predictions and experimental data for inhaled ethanol in male and female B6C3F1 mice, F344 rats, and humans. *Toxicology and Applied Pharmacology* **145**, 147-157.
700. Pastino, G. M., and Conolly, R. B. (2000). Application of a physiologically based pharmacokinetic model to estimate the bioavailability of ethanol in male rats: distinction between gastric and hepatic pathways of metabolic clearance. *Toxicological Sciences* **55**, 256-265.
701. Pastino, G. M., Flynn, E. J., and Sultatos, L. G. (2000). Genetic polymorphism in ethanol metabolism: issues and goals for physiologically based pharmacokinetic modeling. *Drug and Chemical Toxicology* **23**, 179-201.
702. Paterson, S., and Mackay, D. (1986). A pharmacokinetic model of styrene inhalation with the fugacity approach. *Toxicology and Applied Pharmacology* **82**, 444-453.
703. Paustenbach, D., Andersen, M. E., Clewell, H. J., and Gargas, M. L. (1988). A physiologically-based pharmacokinetic model for inhaled carbon tetrachloride in the rat. *Toxicology and Applied Pharmacology* **96**, 191-211.
704. Paustenbach, D., Layard, M. W., Wenning, R. J., and Keenan, R. E. (1991). Risk assessment of 2,3,7,8-TCDD using a biologically based cancer model: a reevaluation of the Kociba et al. bioassay using 1978 and 1990 histopathology. *Journal of Toxicology and Environmental Health* **34**, 11-26.
705. Paustenbach, D. J., Bruce, G. M., and Chrostowski, P. (1997). Current views on the oral bioavailability of inorganic mercury in soil: Implications for Health Risk Assessments. *Risk Analysis* **17**, 544.
706. Payne, J. A. (1982). Verification and validation procedures. In *Introduction to simulation. Programming techniques and methods of analysis* (J. A. Payne, Ed.), pp. 225-242. McGraw-Hill Book Company, New York, St. Louis, San Francisco, & al.

707. Payne, M. P., and Kenny, L. C. (2002). Comparison of Models for the Estimation of Biological Partition Coefficients. *Journal of Toxicology and Environmental Health* **65**, 897-931.
708. pelekis, M., Gephart, L. A., and Lerman, S. E. (2001). Physiological - model-based derivation of the adult and child pharmacokinetic intraspecies uncertainty factors for volatile organic compounds. *Regulatory Toxicology and Pharmacology* **33**, 12-20.
709. pelekis, M., Nicolich, M. J., and Gauthier, J. S. (2003). Probabilistic framework for the estimation of the adult and child toxicokinetic intraspecies uncertainty factors. *Risk Anal.* **23**, 1239-1255.
710. Pelekis, M., Poulin, P., and Krishnan, K. (1995). An approach for incorporating tissue composition data into physiologically based pharmacokinetic models. *Toxicol Ind.Health* **11**, 511-522.
711. Pelekis, M., Krewski, D., and Krishnan, K. (1997). Physiologically based algebraic expressions for predicting steady-state toxicokinetics of inhaled vapors. *Toxicology Methods* **7**, 205-225.
712. Pelekis, M., and Krishnan, K. (1997). Assessing the relevance of rodent data on chemical interactions for health risk assessment purposes: a case study with dichloromethane- toluene mixture. *Regul.Toxicol Pharmacol.* **25**, 79-86.
713. Pelekis, M. and Krishnan, K. Physiologically-based modeling of the pharmacokinetics and pharmacodynamics of aldicarb in humans. Anderson, J. G. and Katzper, M. 124-128. 1999. Proceeding of the 1999 Medical Science Simulation Conference, Society for Computer, Simulation International, San diego, CA.
Ref Type: Conference Proceeding
714. Perbellini, L., Brugnone, F., Caretta, D., and Maranelli, G. (1985). Partition coefficients of some industrial aliphatic hydrocarbons (C5-C7) in blood and human tissues. *British Journal of Industrial Medicine* **42**, 162-167.
715. Perbellini, L., Mozzo, P., Brugnone, F., and Zedde, A. (1986). Physiologicomathematical model for studying human exposure to organic solvents: Kinetics of blood/tissue n-hexane concentrations and of 2,5-hexanedione in urine. *British Journal of Industrial Medicine* **43**, 760-768.
716. Perbellini, L., Mozzo, P., Turri, P. V., Zedde, A., and Brugnone, F. (1988). Biological exposure index of styrene suggested by a physiologico-mathematical model. *International Archives of Occupational and Environmental Health* **60**, 187-193.

717. Perbellini, L., Mozzo, P., Olivata, D., and Brugnone, F. (1990). Dynamic biological exposure indexes for n-hexane and 2,5-hexanedione, suggested by a physiologically-based pharmacokinetic model. *American Industrial Hygiene Association Journal* **51**, 356-362.
718. Perico, A., Cassinelli, C., Brugnone, F., Bavazzano, P., and Perbellini, L. (1999). Biological monitoring of occupational exposure to cyclohexane by urinary 1,2- and 1,4-cyclohexanediol determination. *International Archives of Occupational and Environmental Health* **72**, 115-120.
719. Perkins, R. A., Ward, K. W., and Pollack, G. M. (1995). A pharmacokinetic model of inhaled methanol in humans and comparison to methanol disposition in mice and rats. *Environmental Health Perspectives* **103**, 726-733.
720. Perkins, R. A., Ward, K. W., and Pollack, G. M. (1996). Methanol inhalation: site and other factors influencing absorption, and an inhalation toxicokinetic model for the rat. *Pharmaceutical Research* **13**, 749-755.
721. Pierce, C. H., Dills, R. L., Silvey, G. W., and Kalman, D. A. (1996). Partition coefficients between human blood or adipose tissue and air for aromatic solvents. *Scand.J.Environ.Health.* **22**, 112-118.
722. Pierce, C. H., Dills, R. L., Morgan, M. S., Nothstein, G. L., Shen, D. D., and Kalman, D. A. (1996). Interindividual differences in ²H₈-toluene toxicokinetics assessed by a semiempirical physiologically based model. *Toxicology and Applied Pharmacology* **139**, 49-61.
723. Pierce, C. H., Dills, R. L., Morgan, M. S., Vicini, P., and Kalman, D. A. (1998). Biological monitoring of controlled toluene exposure. *International Archives of Occupational and Environmental Health* **71**, 433-444.
724. Pierce, C. H., Becker, C. E., Tozer, T. N., Owen, D. J., and So, Y. (1998). Modeling the acute neurotoxicity of styrene. *J.Occup.Environ.Med.* **40**, 230-240.
725. Piotrovskij, V. K., Shvatchko, E. V., and Trnovec, T. (1994). The use of physiologically based models to simulate enantioselective differences in pharmacokinetics. *Methods and Findings in Experimental and Clinical Pharmacology* **16**, 263-269.
726. Pleil, J. D., and Lindstrom, A. B. (1998). Sample timing and mathematical considerations for modeling breath elimination of volatile organic compounds. *Risk Analysis* **18**, 585-602.
727. Ploeger, B., Mensinga, T., Sips, A., Meulenbelt, J., and Dejongh, J. (2000). A human physiologically - based model for glycyrrhizic acid, a compound subject to presystemic metabolism and enterohepatic cycling. *Pharmaceutical Research* **17**, 1516-1525.

728. Ploeger, B., Mensinga, T., Sips, A., Deerenberg, C., Meulenbelt, J., and de Jongh, J. (2001). A population physiologically based pharmacokinetic/pharmacodynamic model for the inhibition of 11- β -hydroxysteroid dehydrogenase activity by glycyrrhetic acid. *Toxicology and Applied Pharmacology* **170**, 46-55.
729. Ploeger, B., Mensinga, T., Sips, A., Seinen, W., Meulenbelt, J., and DeJongh, J. (2001). The pharmacokinetics of glycyrrhizic acid evaluated by physiologically based pharmacokinetic modeling. *Drug Metab Rev.* **33**, 125-147.
730. Ploeger, B. A., Meulenbelt, J., and de Jongh, J. (2000). Physiologically based pharmacokinetic modeling of glycyrrhizic acid, a compound subject to presystemic metabolism and enterohepatic cycling. *Toxicology and Applied Pharmacology* **162**, 177-188.
731. Ploemen, J. P. H. T. M., Wormhoudt, L. W., Haenen, G. R. M. M., Oudhoorn, M. J., Commandeur, J. N. M., Vermeulen, N. P. E., De Wazier, I., Beaune, P. H., Watabe, T., and van Bladeren, P. J. (1997). The use of human in vitro metabolic parameters to explore the risk assessment of hazardous compounds: the case of ethylene dibromide. *Toxicology and Applied Pharmacology* **143**, 56-69.
732. Plowchalk, D. R., and Teeguarden, J. (2002). Development of a physiologically based pharmacokinetic model for estradiol in rats and humans: a biologically motivated quantitative framework for evaluating responses to estradiol and other endocrineactive compounds. *Toxicol Sci.* **69**, 60-78.
733. Plowchalk, D. R., Andersen, M. E., and Bethizy, J. D. (1992). A physiologically-based pharmacokinetic model for nicotine disposition in the Sprague-Dawley rat. *Toxicology and Applied Pharmacology* **116**, 177-188.
734. Plowchalk, D. R., Andersen, M. E., and Bogdanffy, M. S. (1997). Physiologically based modeling of vinyl acetate uptake, metabolism, and intracellular pH changes in the rat nasal cavity. *Toxicology and Applied Pharmacology* **142**, 386-400.
735. Poet, T. S., Weitz, K. K., Gies, R. A., Edwards, J. A., Thrall, K. D., Corley, R. A., Tanojo, H., Hui, X., Maibach, H. I., and Wester, R. C. (2002). PBPK modeling of the percutaneous absorption of perchloroethylene from a soil matrix in rats and humans. *Toxicol Sci.* **67**, 17-31.
736. Poet, T. S., Soelberg, J. J., Weitz, K. K., Mast, T. J., Miller, A. A., Thrall, B. D., and Corley, R. A. (2003). Mode of Action and pharmacokinetic studies of 2-butoxyethanol in the mouse with an Emphasis on Forestomach dosimetry. *Toxicol.Sci.* **71**, 176-189.
737. Poet, T. S., and Borghoff, S. J. (1997). In vitro uptake of methyl tert-butylether in male rat kidney: use of a two-compartment model to describe protein interactions. *Toxicology and Applied Pharmacology* **145**, 340-348.

738. Poet, T. S., Corley, R. A., Thrall, K. D., Edwards, J. A., Tanajo, H., Weitz, K. K., Hui, X. Y., Maibach, H. I., and Wester, R. C. (2000). Assessment of the percutaneous absorption of trichloroethylene in rats and humans using MS/MS real-time breath analysis and physiologically based pharmacokinetic modeling. *Toxicological Sciences* **56**, 61-72.
739. Poet, T. S., Thrall, K. D., Corley, R. A., Hui, X. Y., Edwards, J. A., Weitz, K. K., Maibach, H. I., and Wester, R. C. (2000). Utility of real time breath analysis and physiologically based pharmacokinetic modeling to determine the percutaneous absorption of methyl chloroform in rats and humans. *Toxicological Sciences* **54**, 42-51.
740. Portier, C. J., and Kaplan, N. L. (1989). Variability of safe estimated when using complicated models of carcinogenic processes. A dose study: methylene chloride. *Fundamental and Applied Toxicology* **13**, 533-544.
741. Portier, C. J., and Koop-Schneider, A. (1991). A multistage model of carcinogenesis incorporating DNA damage and repair. *Risk Analysis* **11**, 535-543.
742. Poulin, P., and Krishnan, K. (1995). A biologically-based algorithm for predicting human tissue: blood partition coefficients of organic chemicals. *Human & Experimental Toxicology* **14**, 273-280.
743. Poulin, P., and Krishnan, K. (1996). A tissue composition-based algorithm for predicting tissue: air partition coefficients of organic chemicals. *Toxicology and Applied Pharmacology* **136**, 126-130.
744. Poulin, P., and Krishnan, K. (1996). A mechanistic algorithm for predicting blood: air partition coefficients of organic chemicals with the consideration of reversible binding in hemoglobin. *Toxicology and Applied Pharmacology* **136**, 131-137.
745. Poulin, P., and Krishnan, K. (1996). Molecular structure-based prediction of the partition coefficients of organic chemicals for physiological pharmacokinetic models. *Toxicology Methods* **6**, 117-137.
746. Poulin, P., and Krishnan, K. (1998). A quantitative structure-toxicokinetic relationship model for highly metabolised chemicals. *Alternatives to Laboratory Animals* **26**, 45-59.
747. Poulin, P., and Krishnan, K. (1999). Molecular structure-based prediction of the toxicokinetics of inhaled vapors in humans. *International Journal of Toxicology* **18**, 7-18.
748. Poulin, P., Beliveau, M., and Krishnan, K. (1999). Mechanistic animal-replacement approaches for predicting pharmacokinetics of organic chemicals. In *Toxicity assessment alternatives: methods, issues, opportunities*. (H. Salem, and S. A. Katz, Eds.), pp. 115-139. Humana Press Inc., Totowa, NJ.

749. Poulin, P., and Theil, F. P. (2000). A priori prediction of tissue:plasma partition coefficients of drugs to facilitate the use of physiologically-based pharmacokinetic models in drug discovery. *Journal of Pharmaceutical Sciences* **89**, 16-35.
750. Poulin, P., and Theil, F. P. (2002). Prediction of pharmacokinetics prior to in vivo studies. I. Mechanism- based prediction of volume of distribution. *J.Pharm.Sci.* **91**, 129-156.
751. Poulin, P., and Theil, F. P. (2002). Prediction of pharmacokinetics prior to In Vivo studies. II. Generic physiologically based pharmacokinetic models of drug disposition. *J.Pharm.Sci.* **91**, 1358-1370.
752. Pounds, J. G., and Leggett, R. W. (1998). The ICRP age-specific biokinetic model for lead: validations, empirical comparisons, and explorations. *Environmental Health Perspectives* **106**, 1505-1511.
753. Price, K., Haddad, S., and Krishnan, K. (2003). Physiological modeling of age-specific changes in the pharmacokinetics of organic chemicals in children. *J.Toxicol Environ.Health* **66**, 417-433.
754. Price, P. S., Conelly, R. B., Chaisson, C. F., Gross, E. A., Young, J. S., Mathis, E. T., and Tedder, D. R. (2003). Modeling interindividual variation in physiological factors used in PBPK models of humans. *Critical Reviews in Toxicology* **33**, 469-503.
755. Purcell, K. J., Cason, G. H., Gargas, M. L., Andersen, M. E., and Travis, C. C. (1990). In vivo metabolic interactions of benzene and toluene. *Toxicology and Applied Pharmacology* **105**, 37-54.
756. Quick, D. J., and Shuler, M. L. (2000). Use of in vitro data for construction of a physiologically based pharmacokinetic model for naphthalene in rats and mice to probe species differences. *Biotechnology Progress* **15**, 540-555.
757. Ramchandani, V. A., Bolane, J., Li, T. K., and O'Connor, S. (1999). A physiologically-based pharmacokinetic (PBPK) model for alcohol facilitates rapid BrAC clamping. *Alcoholism: Clinical and Experimental Research* **23**, 617-623.
758. Ramsey, J. C., and Andersen, M. E. (1984). A physiologically-based description of the inhalation pharmacokinetics of styrene in rats and humans. *Toxicology and Applied Pharmacology* **73**, 159-175.
759. Rane, A., Wilkinson, G. R., and Shand, D. G. (1977). Prediction of hepatic extraction ratio from in vitro measurement of intrinsic clearance. *Journal of Pharmacology and Experimental Therapeutics* **200**, 420-424.

760. Rao, H. V., and Brown, D. R. (1993). A physiologically based pharmacokinetic assessment of tetrachloroethylene in groundwater for a bathing and showering determination. *Risk Analysis* **13**, 37-49.
761. Rao, H. V., Beliles, R. P., Whitford, G. M., and Turners, C. H. (1995). A physiologically based pharmacokinetic model for fluoride uptake by bone. *Regulatory Toxicology and Pharmacology* **22**, 30-42.
762. Rao, H. V., and Ginsberg, G. L. (1997). A physiologically-based pharmacokinetic model assessment of methyl t-butyl ether in groundwater for a bathing and showering determination. *Risk Analysis* **17**, 583-598.
763. Reddy, M. B., McCarley, K. D., and Bunge, A. L. (1998). Physiologically relevant one-compartment pharmacokinetic models for skin. 2. Comparison of models when combined with a systemic pharmacokinetic. *Journal of Pharmaceutical Sciences* **87**, 482-490.
764. Reddy, M. B., Andersen, M. E., Morrow, P. E., Dobrev, I. D., Varaprath, S., Plotzke, K. P., and Utell, M. J. (2003). Physiological modeling of inhalation kinetics of octamethylcyclotetrasiloxane in humans during rest and exercise. *Toxicol Sci.* **72**, 3-18.
765. Reinoso, R. F., Telfer, B. A., and Rowland, M. (1997). Tissue water content in rats measured by desiccation. *Journal of Pharmacological Methods* **38**, 87-92.
766. Reitz, R. H., Mandrela, A. L., Park, C. N., Andersen, M. E., and Guengerich, F. P. (1988). Incorporation of in vitro enzyme data into the physiologically-based pharmacokinetic (PBPK) model for methylene chloride: Implications for risk assessment. *Toxicology Letters* **43**, 97-116.
767. Reitz, R. H., McDougal, J. N., Himmelstein, M. W., Nolan, R. J., and Schumann, A. M. (1988). Physiologically-based pharmacokinetic modeling with methyl chloroform: Implications for interspecies, high-low dose and dose-route extrapolations. *Toxicology and Applied Pharmacology* **95**, 185-199.
768. Reitz, R. H., Mandrela, A. L., and Guengerich, F. P. (1989). In vitro metabolism of methylene chloride in human and animal tissues: Use in physiologically-based pharmacokinetic models. *Toxicology and Applied Pharmacology* **97**, 230-246.
769. Reitz, R. H., Mandrela, A. L., Corley, R. A., Quast, J. F., Gargas, M. L., Andersen, M. E., Staats, D. A., and Conolly, R. B. (1990). Estimating the risk of liver cancer associated with human exposures to chloroform using physiologically-based pharmacokinetic modeling. *Toxicology and Applied Pharmacology* **105**, 443-459.
770. Reitz, R. H., McCroskey, P. S., Park, C. N., Andersen, M. E., and Gargas, M. L. (1990). Development of a physiologically-based pharmacokinetic model for risk assessment with 1,4-dioxane. *Toxicology and Applied Pharmacology* **105**, 37-54.

771. Reitz, R. H., Gargas, M. L., Andersen, M. E., Provan, W. M., and Green, T. L. (1996). Predicting cancer risk from vinyl chloride exposure with a physiologically based pharmacokinetic model. *Toxicology and Applied Pharmacology* **137**, 253-267.
772. Reitz, R. H., Gargas, M. L., Mendrala, A. L., and Schumann, A. M. (1996). In vivo and in vitro studies of perchloroethylene metabolism for physiologically based pharmacokinetic modeling in rats, mice, and humans. *Toxicology and Applied Pharmacology* **136**, 289-306.
773. Renwick, A. G. (1999). Subdivision of uncertainty factors to allow for toxicokinetics and toxicodynamics. *Human and Ecological Risk Assessment* **5**, 1035-1050.
774. Renwick, A. G. (1994). Pharmacokinetics in toxicology. In *Principles and Methods of Toxicology*. (W. A. Hayes, Ed.), pp. 101-147. Raven Press, New York.
775. Rescigno, A., Beck, J. S., and Thakur, A. K. (1987). Perspectives in Pharmacokinetics. The use and abuse of models. *Journal of Pharmacokinetics and Biopharmaceutics* **15**, 327-344.
776. Rescigno, A. (1996). Pharmacokinetics, science or fiction? *Pharmacological Research* **33**, 227-233.
777. Rescigno, A. (1997). Fundamental concepts in pharmacokinetics. *Pharmacological Research* **35**, 364-390.
778. Rey, T. D., and Havranek, W. A. (1996). Some aspects of using the SimuSolv program for environmental, pharmacokinetics and toxicological applications. *Ecological Modeling* **86**, 277-282.
779. Rhomberg, L. (1995). Use of quantitative modelling in methylene chloride risk assessment. *Toxicology* **114**.
780. Rhomberg, L. R. (2000). Dose-response analyses of the carcinogenic effects of trichloroethylene in experimental animals. *Environ. Health Perspect.* **108**, 343-358.
781. Rideout, V. C. (1991). *Mathematical and Computer Modeling of Physiological Systems*. Prentice-Hall, New York.
782. Riggs, D. S. (1970). *The Mathematical Approach to Physiological Problems: A Critical Treatise*. MIT Press, Cambridge.
783. Riihimaki (1990). *Toxi.Letters.* **50**, 195-201.

784. Robinson, D. E., Balter, N. J., and Schwartz, S. L. (1992). A physiologically based pharmacokinetic model for nicotine and cotinine in man. *Journal of Pharmacokinetics and Biopharmaceutics* **20**, 591-609.
785. Robinson, P. J. (1991). Effect of microcirculatory heterogeneity in the determination of pharmacokinetic parameters: Implications for risk assessment. *Drug Metabolism Reviews* **23**, 43-64.
786. Robinson, P. J. (1992). Physiologically-based liver modeling and risk assessment. *Risk Analysis* **12**, 139-148.
787. Robinson, P. J. (1992). Hepatic modeling and risk assessment: compartmental versus tube models and interspecies scaling. *Drug Metabolism Reviews* **23**, 601-617.
788. Ross, R., Leger, L., Guardo, R., de Guise, J., and Pike, B. G. (1991). Adipose tissue volumes measured by magnetic resonance imaging and computerized tomography in rats. *Journal of Applied Physiology* **70**, 2164-2172.
789. Roth, R. A., and Vinegar, A. (1990). Action by the lungs on circulating xenobiotic agents with a case study of physiologically-based pharmacokinetic modeling of benzo(a)pyrene disposition. *Pharmacology and Therapeutics* **48**, 143-155.
790. Roth, W. L., Freeman, R. A., and Wilson, A. G. (1993). A physiologically based model for gastrointestinal absorption and excretion of chemicals carried by lipids. *Risk Anal.* **13**, 531-543.
791. Roth, W. L., Freeman, R. A., and Wilson, A. G. (1993). A physiologically based model for gastrointestinal absorption and excretion of chemicals carried by lipids. *Risk Anal.* **13**, 531-543.
792. Roth, W. L., Ernst, S., Weber, L. W. D., Kerecsen, L., and Rozman, K. K. (1994). A pharmacodynamically responsive model for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) transfer between liver and fat at low and high doses. *Toxicology and Applied Pharmacology* **127**, 151-162.
793. Roth, W. L., Weber, L. W. D., and Rozman, K. K. (1995). Incorporation of first-order uptake rate constants from simple mammillary models into blood-flow limited physiological pharmacokinetic models via extraction efficiencies. *Pharmaceutical Research* **12**, 263-269.
794. Rowland, M. (1985). Physiologic pharmacokinetic models and interanimal species scaling. *Pharmacology and Therapeutics* **29**, 49-68.
795. Roy, A., Weisel, C. P., Gallo, M. A., and Georgopoulos, P. G. (1996). Studies of multiroute exposure/dose reconstruction using physiologically based pharmacokinetic models. *Toxicology and Industrial Health* **12**, 153-163.

796. Roy, A., Weisel, C. P., Liroy, P. J., and Georgopoulos, P. G. (1996). A distributed parameter physiologically-based pharmacokinetic model for dermal and inhalation exposure to volatile organic compounds. *Risk Analysis* **16**, 147-160.
797. Roy, A., and Georgopoulos, P. G. (1998). Reconstructing week-long exposures to volatile organic compounds using physiologically based pharmacokinetic models. *Journal of Exposure Analysis and Environmental Epidemiology* **8**, 407-422.
798. Runciman, W. B., Ilsley, A. H., Mather, L. E., Carapetis, R., and Rao, M. M. (1984). A sheep preparation for study interaction between blood flow and drug disposition. I; physiological profile. *British Journal of Anaesthesia* **56**, 1015-1028.
799. Russel, F. G., Wouterse, A. C., and Van Ginneken, C. A. (1987). Physiologically based pharmacokinetic model for the renal clearance of salicylic acid and the interaction with phenolsulfonphthalein in the dog. *Drug Metabolism and Disposition* **15**, 695-701.
800. Russel, F. G., Wouterse, A. C., and Van Ginneken, C. A. (1987). Physiologically based pharmacokinetic model for the renal clearance of phenolsulfonphthalein and the interaction with probenecid salicylic acid in the dog. *Journal of Pharmacokinetics and Biopharmaceutics* **15**, 349-368.
801. Russel, F. G., Wouterse, A. C., and Van Ginneken, C. A. (1989). Physiologically based pharmacokinetic model for the renal clearance of iodopyracet and the interaction with probenecid in the dog. *Biopharmaceutics & Drug Disposition* **10**, 137-152.
802. Salvan, A., Thomaseth, K., Bortot, P., and Sartori, N. (2001). Use of a toxicokinetic model in the analysis of cancer mortality in relation to the estimated absorbed dose of dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin, TCDD). *Sci.Total Environ.* **274**, 21-35.
803. Sancho, E., Ferrando, M. D., Lleo, C., and Andreu-Moliner, E. (1998). Pesticide toxicokinetics in fish: accumulation and elimination. *Ecotoxicology and Environmental Safety* **41**, 245-250.
804. Santostefano, M. J., Wang, X., Richardson, V. M., Ross, D. G., DeVito, M. J., and Birnbaum, L. S. (1998). A pharmacodynamic analysis of TCDD-induced cytochrome P450 gene expression in multiple tissues: dose- and time-dependent effects. *Toxicology and Applied Pharmacology* **151**, 294-310.
805. Sarangapani, R., Teeguarden, J. G., Cruzan, G., Clewell, H. J., and Andersen, M. E. (2002). Physiologically based pharmacokinetic modeling of styrene and styrene oxide respiratory-tract dosimetry in rodents and humans. *Inhal.Toxicol* **14**, 789-834.

806. Sarangapani, R., Gentry, P. R., Covington, T. R., Teeguarden, J. G., and Clewell, H. J. I. (2003). Evaluation of the potential impact of age- and gender- specific lung morphology and ventilation rate on the dosimetry of vapors. *Inhal.Toxicol.* **15**, 987-1016.
807. Sarangapani, R., Teeguarden, J., Andersen, M. E., Reitz, R. H., and Plotzke, K. P. (2003). Route-specific differences in distribution characteristics of octamethylcyclotetrasiloxane in rats: analysis using PBPK models. *Toxicol Sci.* **71**, 41-52.
808. Sarangapani, R., Clewell, H. J., Cruzan, G., and Andersen, M. E. (2002). Comparing respiratory - tract and hepatic exposure - dose relationships for metabolized inhaled vapors: a pharmacokinetic analysis. *Inhal.Toxicol* **14**, 835-854.
809. Sathirakul, K., Suzuki, H., Yasuda, K., Hanano, M., and Sugiyama, Y. (1993). Construction of a physiologically based pharmacokinetic model to describe the hepatobiliary excretion process of ligands: quantitative estimation of intracellular diffusion. *Biological and Pharmaceutical Bulletin* **16**, 273-279.
810. Sato, A., and Nakajima, T. (1979). A vial equilibration method to evaluate the drug metabolizing enzyme activity for volatile hydrocarbons. *Toxicology and Applied Pharmacology* **47**, 41-46.
811. Sato, A., and Nakajima, T. (1979). Partition coefficients of some aromatic hydrocarbons and ketones in water, blood and oil. *British Journal of Industrial Medicine* **36**, 231-234.
812. Sato, A., and Nakajima, T. (1987). Pharmacokinetics of organic solvent vapors in relation to their toxicity. *Scandinavian Journal of Work Environment and Health* **13**, 81-93.
813. Sato, A., Endoh, K., and Johanson, G. (1990). The use of models to investigate the toxicokinetic behavior of organic solvents. Exposure assessment for epidemiology and hazard control. In *Industrial hygiene science series.* (S. M. Rapport, Ed.), pp. 131-152. Smith TJ.Lewis publishers..
814. Sato, A., Endoh, K., Kaneko, T., and Johanson, G. (1991). A simulation study of physiological factors affecting pharmacokinetic behavior of organic solvent vapors. *British Journal of Industrial Medicine* **48**, 342-347.
815. Sawada, Y., Harashima, H., Hanano, M., Sugiyama, Y., and Iga, T. (1985). Prediction of the plasma concentration time courses of various drugs in humans based on data from rats. *Journal of Pharmacobio-Dynamics* **8**, 757-766.

816. Schlosser, P. M., Lilly, P. D., Conolly, R. B., Janszen, D. B., and Kimbell, J. S. (2003). Benchmark dose risk assessment for formaldehyde using airflow modeling and a single-compartment, DNA-protein cross-Link Dosimetry model to estimate human equivalent doses. *Risk Anal.* 473-487.
817. Schoeffner, D. J., Warren, D. A., Muralidhara, S., Bruckner, J. V., and Simmons, J. E. (1999). Organ weights and fat volume in rats as a function of strain and age. *Journal of Toxicology and Environmental Health* **56**, 449-462.
818. Schreiber, J. S. (1993). Predicted infant exposure to tetrachloroethene in human breastmilk. *Risk Analysis* **13** , 515-524.
819. Schultz, I. R., and Hayton, W. L. (2000). Interspecies scaling of the bioaccumulation of lipophilic xenobiotics in fish: an example using trifluralin. *Environmental Toxicology and Chemistry* **18**, 1440-1449.
820. Schumann, A. M., Fox, T. R., and Watanabe, P. G. (1982). ¹⁴C Methyl chloroform (1,1,1-Trichloroethane): Pharmacokinetics in rats and mice following inhalation exposure. *Toxicology and Applied Pharmacology* **62**, 390-401.
821. Schwartz, S. (2001). Providing toxicokinetic support for reproductive toxicology studies in pharmaceutical development. *Arch.Toxicol.* **75**, 381-387.
822. Sear, J. W. (1993). Why not model physiologically ? *British Journal of Anaesthesia* **70**, 243-245.
823. Semino, G., Lilly, P., and Andersen, M. E. (1997). A pharmacokinetic model describing pulsatile uptake of orally-administered carbon tetrachloride. *Toxicology* **117**, 25-33.
824. Shatkin, J. A., and Brown, H. S. (1991). Pharmacokinetics of the dermal route of exposure to volatile organic chemicals in water: A computer simulation model. *Environmental Research* **56**, 90-108.
825. Shelley, M. L., Harris, R. L., and Boehlecke, B. A. (1996). A mathematical model of bronchial absorption of vapors in the human lung and its significance in pharmacokinetic modeling. *SAR QSAR Environ Res.* **5**, 221-253.
826. Shelley, M. L., Andersen, M. E., and Fisher, J. W. (1988). An inhalation distribution model for the lactating mother and nursing child. *Toxicology Letters* **43**, 23-29.
827. Shelley, M. L., Andersen, M. E., and Fisher, J. W. (1989). A risk assessment approach for nursing infants exposed to volatile organics through the mother's occupational inhalation exposure. *Applied Industrial Hygiene* **4**, 21-26.

828. Sherman, C. D., Portier, C. J., and Kopp-Schneider, A. (1994). Multistage models of carcinogenesis: an approximation for the size and number distribution of late-stage clones. *Risk Analysis* **14**, 1039-1049.
829. Sherwood, R. J., and Sinclair, G. C. (1999). New PBPK model applied to old occupational exposure to benzene. *American Industrial Hygiene Association Journal* **60**, 259-265.
830. Shibata, N., Gao, W., Okamoto, H., Kishida, T., Iwasaki, K., Yoshikawa, Y., and Takada, K. (2002). Drug interactions between HIV protease inhibitors based on physiologically-based pharmacokinetic model. *J.Pharm.Sci.* **91**, 680-689.
831. Shipp, A. M., Gentry, P. R., Lawrence, G. S., Van Landingham, C., Covington, T., Clewell, H. J., Gribben, K., and Crump, K. (2000). Determination of a site-specific reference dose for methylmercury for fish-eating populations. *Toxicol.Ind.Health.* **16**, 335-438.
832. Shuler, M. L., Ghanem, A., Quick, D., Wong, M. C., and Miller, P. (1996). A self-regulating cell culture analog device to mimic animal and human toxicological responses. *Biotechnology and Bioengineering* **52**, 45-60.
833. Shyr, L. J., Sabourin, P. J., Medinsky, M. A., Birnbaum, L. S., and Henderson, R. F. (1993). Physiologically based modeling of 2-butoxyethanol disposition in rats following different routes of exposure. *Environmental Research* **63**, 202-218.
834. Sielken, R. L., Reitz, R. H., and Hays, S. M. (1996). Using PBPK modeling and comprehensive realism methodology for the quantitative cancer risk assessment of butadiene. *Toxicology* **113**, 231-237.
835. Sijm, D. T. H. M., Schipper, M., and Opperhuizen, A. (1993). Toxicokinetics of halogenated benzenes in fish: lethal body burden as a toxicological end point. *Environmental Toxicology and Chemistry* **12**, 1117-1127.
836. Silverman, K. C., Naumann, B. D., Holder, D. J., Dixit, R., Faria, E. C., Sargent, E. V., and Gallo, M. A. (1999). Establishing data-derived adjustment factors from published pharmaceutical clinical trial data. *Human and Ecological Risk Assessment* **5**, 1059-1089.
837. Simmons, J. E. (1996). Application of physiologically based pharmacokinetic modelling to combination toxicology. *Food and Chemical Toxicology* **34**, 1067-1073.
838. Simon, T. W. (1997). Combining physiologically based pharmacokinetic modeling with Monte Carlo simulation to derive an acute inhalation guidance value for trichloroethylene. *Regulatory Toxicology and Pharmacology* **26**, 257-270.

839. Sinclair, G. C., Gray, C. N., and Sherwood, R. J. (1999). Structure and validation of a pharmacokinetic model for benzene. *American Industrial Hygiene Association Journal* **60**, 249-258.
840. Singh, D. V., Spitzer, H. L., and White, P. D. Addendum to the health risk assessment for dichloromethane. Updated carcinogenicity assessment for dichloromethane. (EPA/600/8-82/004F). 1987.
Ref Type: Serial (Book,Monograph)
841. Singh, P., and Roberts, M. S. (1993). Dermal and underlying tissue pharmacokinetics of salicylic acid after topical application. *Journal of Pharmacokinetics and Biopharmaceutics* **21**, 337-373.
842. Sirianni, G. L., and Pang, K. S. (1997). Organ clearance concepts: new perspectives on old principles. *J.Pharmacokinetic.Biopharm.* **25**, 449-469.
843. Slob, W., Janssen, P. H. M., and van den Hof, J. M. (1997). Structural identifiability of PBPK models: Practical consequences for modeling strategies and study designs. *Critical Reviews in Toxicology* **27**, 261-272.
844. Smith, A. E., Gray, G. M., and Evans, J. S. (1995). The ability of predicted internal dose measures to reconcile tumor bioassay data for chloroform. *Regulatory Toxicology and Pharmacology* **21**, 339-351.
845. Smith, A. E., and Evans, J. S. (1995). Uncertainty in fitted estimates of apparent in vivo metabolic constants for chloroform. *Fundamental and Applied Toxicology* **25**, 29-44.
846. Smith, A. E., Evans, M. V., and Davidian, M. (1998). Statistical properties of fitted estimates of apparent in vivo metabolic constants obtained from gas uptake data . I.lipophilic and slowly metabolized VOCs. *Inhalation Toxicology* **10**, 383-409.
847. Smith, J. M. (1987). Difference equation derivation by numerical integration substitution. In *Mathematical modeling and digital simulation for engineers and scientists* (M. T. Smith, Ed.), pp. 154-160. John Wiley & Sons, New York,Chichester,Brisbane,Toronto,Singapore.
848. Soldin, O. P. (2002). Proposed PBPK model to predict infant exposure to toxic chemicals in breast milk. *Environmental Health Perspectives* **110**, A663-A664.
849. Spear, R. C., Bois, F. Y., Woodruff, T., Auslander, D., Parker, J., and Selvin, S. (1991). Modeling benzene pharmacokinetics across three sets of animal data: parametric sensitivity and risk implications. *Risk Analysis* **11**, 641-654.
850. Spear, R. C., and Bois, F. Y. (1994). Parameters variability and the interpretation of physiologically based pharmacokinetic modeling results. *Environmental Health Perspectives* **102**, 61-66.

851. Srinivasan, R. S., Bourne, D. W., and Putcha, L. (1994). Application of physiologically based pharmacokinetic models for assessing drug disposition in space. *J Clin Pharmacol.* **34**, 692-698.
852. Staats, D. A., Fisher, J. W., and Conolly, R. B. (1991). Gastrointestinal absorption of xenobiotics on physiologically-based pharmacokinetic models. A two compartmental description. *Drug Metabolism and Disposition* **19**, 144-149.
853. Steinbach, K. H., Raffler, H., Pabst, G., and Fliedner, T. M. (1980). A mathematical model of Canine Granulocytopoiesis. *J.Math.Biology.* **10**, 1-12.
854. Stenner, R. D., Merdink, J. L., Fisher, J. W., and Bunge, A. L. (1998). Physiologically-based pharmacokinetic model for trichloroethylene considering enterohepatic recirculation of major metabolites. *Risk Analysis* **18**, 261-269.
855. Stern, A. H., and Smith, A. E. (2003). An assessment of the Cord Blood: Maternal blood methylmercury ratio: Implications for risk assessment. *Environ.Health Perspect.* **111**, 1465-1470.
856. Stickney, J. A., Sager, S. L., Clarkson, J. R., Smith, L. A., Locey, B. J., Bock, M. J., Hartung, R., and Olp, S. F. (2003). An updated evaluation of the carcinogenic potential of 1,4-dioxane. *Regulatory Toxicology and Pharmacology* **38**, 183-195.
857. Stoughton, R. W., and Lamson, P. D. (1936). The relative anaesthetic activity of the butanes and pentanes. *Journal of Pharmacology and Experimental Therapeutics* **58**, 74-77.
858. Sultatos, L. G. (1990). A physiologically-based pharmacokinetic model for parathion based on chemical specific parameters determined in vitro. *Journal of American College of Toxicology* **9**, 611-617.
859. Sultatos, L. G., Kim, B., and Woods, L. (1990). Evaluation of estimations in vitro of tissue: blood distribution coefficients for organothiophosphate insecticides. *Toxicology and Applied Pharmacology* **103**, 52-55.
860. Sum, D. T. H. M., Schipper, M., and Opperhuizen, A. (1993). Toxicokinetics of halogenated benzenes in fish: lethal body burden as a toxicological end point. *Environmental Toxicology and Pharmacology* **12**, 1117-1127.
861. Suzuki, H., Iwatsubo, T., and Sugiyama, Y. (1995). Applications and prospects for physiologically based pharmacokinetic (PB-PK) models involving pharmaceutical agents. *Toxicology Letters* **82/83**, 349-355.
862. Sweeney, L. M., Shuler, M. L., Babish, J. G., and Ghanem, A. (1995). A cell culture analogue of rodent physiology - Application to naphthalene toxicity. *Toxicology in Vitro* **9**, 307-316.

863. Sweeney, L. M., Shuler, M. L., Quick, D., and Babish, J. G. (1996). A preliminary physiologically based pharmacokinetic model for naphthalene and naphthalene oxide in mice and rats. *Annals of Biomedical and Engineering* **24**, 305-320.
864. Sweeney, L. M., Himmelstein, M. W., Schlosser, P. M., and Medinsky, M. A. (1996). Physiologically based pharmacokinetic modeling of blood and tissue epoxide measurements for butadiene. *Toxicology* **113**, 318-321.
865. Sweeney, L. M., Schlosser, P. M., Medinsky, M. A., and Bond, J. A. (1997). Physiologically based pharmacokinetic modeling of 1,3-butadiene, 1,2-epoxy-3-butene, and 1,2:3,4-diepoxybutane toxicokinetics in mice and rats. *Carcinogenesis* **18**, 611-625.
866. Sweeney, L. M., Tyler, T. R., Kirman, C. R., Corley, R. A., Reitz, R. H., Paustenbach, D. J., Holson, J. F., Whorton, M. D., Thompson, K. M., and Gargas, M. L. (2001). Proposed occupational exposure limits for select ethylene glycol ethers using PBPK models and Monte Carlo simulations. *Toxicol Sci.* **62**, 124-139.
867. Sweeney, L. M., Gargas, M. L., Strother, D. E., and Kedderis, G. L. (2003). Physiologically Based Pharmacokinetic Model Parameter Estimation and Sensitivity and Variability Analyses for Acrylonitrile Disposition in Humans. *Toxicological Sciences* **71**, 27-40.
868. Sweeney, L.M (2000). Comparing occupational and environmental risk assessment methodologies using pharmacokinetic modeling. *Human & Ecological Risk Assessment.* **6**, 1101-1124.
869. Tan, Y. M., Butterworth, B. E., Gargas, M. L., and Conolly, R. B. (2003). Biologically motivated computational modeling of chloroform cytotoxicity and regenerative cellular proliferation. *Toxicol.Sci.* **75**, 192-200.
870. Tardif, R., Lapare, S., Krishnan, K., and Brodeur, J. (1993). A descriptive and mechanistic study of the interaction between toluene and xylene in humans. *Int.Arch.Occup.Environ.Health* **65**, S135-S137.
871. Tardif, R., Lapare, S., Krishnan, K., and Brodeur, J. (1993). Physiologically based modeling of the toxicokinetic interaction between toluene and m-xylene in the rat. *Toxicol Appl.Pharmacol.* **120**, 266-273.
872. Tardif, R., Lapare, S., Charest-Tardif, G., Brodeur, J., and Krishnan, K. (1995). Physiologically-based pharmacokinetic modeling of a mixture of toluene and xylene in humans. *Risk Anal.* **15**, 335-342.

873. Tardif, R., Laparé, S., Charest-Tardif, G., Krishnan, K., and Brodeur, J. (1995). Utilisation des modèles cinétiques à base physiologique pour la prédiction des interactions métaboliques consécutives aux expositions à des mélanges binaires de solvants. In 1er Colloque de l'Université de Montréal sur l'environnement: analyse et intervention. (C. E. Delisle, M. A. Bouchard, P. André, and J. Zayed, Eds.), pp. 581-590. Montréal.
874. Tardif, R., Charest-Tardif, G., Brodeur, J., and Krishnan, K. (1997). Physiologically based pharmacokinetic modeling of a ternary mixture of alkyl benzenes in rats and humans. *Toxicology and Applied Pharmacology* **144**, 120-134.
875. Tardif, R., and Charest-Tardif, G. (1999). The importance of measured end-points in demonstrating the occurrence of interactions: a case study with methylchloroform and m-xylene. *Toxicological Sciences* **49**, 312-317.
876. Teo, S. K., Kedderis, G. L., and Gargas, M. L. (1994). Determination of tissue partition coefficients for volatile tissue-reactive chemicals: acrylonitrile and its metabolite 2-cyanoethylene oxide. *Toxicology and Applied Pharmacology* **128**, 92-96.
877. Teorell, T. (1937). Kinetics of distribution of substances administered to the body. I. The extravascular modes of administration. *Archives Internationales de Pharmacodynamie* **57**, 205-225.
878. Teorell, T. (1937). Kinetics of distribution of substances administered to the body. II. The intravascular modes of administration. *Archives Internationales de Pharmacodynamie* **57**, 226-240.
879. Terasaki, T., Iga, T., Sugiyama, Y., Sawada, Y., and Hanano, M. (1984). Nuclear binding as a determinant of tissue distribution of adriamycin, daunomycin, adriamycinol, daunorubicinol and actinomycin D. *Journal of Pharmacobio-Dynamics* **7**, 269-277.
880. Terry, K. K., Elswick, B. A., Welsch, F., and Conolly, R. B. (1995). Development of a physiologically based pharmacokinetic model describing 2-methoxyacetic acid disposition in the pregnant mouse. *Toxicology and Applied Pharmacology* **132**, 103-114.
881. Thakore, K. N., Gargas, M. L., Andersen, M. E., and Mehendale, H. M. (1991). PB-PK derived metabolic constants, hepatotoxicity, and lethality of BrCCL₃ in rats pretreated with chlordecone, phenobarbital, or mirex. *Toxicology and Applied Pharmacology* **109**, 514-528.
882. Theil, F. P., Guentert, T. W., Haddad, S., and Poulin, P. (2003). Utility of physiologically based pharmacokinetic models to drug development and rational drug discovery candidate selection. *Toxicology Letters* **138**, 29-49.

883. Thomas, R. S., Bigelow, P. L., Keefe, T. J., and Yang, R. S. H. (1996). Variability in biological exposure indices using physiologically based pharmacokinetic modeling and Monte Carlo simulation. *American Industrial Hygiene Association Journal* **57**, 23-32.
884. Thomas, R. S., Lytle, W. E., Keefe, T. J., Constan, A. A., and Yang, R. S. H. (1996). Incorporating Monte Carlo simulation into physiologically based pharmacokinetic models using advanced continuous simulation language (ACSL): a computational method. *Fundamental and Applied Pharmacology* **31**, 19-28.
885. Thomas, R. S., Yang, R. S. H., Morgan, D. G., Moorman, M. P., Kermani, H. R. S., Sloane, R. A., O'Connor, R. W., Adkins, B. Jr., Gargas, M. L., and Andersen, M. E. (1996). PBPK modeling / Monte Carlo simulation of methylene chloride kinetic changes in mice in relation to age and acute, subchronic, and chronic inhalation exposure. *Environmental Health Perspectives* **104**, 858-865.
886. Thomas, R. S., Conolly, R. B., Gustafson, D. L., Long, M. E., Benjamin, S. A., and Yang, R. S. H. (2000). A physiologically based pharmacodynamic analysis of hepatic foci within a medium-term liver bioassay using pentachlorobenzene as a promoter and diethylnitrosamine as an initiator. *Toxicology and Applied Pharmacology* **166**, 128-137.
887. Thomaseth, K., and Salvan, A. (1998). ERRATUM. Estimation of occupational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin using a minimal physiologic toxicokinetic model. *Environmental Health Perspectives Suppl* **106**, 743-753.
888. Thrall, B. D., and Woodstock, A. D. (2003). Evaluation of the dermal bioavailability of aqueous xylene in F344 rats and human volunteers. *Journal of Toxicology and Environmental Health* **66**, 1267-1281.
889. Thrall, K. D., Gies, R. A., Muniz, J., Woodstock, A. D., and Greg Higgins (2002). Route-of-entry and brain tissue partition coefficients for common superfund contaminants. *J.Toxicol Environ.Health* **65**, 2075-2086.
890. Thrall, K. D., and Woodstock, A. D. (2002). Evaluation of the dermal absorption of aqueous toluene in F344 rats using real-time breath analysis and physiologically based pharmacokinetic modeling. *Journal of Toxicology and Environmental Health* **65**, 2087-2100.
891. Thrall, K. D., Weitz, K. K., and Woodstock, A. D. (2002). Use of real-time breath analysis and physiologically based pharmacokinetics modeling to evaluate dermal absorption of aqueous toluene in human volunteers. *Toxicol Sci.* **68**, 280-287.
892. Thrall, K. D., Soelberg, J. J., Weitz, K. K., and Woodstock, A. D. (2002). Development of a physiologically based pharmacokinetic model for methyl ethyl ketone in F344 rats. *J.Toxicol Environ.Health A* **65**, 881-896.

893. Thrall, K. D., and Kenny, D. V. (1996). Evaluation of a carbon tetrachloride physiologically based pharmacokinetic model using real-time breath-analysis monitoring. *Inhalation Toxicology* **8**, 251-261.
894. Thrall, K. D., and Poet, T. S. (2000). Determination of biokinetic interactions in chemical mixtures using real-time breath analysis and physiologically based pharmacokinetic modeling. *Journal of Toxicology and Environmental Health* **59**, 653-670.
895. Thrall, K. D., Vucelick, M. E., Gies, R. A., Zangar, R. C., Weitz, K. K., Poet, T. S., Springer, D. L., Grant, D. M., and Benson, J. M. (2000). Comparative metabolism of carbon tetrachloride in rats, mice, and hamsters using gas uptake and PBPK modeling. *Journal of Toxicology and Environmental Health* **60**, 531-548.
896. Timchalk, C., Kousba, A., and Poet, T. S. (2002). Monte Carlo analysis of the human chlorpyrifos-oxonase (PONI) polymorphism using a physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) model. *Toxicol Lett.* **135**, 51-59.
897. Timchalk, C., Nolan, R. J., Mendrala, A. L., Dittenber, D. A., Brzak, K. A., and Mattsson, J. L. (2002). A physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) model for the organophosphate insecticide chlorpyrifos in rats and humans. *Toxicol Sci.* **66**, 34-53.
898. Timchalk, C., Poet, T. S., Lin, Y., Weitz, K. K., Zhao, R., and Thrall, K. D. (2001). Development of an integrated microanalytical system for analysis of lead in saliva and linkage to a physiologically based pharmacokinetic model describing lead saliva secretion. *AIHAJ.* **62**, 295-302.
899. Timchalk, C., Nolan, R. J., Mendrala, A. L., Dittenber, D. A., Brzak, K. A., and Mattsson, J. L. (2002). A Physiologically Based Pharmacokinetic and Pharmacodynamic (PBPK/PD) Model for the Organophosphate Insecticide Chlorpyrifos in Rats and Humans. *Toxicol Sci.* **66**, 34-53.
900. Trachsel, D., Tschudi, P., Portier, C. J., Kuhn, M., Thormann, W., Scholtysik, G., and Mevissen, M. (2004). Pharmacokinetics and pharmacodynamic effects of amiodarone in plasma of ponies after single intravenous administration. *Toxicology and Applied Pharmacology* **195**, 113-125.
901. Travis, C. C., Quillen, J. L., and Arms, A. D. (1990). Pharmacokinetics of benzene. *Toxicology and Applied Pharmacology* **102**, 400-420.
902. Travis, C. C., White, R. K., and Ward, R. C. (1990). Interspecies extrapolation of pharmacokinetics. *Journal of Theoretical Biology* **142**, 285-304.

903. Travis, C. C., and Hattemer-Frey, H. A. (1990). Pharmacokinetics and its application to risk assessment. In *Hasard assessment of chemicals* (J. Saxena, Ed.), pp. 39-82. Hemisphere Publishing Corporation, New York, Washington, Philadelphia, London.
904. Travis, C. C., and Hattemer-Frey, H. A. (1991). Physiological pharmacokinetic models. In *Statistics in Toxicology* (D. Krewski, and C. Franklin, Eds.), p. 170. Gordon and Breach, New York.
905. Travis, C. C., McClain, T. W., and Birkner, P. D. (1991). Diethylnitrosamine-Induced Hepatocarcinogenesis in Rats: A Theoretical Study. *Toxicology and Applied Pharmacology* **109**, 289-304.
906. Travis, C. C., Zeng, C., and Nicholas, J. (1996). Biological model of ED01 hepatocarcinogenesis. *Toxicology and Applied Pharmacology* **140**, 29.
907. Tsuji, A., Nishide, K., Minami, H., Nakashima, E., Terasaki, T., and Yamana, T. (1985). Physiologically based pharmacokinetic model for cefazolin in rabbits and its preliminary extrapolation to man. *Drug Metabolism and Disposition* **13**, 729-739.
908. Tsukamoto, Y., Kato, Y., Ura, M., Horii, I., Ishitsuka, H., Kusuhara, H., and Sugiyama, Y. (2001). A physiologically based pharmacokinetic analysis of capecitabine, a triple prodrug of 5-FU, in humans: the mechanism for tumor-selective accumulation of 5-FU. *Pharm.Res.* **18**, 1190-1202.
909. Tsukamoto, Y., Kato, Y., Ura, M., Horii, I., Ishikawa, T., Ishitsuka, H., and Sugiyama, Y. (2001). Investigation of 5-FU disposition after oral administration of capecitabine, a triple-prodrug of 5-FU, using a physiologically based pharmacokinetic model in a human cancer xenograft model: comparison of the simulated 5-FU exposures in the tumor tissue between human and xenograft model. *Biopharmaceutics & Drug Disposition* **22**, 1-14.
910. Tsuruta, H. Percutaneous absorption of organic solvents. III. On the penetration rates of hydrophobic solvents through the excised rat skin. *Industrial Health* **20**, 335-345. 1982.
Ref Type: Abstract
911. Tuey, D. B., and Matthews, D. H. (1980). Use of a physiological compartmental model for the rat to describe the pharmacokinetics of several chlorinated biphenyls in the mouse. *Drug Metabolism and Disposition* **8**, 397-403.
912. Tuey, D. B., and Matthews, D. H. (1980). Distribution and excretion of 2,2',4',4',5,5'-hexabromobiphenyls in rats and man: Pharmacokinetic model predictions. *Toxicology and Applied Pharmacology* **53**, 420-430.

913. Uemitsu, N. (1986). Inhalation pharmacokinetics of carbon tetrachloride in rats based on arterial blood: inhaled air concentration ratios. *Toxicology and Applied Pharmacology* **83**, 20-29.
914. Upton, R. N., and Ludbrook, G. L. (1997). A physiological model of induction of anaesthesia with propofol in sheep. 1. Structure and estimation of variables. *British Journal of Anaesthesia* **79**, 497-504.
915. Van Asperen, J., Rijcken, W. R. P., and Lammers, J. H. C. M. (2003). Application of physiologically based toxicokinetic modelling to study the impact of the exposure scenario on the toxicokinetics and the behavioural effects of toluene in rats. *Toxicol.Lett.* **138**, 51-68.
916. van der Molen, G. W., Kooijman, S. A. L. M., and Slob, W. (1996). A generic toxicokinetic model for persistent lipophilic compounds in humans: an application to TCDD. *Fundamental and Applied Pharmacology* **31**, 83-94.
917. Van Eijkeren, J. C. (2002). Estimation of metabolic rate constants in PBPK - model from liver slice experiments: what are the experimental needs? *Risk Analysis* **22**, 159-173.
918. Van Ommen, B., de Jongh, J., van de Sandt, J., Blaauboer, B., Hissink, E., Bogaards, S., and van Bladeren, P. (1995). Computer-aided biokinetic modelling combined with in vitro data. *Toxicology in Vitro* **9**, 537-542.
919. van Vliet, P. W., and de Jongh, J. (1996). Biokinetics and biokinetic models in risk assessment. *Human & Experimental Toxicology* **15**, 799-809.
920. Vander, A. J., Sherman, J. H., and Luciano, D. S. (1990). *Respiration*. pp. 440-452. Mc Graw-Hill, New York, Montréal, Toronto & al.
921. Varkonyi, P., Bruckner, J. V., and Gallo, J. M. (1995). Effect of parameter variability on physiologically-based pharmacokinetic model predicted drug concentrations. *Journal of Pharmaceutical Sciences* **84**, 381-384.
922. Verhaar, H. J. M., Morroni, J. R., Reardon, K. F., Hays, S. M., Gaver, D. P., Carpenter, R. L., and Yang, R. S. H. (1997). A proposed approach to study the toxicology of complex mixtures of petroleum products: the integrated use of QSAR, lumping analysis and PBPK/PD modeling. *Environ.Health Perspect.* **105**, 179-195.
923. Vicini, P., Pierce, C. H., Dills, R. L., Morgan, M. S., and Kalman, D. A. (1999). Individual prior information in a physiological model of 2H8-toluene kinetics: an empirical bayes estimation strategy. *Risk.Anal.* **19**, 1127-1134.
924. Vielle, B., and Chauvet, G. (1993). An ACSL simulation of the respiratory system. *International Journal of Biomedical Computing* **33**, 45-54.

925. Vinegar, A. (2001). PBPK modeling of canine inhalation exposures to halogenated hydrocarbons. *Toxicol Sci.* **60**, 20-27.
926. Vinegar, A., Auten, K. L., Seckel, C. S., Reed, Y. M., and Conolly, R. B. (1990). Physiologically based pharmacokinetic model of the metabolism of trichloroethylene by an isolated ventilated perfused lung. *Inhalation Toxicology* **2**, 285-294.
927. Vinegar, A., Winsett, D. W., Andersen, M. E., and Conolly, R. B. (1990). Use of a physiologically based pharmacokinetic and computer simulation for retrospective assessment of exposure to volatile toxicants. *Inhalation Toxicology* **2**, 119-128.
928. Vinegar, A., Seckel, C. S., Pollard, D. L., Kinkead, E. R., Conolly, R. B., and Andersen, M. E. (1992). Polychlorotrifluoroethylene oligomer pharmacokinetics in F-344 rats: Development of a physiologically-based model. *Fundamental and Applied Toxicology* **18**, 504-514.
929. Vinegar, A., Williams, R. J., Fisher, J. W., and McDougal, J. N. (1994). Dose-dependant metabolism of 2,2-dichloro-1,1,1-trifluoroethane: a physiologically based pharmacokinetic model in the male Fisher 344 rat. *Toxicology and Applied Pharmacology* **129**, 103-113.
930. Vinegar, A., and Jepson, G. W. (1996). Cardiac sensitization thresholds of halon replacement chemicals predicted in humans by physiologically based pharmacokinetic modeling. *Risk Analysis* **16**, 571-579.
931. Vinegar, A., Jepson, G. W., and Overton, J. H. (1998). PBPK modeling of short-term (0 to 5 min) human inhalation exposures to halogenated hydrocarbons. *Inhalation Toxicology* **10**, 411-429.
932. Vinegar, A., Jepson, G. W., Hammann, S. J., Harper, G., Dierdorf, D. S., and Overton, J. H. (2000). Simulated blood levels of CF₃I in personnel exposed during its release from an F-15 jet engine nacelle and during intentional inhalation. *American Industrial Hygiene Association Journal* **60**, 403-408.
933. Vinegar, A., Jepson, G. W., Cisneros, M., Rubenstein, R., and Brock, W. J. (2000). Setting safe acute exposure limits for halon replacement chemicals using physiologically based pharmacokinetic modeling. *Inhalation Toxicology* **12**, 751-763.
934. Volp, R. F., Sipes, I. G., Falcoz, C., Carter, D. E., and Gross, J. F. (1984). Disposition of 1,2,3-trichloropropane in the Fischer-344 rats: Conventional and physiological pharmacokinetics. *Toxicology and Applied Pharmacology* **75**, 8-17.
935. von Bertalanffy, L. (1968). The model of open system. In *General system theory foundations, development, applications* pp. 139-154.

936. Wada, D. R., and Ward, D. S. (1994). The hybrid model - a new pharmacokinetic model for computer-controlled infusion pumps. *IEEE Transaction on Biomedical Engineering* **41**, 134-142.
937. Wada, D. R., Stanski, D. R., and Ebling, W. F. (1995). A PC-based graphical simulator for physiological pharmacokinetic models. *Computer Methods and Programs in Biomedecine* **46**, 245-255.
938. Wada, D. R., Bjorkman, S., Ebling, W. F., Harashima, H., Harapat, S. R., and Stanski, D. R. (1997). Computer simulation of the effects of alterations in blood flows and body composition on thiopental pharmacokinetics in humans. *Anesthesiology* **87**, 884-899.
939. Wagner, J. G. (1973). Properties of the Michaelis-Menten equation and its integrated form which are useful in pharmacokinetics. *Journal of Pharmacokinetics and Biopharmaceutics* **1**, 103-121.
940. Wagner, J. G. (1975). *Fundamentals of Clinical Pharmacokinetics*. Drug International, Hamilton, IL.
941. Wagner, J. G. (1981). History of pharmacokinetics. *Pharmacology and Therapeutics* **12**, 537-562.
942. Wagner, P. D. (1981). Ventilation-perfusion relationships. *Clin. Physiology*. **1**, 437-451.
943. Wakefield, J. (1996). The bayesian analysis of population pharmacokinetic models. *J Am Statistical Ass* **91**, 62-75.
944. Waller, C. L., Evans, M. V., and Mckinney, J. C. (1996). Modeling the cytochrome P450-mediated metabolism of chlorinated volatile organic compounds. *Drug.metab.Dispos.* **24**, 203-210.
945. Walton, K., Dorne, J. L., and Renwick, A. G. (2001). Uncertainty factors for chemical risk assessment: interspecies differences in the in vivo pharmacokinetics and metabolism of human CYP1A2 substrates. *Food and Chemical Toxicology* **39**, 667-680.
946. Wang, X., Santostefano, M. J., Evans, M. V., Richardson, V. M., Diliberto, J. J., and Birnbaum, L. S. (1997). Determination of parameters responsible for pharmacokinetic behavior of TCDD in female Sprague-Dawley rats. *Toxicology and Applied Pharmacology* **147**, 151-168.
947. Wang, X., Santostefano, M. J., DeVito, M. J., and Birnbaum, L. S. (2000). Extrapolation of a PBPK model for dioxins across dosage regimen, gender, strain, and species. *Toxicological Sciences* **56**, 49-60.

948. Wang, Y., Kupper, L. L., Lof, A., and Rappaport, S. M. (1996). Comparison of average estimated metabolic rates for styrene in previously exposed and unexposed groups with pharmacokinetic modelling. *Occupational and Environmental Medicine* **53**, 601-605.
949. Ward, K. W., Blumenthal, G. M., Welsch, F., and Pollack, G. M. (1997). Development of a physiologically based pharmacokinetic model to describe the disposition of methanol in pregnant rats and mice. *Toxicology and Applied Pharmacology* **145**, 311-322.
950. Ward, R. C., Travis, C. C., Hetrick, D. M., Andersen, M. E., and Gargas, M. L. (1988). Pharmacokinetics of tetrachloroethylene. *Toxicology and Applied Pharmacology* **93**, 108-117.
951. Warner, P. D. (1982). Calculating the distribution of ventilation-perfusion ratios from inert gas elimination data. *Federation.Proc.* **41**, 136-139.
952. Watanabe, K. H., Bois, F. Y., Daisey, J. M., Auslander, D. M., and Spear, R. C. (1994). Benzene toxicokinetics in humans: exposure of bone marrow to metabolites. *Occupational and Environmental Medicine* **51**, 414-420.
953. Watanabe, K. H., and Bois, F. Y. (1996). Interspecies extrapolation of physiological pharmacokinetic parameter distributions. *Risk Analysis* **16**, 741-754.
954. Welsch, F., Blumenthal, G. M., and Conolly, R. B. (1995). Physiologically based pharmacokinetic models applicable to organogenesis: extrapolation between species and potential use in prenatal toxicity risk assessments. *Toxicology Letters* **82/83**, 539-547.
955. Welsch, F., Blumenthal, G. M., and Conolly, R. B. (1995). Physiologically based pharmacokinetic models applicable to organogenesis: extrapolation between species and potential use in prenatal toxicity risk assessments. *Toxicol Lett.* **82-83**, 539-547.
956. Willems, B. A., Melnick, R. L., Kohn, M. C., and Portier, C. J. (2001). A physiologically based pharmacokinetic model for inhalation and intravenous administration of naphthalene in rats and mice. *Toxicol Appl.Pharmacol.* **176**, 81-91.
957. Williams, R. J., Vinegar, A., McDougal, J. N., Jarabek, A. M., and Fisher, J. W. (1996). Rat to human extrapolation of HCFC-123 kinetics deduced from halothane kinetics-a corollary approach to physiologically based pharmacokinetic modelling. *Fundamental and Applied Toxicology* **30**, 55-66.
958. Wilson, A. G. E., Frantz, S. W., and Keifer, L. C. (1994). A tiered approach to pharmacokinetic studies. *Environmental Health Perspectives Suppl* **102**, 5-11.

959. Woodruff, T. J., and Bois, F. Y. (1993). Optimization issues in physiological toxicokinetic modeling: a case study with benzene. *Toxicol.Lett.* **69**, 181-196.
960. Woodruff, T. J., Bois, F. Y., Auslander, D., and Spear, R. C. (1992). Structure and parametrization of pharmacokinetic models: Their impact on model predictions. *Risk Analysis* **12**, 189-201.
961. Wu, K. Y., Smithers, B. M., and Roberts, M. S. (1997). Melphalan dosing regimens for management of recurrent melanoma by isolated limb perfusion: application of a physiological pharmacokinetic model based on melphalan distribution in the isolated perfused rat hindlimb. *Melanoma Research* **7**, 252-264.
962. Wunscher, G., Kersting, H., Heberer, H., Westmeier, I., Wenzel, V., Flechsig, M., and Matthaeus, E. (1991). Simulation system SONCHES-based toxicokinetic model and data base bank as a tool in biological monitoring and risk assessment. *Science of the Total Environment* **101**, 101-109.
963. Yamaguchi, T., Yabuki, M., Saito, S., Watanabe, T., Nishima, H., Isobe, N., Shono, F., and Matsuo, M. (1996). Research to develop a predicting system of mammalian subacute toxicity (3) construction of a predictive toxicokinetics model. *Chemosphere* **33**, 2441-2468.
964. Yang, R., Thurston, V., Neuman, J., and Randall, D. J. (2000). A Physiological model to predict xenobiotic concentration in fish. *Aquatic Toxicology* **48**, 109-117.
965. Yang, R. S. H., El-Masri, H. A., Thomas, R. S., and Constan, A. A. (1995). The use of physiologically-based pharmacokinetic pharmacodynamic dosimetry models for chemical mixtures. *Toxicology Letters* **82-83**, 497-504.
966. Yang, R. S. H., El-Masri, H. A., Thomas, R. S., Constan, A. A., and Tessari, J. D. (1995). The application of physiologically based pharmacokinetic/pharmacodynamic (PBPK/PD) modeling exploring risk assessment approaches of chemical mixtures.. *Toxicology Letters* **79**, 193-200.
967. Yang, R. S. H., Thomas, R. S., Gustafson, D. L., Campain, J., Benjamin, S. A., Verhaar, H. J. M., and Mumtaz, M. M. (1998). Approaches to developing alternative and predictive toxicology based on PBPK/PD and QSAR modeling. *Environmental Health Perspectives Suppl* **106**, 1385-1393.
968. Yesair, D. W., Feder, P. I., and Chin, A. E. (1986). Development, evaluation and use of a pharmacokinetic model for hexachlorobenzene. In *Hexachlorobenzene: Proceedings of an International Symposium*. (C. R. Morris, and J. R. P. Cabral, Eds.), pp. 297-318. Oxford University Press, New York.

969. Yoshikawa, T., Oguma, T., Ichihashi, T., Kinoshita, H., Hirano, K., and Yamada, H. (1999). Epimerization of moxalactam by albumin and simulation of in vivo epimerization by a physiologically based pharmacokinetic model. *Chirality* **11**, 309-315.
970. You, L., Gazi, E., Archibeque-Engle, S., Casanova, M., Conolly, R. B., and Heck, H. A. (1999). Transplacental and lactational transfer of p,p'-DDE in sprague-dawley rats. *Toxicology and Applied Pharmacology* **157**, 134-144.
971. Young, J. F., Branham, W. S., Sheehan, D. M., Baker, M. E., Wosilait, W. D., and Luecke, R. H. (1997). Physiological "constants" for PBPK models for pregnancy. *Journal of Toxicology and Environmental Health* **52**, 385-401.
972. Young, J. F. (1998). Physiologically-based pharmacokinetic model for pregnancy as a tool for investigation of developmental mechanisms. *Computers in Biology and Medicine* **28**, 359-364.
973. Young, J. F., Wosilait, W. D., and Luecke, R. H. (2001). Analysis of methylmercury disposition in humans utilizing a PBPK model and animal pharmacokinetic data. *J.Toxicol Environ.Health A* **63**, 19-52.
974. Yu, D., and Kim, J. K. (2004). A physiologically based assessment of human exposure to radon released from groundwater. *Chemosphere* **54**, 639-645.
975. Yu, D. (1998). Uncertainties in a pharmacokinetic modeling for inorganic arsenic. *Journal of Environmental Science & Health.Part A* **33**, 1369-1390.
976. Yu, D. (1999). A physiologically based pharmacokinetic model of inorganic arsenic. *Regulatory Toxicology and Pharmacology* **29**, 128-141.
977. Yu, D. H. (2000). A pharmacokinetic modeling of inorganic arsenic: a short-term oral exposure model for humans. *Chemosphere* **39**, 2737-2747.
978. Yu, R. C., Hattis, D., Landaw, E. M., and Froines, J. R. (2002). Toxicokinetic interaction of 2,5-hexanedione and methyl ethyl ketone. *Arch.Toxicol.* **75**, 643-652.
979. Yu, X., Johanson, G., Ichihara, G., Shibata, E., Kamijima, M., Ono, Y., and Takeuchi, Y. (1998). Physiologically Based Pharmacokinetic Modeling of Metabolic Interactions between n-Hezane and Toluene in Humans. *J Occup Health* **40**, 293-301.
980. Zaharko, D. S., Dedrick, R. L., and Oliverio, V. T. (1972). Prediction of the distribution of methotrexate in the sting rays; use of a model developed in mice. *Comparative Biochemistry and Physiology* **42A**, 183-194.

981. Zellner, D., Frankewitsch, T., Simon, S., and Keller, F. (1996). Statistical analysis of heterogeneous pharmacokinetic data from the literature. *European Journal of Clinical Chemistry and Clinical Biochemistry* **34**, 585-589.
982. Zierler, K. L. (1961). Theory of the use of arteriovenous concentration differences for measuring metabolism in steady and non-steady states. *Journal of Clinical Investigation* **40**, 2111-2125.
983. Zwart, A., Lommen, J. G. J., and Feron, V. J. (1992). Multi-compartment model to study the effect of air-blood and blood-tissue partition coefficients on concentration-time-effect relationships. *Arch.Toxicol Suppl* **15**, 249-252.