- *Ahuja S, Thompson G, Smith J. 1988. Trace/ultratrace analyses of unstable compounds investigations on hydrazobenzene and azobenzene. J Res Natl Bur Stand 93:344-347.
- *Aldrich Catalog. 1988. Aldrich catalog handbook. Milwaukee, WI: Aldrich Chemical Company, Inc., 642.
- *Alvarez, C. 1989. Fabricolor, Patterson, NJ. Transcribed telephone conversation with Dr. D. Anthony Gray of Syracuse Research Corporation.
- Asafu-Adjaye EB, Yun JI, Su SY. 1985. Multi-component mixture analysis using room-temperature phosphorimetry. Anal Chem 57:904-907.
- Ashby J, Tennant RW. 1988. Chemical structure, Salmonella mutagenicity and extent of carcinogenicity as indicators of genotoxic carcinogenesis among 22 chemicals tested in rodents by the U.S. NCI/NTP. Mutat Res 204:17-115.
- *Atkinson R. 1985. Kinetics and mechanisms of the gas-phase reactions of the hydroxyl radical with organic compounds under atmospheric conditions. Chem Rev 8:69-201.
- *Atkinson R.. 1987. A structure-activity relationship for the estimation of rate constants for the gas-phase reaction of OH radicals with organic compounds. Int J Chem Kinet 19:799-828.
- *ATSDR. 1990. Management Information System. Agency for Toxic Substances and Disease Registry, Atlanta, GA. September 5, 1990.
- *Barnes D, Bellin J, DeRosa C, et al. 1987. Reference dose (RfD): description and use in health risk assessments. Volume I, Appendix A: Integrated risk information system supportive documentation. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA/600/8-86/032a.
- *Barnhart, ER. 1988. Physicians' desk reference. Oradell, NJ: Medical Economics Company Inc., 854-855, 979-981.
- *Beard RR, JT Noe. 1981. Aromatic nitro and amino compounds. In: Clayton GD, Clayton RE, eds. Patty's industrial hygiene and toxicology, vol 2A, 3rd ed. New York, NY: John Wiley and Sons, 213-2489.
- *Bolton GC, Griffiths IA. 1978. Metabolism of hydrazines and hydrazides by the intestinal microflora. Experientia (Switzerland) 34:1484-1486.

^{*}Cited in text

- Brusick D. 1983. Evaluation of chronic rodent bioassays and Ames assay tests as accurate models for predicting human carcinogens. In: Milman HA, ed. Application of biological markers for carcinogen testing, 153-163.
- *Camanzo J, Rice CP, Jude DJ, et al. 1987. Organic priority pollutants in nearshore fish from 14 Lake Michigan tributaries and embayments, 1983. J Great Lakes Res 13:296-309.
- *CAS. 1988. Chemical Abstract Services Online Registry File. December 6, 1988.
- *CLPSDB. 1987. Contract Laboratory Program Statistical Data Base. April 13, 1987.
- *De Vault DS. 1985. Contaminants in fish from Great Lakes harbors and tributary mouths. Arch Environ Contam Toxic01 14:587-594.
- *Dean J, ed. 1985. Lange's handbook of chemistry. 13th ed. New York, NY: McGraw-Hill Book Co., 7-368.
- *Dietrich MJ, Randall TL, Canney PJ. 1985. Wet air oxidation of hazardous organics in wastewater. Environ Prog 4:171-177.
- *Dunkel VC, Zeiger E, Brusick D, et al. 1985. Reproducibility of microbial mutagenicity assays: II. Testing of carcinogens and noncarcinogens in Salmonella typhimurium and Escherichia coli. Environ Mutagen 7:1-19, 37, 155-158.
- *Dutkiewicz T, Szymanska J. 1973. [Chromatographic determination of hydrazobenzene metabolites in rats.] Bromatol Chem Toksykol 6:323-327. (Polish)
- *EPA. 1980. Ambient water quality criteria for diphenylhydrazine. Prepared by the Environmental Criteria and Assessment Office, Cincinnati, OH, for the Office of Water Regulations and Standards, Washington, DC. EPA 440/5-80-062.
- *EPA. 1986. Reference values for risk assessment. US Environmental Protection Agency, Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Cincinnati, OH, for the Office of Solid Waste. Washington, DC.
- *EPA. 1987a. USEPA Contract Laboratory Program Statement of Work for Organics Analysis. Dated 10/86 revised 8/87.
- *EPA. 1987b. U.S. Environmental Protection Agency. 40 CFR Parts 117 and 302. Hazardous substances; reportable quantity adjustments; proposed rules, Federal Register 52:8140-8152.

- *EPA. 1988a. Integrated Risk Information System (IRIS). Risk estimates for carcinogenicity for 1,2-diphenylhydrazine. Online. (Verification date 3/1/88). US Environmental Protection Agency, Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. Cincinnati, OH.
- *EPA. 1988b. Integrated Risk Information System (IRIS). Risk estimates for carcinogenicity for aniline, Online. (Verification date g/7/88). US Environmental Protection Agency, Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. Cincinnati, OH.
- *EPA. 1988c. Integrated Risk Information System (IRIS). Risk estimates for carcinogenicity for benzidine. Online. (Verification date g/7/88). US Environmental Protection Agency, Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. Cincinnati, OH.
- *EPA. 1989. Interim Methods for Development of Inhalation References Doses. US Environmental Protection Agency, Office of Health and Environmental Assessment. Washington, DC. EPA 600/8-88-066F.
- *Fabre H, Hussam-Eddine N, Mandrou B. 1984. Stability-indicating assay for phenylbutazone: High-performance liquid-chromatographic determination of hydrazobenzene and azobenzene in degraded aqueous phenylbutazone solutions, J Pharm Sci 73:1706-1709.
- *Ferber KH. 1978. Benzidine and related biphenyldiamines. In: Encyclopedia of chemical technology, vol. 3, 3rd ed. New York, NY: McGraw-Hill Book Co., 772-777.
- *FSTRAC. 1988. Federal-State Toxicology and Regulatory Alliance Committee. Chemical Communication Subcommittee. March 1988.
- *Galloway SM, Armstrong MJ, Reuben C, et al. 1987. Chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells: Evaluations of 108 chemicals Env Mol Mutagen 10(Supp 10):1-35.
- *Genin VA, Medvedovskiy AG, Voronin VM. 1975. [Increased carcinogenic activity during joint effect of hydrobenzene (sic) and benzidine sulfate.] Gig Tr Prof Zabol 6:28-31. (Russian)
- Gold LS, Ward JM, Bernstein L, et al. 1986. Association between carcinogenic potency and tumor pathology in rodent carcinogenesis bioassays. Fund Appl Toxic01 6:677-690.
- Graffeo AP, Riggin RM. 1978. The application of electrochemical detection to the HPLC analysis of nonvolatile pollutants. In: Proceedings: 4th joint conference on Sensory Environmental Pollution, 637-639.

- Gurka DF, Umana M, Pellizzari ED, et al. 1985. The measurement of on-thefly Fourier transform infrared reference spectra of environmentally important compounds. Appl Spectrosc 39:297-303.
- *Hall LW Jr., Pinkney AE, Horseman LO, et al. 1985. Mortality of striped bass larvae in relation to contaminants and water quality in a Chesapeake Bay tributary. Trans Am Fish Sot 114:861-868.
- *Hansch C, Leo AJ. 1985. Medchem Project. Claremont CA: Pomona College. Issue No. 26.
- *Haworth S, Lawlor T, Mortelmas K, et al. 1983. <u>Salmonella</u> mutagenicity test rules for 250 chemicals. Environ Mutagen 5(Suppl. 1):21, 37-38, 102.
- Hess GG, McKenzie DE, Hughes BM. 1986. Selective preconcentration of polynuclear aromatic hydrocarbons and polychlorinated biphenyls by in situ metal hydroxide precipitation. J Chromatogr 366:197-204.
- *HSDB. 1988. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD. December 5, 1988.
- *Hughes DW. 1981. Malonic acid and derivatives. In: Kirk-Othmer encyclopedia of chemical technology, vol. 14, 3rd ed, New York, NY: Wiley-Interscience, 794, 803-810.
- Hurt K, Marhold J, Merhaut J. 1961. Occupational tumours of the urinary tract. Neoplasma 8:551-560.
- *IARC. 1972. IARC monographs on the evaluation of carcinogenic risk of chemicals to humans. Vol.1: Benzidine. World Health Organization, Lyon, France.
- *Kenaga EE. 1980. Predicted bioconcentration factors and soil sorption coefficients of pesticides and other chemicals. Ecotox Environ Safety 4:26-38.
- *Kornis G. 1982. Pyrazoles, pyrazolines, pyrazolones. In: Kirk-Othmer Encyclopedia of chemical technology, vol. 19, 3rd ed. McGraw-Hill Book Co., 448-451.
- *Kurlyandskiy BA, Medvedovskiy AG, Genin VA, et al. 1976. [Experimental study of the combined effect of some diphenyl amino derivatives for the purpose of preventing occupational bladder tumors.] Gig Tr Prof Zabol 5:34-38. (Russian)
- Lao RC, Thomas RS, Bastien P, et al. 1982. Analysis of organic priority and nonpriority pollutants in environmental samples by GC/MS/computer systems. Pergamon Ser Environ Sci 7:107-118.

- Levene CI. 1961. Structural requirements for lathyrogenic agents. J Exp Med 114:295-310.
- *Lurie AP. 1964. Benzidine and related diaminobiphenyls. In: Encyclopedia of chemical technology, vol. 3, 2nd ed. McGraw-Hill Book Co., 3:408, 413, 420.
- *Lyman WJ, Reel WF, Rosenblatt DH. 1982. Handbook of chemical property estimation methods environmental behavior of organic compounds. New York: McGraw-Hill Book Co., 4-9; 15-16
- *Mabey WR, Smith JH, Pod011 RT, et al. 1982. Aquatic fate process data for organic priority pollutants. U.S. Environmental Protection Agency, Washington, D.C. EPA-440/4-81-014.
- *Macholz R, Kujawa M, Schulze J, et al. 1985. The metabolism of some xenobiotics in germ-free and conventional rats. Arch Toxic01 8:373-376.
- Mansour M, Parlar H, Korte F. 1975. Ecological chemistry. CI. Reaction behavior of 3,4-dichloraniline and 3,4-dichlorophenol in solution as a solid and in gas phase during UV radiation. Chemosphere 4:235-240.
- Marhold J. 1951. [A case of tumour of the bladder following exposure to benzidine.] Pracovni Lekarstvi 31272-274. (Czech)
- Marhold J. 1953. [Second case of urinary bladder tumour following work with interproducts of dyes.] Procovni Lekarstvi 4:347. (Czech). (Summarized in Occupational Safety and Health Database, Dialog File 161, NIOSH Accession 00021815.)
- *Marhold J, Matrka M, Hub H, et al. 1968. The possible complicity of diphenyline in the origin of tumors in the manufacture of benzidine. Neoplasma 15:3-10.
- *Maronpot RR, Shimkin MB, Witschi HP, et al. 1986. Strain A mouse pulmonary tumor test results for chemicals previously tested in the National Cancer Institute carcinogenicity tests. J Natl Cancer Inst 76:1101-1112.
- Maronpot RR, Witschi HP, Smith LH, et al. 1983. Recent experience with the strain A mouse pulmonary tumor bioassay model. Environ Sci Res 27:341-349.
- *Matsui F, Lovering EG, Curran NM, et al. 1983. Determination of azobenzene and hydrazobenzene in phenylbutazone and sulfinpyrazone products by high-performance liquid chromatography. J Pharm Sci 72:1223-1224.
- *Melton RG, Coleman WE, Slater RW, et al. 1981. Comparison of Grob closedloop stripping analysis with other trace organic methods. Adv Identif Anal Org Pollut Water 2:597-673.

- Miller HC, James RH, Dickson WR, et al. 1981. Evaluation of methodology for the survey analysis of solid wastes. ASTM Spec Tech Publ 760:240-266.
- *NAS/NRC. 1989. Biologic markers in reproductive toxicology. National Academy of Sciences/National Research Council. Washington, DC: National Academy Press, 15-35.
- *NATICH. 1988. National Air Toxics Information Clearinghouse. Data base report on state, local and EPA air toxics activities. July, 1988. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC.
- *NCI. 1978. Bioassay of hydrazobenzene for possible carcinogenicity. NC1 Carcinogenesis Technical Report Series No. 92. Washington, DC: U.S. Department of Health, Education, and Welfare, National Cancer Institute. DHEW Publication No. (NIH) 78-1342.
- *Neely WB, Blau GE, eds. 1985. Environmental exposure from chemicals, vol. 1. Boca Raton, FL: CRC Press, Inc.
- *NIOSH. 1988. National Occupational Exposure Survey (NOES). Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.
- *NRC. 1981. Metabolism of aromatic amines. In: Aromatic amines: An assessment of the biological and environmental effects. National Research Council, Washington, DC. NTIS PB83-133058, 40-59.
- *Patterson JW, Kodukala PS. 1981. Biodegradation of hazardous organic pollutants. Chem Eng Prog 77:48-55.
- *Pfordte K. 1973. [Acute toxicity and methemoglobin-forming properties of some industrial noxae: Nitrobenzene and its reduction products.] Zeitschrift fuer die Gesamte Hygiene und Ihre Grenzgebiete 19:35-39. (German)
- Phai LD, Reuter G. 1976. [Secretion of organic compounds by microorganisms in presence of diphenyl amine.] Allg Mikrobiol 26:369-375. (German)
- *Pliss GB. 1974. [Carcinogenic properties of hydrazo-benzene.] Vopr Onkol 20:53-57. (Russian)
- Poctova M, Kakac B. 1981. [Determination of azobenzene and hydrazobenzene in ketazone (kebuzone) pharmaceutical preparations.] Cesk Farm 30:159-161. (Czech)

- *Reinhardt CF, Brittelli MR. 1981. Heterocyclic and miscellaneous nitrogen compounds. Hydrazine. In: Clayton GD, Clayton FE, ed. Patty's industrial hygiene and toxicology, vol. 2A, 3rd ed. New York, NY: John Wiley and Sons, NY, 2791-2822.
- *Riggin RM, Howard CC. 1979. Determination of benzidine, dichlorobenzidine, and diphenylhydrazine in aqueous media by high performance liquid chromatography. Anal Chem 51:210-214.
- *Riggin RM, Howard CC. 1982. Determination of benzidines in industrial and municipal wastewaters. U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, OH. EPA 600/S4-82-022.
- *Sadtler Index. n.d. UV spectrum 4611. Philadelphia, PA: Samuel P. Sadtler and Son, Inc.
- *Sandridge RL, Staley HB. 1978. Amines by reduction, In: Encyclopedia of chemical technology, vol. 2, 3rd ed. McGraw-Hill Book Co., 355-376.
- *SANSS . 1988. Structure and Nomenclature Search System. December 5, 1988
- *Schafer EW, Bowles WA. 1985. Acute oral toxicity and repellence of 933 chemicals to house and deer mice. Arch Environ Contam Toxic01 14:111-129.
- *Seiler JP. 1977. Inhibition of testicular DNA synthesis by chemical mutagens and carcinogens. Preliminary results in the validation of a novel short term test. Mutat Res 46:305-310.
- *Shabad IX, Genin VA. 1975. [Combined action of amino-substituted biphenyl causing bladder tumors.] Urol Nefrol 1:38-42. (Russian)
- *Spitz S, Maguigan WH, Dobriner K. 1950. The carcinogenic action of benzidine. Cancer 3:789-804.
- *Tabak HH, Quave SA, Mashni CI. 1981a. Biodegradability studies for predicting the environmental fate of organic priority pollutants. In: Symposium proceedings of 94th annual meeting Association of Official Analytical Chemistry: Test protocols for environmental fate and movement of toxicants, Washington, DC, 267-328.
- *Tabak HH, Quave SA, Mashni CI, et al. 1981b. Biodegradability studies with organic priority pollutant compounds. J Water Pollut Contr Fed 53:1503-1518.
- *Tang JIS, Yen TF, Kawahara FK. 1983. Separation and identification of the organic species in coal conversion process wastewater. In: Symposium: Chem Geochem Aspects Fossil Energy, 85-106.

- *USITC. 1979. United States International Trade Commission. Synthetic organic chemicals. U.S. production and sales, 1978. Washington, DC: U.S. Government Printing Office, 2.
- Vigliani EC, Barsotti M. 1962. Environmental tumors of the bladder in some Italian dye-stuff factories. Acta Unio Internat Contra Cancrum 18:669-675.
- *Weber EJ, Wolfe NL. 1986. Kinetic studies of aromatic azo compounds in anaerobic sediment/water systems [abstract]. In: 191st National meeting: American Chemical Society Division of Environmental Chemistry 26:239-40.
- *Weber EJ, Wolfe NL. 1987. Kinetic studies of the reduction of aromatic azo compounds in anaerobic sediment/water systems. Environ Toxic01 Chem 6:911-919.
- Weisburger EK. 1983. Species differences in response to aromatic amines. Basic Life Sci 27:23-47.
- Werner R. Uehleke H, Wohrlin R. 1976. Reduction of azobenzene to hydrazobenzene by liver fractions. Naunyn-Schmeidebergs Arch Pharmacol 293:54.
- *Williams RT. 1959. The metabolism of dyestuffs and other colouring matters. In: Detoxication mechanisms. The metabolism and detoxication of drugs, toxic substances and other organic compounds, 2nd ed. New York, NY: John Wiley and Sons, Inc., 472-488.
- *Yoon JS, Mason JM, Valencia R, et al. 1985. Chemical mutagenesis testing in Drosophila. IV. Results of 45 coded compounds tested for the National Toxicology Program. Environ Mutagen 7:349-367.
- Zeiger E. 1987. Carcinogenicity of mutagens: predictive capability of the $\underline{\text{Salmonella}}$ mutagenesis assay for rodent carcinogenicity. Cancer Res 47:1287-1296.