

9. REFERENCES

Aasted A, Darre E, Wulf HC. 1987. Mustard gas clinical toxicological and mutagenic aspects based on modern experience. *Ann Plast Surg* 19:330-333.

*Aasted A, Wulf HC, Darre E, et al. 1985. [Fishermen exposed to mustard gas. Clinical experience and evaluation of the cancer risk.] *Ugeskrift for Laeger* 147:221-2216. (Dutch)

Abe Y, Sugisaki K, Dannenberg AM. 1996. Rabbit vascular endothelial adhesion molecules: ELAM-1 is most elevated in acute inflammation, whereas VCAM-1 and ICAM-1 predominate in chronic inflammation. *J Leukoc Biol* 60:692-703.

Abramowicz M. 2002. Prevention and treatment of injury from chemical warfare agents. *The Medical Letter: On drugs and therapeutics* 44(1121):1-4.

*Adinolfi M. 1985. The development of the human blood-CSF-brain barrier. *Dev Med Child Neurol* 27:532-537.

*Adlercreutz H. 1995. Phytoestrogens: Epidemiology and a possible role in cancer protection. *Environ Health Perspect Suppl* 103(7):103-112.

*Agency for Toxic Substances and Disease Registry. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles: Notice. *Fed Regist* 54(174):37618-37634.

*Agency for Toxic Substances and Disease Registry. 1990. Biomarkers of organ damage or dysfunction for the renal, hepatobiliary, and immune systems. Subcommittee on Biomarkers of Organ Damage and Dysfunction.

*Alexander SF. 1947. Medical report of the Bari Harbor mustard casualties. *Military Surgeon* 101:1-17.

*Ali-Mattila E, Siivinen K, Kenttamaa H, et al. 1983. Mass spectrometric methods in structural analysis of some vesicants. *Int J Mass Spectrom Ion Phys* 47:371-374.

*Allon N, Gilat E, Amir A, et al. 1993. Sulfur mustard inhalation induced respiratory lesions in guinea pigs: Physiological, biochemical and histological study. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Volume 1.* Springfield, VA: US Department of Commerce, 133-139

*Altman PL, Dittmer DS. 1974. In: *Biological handbooks: Biology data book. Vol. III. 2nd ed.* Bethesda, MD: Federation of American Societies for Experimental Biology, 1987-2008, 2041.

Altus Biologics Inc. 2000. Stabilized crystalline OPAA-2 for additive in topical skin protectant. ADB261408.

*Amalric P, Bessou P, Farenc M. 1965. [Delayed relapsing mustard gas keratitis.] *Bull Soc Ophtal Franc* 65:101-106. (French)

*Cited in text

9. REFERENCES

Amir A, Chapman S, Gozes Y, et al. 1998. Protection by extracellular glutathione against sulfur mustard induced toxicity in vitro. *Hum Exp Toxicol* 17:652-660.

*Andersen ME, Krishnan K. 1994. Relating in vitro to in vivo exposures with physiologically based tissue dosimetry and tissue response models. In: Salem H, ed. *Animal test alternatives: Refinement, reduction, replacement*. New York: Marcel Dekker, Inc., 9-25.

*Andersen ME, Clewell HJ III, Gargas ML, et al. 1987. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. *Toxicol Appl Pharmacol* 87:185-205.

*Anderson JS. 1942. The effect of mustard gas vapour on eyes under Indian hot weather conditions. CDRE (India)- Report No. 241.

Anderson DR, Byers SL, Clark CR, et al. 1997. Biochemical alterations in rat lung lavage fluid following acute sulfur mustard inhalation. *Inhal Toxicol* 9:43-51.

Anderson DR, Yourick JJ, Moeller RB, et al. 1996. Pathologic changes in rat lungs following acute sulfur mustard inhalation. *Inhal Toxicol* 8:285-297.

Andrew DJ, Lindsay CD. 1998. Protection of human upper respiratory tract cell lines against sulphur mustard toxicity by hexamethylenetetramine (HMT). *Hum Exp Toxicol* 17:373-379.

Anft M. 1988. Burnt offerings: A generation of chemical weapons is scheduled to go up in smoke. *Environmental Action* 11-13.

*Angelov A, Belchev L, Angelov G. 1996a. Study of some toxic effects of sulfur mustard gas on broiler chickens. *Vet Archiv* 66:27-34.

Angelov A, Belchev L, Angelov G. 1996b. Experimental sulfur mustard gas poisoning and protective effect of different medicines in rats and rabbits. *Indian Vet J* 73:546-551.

*Anslow WP, Houck CR. 1946. Systemic pharmacology and pathology of sulfur and nitrogen mustards. In: *Chemical warfare agents and related chemical problems*. Part 4. Chapter 22. U.S. Office of Scientific Research and Development. Washington, DC: National Defense Research Committee, 440-478.

*Arroyo CM, Schafer RJ, Carmichael AJ. 2000. Reactivity of chloroethyl sulfides in the presence of a chlorinated prophylactic: a kinetic study by EPR/spin trapping and NMR techniques. *J Appl Toxicol* 20:S7-S12.

Arroyo CM, Schafer RJ, Kurt EM, et al. 1999. Response of normal human keratinocytes to sulfur mustard (HD): Cytokine release using a non-enzymatic detachment procedure. *Hum Exp Toxicol* 18:1-11.

*Ashby J, Tinwell H, Callander RD, et al. 1991. Genetic activity of the human carcinogen sulphur mustard towards salmonella and the mouse bone marrow. *Mutat Res* 257:307-311.

Atkinson R. 1987. A structure-activity relationship for the estimation of rate constants for the gas-phase reactions of OH radicals with organic compounds. *Int J Chem Kinet* 19:799-828.

9. REFERENCES

- *Auerbach C. 1947. The induction by mustard gas of chromosomal instabilities in *Drosophila melanogaster*. Proc R Soc Edinb 62B:307-320.
- Auerbach C, Robson JM. 1946. Tests of chemical substances for mutagenic action. 1946/1947 Proceedings of the Royal Society Edinburgh, Section B 62:284-291.
- Augerson WS, Sivak A, Marley WS. 1986. Chemical casualty treatment protocol development-treatment approaches. Vol II-IV. Cambridge, MA: Arthur D. Little, Inc.
- Axelrod DJ, Hamilton JG. 1947. Radio-autographic studies of the distribution of lewisite and mustard gas in skin and eye tissues. Am J Pathol 23:389-411.
- *Azizi F, Amini M, Arbab P. 1993. Time course of changes in free thyroid indices, rT3, TSH, and ACTH following exposure to sulfur mustard. Exp Clin Endocrinol 101:303-306.
- *Azizi F, Keshavarz A, Roshanzamir F, et al. 1995. Reproductive function in men following exposure to chemical warfare with sulphur mustard. Med War 11:34-44.
- Back KC, Thomas AA, MacEwen JD. 1972. Reclassification of material listed as transportation health hazards. Office of Hazardous Materials of the Assistant Secretary for Safety and Consumer Affairs, Department of Transportation. TSA-2072-3, PB214270.
- *Balali-Mood M. 1986. First report of delayed toxic effects of yperite poisoning in Iranian fighters. In: Heyndricks B, ed. Terrorism: Analysis and detection of explosives. Proceedings of the Second World Congress on new compounds in biological and chemical warfare. Gent: Rijksuniversiteit. 489-495.
- *Ball CR, Roberts JJ. 1971/72. Estimation of interstrand DNA cross-linking resulting from mustard gas alkylation of HeLa cells. Chem Biol Interact 4:297-303.
- *Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. Regul Toxicol Pharmacol 8:471-486.
- *Bartlett PD, Swain CG. 1949. Kinetics of hydrolysis and displacement reactions of β,β' -dichlorodiethyl sulfide (mustard gas) and of β -chloro- β' -hydroxydiethyl sulfide (mustard chlorohydrin). J Am Chem Soc 71:1406-1415.
- *Baskin SI, Prabhakaran V, Bowman JD, et al. 2000. *In vitro* effects of anionic sulfur compounds on the spectrophotometric properties of native DNA. J Appl Toxicol 20:S3-S5.
- Battista SP, McSweeney ES Jr. 1965. Approaches to a quantitative method for testing eye irritation. J Soc Cosmet Chem 16:119-131.
- *BEA. 2001. Chemical Weapons Convention requirements. Schedules of chemicals. U.S. Bureau of Export Administration. Code of Federal Regulations. 15 CFR 745.
<http://ecfr.access.gpo.gov/otcgo/cfr/otfilter.cgi?DB=...andI&QUERY=8180&RGN=BAPPCT&SUBSET=SUBSET&FROM=1&ITEM=1>. May 24, 2001.
- *Beck NV, Carrick WA, Cooper DB, et al. 2001. Extraction of thiodiglycol from soil using pressurized liquid extraction. J Chromat 907:221-227.

9. REFERENCES

- *Beebe GW. 1960. Lung cancer in World War I veterans: Possible relation to mustard gas injury and 1918 influenza epidemic. *J Natl Cancer Inst* 25:1231-1252.
- Belcher DW. 1977. Spray drying of war gas residue. CEP 101-104.
- *Benschop HP, van der Schans GP, Noort D, et al. 1997. Verification of exposure to sulfur mustard in two casualties of the Iran-Iraq Conflict. *J Anal Toxicol* 21:249-251.
- Berenblum I. 1931. The anti-carcinogenic action of dichlorodiethylsulphide (mustard gas). *J Pathol Bacteriol* 34:731-746.
- Berenblum I. 1935. Experimental inhibition of tumor induction by mustard gas and other compounds. *J Pathol Bacteriol* 40:549-558.
- *Berger GS. 1994. Epidemiology of endometriosis. In: Berger GS, ed. *Endometriosis: Advanced management and surgical techniques*. New York, NY: Springer-Verlag.
- *Bhat KR, Benton BJ, Rosenthal DS, et al. 2000. Role of poly (ADP-ribose) polymerase (PARP) in DNA repair in sulfur mustard-exposed normal human epidermal keratinocytes (NHEK). *J Appl Toxicol* 20:S13-S18.
- Bhattacharya R, Rao LPV, Pant SC, et al. 2001. Protective effects of amifostine and its analogues on sulfur mustard toxicity in vitro and in vivo. *Toxicol Appl Pharmacol* 176:24-33.
- *Bide RW, Sawyer TW, DiNinno VL, et al. 1993. Skin decontamination of G, V, H & L agents by Canadian reactive skin decontamination lotion. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993*. Vol. 1. Springfield, VA: US Department of Commerce, 379-387.
- *Black RM, Read RW. 1991. Methods for the analysis of thiodiglycol sulphoxide, a metabolite of sulphur mustard, in urine using gas chromatography-mass spectrometry. *J Chromatogr* 558:393-404.
- *Black RM, Read RW. 1995a. Biological fate of sulphur mustard, 1,1'-thiobis(2-chloroethane): Identification of β -lyase metabolites and hydrolysis products in human urine. *Xenobiotica* 25(2):167-173.
- *Black RM, Read RW. 1995b. Improved methodology for the detection and quantization of urinary metabolites of sulphur mustard using gas chromatography-tandem mass spectrometry. *J Chromatogr* 665:97-105.
- *Black RM, Read RW. 1997. Application of liquid chromatography-atmospheric pressure chemical ionization mass spectrometry, and tandem mass spectrometry, to the analysis and identification of degradation products of chemical warfare agents. *J Chromatogr* 759:79-92.
- *Black RM, Brewster K, Clarke RJ, et al. 1992a. Biological fate of sulphur mustard, 1,1'-thiobis(2-chloroethane): Isolation and identification of urinary metabolites following intra peritoneal administration to rat. *Xenobiotica* 22(4):405-418.
- Black RM, Brewster K, Clarke RJ, et al. 1993a. Metabolism of thiodiglycol (2,2'-thiobis-ethanol): Isolation and identification of urinary metabolites following intra peritoneal administration to rat. *Xenobiotica* 23(5):473-481.

9. REFERENCES

- *Black RM, Clarke RJ, Cooper DB, et al. 1993b. Application of head space analysis, solvent extraction, thermal desorption and gas chromatography-mass spectrometry to the analysis of chemical warfare samples containing sulphur mustard and related compounds. *J Chromatogr* 637:71-81.
- *Black RM, Clarke RJ, Harrison JM, et al. 1997a. Biological fate of sulphur mustard: Identification of valine and histidine adducts in hemoglobin from casualties of sulphur mustard poisoning. *Xenobiotica* 27(5):499-512.
- *Black RM, Clarke RJ, Read RW. 1991. Analysis of 1,1'-sulphonylbis[2-(methylsulphinyl)ethane] and 1-methylsulphinyl-2-[2-(methylthio)ethylsulphonyl]ethane, metabolites of sulphur mustard, in urine using gas chromatography-mass spectrometry. *J Chromatogr* 558:405-414.
- *Black RM, Clarke RJ, Read RW, et al. 1994. Application of gas chromatography-mass spectrometry and gas chromatography-tandem mass spectrometry to the analysis of chemical warfare samples, found to contain residues of the nerve agent sarin, sulphur mustard and their degradation products. *J Chromatogr* 662:301-321.
- *Black RM, Hambrook JL, Howells DJ, et al. 1992b. Biological fate of sulfur mustard, 1,1'-thiobis(2-chloroethane). Urinary excretion profiles of hydrolysis products and β -lyase metabolites of sulfur mustard after cutaneous application in rats. *J Anal Toxicol* 16:79-84.
- *Black RM, Harrison JM, Read RW. 1997b. Biological fate of sulphur mustard: *In vitro* alkylation of human hemoglobin by sulphur mustard. *Xenobiotica* 27(1):11-32.
- Blair A, Kazerouni N. 1997. Reactive chemicals and cancer. *Cancer Causes Control* 8:473-490.
- *Blank JA, Lane LA, Olson CT. 1996. Protein alterations in weanling pig skin following percutaneous sulfur mustard exposure. Medical Research and Evaluation Facility. Columbus, OH.
- *BNA. 2001. Environment and Safety Library on the Web States and Territories. Washington, D.C. Bureau of National Affairs, Inc. <http://www.esweb.bna.com/>. February 23, 2001.
- Bodell WJ, Gerosa M, Aida T, et al. 1985. Investigation of resistance to DNA cross-linking agents in 9L cell lines. *Cancer Res* 45:3460.
- Bongiovanni R, Millard CB, Schultz SM, et al. 1993. Estimation of neutrophil infiltration into hairless guinea pig skin treated with 2,2'-dichlorodiethyl sulfide. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, VA: US Department of Commerce, 389-395.
- *Borak J, Sidell F. 1992. Agents of chemical warfare: Sulfur mustard. *Anal Emerg Med* 21:303-308.
- Borges HT, Faust RA, Watson AP, et al. 1996. Preliminary data analysis and derivation of an estimated reference dose (RfD) for sulfur mustard (HD). *Toxicologist* 30(1 part 2):149.
- Boronin AM, Ermakova IT, Sakharovsky VG, et al. 2000. Ecologically safe destruction of the detoxification products of mustard-lewisite mixtures from the Russian chemical stockpile. *J Chem Technol Biotechnol* 15:82-88.

9. REFERENCES

- *Borrett VT, Matthews RJ, Colton R, et al. 1996. Verification of the United Nations Chemical Weapons Convention: the application of electrospray mass spectrometry. *Rapid Commun Mass Spectrom* 10:1114-1118.
- Bossle PC, Ellzy MW, Martin JJ. 1992. Detection of thiodiglycol and its sulfoxide and sulfone analogues in environmental waters by high performance liquid chromatography. In: Abstracts of papers, part 1, 203rd ACS national meeting, 0-8412-2210-X. San Francisco, CA: American Chemical Society.
- Boublik T, Fried V, Hala E. 1984. The vapor pressures of the temperature dependence of the vapor pressures of some pure substances in the normal and low pressure region. 2nd ed. Amsterdam, Oxford, New York, Tokyo: Elsevier.
- *Bournell JC, Cohen JA, Dixon M, et al. 1946. Studies on mustard gas ($\beta\beta'$ -dichlorodiethyl sulphide) and some related compounds. 5. The fate of injected mustard gas (containing radioactive sulphur) in the animal body. *Biochem J* 40:757-764.
- *Bowden E. 1943. Median detectable concentrations by odor of plant run mustard, plant run lewisite and pilot plant ethyl nitrogen mustard. TDMR 615. Chemical Warfare Service.
- *Brankowitz WR. 1987. Chemical weapons movement. History compilation. Aberdeen Proving Ground, MD: Office of the Program Manager for chemical munitions (demilitarization and binary), ADA193348.
- Brimfield AA. 1995. Possible protein phosphatase inhibition by bis(hydroxyethyl)sulfide, a hydrolysis product of mustard gas. *Toxicol Lett* 78:43-48.
- Brown RFR, Rice P. 1997. Histopathological changes in Yucatan minipig skin following challenge with sulphur mustard. A sequential study of the first 24 hours following challenge. *Int J Exp Pathol* 78:9-20.
- *Budavari S, O'Neil MJ, Smith A, et al., eds. 1996. The Merck index. An encyclopedia of chemicals, drugs and biologicals. 12th ed. Whitehouse Station, NJ: Merck & Co. Inc., 1082.
- *Budiansky S. 1984. Chemical weapons: "United Nations accuses Iraq of military use." *Nature* 308:483.
- Bullman T, Kang H. 1994. The effects of mustard gas, ionizing radiation, herbicides, trauma, and oil smoke on U.S. military personnel: The results of veteran studies. *Annu Rev Public Health* 15:69-90.
- *Bullman T, Kang H. 2000. A fifty year mortality follow-up study of veterans exposed to low level chemical warfare agent, mustard gas. *Ann Endocrinol (Paris)* 10(5):333-338.
- *Burrows EP. 1998. Analysis of chemical warfare agents and their transformation products. Govt Reports Announcements & Index (GRA&I), Issue 05.
- Byrne MP, Broomfield CA, Stites WE. 1996. Mustard gas cross linking of proteins through preferential alkylation of cysteines. *J Protein Chem* 15(2):131-136.
- Calabrese EJ, Baldwin LA, Leonard DA, et al. 1995. Decrease in hepatotoxicity by lead exposure is not explained by its mitogenic response. *J Appl Toxicol* 15(2):129-132.

9. REFERENCES

- *Calvet JH, Coste A, Levame M, et al. 1996. Airway epithelial damage induced by sulfur mustard in guinea pigs, effects of glucocorticoid. *Hum Exp Toxicol* 15:964-971.
- Calvet JH, D'Ortho MP, Jarreau PH, et al. 1994a. Glucocorticoid inhibit sulfur mustard-induced airway muscle hyperresponsiveness to substance P. *J Appl Physiol* 77(5):2325-2332.
- Calvet JH, Gascard JP, Delamanche S, et al. 1999a. Airway epithelial damage and release of inflammatory mediators in human lung parenchyma after sulfur mustard exposure. *Hum Exp Toxicol* 18:77-81.
- Calvet JH, Jarreau PH, Levame M, et al. 1994b. Acute and chronic respiratory effects of sulfur mustard intoxication in guinea pig. *J Appl Toxicol* 76(2):681-688.
- Calvet JH, Planus E, Rouet P, et al. 1999b. Matrix metalloproteinase gelatinases in sulfur mustard-induced acute airway injury in guinea pigs. *Am J Physiol* 276:L754-L762.
- *Calvet JH, Trouiller G, Harf A. 1993. Acute and chronic respiratory lesions induced by sulfur mustard in guinea pigs: Role of Tachykinins. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1.* Springfield, VA: US Department of Commerce, 123-132.
- *Cameron GR, Gaddum JH, Short RHD. 1946. The absorption of war gasses by the nose. *J Pathol Bacteriol* 58:449-455.
- *Capizzi RL, Papirmeister B, Mullins JM, et al. 1974. The detection of chemical mutagens using the L5178Y/Asn-murine leukemia *in vitro* and in a host-mediated assay. *Cancer Res* 34:3073-3082.
- Capizzi RL, Smith WJ, Field R, et al. 1973. A host-mediated assay for chemical mutagens using L5178Y/Asn murine leukemia. *Mutat Res* 21:6.
- Carrick WA, Cooper DB, Muir B. 2001. Retrospective identification of chemical warfare agents by high-temperature automatic thermal desorption-gas chromatography-mass spectrometry. *J Chromatogr A* 925:241-249.
- Carter CA, Yvette H, Ludlum DB. 1988. Release of 7-alkylguanines from haloethylnitrosourea-treated DNA by *E. coli* 3-methyladenine-DNA Glycosylase II. *Biochem Biophys Res Comm* 155:1261-1265.
- *Case RA, M, Lea AJ. 1955. Mustard gas poisoning, chronic bronchitis, and lung cancer: An investigation into the possibility that poisoning by mustard gas in the 1914-18 war might be a factor in the production of neoplasia. *Br J Prev Soc Med* 9:62-72.
- *Casillas RP, Smith KJ, Castrejon LR, et al. 1996. Effect of topically applied drugs against HD-induced cutaneous injury in the mouse ear edema model. *Med Def Biosci Rev.* 2:801-809.
- *Casselmann AA, Gibson NCC, Bannard RAB. 1973. A rapid, sensitive, gas-liquid chromatographic method for the analysis of bis(2-chloroethyl) sulfide collected from air in hydrocarbon solvents. *J Chromatogr* 78:317-322.
- Chakrabarti AK, Ray P, Broomfield CA, et al. 1998. Purification and characterization of protease activated by sulfur mustard in normal human epidermal keratinocytes. *Biochem Pharmacol* 56:467-472.

9. REFERENCES

- *Chauhan RS, Murty LVR. 1997. Effect of topically applied sulphur mustard on guinea pig liver. *J Appl Toxicol* 17:415-419.
- *Chauhan RS, Murthy LVR, Arora U, et al. 1996. Structural changes induced by sulphur mustard in rabbit skin. *J Appl Toxicol* 16:491-495.
- *Chauhan RS, Murthy LVR, Malhotra RC. 1993a. Effect of sulphur mustard on mouse skin-an electron microscopic evaluation. *Bull Environ Contam Toxicol* 51:374-380.
- *Chauhan RS, Murthy LVR, Pandey M. 1993b. Histomorphometric study of animal skin exposed to sulphur mustard. *Bull Environ Contam Toxicol* 51:138-145.
- *Chauhan RS, Murthy LVR, Pant SC. 1995. Electron microscopic study of guinea pig skin exposed to sulphur mustard. *Bull Environ Contam Toxicol* 55:50-57.
- CHEMFATE. 2001. Di-2-chloroethyl sulfide. Syracuse Research Corp. <http://esc.syrres.com/efdb/Chemfate.htm>. May 29, 2001.
- Cheng TC, Kolakowski JE, Harvey SP. 1993. Bioprocessing of industrial and agricultural waste 1: Advances in the biodegradation of chemical warfare agents and related materials. *J Cell Biochem Suppl* 21A:41.
- *Chilcott RP, Jenner J, Carrick W, et al. 2000. Human skin absorption of bis-2-(chloroethyl)sulphide (sulphur mustard) in vitro. *J Appl Toxicol* 20:349-355.
- *Chilcott RP, Jenner J, Hotchkiss SAM, et al. 2001. In vitro skin absorption and decontamination of sulphur mustard: comparison of human and pig-ear skin. *J Appl Toxicol* 21:279-283.
- *Clark DN. 1989. Review of reactions of chemical agents in water. Final report. Fort Detrick, Frederick, Maryland: U.S. Army Medical Research and Development Command. 88PP8847, 39-43.
- *Clark E, Smith WJ. 1993. Activation of poly (ADP-RIBOSE) polymerase by sulfur mustard in hela cell cultures. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, VA: US Department of Commerce 199-205.
- Clark CR, Smith JR, Shih ML. 1999. Development of an *in vitro* screening method for evaluating decontamination of sulfur mustard by reactive dermal formulations. *J Appl Toxicol* 19:S77-S81.
- Clemenson CJ, Kristoffersson H, Sorbo B, et al. 1963. Whole body autoradiographic studies of the distribution of sulphur 35-labelled mustard gas in mice. *Acta Radiol Ther Phys Biol* 1:314-320.
- *Clewell HJ III, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- Code of Maryland Regulations (COMAR). 1990. State of Maryland 26.11.15. Toxic Air Pollutants. The Bureau of National Affairs, Inc., Washington, D.C.
- Cohen B. 1946. Kinetic reactions of sulfur and nitrogen mustards. In: Chemical warfare agents and related problems parts III-IV. Summary technical report of Division 9, NRDC. Washington, DC: Office of Scientific Research and Development. PB158508, 415-424.

9. REFERENCES

- Cohen AM, Prabhaker H. 1983. Carcinogen induced DNA damage in isolated rat liver nuclei. *Cancer Lett* 18:163-167.
- *Cohn JP. 1999. A make over for rocky mountain arsenal. *Bioscience* 49(4):273-277.
- *Colburn EF. 1978. Monitoring the disposal of hazardous materials. 4th ed. Joint Conference on Sensing of Environmental Pollutants, New Orleans, LA, 1977. Washington, DC: American Chemical Society, 489-492.
- *Colborn T, Clement C. 1992. Chemically induced alterations in sexual and functional development. The Wildlife/Human Connection. In: *Advances in modern environmental toxicology*. Volume XXI. Princeton, NJ: Princeton Scientific Publishing Co.
- Corsini E, Galli CL. 1998. Cytokines and irritant contact dermatitis. *Toxicol Lett* 102-103:277-282.
- *Coutelier JP, Lison D, Simon O, et al. 1991. Effect of sulfur mustard on murine lymphocytes. *Toxicol Lett* 58:143-148.
- *Cowan FM, Anderson DR, Broomfield CA, et al. 1997. Biochemical alterations in rat lung lavage fluid following acute sulfur mustard inhalation: II. Increases in proteolytic activity. *Inhal Toxicol* 9:53-61.
- *Cowan FM, Yourick JJ, Hurst CG, et al. 1993. Sulfur mustard-increased proteolysis following in vitro and in vivo exposures. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993*. Vol. 1. Springfield, MA: US Department of Commerce, 49-55.
- Crathorn AR, Roberts JJ. 1965. Reactions of cultured mammalian cells of varying radiosensitivity with the radiomimetic alkylating agent, mustard gas. *Prog Biochem Pharmacol* 1:320-326.
- Crathorn AR, Roberts JJ. 1966. Mechanism of the cytotoxic action of alkylating agents in mammalian cells and evidence for the removal of alkylated groups from deoxyribonucleic acid. *Nature* 211:150-153.
- Creasy WR, Brickhouse MD, Morrissey KM, et al. 1999. Analysis of chemical weapons decontamination waste from old ton containers from Johnston Atoll using multiple analytical methods. *Environ Sci Technol* 33:2157-2162.
- Creasy WR, Stuff JR, Williams B, et al. 1997. Identification of chemical-weapons-related compounds in decontamination solutions and other matrices by multiple chromatographic techniques. *J Chromatogr* 774:253-263.
- *Cullumbine H. 1946. The mode of penetration of the skin by mustard gas. *Br J Dermatol* 58:291-294.
- *Cullumbine H. 1947. Medical aspects of mustard gas poisoning. *Nature* 4031:151-153.
- Culp SJ, Gaylor DW, Sheldon WG, et al. 1998. A comparison of the tumors induced by coal tar and benzo[a]pyrene in a 2-year bioassay. *Carcinogenesis* 19(1):117-124.
- *Currie DJ, Weaver RS, Cameron BG. 1977. Disposal of WW II mustard gas hydrolysate by burning. *Proc Annu Meet Air Pollut Control Assoc* 70:1-11.

9. REFERENCES

- *CWC. 1993. Chemical Weapons Convention Treaty. http://www.cwc.gov/treaty/cwcIndex_html. August 22, 2003.
- *Dabney BJ. 1991. Mustard gas MEDITEXT medical management. In: Hall AH, Rumack BH, eds. TOMES Plus Information System, Micromedex, Inc., Denver, CO.
- Dabrowska MI, Becks LL, Lelli JL, et al. 1996. Sulfur mustard induces apoptosis and necrosis in endothelial cells. *Toxicol Appl Pharmacol* 141:568-583.
- Dachir S, Fishbeine E, Meshulam Y, et al. 2002. Potential anti-inflammatory treatments against cutaneous sulfur mustard injury using the mouse ear vesicant model. *Hum Exp Toxicol* 21:197-203.
- *Dacre JC. 1994. Hazard evaluation of army compounds in the environment. *Drug Metab Rev* 26:649-662.
- *Dacre JC, Goldman M. 1996. Toxicology and pharmacology of the chemical warfare agent sulfur mustard. *Pharmacol Rev* 48(2):289-326.
- *Dacre JC, Beers R, Goldman M, et al. 1995. Toxicology and pharmacology of the chemical warfare agent sulfur mustard - A review. *Govt Reports Announcements & Index*. No. 23. ADA294927.
- *D'Agostino PA, Provost LR. 1988a. Capillary column isobutane chemical ionization mass spectrometry of mustard and related compounds. *Biomed Environ Mass Spectrom* 15:553-564.
- *D'Agostino PA, Provost LR. 1988b. Gas chromatographic retention indices of sulfur vesicants and related compounds. *J Chromatogr* 436:399-411.
- *D'Agostino PA, Provost LR. 1992. Determination of chemical warfare agents, their hydrolysis products and related compounds in soil. *J Chromatogr* 589:287-294.
- *D'Agostino PA, Provost LR, Hansen AS, et al. 1989. Identification of mustard related compounds in aqueous samples by gas chromatography/mass spectrometry. *Biomed Environ Mass Spectrom* 18:484-491.
- *Dahl H, Gluud B, Vangsted P, et al. 1985. Eye lesions induced by mustard gas. *Acta Ophthalmol [Suppl]* (Copenh) 173:30-31.
- Dangi RS, Jeevaratnam K, Sugendran K, et al. 1994. Solid-phase extraction and reversed-phase high-performance liquid chromatographic determination of sulphur mustard in blood. *J Chromatogr* 661:341-345.
- *Dannenberg AM, Tsuruta J. 1993. Role of cytokines and reactive oxygen intermediates in the inflammatory response produced by sulfur mustard. A progress report. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, VA: US Department of Commerce, 58-65.
- Dannenberg AM Jr, Pula PJ, Liu LH, et al. 1985. Inflammatory mediators and modulators released in organ culture from rabbit skin lesions produced *in vivo* by sulfur mustard: I. Quantitative histopathology, polymorphonuclear leukocyte, basophil, and mononuclear cell survival, and unbound (serum) protein content. *Am J Pathol* 121:15-27.

9. REFERENCES

- Davis KG, Aspera G. 2001. Exposure to liquid sulfur mustard. *Ann Emerg Med* 37(6):653-656.
- *Davison C, Rozman RS, Smith PK. 1961. Metabolism of bis-B-chloroethyl sulfide. *Biochem Pharmacol* 7:65-74.
- Demek MM, Davis GT, Dennis WH Jr, et al. 1970. Behavior of chemical agents in seawater. Edgewood Arsenal, MD: Department of the Army Edgewood Arsenal. AD873242.
- *Detheux M, Jijakli H, Lison D. 1997. Effect of sulphur mustard on the expression of urokinase in cultured 3T3 fibroblasts. *Arch Toxicol* 71:243-249.
- De Young LM, Mufson RA, Boutwell RK. 1977. An apparent inactivation of initiated cells by the potent inhibitor of two-stage mouse skin tumorigenesis, bis(2-chloroethyl)sulfide. *Cancer Res* 37:4590-4594.
- *D'Halluin F, Roels H. 1984. Autopsy observations in an Iranian soldier exposed to war gases. *Arch Belges (Suppl)*:284-290.
- *DHHS. 1988. Final recommendations for protecting the health and safety against potential adverse effects of long-term exposure to low doses of agents: GA, GB, VX, mustard agent (H, HD, T), and lewisite (L). *Fed Regist* 53(50):8504-8507.
- DOA. 1985. Protection against the acute and delayed toxicity of mustards and mustard-like compounds: Annual report. Frederick, MD: U.S. Army Medical Research and Development Command, Department of the Army. AD-A182 468.
- *DOA. 1987. Teratology studies of lewisite and sulfur mustard agents: Effects of sulfur mustard in rats and rabbits: Final Report: Frederick, MD: U.S. Army Medical Research and Development Command, Department of the Army. AD-A187 495.
- *DOA. 1988. Chemical stockpile disposal program: Final programmatic environmental impact statement. Aberdeen Proving Ground, MD: Department of the Army V-IX, 1-6.
- DOA. 1989. Toxicology studies on lewisite and sulfur mustard agents: Subchronic toxicity study on lewisite in rats: Final report. Frederick, MD: U.S. Army Medical Research and Development Command, Department of the Army. ADA217886.
- DOA. 1994a. Environmental chemistry and fate of chemical warfare agents: Draft: Final report. San Antonio, TX: Corps of Engineers. Huntsville Division. Department of the Army. SwRI Project 01-5864.
- DOA. 1994b. Mechanism of cutaneous vesication. Frederick, MD: U.S. Army Medical Research, Development, Acquisition and Logistics Command, Department of the Army. ADA283085.
- DOA. 1995. Host factors contributing to disability following sulfur mustard exposure. Frederick, MD: U.S. Army Medical Research and Material Command, Department of the Army. ADA294497.
- *DOA. 1996. Health risk assessment for sulfur mustard (HD): draft report. Oak Ridge, TN: U.S. Army Environmental Center, Department of the Army. 1769-1769-A1.

9. REFERENCES

- DOA. 1998. Characterization and modulation of proteins involved in sulfur mustard vesication. Frederick, MD: U.S. Army Medical Research and Material Command, Department of the Army. ADA366 664.
- *DOA. 2000. Anniston chemical agent disposal facility. Department of the Army. <http://www.pmcda.apgea.army.mil/CSDP/IP/FS/QF/ANCA/index.asp>. March 8, 2001.
- *DOA. 2003. News release. Mustard leak detected at Deseret Chemical Depot. U.S. Department of the Army. <http://www.pmcda.army.mil/>. August 27, 2003.
- *DOD. 2003. Blue Grass Army Depot, Kentucky. Chemical weapons disposal in Kentucky. U.S. Department of Defense. http://www.pmacwa.army.mil/ky/cw_disposal_Ky.htm. August 27, 2003.
- *Doebler JA. 2002. Blockade of sulfur mustard cytotoxicity *in vitro*. U.S. Army Medical Research Institute of Chemical Defense, Neurotoxicology Branch, Pharmacology Division. Aberdeen Proving Ground, MD.
- *DOS. 2001. International traffic in arms. United States munitions list. Chemical agents. U.S. Department of State. Code of Federal Regulations. 22 CFR 121.7. <http://ecfr.access.gpo.gov/otcqi/cfr/otfilter.cgi...TI&QUERY=1682&RGN=BSECCT&SUBSET=SUBSET&FROM=1&ITEM=1>. May 24, 2001.
- *DOT. 2001. Hazardous materials table. U.S. Department of Transportation. Code of Federal Regulations. 49 CFR 172.101. <http://ecfr.access.gpo.gov/otcqi/cfr/otfilter.cgi?DB=...I&QUERY=971312&RGN=BSECCT&SUBSET=SUBSET&FROM=1&ITEM=1>. May 24, 2001.
- Dowlati A, Pierard GE. 1993. Epidermal hyperplasia with or without atypia in patients exposed to mustard gas. *Arch Dermatol* 129:245.
- *Drasch G, Kretschmer E, Pahrn M, et al. 1987. Concentrations of mustard gas bis-2-chloroethylsulfide in the tissue of a victim of a vesicant exposure. *J Forensic Sci* 32:1788-1793.
- *Dreisbach RH, Robertson WO. 1987. Handbook of poisoning: Prevention, diagnosis and treatment. 12th ed. Norwalk, CT: Appleton and Lange.
- *DTIC. 2002. DTIC research summaries. Defense Technical Information Center. Ft. Belvoir, VA. October 22, 2002.
- Dube SN, Husain K, Sugendran K, et al. 1998. Dose response of sulphur mustard: Behavioral and toxic signs in rats. *Indian J Physiol Pharmacol* 42(3):389-394.
- Dumez H, Guetens G, De Boeck G, et al. 2001. Quantitation of suspensions (MESED). Application of MESED-GC/MS in the quantitation of ifosfamide mustard in erythrocytes, plasma, and plasma water. *J Sep Sci* 24(2):123-128.
- *Easton DF, Peto J, Doll R. 1988. Cancers of the respiratory tract in mustard gas workers. *Br J Ind Med* 45:652-659.
- Ebtekar M, Hassan ZM. 1993. Effect of immunomodulators pyrimethamine and cimetidine on immunosuppression induced by sulfur mustard in mice. *Immunopharmacology* 15(4):533-541.

9. REFERENCES

- *Eisenmenger W, Drasch G, von Clarmann M, et al. 1991. Clinical and morphological findings on mustard gas [bis(2-chloroethyl)sulfide] poisoning. *J Forensic Sci* 36(6):1688-1698.
- *Eldad A, Meir PB, Breiterman S, et al. 1998a. Superoxide dismutase (SOD) for mustard gas burns. *Burns* 24:114-119.
- *Eldad A, Weinberg A, Breiterman S, et al. 1998b. Early nonsurgical removal of chemically injured tissue enhances wound healing in partial thickness burns. *Burns* 24:166-172.
- *Ellenhorn MJ, Barceloux DG. 1988. *Medical toxicology*. New York, NY: Elsevier Science Publishing Company.
- *Emad A, Rezaian GR. 1997. The diversity of the effects of sulfur mustard gas inhalation on respiratory system 10 years after a single, heavy exposure. *Chest* 112(3):734-738.
- Emad A, Rezaian GR. 1999a. Characteristics of broncho alveolar lavage fluid in patients with sulfur mustard gas-induced asthma or chronic bronchitis. *Am J Med* 106:625-628.
- Emad A, Rezaian GR. 1999b. Immunoglobulins and cellular constituents of the BAL fluid of patients with sulfur mustard gas-induced pulmonary fibrosis. *Chest* 115:1346-1351.
- Emison ES, Smith WJ. 1997. Cytometric analysis of DNA damage in cultured human epithelial cells after exposure to sulfur mustard. *J Am Coll Toxicol* 15:S9-S18.
- English F, Brisbane WT, Bennett Y. 1990. The challenge of mustard-gas keratopathy. *Med J Aust* 152:55-56.
- EPA. 1987a. US Environmental Protection Agency. Code of Federal Regulations. 40 CFR 355, Appendix A.
- EPA. 1987b. US Environmental Protection Agency. *Fed Regist* 52:21152.
- EPA. 1987c. Recommendations for and documentation of biological values for use in risk assessment. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Research and Development, Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. EPA ECAO-CIN-554.
- EPA. 1988. US Environmental Protection Agency. Code of Federal Regulations. 40 CFR 261, Appendix VIII.
- EPA. 1989. Interim methods for development of inhalation reference doses. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA888066F.
- *EPA. 1990. Interim methods for development of inhalation reference concentrations. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development, Environmental Criteria and Assessment Office. EPA600890066A.
- EPA. 1991. Upper-bound quantitative cancer risk estimate for populations adjacent to sulfur mustard incineration facilities. Washington, DC: Human Health Assessment Group, Office of Health and

9. REFERENCES

- Environmental Assessment, Office of Research and Development. U.S. Environmental Protection Agency. EPA600891053.
- EPA. 1994. Methods for derivation of inhalation reference concentrations and application of inhalation dosimetry. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development, Environmental Criteria and Assessment Office. EPA600890066F.
- *EPA. 1997. Special report on environmental endocrine disruption: An effects assessment and analysis. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA630R96012.
- *EPA. 2001a. Health and environmental protection standards. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 192. http://esweb.bna.com/cgi-bin/om_isa...tID=109873&softpage=es_menu_federal. February 22, 2001.
- *EPA. 2001b. Identification and listing of hazardous waste. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 261. http://esweb.bna.com/cgi-bin/om_isa...tID=109873&softpage=es_menu_federal. February 22, 2001.
- *EPA. 2001c. Reportable quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 355. http://esweb.bna.com/cgi-bin/om_isa...tID=109873&softpage=es_menu_federal. February 22, 2001.
- *EPA. 2001d. Toxic chemical release reporting community right-to-know. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 372.65. http://esweb.bna.com/cgi-bin/om_isa...tID=109873&softpage=es_menu_federal. February 22, 2001.
- *Epstein J, Rosenblatt DH, Gallacio A, et al. 1973. Summary report on a data base for predicting consequences of chemical disposal operation. ADB955399.
- Epstein SS, Arnold E, Andrea J, et al. 1972. Detection of chemical mutagens: Dominant lethal assay in the mouse. *Toxicol Appl Pharmacol* 23:288-325.
- *Fahmy OG, Fahmy MJ. 1971. Mutability at specific euchromatic and heterochromatic loci with alkylating and nitroso compounds in *Drosophila melanogaster*. *Mutat Res* 13:19-34.
- *Fahmy OG, Fahmy MJ. 1972. Mutagenic selectivity for the RNA-forming genes in relation to the carcinogenicity of alkylating agents and polycyclic aromatics. *Cancer Res* 32:550-557.
- *Fan L, Bernstein IA. 1991. Effect of bis(β -chloroethyl)sulfide (BCES) on base mismatch repair of DNA in monkey kidney cells. *Toxicol Appl Pharmacol* 111:233-241.
- *FEDRIP. 2002. Federal Research In Progress Database. National Technical Information Service, Springfield, VA.
- Ferguson LR, Turner PM. 1988. Mitotic crossing-over by anti-cancer drugs in *Saccharomyces cerevisiae* strain D5. *Mutat Res* 204:239-250.
- *Fidder A, Moes GWH, Scheffer AG, et al. 1994. Synthesis, characterization, and quantization of the major adducts formed between sulfur mustard and DNA of calf thymus and human blood. *Chem Res Toxicol* 7:199-204.

9. REFERENCES

- *Fidder A, Noort D, de Jong AL, et al. 1996a. Monitoring of *in vitro* and *in vivo* exposure to sulfur mustard by GC/MS determination of the N-terminal valine adduct in hemoglobin after a modified edman degradation. *Chem Res Toxicol* 9:788-792.
- *Fidder A, Noort D, de Jong LPA, et al. 1996b. N7-(2-hydroxyethylthioethyl)-guanine: A novel urinary metabolite following exposure to sulphur mustard. *Arch Toxicol* 70:854-855.
- Firooz A, Komeile A, Dowlati Y. 1999. Eruptive melanocytic nevi and cherry angiomas secondary to exposure to sulfur mustard gas. *J Am Acad Dermatol* 40(4):646-647.
- *Fisher TL, Jaskot M, Sass S. 1969. Trace estimation and differentiation of some mustards employing gas-liquid chromatography. Edgewood Arsenal technical report. Edgewood Arsenal, Maryland: Department of the Army, Edgewood Arsenal, Research Laboratories, Chemical Research Laboratory. EATR 4321.
- *Fomon SJ. 1966. Body composition of the infant: Part I: The male "reference infant." In: Falkner F, ed. *Human development*. Philadelphia, PA: WB Saunders, 239-246.
- *Fomon SJ, Haschke F, Ziegler EE, et al. 1982. Body composition of reference children from birth to age 10 years. *Am J Clin Nutr* 35:1169-1175.
- Foussereau J, Benezra C, Maibach HI, et al. 1982. Occupational contact dermatitis, clinical and chemical aspects. Philadelphia, PA: W.B. Saunders Company, 171-176.
- *Fowler WK, Smith JE. 1990. Solid sorbent collection and gas chromatographic determination of bis(2-chloroethyl)sulfide in air at trace concentrations. *J Chromatogr Sci* 28:118-122.
- Fox M, Scott D. 1980. The genetic toxicology of nitrogen and sulfur mustard. *Mutat Res* 75:131-168.
- Frank AL. 1982. The epidemiology and etiology of lung cancer. *Clin Chest Med* 3:219-228.
- Frank AL. 1987. Occupational cancers of the respiratory system. *Seminars in Occupational Medicine* 2:257-266.
- *Franke S. 1967. [Textbook of military chemistry.] Vol. I, 2nd ed. Berlin, West Germany: Military Publisher of the German Democratic Republic. (German-English translation by the U.S. Army Medical Intelligence and Information Agency), 114-122, 132-133, 168-178.
- *Freitag L, Firusian N, Stamatis G, et al. 1991. The role of bronchoscopy in pulmonary complications due to mustard gas inhalation. *Chest* 100:1436-1441.
- *Friedberg K, Mengel K, Schlick E. 1983. The action of azimexone on the cells of the hemopoietic system in mice, especially after the damage with x-rays. *Radiation and Environ Biophys* 22:117-131.
- Friedenwald JS, Buschke W. 1948. Nuclear fragmentation produced by mustard and nitrogen mustards in the corneal epithelium. *Bull Johns Hopkins Hosp* 82:161-177.
- Friedenwald JS, Scholz RO, Snell Jr A, et al. 1948. Primary reaction of mustard with the corneal epithelium. *Bull Johns Hopkins Hosp* 82:102-120.

9. REFERENCES

- Fritsche U, Koenig A. 1982. [Luminometric determination of S-lost with sodium hypobromite.] *Mikrochim Acta* 1:349. (German)
- *Gates M, Moore S. 1946. Mustard gas and other sulfur mustards. In: *Chemical warfare agents, and related chemical problems, Parts I-II. Summary technical report of Division 9, NDRC, Volume 1, Chapter 5, 30-58.*
- Gaylor DW, Gold LS. 1995. Quick estimate of the regulatory virtually safe dose based on the maximum tolerated dose for rodent bioassays. *Regul Toxicol Pharmacol* 22:57-63.
- Geeraets WJ, Abedi S, Blanke RV. 1977. Acute corneal injury by mustard gas. *South Med J* 70(3):348-350.
- Ghanei M, Vosoghi AA. 2002. An epidemiologic study to screen for chronic myelocytic leukemia in war victims exposed to mustard gas. *Environ Health Perspect* 110(5):519-521.
- Ghotbi L, Hassan Z. 2002. The immunostatus of natural killer cells in people exposed to sulfur mustard. *Int Immunopharm* 2:981-985.
- *Gibson NCC, Casselman AA, Bannard RAB. 1974. An improved gas-liquid chromatographic method for the analysis of bis(2-chloroethyl) sulfide collected from air by solvent entrapment. *J Chromatogr* 92:162-165.
- Gilbert RM, Rowland S, Davison CL, et al. 1975. Involvement of separate pathways in the repair of mutational and lethal lesions induced by a mono-functional sulfur mustard. *Mutat Res* 28:257-276.
- Gililand J, Weinstein L. 1983. The effects of cancer chemotherapeutic agents on the developing fetus. *Obstet Gynecol Surv* 38:6-13.
- Gilman MR. 1982. Skin and eye testing in animals. In: Hayes AW, ed. *Principles and methods of toxicology*. New York: Raven Press, 209-222.
- *Giwerzman A, Carlsen E, Keiding N, et al. 1993. Evidence for increasing incidence of abnormalities of the human testis: A review. *Environ Health Perspect Suppl* 101(2):65-71.
- Gold MB, Scharf BA. 1995. Hematological profile of the euthymic hairless guinea pig following sulfur mustard vesicant exposure. *J Appl Toxicol* 15:433-438.
- Gold MB, Bongiovanni R, Scharf BA, et al. 1993. Hypochlorite solution as a decontaminant in sulfur mustard contaminated skin defects in the euthymic hairless guinea pig. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1.* Springfield, VA: US Department of Commerce, 369-378.
- *Gold MB, Bongiovanni R, Scharf BA, et al. 1994. Hypochlorite solution as a decontaminant in sulfur mustard contaminated skin defects in the euthymic hairless guinea pig. *Drug Chem Toxicol* 17(4):499-527.
- *Goldfrank LR, Flomenbaum NE, Lewin NA, et al. 1990. *Goldfrank's toxicologic emergencies*. 4th ed. Norwalk, CT: Appleton and Lange.

9. REFERENCES

- Goldstein LS. 1984. Use of *in vitro* technique to detect mutations induced by antineoplastic drugs in mouse germ cells. *Cancer Treat Rep* 68:855-856.
- Gottschall EB. 2002. Occupational and environmental thoracic malignancies. *J Thorac Imaging* 17:189-197.
- *Graef I, Karnofsky DA, Jager VB, et al. 1948. The clinical and pathologic effects of the nitrogen and sulphur mustards in laboratory animals. *Am J Pathol* 24:1-47.
- *Graham JS, Bryant MA, Braue EH. 1994. Effect of sulfur mustard on mast cells in hairless guinea pig skin. *J Toxicol Cutaneous Ocul Toxicol* 13(1):47-54.
- Graham JS, Schomacker KT, Glatter RD, et al. 2002. Bioengineering methods employed in the study of wound healing of sulphur mustard burns. *Skin Res Tech* 8:57-69.
- Gray PJ. 1995. Sulphur mustards inhibit binding of transcription factor AP2 *in vitro*. *Nucl Acids Res* 23(21):4378-4382.
- Gray PJ, Phillips DR. 1993. Effect of alkylating agents on initiation and elongation of the *lac* UV5 promoter. *Biochemistry* 32:12471-12477.
- *Gresham GL, Groenewold GS, Appelhans AD, et al. 2001. Static secondary ionization mass spectrometry and mass spectrometry/mass spectrometry (MS²) characterization of the chemical warfare agent HD on soil particle surfaces. *Int J Mass Spectrom* 208:135-145.
- Groenewold GS, Appelhans AD, Ingram JC, et al. 1998. Detection of 2-chloroethyl ethyl sulfide on soil particles using ion trap-secondary ion mass spectrometry. *Talanta* 47:981-986.
- *Groenewold GS, Ingram JC, Appelhans AD, et al. 1995. Detection of 2-chloroethyl ethyl sulfide and sulfonium ion degradation products on environmental surfaces using static SIMS. *Environ Sci Technol* 29:2107-2111.
- *Gross CL, Smith WJ. 1993. Pretreatment of isolated human peripheral blood lymphocytes with L-oxothiazolidine 4-carboxylate reduces sulfur mustard cytotoxicity. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993*. Vol. 1. Springfield, VA: US Department of Commerce, 141-147.
- *Guild WJF, Harrison KP, Fairley A, et al. 1941. The effect of mustard gas vapour on the eyes. Chemical Board, Physiological Sub-Committee and Panel of Ophthalmic Specialists. *Porton Report No. 2297*. Great Britain.
- Guittin P, Schorch F, Fontaine J-J, et al. 1989. Experimental pathology induced in rat by a single skin application of mustard gas. *Pathol Res Pract* 185:68-69.
- *Guzelian PS, Henry CJ, Olin SS. 1992. Similarities and differences between children and adults: Implications for risk assessment. Washington, DC: International Life Sciences Institute Press.
- *Haddad LM, Winchester JF. 1990. *Clinical management of poisoning and drug overdose*. 2nd ed. Philadelphia, PA: W.B. Saunders Company.

9. REFERENCES

- *Hambrook JL, Harrison JM, Howells DJ, et al. 1992. Biological fate of sulphur mustard (1,1'-thiobis(2-chloroethane)): Urinary and fecal excretion of ^{35}S by rat after injection or cutaneous application of ^{35}S -labeled sulphur mustard. *Xenobiotica* 22(1):65-75.
- *Hambrook JL, Howells DJ, Schock C. 1993. Biological fate of sulphur mustard (1,1'-thiobis(2-chloroethane)): Uptake, distribution and retention of ^{35}S in skin and in blood after cutaneous application of ^{35}S -sulphur mustard in rat and comparison with human blood *in vitro*. *Xenobiotica* 23(5):537-561.
- Hancock JR, McAndless JM, Hicken RP. 1991. A solid adsorbent based system for the sampling and analysis of organic compounds in air: An application to compounds of chemical defense interest. *J Chromatogr Sci* 29:40-45.
- Hart BW, Schlager JJ. 1996. G₂/M phase cell cycle block by sulfur mustard in normal human keratinocytes. *Med Def Biosci Rev* 2:835-843.
- *Hart BW, Schlager JJ. 1997. Okadaic acid and calyculin a reverse sulfur mustard-induced G₂/M cell-cycle block in human keratinocytes. *J Am Coll Toxicol* 15(Suppl. 2):S36-S42.
- Hartmann HM. 2002. Evaluation of risk assessment guideline levels for the chemical warfare agents mustard, GB, and VX. *Regul Toxicol Pharmacol* 35:347-356.
- Harvey SP, Szafraniec LL, Beaudry WT. 1998a. Hydrolysis and biodegradation of the vesicant agent HT: two potential approaches. *Biorem J* 2(3&4):191-203.
- Harvey SP, Szafraniec LL, Beaudry WT. 1998b. Neutralization and biodegradation of sulfur mustard. In: *Bioremediation*. Aberdeen Proving Ground, MD 21010-5423: U.S. Army Edgewood Research, Development and Engineering Center, 615-636.
- Hassan ZM, Ebtakar M. 2001. Modeling for immunosuppression by sulfur mustard. *Int Immunopharm* 1:605-610.
- Hassan ZM, Ebtakar M. 2002. Immunological consequence of sulfur mustard exposure. *Immunol Lett* 83:151-152.
- Hay A. 1993. Effects on health of mustard gas. *Nature* 366:398-399.
- *HazDat. 2003. Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, GA.
- Helmke B, Starz H, Bachter D, et al. 2002. Metastasising porocarcinoma following exposure to poison gas. *Lancet* 359(9318):1685.
- Hemminki K, Kallama S, Falck K. 1983. Correlations of alkylating activating and mutagenicity in bacteria of cytostatic drugs. *Acta Pharmacol Toxicol* 53:421-428.
- Heston WE. 1950. Carcinogenic action of the mustards. *J Natl Cancer Inst* 11:415-423.
- *Heston WE. 1953a. Occurrence of tumors in mice injected subcutaneously with sulfur mustard and nitrogen mustard. *J Natl Cancer Inst* 14:131-140.
- *Heston WE. 1953b. Pulmonary tumors in Strain A mice exposed to mustard gas. *Proceedings of the Society for Experimental Biology and Medicine* 82:457-460.

9. REFERENCES

- *Heully F, Gruinger M, et al. 1956. [Collective intoxication caused by the explosion of a mustard gas shell.] *Annales de Medecine Legale* 36:195-204. (French)
- *Heyndrickx A, Heyndrickx B. 1984. Treatment of Iranian soldiers attacked by chemical and microbiological war gases. *Arch Belges (Supplement)*:S157-S159.
- *Hobson DW, Snider TH, Korte DW. 1993. Evaluation of the effects of hypochlorite solutions in the decontamination of wounds exposed to either VX or sulfur mustard. Columbus, OH: Battelle Memorial Institute.
- *Hoel DG, Davis DL, Miller AB, et al. 1992. Trends in cancer mortality in 15 industrialized countries, 1969-1986. *J Natl Cancer Inst* 84(5):313-320.
- Hooijschuur EWJ, Keintz CE, Brinkman UAT. 1999. Determination of the sulfur mustard hydrolysis product thiodiglycol by microcolumn liquid chromatography coupled on-line with sulfur flame photometric detection using large-volume injections and peak compression. *J Chromatogr* 849:433-444.
- *Hooijschuur EWJ, Kientz CE, Brinkman UAT. 2001. Application of microcolumn liquid chromatography and capillary electrophoresis with flame photometric detection for the screening of degradation products of chemical warfare agents in water and soil. *J Chromatogr A* 928:187-199.
- Hopkins AR, Lewis NS. 2001. Detection and classification characteristics of arrays of carbon black/organic polymer composite chemiresistive vapor detectors for the nerve agent simulants dimethylphosphonate and diisopropylmethylphosphonate. *Anal Chem* 73:884-892.
- Horwitz EP, Dietz ML, Fisher DE. 1991. Separation and preconcentration of strontium from biological, environmental, and nuclear waste samples by extraction chromatography using a crown ether. *Anal Chem* 63:522-525.
- *Hosseini K, Moradi A, Mansouri A, et al. 1989. Pulmonary manifestations of mustard gas injury: a review of 61 cases. *Iran J Med Sci* 14(2):20-26.
- *HSDB. 2002. Hazardous Substances Data Bank. National library of Medicine, National Toxicology Information Program, Bethesda, MD.
- Hu J, Mao Y, White K, et al. 2002. Renal cell carcinoma and occupational exposure to chemicals in Canada. *Occup Med* 52(3):157-164.
- Hua A, Daniel R, Jasseron MP, et al. 1993. Early cytotoxic effects induced by Bis-chloroethyl sulphide (sulphur mustard): Ca^{2+} rise and time-dependent inhibition of B77 fibroblast serum response. *J Appl Toxicol* 13(3):161-168.
- *Hughes WF Jr. 1942. Mustard gas injuries to the eyes. *Arch Ophthalmol* 27:582-601.
- Hughes WF Jr. 1945. The importance of mustard burns of the eye as judged by World War I statistics and recent accidents. In: National Research Council, Division of Medical Sciences, Committee on Treatment of Gas Casualties. Fasciculus on chemical warfare medicine. Vol. 1, Eye. Washington, DC: Prepared for the Committee on Medical Research of the Office of Scientific Research and Development, 79-90.

9. REFERENCES

Hur GH, Kim YB, Choi DS, et al. 1998. Apoptosis as a mechanism of 2-chloroethylethyl sulfide-induced cytotoxicity. *Chem Biol Interact* 110:57-70.

*Husain K, Dube SN, Sugendran K, et al. 1996. Effect of topically applied sulphur mustard on antioxidant enzymes in blood cells and body tissues of rats. *J Appl Toxicol* 16:245-248.

*IARC. 1975. Mustard gas. IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. International Agency for Research on Cancer. 9:181-207.

*IARC. 1987. IARC monographs on the evaluation of carcinogenic risks to humans. Overall evaluations of carcinogenicity: International Agency for Research on Cancer. An updating of IARC monographs, Volumes 1 to 42, Supplement 7:67.

*IARC. 2001. IARC monographs on the evaluation of carcinogenic risks to humans. International Agency for Research on Cancer. <http://www.iarc.fr/pageroot/top1.html>. February 22, 2001.

*Ichinotsubo D, Mower HF, Setliff J, et al. 1977. The use of rec- bacteria for testing of carcinogenic substances. *Mutat Res* 46:53-61.

*Inada S, Hiragun K, Seo K, et al. 1978. Multiple Bowens disease observed in former workers of a poison gas factory in Japan with special reference to mustard gas exposure. *J Dermatol* 5:49-60.

*IRIS. 2003. Mustard gas. Integrated Risk Information System. U.S. Environmental Protection Agency. <http://www.epa.gov/iris/subst/index.htm>. January 28, 2003.

Jackson R, Adams RH. 1973. Horrifying basal cell carcinoma: A study of 33 cases and a comparison with 435 nonhorror cases and a report on 4 metastatic cases. *J Surg Oncol* 5:431-463.

*Jakubowski EM, Sidell FR, Evans RA, et al. 2000. Quantification of thiodiglycol in human urine after an accidental sulfur mustard exposure. *Toxicol Meth* 10:143-150.

*Jakubowski EM, Woodard CL, Mershon MM, et al. 1990. Quantification of thiodiglycol in urine by electron ionization gas chromatography-mass spectrometry. *J Chromatogr* 528:184-190.

*Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs cerebral cortex. *Brain Res* 190:3-16.

*Johnsen BA, Blanch JH. 1984. Analysis of snow samples contaminated with chemical warfare agents. Proceedings of the First World Congress, Med Soc Hyg Chem Warfare Toxicol Eval Pt 22:22-30.

*Johnson MA. 1998. Written communication (July 21, 1999) to Nancy Crowe, Bureau of Export Administration, Regulatory Policy Division, Office of Exporter Services, regarding proposed chemical weapons convention regulations. *Fed Regist* 64:39194.

*Jorgenson B, Olesen B, Berntsen O. 1985. [Accidents with mustard gas near Bornholm.] *Ugeskrift for Laeger* 147:2251-2254. (Dutch)

Jones TD, Walsh PJ, Watson AP, et al. 1988. Chemical scoring by a rapid screening of hazard (RASH) method. *Risk Anal* 8(1):99-118.

9. REFERENCES

- Ju Fang W. 1984. Biological detection of chemical warfare agents. *Arch Belg Med Soc Hyg Med Trav Med Leg Suppl*:74-80.
- Kadar T, Turetz J, Fishbine E, et al. 2001. Characterization of acute and delayed ocular lesions induced by sulfur mustard in rabbits. *Curr Eye Res* 22(1):42-53.
- Kam CM, Selzler J, Schulz SM, et al. 1997. Enhanced serine protease activities in the sulfur mustard-exposed homogenates of hairless guinea pig skin. *Int J Toxicol* 16:625-638.
- Karaer F. 1996. Environmental pollution and carcinogenic risk. *J Environ Pathol Toxicol Oncol* 15(2-4):105-113.
- Karlsson JO, Nguyen NV, Foland LD, et al. 1985. (2-Alkynylethenyl)ketenes: A new benzoquinone synthesis. *J Am Chem Soc* 107:3392-3393.
- Khordagui HK. 1995. Fate and control of nerve chemical warfare agents in the desalination industry of the Arabian-Persian Gulf. *Environ Int* 21(4):363-379.
- Khordagui H, Al-Ajimi D. 1994. Potential fate of blistering chemical warfare agents in the coastal waters of Kuwait. *J Environ Sci Health A29*:687-700.
- *Kientz CE. 1998. Chromatography and mass spectrometry of chemical warfare agents, toxins and related compounds: State of the art and future prospects. *J Chromatogr* 814:1-23.
- *Kindred JE. 1947. Histological changes occurring in the hemopoietic organs of albino rats after single injections of 2-chloroethyl vesicants: A quantitative study. *Arch of Path* 43:253-295.
- *Kircher M, Brendel M. 1983. DNA alkylation by mustard gas in yeast *Saccharomyces-cerevisiae* strains of different repair capacity. *Chem-Biol Interact* 44:27-39.
- Kjellstrom BT, Persson JKE, Runn P. 1997. Surgical treatment of skin lesions induced by sulfur mustard ("mustard gas")-An experimental study in the guinea pig. *Ann Acad Med Singapore* 26:30-36.
- *Klain GJ, Omaye ST, Schuschereba ST, et al. 1991. Ocular toxicity of systemic and topical exposure to butyl 2-chloroethyl sulfide. *J Toxicol Cutaneous Ocul Toxicol* 10(4):289-302.
- *Klehr N. 1984. [Cutaneous late manifestations in former mustard gas workers]. *Z Hautkr* 59:1161-1170. (German)
- Koepke SR, Kroeger-Koepke MB, Bosan W, et al. 1988. Alkylation of DNA in rats by N-nitrosomethyl-(2-hydroxyethyl)amine: Dose response and persistence of the alkylated lesions in vivo. *Cancer Res* 48:1537-1542.
- *Komori M, Nishio K, Kitada M, et al. 1990. Fetus-specific expression of a form of cytochrome P-450 in human livers. *Biochemistry* 29:4430-4433.
- *Koper O, Lucas E, Klabunde KJ. 1999. Development of reactive topical skin protectants against sulfur mustard and nerve agents. *J Appl Toxicol* 19:S59-S70.
- Kosson. 2000. Obstacles to closure of the Johnston atoll chemical agent disposal system. <http://www.4.nationalacademies.org/cets/dmst.nsf>. May 4, 2000.

9. REFERENCES

- *Krishnan K, Andersen ME. 1994. Physiologically based pharmacokinetic modeling in toxicology. In: Hayes AW, ed. Principles and methods of toxicology. 3rd ed. New York, NY: Raven Press, Ltd., 149-188.
- *Krishnan K, Andersen ME, Clewell HJ III, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, ed. Toxicology of chemical mixtures: Case studies, mechanisms, and novel approaches. San Diego, CA: Academic Press, 399-437.
- Kroes R, Galli C, Munro I, et al. 2000. Threshold of toxicological concern for chemical substances present in the diet: A practical tool for assessing the need for toxicity testing. *Food Chem Toxicol* 38:255-312.
- Kumar O, Vijayaraghavan R. 1997. Effect on physiological variables & urinary metabolites following a single dermal application of sulphur mustard in rats. *Def Sci J* 47(3):389-394.
- *Kumar O, Vijayaraghavan R. 1998. Effect of sulphur mustard inhalation exposure on some urinary variables in mice. *J Appl Toxicol* 18:257-259.
- Kumar O, Sugendran K, Vijayaraghavan R. 2001. Protective effect of various antioxidants on the toxicity of sulphur mustard administered to mice by inhalation or percutaneous routes. *Chem Biol Interact* 134:1-12.
- *Kumar P, Sharma US, Vijayaraghavan R. 1991. Study of the efficacy of CC-2 and Fuller's Earth Combination as a decontaminant against sulphur mustard (Mustard Gas) dermal intoxication in mice. *Def Sci J* 41(4):363-366.
- Kumar P, Vijayaraghavan R, Kulkarni AS, et al. 2002. In vivo protection by amifostine and DRDE-07 against sulphur mustard toxicity. *Hum Exp Toxicol* 21:371-376.
- Kuperman R, Dunn C. 1994. Ecological effects of soil contamination at Aberdeen Proving Ground, Maryland. *Bull Ecol Soc Am* 75(1):118-119.
- *Kurata H. 1980. Lessons learned from the destruction of the chemical weapons of the Japanese Imperial Forces. In: Stockholm International Peace Research Institute. Chemical weapons: Destruction and conversion. London: Taylor and Francis, 77-93.
- Kurozumi S, Haradi Y, Sugimoto Y, et al. 1977. Airway malignancy in poisonous gas workers. *J Laryngol Otol* 91:217-226.
- *Kurt E, Schafer RJ, Arroyo CM. 1998. Effects of sulfur mustard on cytokines released from cultured human epidermal keratinocytes. *Int J Toxicol* 17:223-229.
- Kurt EM, Schafer RJ, Broomfield CA, et al. 1997. Immunologic cytokine expression in human keratinocytes after exposure to sulfur mustard. *J Am Coll Toxicol* 15(Suppl. 2):S32-S35.
- *Kwong CD, Segers DP. 1996. Antivesication by simultaneous prophylaxis and detoxification. *Govt Reports Announcements & Index*. ADA230926.
- Lal J, Kumar V, Gupta RC. 2002. LC determination of a sulphur mustard decontaminant CC-2 in rat serum. *J Pharm Biomed Anal* 29:609-615.

9. REFERENCES

- *Langenberg JP, van der Schans GP, Spruit HET, et al. 1998. Toxicokinetics of sulfur mustard and its DNA-adducts in the hairless guinea pig. *Drug Chem Toxicol* 21(Suppl. 1):131-147.
- Lardot C, Dubois V, Lison D. 1999. Sulfur mustard upregulates the expression of interleukin-8 in cultured human keratinocytes. *Toxicol Lett* 110:29-33.
- *Laughlin RC. 1944a. Correlation of eye changes in rabbits with CT exposure to HD. MRL (EA) Report No. 23.
- *Laughlin RC. 1944b. Continued exposure of human eyes to H vapor, MIT subjects. MRL (EA) Report No. 9.
- *Laughlin RC. 1944c. Eye examination of factory workers handling H, CN and CG. MRL (EA) Report 18.
- Lawley PD, Brookes P. 1965. Molecular mechanism of the cytotoxic action of difunctional alkylating agents and of resistance to this action. *Nature* 206:480-483.
- *Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics: Implications for practice. *Pediatr Clin North Am* 44(1):55-77.
- Lefkowitz LJ, Smith WJ. 2002. Sulfur mustard-induced arachidonic acid release is mediated by phospholipase D in human keratinocytes. *Biochem Biophys Res Commun* 295:1062-1067.
- Leggett DC. 1987. Persistence of chemical agents on the winter battlefield. Part 1. Literature review and theoretical evaluation. Defense Technical Information Center, U.S. Army Cold Regions Res Eng Lab: CRREL Report # 87-12.
- Lemen RA. 1986. Occupationally induced lung cancer epidemiology. *Occup Respir Dis* 629-656.
- *Leung H-W. 1993. Physiologically-based pharmacokinetic modeling. In: Ballentine B, Marro T, Turner P, eds. *General and applied toxicology*. Vol. 1. New York, NY: Stockton Press, 153-164.
- *Lüning KG. 1952. Studies on the origin of apparent gene mutations in *Drosophila melanogaster*. *Acta Zool* 33:193.
- Lewis DFV, Bird MG, Jacobs MN. 2002. Human carcinogens: An evaluation study via the COMPACT and Hazard Expert procedures. *Hum Exp Toxicol* 21:115-122.
- Li Q, Laval J, Lundlum DB. 1997. Fpg protein releases a ring-opened N-7 guanine adduct from DNA that has been modified by sulfur mustard. *Carcinogenesis* 18(5):1035-1038.
- Lieske C, Gross C. 1992. Reply from the authors. *Immunol Lett* 34(2):175-176.
- Lieske C, Klopčič R, Gross C, et al. 1992. Development of an antibody that binds sulfur mustard. *Immunol Lett* 31:117-122.
- *Lin P, Bernstein IA, Vaughan FL. 1994. Failure to observe a relationship between bis-(β -chloroethyl) sulfide-induced NAD depletion and cytotoxicity in the rat keratinocyte culture. *J Toxicol Environ Health* 42:393-405.

9. REFERENCES

- *Lin P, Bernstein IA, Vaughan FL. 1996a. Bis(2-chloroethyl)sulfide (BCES) disturbs the progression of rat keratinocytes through the cell cycle. *Toxicol Lett* 84:23-32.
- *Lin P, Vaughan FL, Bernstein IA. 1996b. Formation of interstrand DNA cross-links by bis-(2-chloroethyl)sulfide (BCES): A possible cytotoxic mechanism in rat keratinocytes. *Biochem Biophys Res Commun* 218:556-561.
- Lindsay C, Rice P. 1995. Changes in connective tissue macromolecular components of Yucatan mini-pig skin following the application of sulfur mustard vapor. *Hum Exp Toxicol* 14:341-348.
- Lindsay CD, Hambrook JL. 1997. Protection of A549 cells against the toxic effects of sulphur mustard by hexamethylenetetramine. *Hum Exp Toxicol* 16:106-114.
- Lindsay CD, Hambrook JL. 1998. Diisopropylglutathione ester protects A549 cells from the cytotoxic effects of sulphur mustard. *Hum Exp Toxicol* 17:606-612.
- Lindsay CD, Upshall DG. 1995. The generation of a human dermal equivalent to assess the potential contribution of human dermal fibroblasts to the sulphur mustard-induced vesication response. *Hum Exp Toxicol* 14:580-586.
- Lindsay CD, Hambrook JL, Lailey AF. 1997. Monoisopropylglutathione ester protects A549 cells from the cytotoxic effects of sulphur mustard. *Hum Exp Toxicol* 16:636-644.
- Lindsay CD, Hambrook JL, Smith CN, et al. 1996. Histological assessment of the effects of the percutaneous exposure of sulfur mustard in an in vitro human skin system and the therapeutic properties of the protease inhibitors. *Med Def Biosci Rev* 2:899-908.
- *Liu DK, Wannemacher RW, Snider TH, et al. 1999. Efficacy of the topical skin protectant in advanced development. *J Appl Toxicol* 19:S41-S45.
- *Livingston, AL. 1978. Forage plant estrogens. *J Toxicol Environ Health* 4:301-324.
- Lodhi IJ, Sweeney JF, Clift RE, et al. 2001. Nuclear dependence of sulfur mustard-mediated cell death. *Toxicol Appl Pharmacol* 170:69-77.
- Logan TP, Millard CB, Shutz M, et al. 1999. Cutaneous uptake of ¹⁴C-HD vapor by the hairless guinea pig. *Drug Chem Toxicol* 22(2):375-387.
- Lohs K. 1975. Delayed toxic effects of chemical warfare agents. Stockholm International Peace Research Institute Monograph. Stockholm: Almqvist & Wiksell International.
- *Ludlum DB, Austin-Ritchie P, Hagopian M, et al. 1994. Detection of sulfur mustard-induced DNA modifications. *Chem Biol Interact* 91:39-49.
- Lundy PM, Sawyer TW, Hand BT, et al. 1998. Effects of bis(2-chloroethyl)sulfide on ATP receptor-mediated responses of the rat vas deferens: Possible relationship to cytotoxicity. *J Pharmacol Exp Ther* 285(1):299-306.
- *Lyman WJ, Reehl WF, Rosenblatt DH. 1990. Handbook of chemical property estimation methods. 2nd ed. Washington, DC: American Chemical Society.

9. REFERENCES

- *MacNaughton, MG. 2001. Monitoring information for sulfur mustard. Southwest Research Institute.
- *Maisonneuve A, Callebat I, Debordes L, et al. 1993. Biological fate of sulphur mustard in rat: Toxicokinetics and disposition. *Xenobiotica* 23(7):771-780.
- *Maisonneuve A, Callebat I, Debordes L, et al. 1994. Distribution of [¹⁴C]sulfur mustard in rats after intravenous exposure. *Toxicol Appl Pharmacol* 125:281-287.
- *Mandl H, Freilinger G. 1984. First report on victims of chemical warfare in the Gulf War treated in Vienna. *Arch Belges (Supplement)*:330-340.
- *Mann I. 1944. A study of eighty-four cases of delayed mustard gas keratitis fitted with contact lenses. *Br J Ophthalmol* 28:441-447.
- *Mann I, Pullinger BD. 1944. A study of mustard gas lesions on the eyes of rabbits and men. *Am J Ophthalmol* 26:1253-1277.
- *Manning KP, Skegg DCG, Stell PM, et al. 1981. Cancer of the larynx and other occupational hazards of mustard gas workers. *Clin Otolaryngol* 6:165-170.
- *Marrs TC, Maynard RL, Sidell FR. 1996. Chemical warfare agents. John Wiley & Sons, New York.
- Martens ME. 1997. In vitro studies of glucose metabolism in human epidermal keratinocytes exposed to sulfur mustard. *J Am Coll Toxicol* 15(Suppl. 2):S19-S31.
- *Martens ME, Smith WJ. 1993. Mechanisms of sulfur mustard-induced metabolic injury. *FASEB J* 8(3):A408.
- Marzulli FN, Simmon ME. 1971. Eye irritation from topically applied drugs and cosmetics: preclinical studies. *Am J Ophthalmol* 48:61-79.
- *Masta A, Gray PJ, Phillips DR. 1996. Effect of sulphur mustard on the initiation and elongation of transcription. *Carcinogenesis* 17(3):525-532.
- Matijasevic Z, Precopio ML, Snyder JE, et al. 2001. Repair of sulfur mustard-induced DNA damage in mammalian cells measured by a host cell reactivation assay. *Carcinogenesis* 22(4):661-664.
- *Matijasevic Z, Stering A, Ludlum DB. 1996. Toxicity of sulfur mustard for human fibroblasts grown in cell culture. *Med Def Biosci Rev* 2:635-50.
- *Maumenee AE, Scholz RO. 1948. The histopathology of the ocular lesions produced by sulfur and nitrogen mustards. *Bull John Hopkins Hosp* 82:121-147.
- Maurice DM, Giardini AA. 1951. A simple optical apparatus for measuring the corneal thickness, and the average thickness of the human cornea. *Br J Ophthalmol* 35:169-177.
- *May WG. 1998. Effluents from alternative demilitarization technologies. Netherlands: Kluwer Academic Publishers.

9. REFERENCES

- *Mayr U, Butsch A, Schneider S. 1992. Validation of two *in vitro* test systems for estrogenic activities with zearalenone, phytoestrogens and cereal extracts. *Toxicology* 74:135-149.
- Mazumder PK, Sugendran K, Vijayaraghavan R. 1998. Protective efficacy of calcium channel blockers in sulphur mustard poisoning. *Biomed Environ Sci* 11:363-369.
- *Mazurek M, Witkiewicz Z, Popiel S, et al. 2001. Capillary gas chromatography-atomic emission spectroscopy-mass spectrometry analysis of sulphur mustard and transformation products in a block recovered from the Baltic Sea. *J Chromatogr A* 919:133-145.
- *McAdams AJ Jr. 1956. A study of mustard vesication. *J Invest Derm* 26:317-326.
- McCann J, Choi E, Yamasaki E, et al. 1975. Detection of carcinogens as mutagens in the Salmonella/microsome test: Assay of 300 chemicals. *Proc Natl Acad Sci* 72:5135-5170.
- *McNamara BP, Owens EJ, Christensen MK, et al. 1975. Toxicological basis for controlling levels of mustard in the environment. Edgewood Arsenal Special Publication. Aberdeen Proving Ground, Maryland: Department of the Army. EB-SP-74030.
- *Medvedeva N, Polyak Y, Zaytceva T, et al. 2000. Microbiological destruction of mustard in soil. *Environ Sci Pollut Control Series (bioremediation of contaminated soils)* 32:151-176.
- Meier HL, Johnson JB. 1992. The determination and prevention of cytotoxic effects induced in human lymphocytes by the alkylating agent 2,2'-dichlorodiethyl sulfide (sulfur mustard, HD). *Toxicol Appl Pharmacol* 113:234-239.
- *Meier HL, Kelly SA. 1993. The identification and ranking of poly (ADP-RIBOSE) polymerase inhibitors as protectors against sulfur mustard induced decrease in cellular energy and viability *in vitro* assays with human lymphocytes. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, VA: US Department of Commerce, 227-236.
- Meier HL, Millard CB. 1998. Alterations in human lymphocyte DNA caused by sulfur mustard can be mitigated by selective inhibitors of poly(ADP-ribose) polymerase. *Biochem Biophys Acta* 1404:367-376.
- *Meier HL, Clayson ET, Kelly SA, et al. 1996. Effect of sulfur mustard (HD) on ATP levels of human lymphocytes cultured *in vitro*. *In Vitro Toxicol* 9(2):135-139.
- *Meier HL, Gross CL, Graham LM, et al. 1987. The prevention of 2,2-dichlorodiethyl sulfide (sulfur mustard, HD) cytotoxicity in human lymphocytes by inhibitors of the poly(ADP-ribose) polymerase. In: Proceedings of the 6th Chemical Defense Bioscience Review, Frederick, MD, 313-315.
- Meisenberg BR, Melaragno AJ, Monroy RL. 1993. Granulocyte colony stimulating factor (G-CSF) for mustard-induced bone marrow suppression. *Mil Med* 158:470-474.
- Mellor SG, Rice P, Cooper GJ. 1991. Vesicant burns. *Brit J Plastic Surg* 44:434-437.
- Mesilaakso MT. 1997. Application of NMR spectroscopy to environmental analysis: detection of trace amounts of chemical warfare agents and related compounds in organic extract, water, and sand. *Environ Sci Technol* 31:518-522.

9. REFERENCES

- *Meylan WM, Howard PH. 1993. Computer estimation of the atmospheric gas-phase reaction rate of organic compounds with hydroxyl radicals and ozone. *Chemosphere* 26:2293-2299.
- *Michaelson S. 2000. DNA fragmentation pattern induced in thymocytes by sulphur mustard. *Chem Biol Interact* 125:1-15.
- Millard CB, Bongiovanni R, Broomfield CA. 1997. Cutaneous exposure to bis-(2-chloroethyl)sulfide results in neutrophil infiltration and increased solubility of 180,000 M_r subepidermal collagens. *Biochem Pharmacol* 53:1405-1412.
- Millard CB, Meier HL, Broomfield CA. 1994. Exposure of human lymphocytes to bis-(2-chloroethyl)sulfide solubilizes truncated and intact core histones. *Biochem Biophys Acta* 1224:389-394.
- Mishima S, Hedbys BO. 1968. Measurement of corneal thickness with the haag-streit pachometer. *Arch Ophthalmol* 80:710-713.
- *Mitretek Systems. 2002. Chemistry of H (mustard). <http://www.mitretek.org/home.nsf/homelandsecurity/Mustard>.
- *Mol MAE, DeVries R, Kluivers AW. 1991. Effects of nicotinamide on biochemical changes and microblistering induced by sulfur mustard in human skin organ cultures. *Toxicol Appl Pharmacol* 107:439-449.
- *Mol MAE, Van De Ruit ABC, Kluivers AW. 1989. NAD⁺ levels and the glucose uptake of cultured human epidermal cells exposed to sulfur mustard. *Toxicol and Applied Pharm* 98:159-165.
- *Momeni AZ, Aminjavaheri M. 1994. Skin manifestations of mustard gas in a group of 14 children and teenagers: A clinical study. *Int J Dermatol* 33(3):184-187.
- *Momeni AZ, Enshaeih S, Meghdadi M, et al. 1992. Skin manifestations of mustard gas. *Arch Dermatol* 128:775-780.
- Moore AM, Rockman JB. 1950. A study of human hypersensitivity to compounds of the mustard gas type. *Can J Res* 28E:169-176.
- *Morgenstern P, Koss FR, Alexander WW. 1947. Residual mustard gas bronchitis; effects of prolonged exposure to low concentrations. *Ann Intern Med* 26:27-40.
- *Morselli PL, Franco-Morselli R, Bossi L. 1980. Clinical pharmacokinetics in newborns and infants: Age-related differences and therapeutic implications. *Clin Pharmacokin* 5:485-527.
- *Munavalli S, Jakubowski EW. 1989. Thermospray liquid chromatography/mass spectrometry of mustard and its metabolites. Aberdeen Proving Ground, MD: U.S. Army Medical Research Institute of Chemical Defense, U.S. Armament Munitions Chemical Command. CRDEC-TR-066.
- *Munavalli S, Jakubowski EM, Durst HD. 1995. Liquid chromatography/thermospray mass spectrometry of mustard and its metabolites. *J Mass Spectrom* 30:1716-1722.
- *Munro NB, Talmage SS, Griffin GD, et al. 1999. The sources, fate, and toxicity of chemical warfare agent degradation products. *Environ Health Perspect* 107(12):933-973.

9. REFERENCES

- Murphy ML. 1959. Comparison of the teratogenic effects of five polyfunctional alkylating agent on the rat fetus. *Pediatrics* 23:231-244.
- Murphy RJ. 1979. Air pollution aspects of hazardous material disposal. *Proc Annu WWEMA Ind Pollut Conf* 7:163-170.
- *Murray VS, Volans GN. 1991. Management of injuries due to chemical weapons. *Br Med J* 19:302(6769):129-30.
- *NAC/AEGL. 2001. Acute exposure guideline levels (AEGLs) for sulfur mustard (Agent HD). Final acute exposure guideline levels (AEGLs). National Advisory Committee on Exposure Guideline Levels for Hazardous Substances.
- *Nagy SM, Columbic D, Stein WH, et al. 1946. The penetration of vesicant vapors into human skin. *J Gen Physiol* 29:441-445.
- *Nakamura T. 1956. [Studies on the warfare gas-injury in Japan. Report I: On the general condition of the poison gas island.] *Hiroshima Med J* 4:1141-1149. (Japanese)
- *NAS/NRC. 1989. Biologic markers in reproductive toxicology. National Academy of Sciences/National Research Council. Washington, DC: National Academy Press, 15-35.
- Needham DM, Cohen JA, Barrett AM. 1947. The mechanism of damage to the bone marrow in systemic poisoning with mustard gas. *Biochemistry* 41:631-639.
- Nersessians AK. 1992. Activity of human carcinogens in the salmonella and rodent bone marrow cytogenetic tests. *Mutat Res* 281:239-243.
- Newman-Taylor AJ, Morris AJR. 1991. Experience with mustard gas casualties. *Lancet* 337:242.
- *NIOSH. 2003. Mustard Emergency Response Card. National Institute for Occupational Safety and Health. <http://www.bt.cdc.gov/agent/mustardgas/erc505-60-2pr.asp>. March 20, 2003.
- *Nishimoto Y, Burrows B, Miyanishi S, et al. 1970. Chronic obstructive lung disease in Japanese poisoning gas workers. *Am Rev Resp Disease* 102:173-179.
- Nishimoto Y, Yamakido M, Ishioka S, et al. 1988. Epidemiological studies of lung cancer in Japanese mustard gas workers. In: Miller RW, et al. Unusual occurrences as clues to cancer etiology. Tokyo: Japan Science Society Press, 95-101.
- *Nishimoto Y, Yamakido M, Shigenobu T, et al. 1983. Long term observation of poison gas workers with special reference to respiratory cancers. *J UOEH* 5:89-94.
- *Niu T, Matijasevic Z, Austin-Ritchie P, et al. 1996. A ³²P-postlabeling method for the detection of adducts in the DNA of human fibroblasts exposed to sulfur mustard. *Chem Biol Interact* 100:77-84.
- *Noort D, Hulst AG, de Jong LPA, et al. 1999. Alkylation of human serum albumin by sulfur mustard in vitro and in vivo: Mass spectrometric analysis of a cysteine adduct as a sensitive biomarker of exposure. *Chem Res Toxicol* 12:715-721.

9. REFERENCES

- *Noort D, Hulst AG, Trap HC, et al. 1997. Synthesis and mass spectrometric identification of the major amino acid adducts formed between sulphur mustard and hemoglobin in human blood. *Arch Toxicol* 71:171-178.
- *Noort D, Verheij ER, Hulst AG, et al. 1996. Characterization of sulfur mustard induced structural modifications in human hemoglobin by liquid chromatography-tandem mass spectrometry. *Chem Res Toxicol* 9:781-787.
- *Norman JE Jr. 1975. Lung cancer mortality in World War I veterans with mustard gas injury 1919-1965. *J Natl Cancer Inst* 54:311-318.
- *NRC. 1985. Possible long-term health effects of short-term exposure to chemical agents. Volume 3. Current health status of test subjects. *Govt Reports Announcements & Index (GRA&I)*. NTIS/AD-A163 614/1. Washington, DC: National Academy of Sciences, National Research Council, National Academy Press.
- *NRC. 1993. Pesticides in the diets of infants and children. National Research Council. Washington, DC: National Academy Press.
- *NRC. 1994. Recommendations for the disposal of chemical agents and munitions. National Research Council. Washington, DC: National Academy Press.
- *NRC. 1996. Review and evaluation of alternative chemical disposal technologies. National Research Council. Washington, DC: National Academy Press.
- *NRC. 1997. Review of acute human toxicity estimates for selected chemical-warfare agents. Committee on Toxicology, National Research Council, Washington, DC. <http://books.nap.edu/books/0309057493/html/59.html>.
- *NRC. 1999a. Review and evaluation of alternative technologies for demilitarization of assembled chemical weapons. National Research Council. Washington, DC: National Academy Press.
- *NRC. 1999b. Review of the U.S. Army's health risk assessments for oral exposure to six chemical-warfare agents. National Research Council, Washington, DC. National Academy Press.
- *NRC. 2000. Review of the U.S. Army's health risk assessments for oral exposure to six chemical-warfare agents. National Research Council. Washington, DC: National Academy Press.
- *NRC. 2003. Acute exposure guideline levels for selected airborne chemicals. Volume 3. Subcommittee on Acute Exposure Guideline Levels, Committee on Toxicology, National Research Council. Washington, DC: National Academy Press.
- *NRL. 1945. Chamber tests with human subjects. IX. Basic tests with H vapor. Naval Research Laboratory, Washington, DC. AD396275.
- NTP. 1989. Fifth annual report on carcinogens. Summary NTP Publication No. 89-239. US Department of Health and Human Services. Public Health Service. National Toxicology Program. Research Triangle Park, NC.
- *NTP. 2001. National Toxicology Program. <http://ntp-server.niehs.nih.gov/>. February 27, 2001.

9. REFERENCES

- Nyska A, Lomnitski L, Maronpot R, et al. 2001. Effects of iodine on inducible nitric oxide synthase and cyclooxygenase-2 expression in sulfur mustard-induced skin injury in guinea pigs. *Arch Toxicol* 74:768-774.
- *Oak Ridge National Laboratory. 1996. Health risk assessment for sulfur mustard (HD). Appendix E. Draft Report.
- Ohmine H, Fujita M, Goriki K, et al. 1984. A study of the genetic effects of occupational exposure to mustard gas 2. *Jpn J Hum Genet* 29:237-238.
- *OPCW. 2001. Organization for the prohibition of chemical weapons, decontamination of chemical warfare agents. <http://www.opcw.nl/chemhaz/decon.htm>. March 13, 2001.
- *Opresko DM, Young RA, Faust RA, et al. 1998. Chemical warfare agents: Estimating oral reference doses. *Oakridge, TN: Rev Environ Contam Toxicol* 56:1-183.
- *Opresko DM, Young RA, Watson AP, et al. 2001. Chemical warfare agents: Current status of oral reference doses. *Rev Environ Contam Toxicol* 172:65-85.
- Orma PS, Middleton RK. 1992. Aerosolized atropine as an antidote to nerve gas. *Ann Pharmacother* 26:937-938.
- *OSHA. 1982. Occupational Safety and Health Administration. *Federal Register*. 47:30420.
- *Owen GM, Brozek J. 1966. Influence of age, sex and nutrition on body composition during childhood and adolescence. In: Falkner F, ed. *Human development*. Philadelphia, PA: WB Saunders, 222-238.
- *Pant SC, Vijayaraghavan R. 1999. Histomorphological and histochemical alterations following short-term inhalation exposure to sulfur mustard on visceral organs of mice. *Biomed Environ Sci* 12:201-213.
- *Papirmeister B. 1993. Excitement in vesicant research – yesterday, today, and tomorrow. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993*. Vol. 1. Springfield, VA: US Department of Commerce, 1-14.
- *Papirmeister B, Feister AF, Robinson SI, et al. 1991. *Medical defense against mustard gas: Toxic mechanisms and pharmacological implications*. CRC Press, Boca Raton, FL.
- *Papirmeister B, Gross CL, Meier HL, et al. 1985. Molecular basis for mustard-induced vesication. *Fundam Appl Toxicol* 5:S134-S149.
- *Papirmeister B, Gross CL, Petrali JP, et al. 1984a. Pathology produced by sulfur mustard in human skin grafts on athymic nude mice: 1. Gross and light microscopic changes. *J Toxicol Cutaneous Ocul Toxicol* 3:371-392.
- *Papirmeister B, Gross CL, Petrali JP, et al. 1984b. Pathology produced by sulfur mustard in human skin grafts on athymic nude mice: 2. Ultrastructural changes. *J Toxicol Cutaneous Ocul Toxicol* 3:393-408.
- *Pauser G, Aloy A, Caravan M, et al. 1984. Lethal intoxication by war gases on Iranian soldiers. Therapeutic interventions on survivors of mustard gas and mycotoxin immersion. *Archives Belges*:S341-S351.

9. REFERENCES

- Pearson GS. 1993. Chemical complications. *Nature* 365(3443):218.
- Pechura CM. 1993. The health effects of mustard gas and lewisite. *JAMA* 269:453.
- *Pechura CM, Rall DP. 1993. Veterans at risk: The health effects of mustard gas and lewisite. Washington DC: National Academy Press, 117-118.
<http://nap.edu/openbook/030904832X/html/R1.html>. July 10, 2001.
- Peters RA. 1947. Biochemical research at Oxford upon mustard gas. *Nature* 4031:149-153.
- Petralli JP, Oglesby-Megee S. 1997. Toxicity of mustard gas in skin lesions. *Microsc Res Tech* 37:221-228.
- *Pierard GE, Dowlati A, Dowlati Y, et al. 1990. Chemical warfare casualties and yperite-induced xerodermoid. *Am J Dermatopathol* 12(6):565-570.
- *Platteborze PL. 2000. The effects of sulfur mustard on transcription in human epidermal keratinocytes: Analysis at early time points through DNA arrays. *Toxicol Meth* 10:151-163.
- Pleyer U, Sherif Z, Baatz H, et al. 1999. Delayed mustard gas keratopathy: Clinical findings and confocal microscopy. *Am J Ophthalmol* 128:506-507.
- Pons F, Calvet J-H, Haag M, et al. 2001. Altered expression of lung cytochrome P450 3A1 in rat after exposure to sulfur mustard. *Pharmacol Toxicol* 88:40-44.
- *Posner JC. 1991. Evaluation of sorbents for the collection and analysis of trace levels of airborne vapors: Bis(2-chloroethyl)sulfide (mustard). A case study. *Chemosphere* 22:461-472.
- *Pour-Jafari H. 1992. Fetal deaths and parental exposure to chemical warfare agents. *Med J Islamic Rep Iran* 6:87-88.
- *Pour-Jafari H. 1994a. Secondary sex ratios in progenies of Iranian chemical victims. *Vet Hum Toxicol* 36:475-476.
- *Pour-Jafari H. 1994b. Congenital malformations in the progenies of Iranian chemical victims. *Vet Human Toxicol* 36(6):562-563.
- *Pour-Jafari H, Moushtaghi A. 1992. Alterations of libido in gassed Iranian men. *Vet Hum Toxicol* 34(6):547.
- *Prentiss AN. 1937. Chemicals in war. New York: McGraw-Hill.
- *Price CC, Bullitt IH. 1947. Hydrolysis and oxidation of mustard gas and related compounds in aqueous solution. *J Org Chem* 12:238-248.
- Price CC, Wakefield LB. 1947. Reactions and analysis of B-chloroethyl sulfide in water. *J Org Chem* 12:232-237.
- Probst GS, Hill LE, Bewsey BJ. 1980. Comparison of 3 *in vitro* assays for carcinogen-induced DNA damage. *J Toxicol Environ Health* 6:333-349.

9. REFERENCES

- Probst GS, McMahon RE, Hill CZ, et al. 1981. Chemically-induced unscheduled DNA synthesis in primary rat hepatocyte cultures: A comparison with bacterial mutagenicity using 218 compounds. *Environ Mutagen* 3:11-32.
- *Pu Y, Lin P, Vaughan FL, et al. 1995. Appearance of interleukin 1 α relates DNA interstrand cross-links and cytotoxicity in cultured human keratinocytes exposed to bis-(2chloroethyl)sulfide. *J Appl Toxicol* 15:477-482.
- *Rao PVL, Vijayaraghavan R, Bhaskar ASB. 1999. Sulphur mustard induced DNA damage in mice after dermal and inhalation exposure. *Toxicology* 139:39-51.
- Ray P, Chakrabarti AK, Broomfield CA, et al. 2002. Sulfur mustard-stimulated protease: a target for antivesicant drugs. *J Appl Toxicol* 22:139-140.
- Ray R, Benton BJ, Anderson DR, et al. 1999. Poly(ADP-ribose) polymerase (PARP) mediated mechanisms of sulphur mustard (SM) toxicity and its protection. *FASEB J* 13(7):A1341.
- Ray R, Legere RH, Majerus BJ, et al. 1995. Sulfur mustard-induced increase in intracellular free calcium level and arachidonic acid release from cell membrane. *Toxicol Appl Pharmacol* 131:45-52.
- *Ray R, Majerus BJ, Munavalli GS, et al. 1993. Sulfur mustard-induced increase in intracellular calcium: A mechanism of mustard toxicity. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13, May 1993. Vol. 1. Springfield, VA: US Department of Commerce, 267-276.*
- Reddy PMK, Dubey DK, Kumar P, et al. 1996. Evaluation of CC-2 as a decontaminant at various time intervals against topically applied sulphur mustard in mice. *Indian J Pharmacol* 28:227-231.
- *Reed CI. 1918. The minimum concentration of mustard gas effective for man. Preliminary Report. War Department, Medical Division, Pharmacological Research Section, American University Experiment Station, Washington, DC. Report 318.
- Reed CI, Hopkins EF, Weyand CF. 1918. The minimum concentration of mustard gas effective for man. Final Report. War Department, Medical Division, Pharmacological Research Section, American University Experiment Station, Washington, DC. Report 329.
- Reed CI. 1920. The minimum concentration of dichlorethylsulfide (mustard gas) effective for man. *J Pharmacol Exp Ther* 15:77-80.
- Rees J, Harper P, Ellis F. 1991. Mustard gas casualties. *Lancet* 337:430.
- Reid BD, Walker IG. 1969. The response of mammalian cells to alkylating agents. II. On the mechanism of the removal of sulfur-mustard-induced cross-links. *Biochem Biophys Acta* 179:179-182.
- *Renshaw B. 1946. Mechanisms in production of cutaneous injuries by sulfur and nitrogen mustards. In: *Chemical warfare agents and related chemical problems. Vol. 4. Chapter 23, Washington, DC: U.S. Office of Scientific Research and Development, National Defense Research Committee, 479-518.*
- Renwick AG, Lazarus NR. 1998. Human variability and noncancer risk assessment-an analysis of the default uncertainty factor. *Regul Toxicol Pharmacol* 27:3-20.

9. REFERENCES

- Requena L, Requena C, Sanchez G, et al. 1988. Chemical warfare. Cutaneous lesions from mustard gas. *J Am Acad Dermatol* 19:529-536.
- *Rewick RT, Schumacher ML, Haynes DL. 1986. The UV absorption spectra of chemical agents and stimulants. *Appl Spectrosc* 40(2):152-156.
- *Ribeiro PL, Mitra RS, Bernstein IA. 1991. Assessment of the role of DNA damage and repair in the surviving cultures of rat cutaneous keratinocytes exposed to bis(2-chloroethyl) sulfide. *Toxicol Appl Pharmacol* 111(2):342-51.
- Rikimaru T, Nakamura M, Yano T, et al. 1991. Mediators, initiating the inflammatory response, released in organ culture by full-thickness human skin explants exposed to the irritant, sulfur mustard. *J Invest Dermatol* 96:888-897.
- Riviere JE, Brooks JD, Williams PL, et al. 1995. Toxicokinetics of tropical sulfur mustard penetration, disposition, and vascular toxicity in isolated perfused porcine skin. *Toxicol Appl Pharmacol* 135:25-34.
- Riviere JE, Monteiro-Riviere NA, Baynes RE, et al. 2002. Gulf war related exposure factors influencing topical absorption of ¹⁴C-permethrin. *Toxicol Lett* 135:61-71.
- Riviere JE, Smith CE, Budsaba K, et al. 2001. Use of methyl salicylate as a simulant to predict the percutaneous absorption of sulfur mustard. *J Appl Toxicol* 21:91-99.
- *Roberts JJ, Warwick GP. 1963. Studies of the mode of action of alkylating agents-VI. The metabolism of bis-β-chloroethylsulfide (mustard gas) and related compounds. *Biochem Pharmacol* 12:1239-1334.
- *Rohrbaugh DK, Yang YC. 1997. Liquid chromatography/electrospray mass spectrometry of mustard-related sulfonium ions. *J Mass Spectrom* 32:1247-1252.
- Rohrbaugh DK, Yang Y-C, Ward JR. 1988. Identification of degradation products of 2-chloroethyl ethyl sulfide by gas chromatography-mass spectrometry. *J Chromatogr* 447:165-169.
- Romano Jr JA, King JM. 2001. Psychological casualties resulting from chemical and biological weapons. *Mil Med* 166:21-22.
- Rommerim RL, Hackett PL. 1986. Evaluation of the teratogenic potential of the mustards. *Teratology* 33:70C.
- *Rosenblatt DH, Miller TA, Dacre JC, et al. 1975. Problem definition studies on potential environmental pollutants. II. Physical, chemical, toxicological, and biological properties of 16 substances. Fort Detrick, MD: U.S. Army Medical Bioengineering Research Development Laboratory. TR-7509.
- *Rosenblatt DH, Small MJ, Kimmell TA, et al. 1996. Background chemistry for warfare agents and decontamination processes in support of delisting waste streams at the U.S. Army Dugway Proving Ground, Utah.
- Rosenthal DS, Simbulan-Rosenthal CM, Liu WF, et al. 2001. PARP determines the mode of cell death in skin fibroblasts, but not keratinocytes, exposed to sulfur mustard. *J Invest Dermatol* 117:1566-1573.

9. REFERENCES

- *Rosenthal DS, Simbulan-Rosenthal CMG, Spoonde SIA, et al. 1998. Sulfur mustard induces markers of terminal differentiation and apoptosis in keratinocytes via a Ca^{2+} -calmodulin and capase-dependent pathway. *J Invest Dermatol* 111:64-71.
- *Rozmiarek H, Capizzi RL, Papirmeister B, et al. 1973. Mutagenic activity in somatic and germ cells following chronic inhalation of sulfur mustard. *Mutat Res Sect Environ Mutag Relat Sub* 21:13-14.
- Ruhl CM, Park SJ, Danisa O, et al. 1994. A serious skin sulfur mustard burn from an artillery shell. *J Emerg Med* 12(2):159-166.
- Safaei A, Saluti R, Kumar PV. 2001. Conjunctival dysplasia in soldiers exposed to mustard gas during the Iraq-Iran war. *Acta Cytol* 45(6):909-913.
- Safarinejad MR. 2001. Testicular effect of mustard gas. *Urology* 58:90-94.
- Safarinejad MR, Moosavi SA, Montazeri B. 2001. Ocular injuries caused by mustard gas: diagnosis, treatment, and medical defense. *Mil Med* 166(1):67-70.
- Sage GW, Howard PH. 1989. Environmental fate assessments of chemical agents: HD and VX. Chemical Hazard Assessment Division. Syracuse, NY: Syracuse Research Corporation.
- *Sandelowsky I, Simon GA, Barak R, et al. 1992. N^1 -(2-hydroxyethylthioethyl)-4-methyl imidazole (4-met-1-imid-thioglycol) in plasma and urine: A novel metabolite following dermal exposure to sulphur mustard. *Arch Toxicol* 66:296-297.
- *Sass S, Steger RJ. 1982. Gas chromatographic differentiation and estimation of some sulfur and nitrogen mustards using a multidetector technique. *J Chromatogr* 238:121-132.
- *Sass S, Stutz MH. 1981. Thin-layer chromatography of some sulfur and nitrogen mustards. *J Chromatogr* 213:173-176.
- Sasser LB, Cushing JA, Dacre JC. 1990. Dominant lethal effect of sulfur mustard in rats. *Toxicologist* 10(1):225.
- *Sasser LB, Cushing JA, Dacre JC. 1993. Dominant lethal study of sulfur mustard in male and female rats. *J Appl Toxicol* 13(5):359-368.
- *Sasser LB, Cushing JA, Dacre JC. 1996a. Two-generation reproduction study of sulfur mustard in rats. *Reprod Toxicol* 10(4):311-319.
- *Sasser LB, Miller RA, Kalkwarf DR, et al. 1996b. Subchronic toxicity evaluation of sulfur mustard in rats. *J Appl Toxicol* 16(1):5-13.
- *Sawyer TW. 1998. Characterization of the protective effects of L-nitroarginine methyl ester (L-NAME) against the toxicity of sulphur mustard in vitro. *Toxicology* 131:21-32.
- *Sawyer TW. 1999. Synergistic protective effects of selected arginine analogues against sulphur mustard toxicity in neuron culture. *Toxicol Appl Pharmacol* 155:169-176.
- Sawyer TW, Risk D. 2000. Effects of selected arginine analogues on sulphur mustard toxicity in human and hairless guinea pig skin keratinocytes. *Toxicol Appl Pharmacol* 163:75-85.

9. REFERENCES

- *Sawyer TW, Hancock JR, D'Agostino PA. 1998. L-Thiocitrulline: A potent protective agent against the toxicity of sulphur mustard *in vitro*. *Toxicol Appl Pharmacol* 151:340-346.
- *Sawyer TW, Lundy PM, Weiss MT. 1996. Protective effect of an inhibitor of nitric oxide synthase on sulphur mustard toxicity *in vitro*. *Toxicol Appl Pharmacol* 141:138-144.
- *Sax IN, Lewis RJ. 1989. Dangerous properties of industrial materials. Volume II. 7th ed. New York: Van Nostrand Reinhold, 477.
- *SBCCOM. 1999. Distilled mustard (HD). Material safety data sheet. U.S. Army Soldier and Biological Chemical Command. <http://in1.apgea.army.mil/RDA/msds/hd.htm>. July 12, 2001.
- *SBCCOM. 2001. M291 Skin decontamination kit. U.S. Army Soldier and Biological Chemical Command. <http://www.sbccom.apgea.army.mil/products/m291.htm>. March 14, 2001.
- *SBCCOM. 2002. Biological and chemical agent quick reference tables. U.S. Army Soldier and Biological Chemical Command. <http://www.sbccom.apgea.army.mil/products/m291.htm>. March 12, 2002.
- Schlager JJ, Hart BW. 2000. Stress gene activity in HepG2 cells after sulfur mustard exposure. *J Appl Toxicol* 20:395-405.
- *Scholz RO. 1945. Clinical and pathological studies of ocular mustard gas burns. *Fasciculus on Chemical Warfare Medicine. Volume I, Eye*. Washington, DC: National Research Council, Division of Medical Sciences, Committee on Treatment of Gas Casualties, 155-191.
- *Scholz RO, Woods AC. 1945. Relapsing and chronic mustard gas lesions of the eyes. *Fasciculus on Chemical Warfare Medicine. Volume I, Eye*. Washington, DC: National Research Council, Division of Medical Sciences, Committee on Treatment of Gas Casualties, 260-278.
- Scott D, Marshall RR. 1977. Relationships between DNA repair chromosome aberrations and survival in mammalian cells. *Mutat Res* 46:154-155.
- *Scott D, Fox M, Fox BW. 1974. The relationship between chromosomal aberrations, survival, and DNA repair in tumor cell lines of differential sensitivity to x-rays and sulphur mustard. *Mutat Res* 22:207-221.
- *Seidell A. 1941. Solubilities of organic compounds. A compilation of quantitative solubility data from the periodical literature. Vol. 11, 3rd Edition. New York: D. Van Nostrand Company, Inc. 241-242.
- *Setchell BP, Waites GMH. 1975. The blood-testis barrier. In: Creep RO, Astwood EB, Geiger SR, eds. *Handbook of physiology: Endocrinology V*. Washington, DC: American Physiological Society.
- Shahin S, Cullinane C, Gray PJ. 2001. Mitochondrial and nuclear DNA damage induced by sulphur mustard in keratinocytes. *Chem Biol Interact* 138:231-245.
- Shakil FA, Kuramoto A, Yamakido M, et al. 1993. Cytogenetic abnormalities of hematopoietic tissue in retired workers of the Ohkunojima poison gas factory. *Hiroshima J Med Sci* 42(4):159-165.

9. REFERENCES

- Sherer RA, Price PS. 1993. The effect of cooking processes on PCB levels in edible fish tissue. *Qual Assur Good Prac Reg Law* 2(4):396-407.
- Shih ML, Korte WD, Smith JR, et al. 1999a. Analysis and stability of the candidate sulfur mustard decontaminant S-330. *J Appl Toxicol* 19:S89-S95.
- Shih ML, Korte WD, Smith JR, et al. 1999b. Reactions of sulfides with S-330, a potential decontaminant of sulfur mustard in formulations. *J Appl Toxicol* 19:S83-S88.
- Shimkin MB, McClelland JN. 1949. Induced pulmonary tumors in mice. IV. Analysis of dose response data with methyl-cholanthrene. *J Natl Cancer Inst* 10:597-603.
- Sidell FR, Hurst CG. 1992. Clinical considerations in mustard poisoning. In: Somani AM ed. *Chemical warfare agents*. New York: Academic Press, 51-67.
- *Sinclair DC. 1948. The clinical features of mustard-gas poisoning in man. *Br Med J* 290-294.
- *Sinclair DC. 1950. Disability produced by exposure of skin to mustard-gas vapor. *Br Med J* 346-348.
- SIPRI. 1975. Delayed toxic effects of chemical warfare agents: A SIPRI monograph. Stockholm: Stockholm International Peace Research Institute.
- *SIPRI. 1971. The Problem of chemical and biological warfare: A study of the historical, technical, military, legal, and political aspects of CBW, and possible disarmament measures. Stockholm International Peace Research Institute. Stockholm, Sweden: Almqvist & Wiksell, 125-305.
- Sklyar VI, Mosolova TP, Kuchernko IA, et al. 1999. Anaerobic toxicity and biodegradability of hydrolysis products of chemical warfare agents. *Appl Biochem Biotech* 81:107-117.
- *Small MJ. 1984. Compounds formed from the chemical decontamination of HD, GB, and VX and their environmental fate. U.S. Army Research and Development Command. Frederick, Maryland.
- Smith CN, Lindsay CD. 2001a. Kojic acid reduces the cytotoxic effects of sulfur mustard on cultures containing human melanoma cells in vitro. *J Appl Toxicol* 21:435-440.
- Smith CN, Lindsay CD. 2001b. Stimulation of C32 and G361 melanoma cells using oleoyl acetyl glycerol and its effect on sulphur mustard cytotoxicity. *Hum Exp Toxicol* 20:418-425.
- *Smith JE, Fowler WK. 1985. Analytical methods development. Final report. Contract DAAK 11-82-C-0162.
- *Smith JR, Shih ML. 2001. Analysis of the degradation compounds of chemical warfare agents using liquid chromatography/mass spectrometry. *J Appl Toxicol* 21:S27-S34.
- Smith WJ, Dunn MA. 1991. Medical defense against blistering chemical warfare agents. *Arch Dermatol* 127:1207-1213.
- Smith WJ, Gross CL. 2002. Sulfur mustard medical countermeasures in a nuclear environment. *Mil Med* 167:101-102.

9. REFERENCES

- Smith C, Lindsay C, Upshall D. 1997. Presence of methenamine/glutathione mixtures reduces the cytotoxic effect of sulfur mustard on cultured SVK-14 human keratinocytes *in vitro*. *Hum Exp Toxicol* 16:247-253.
- Smith CN, Lindsay CD, Hambrook JL. 2001. An *in vitro* comparison of the cytotoxicity of sulphur mustard in melanoma and keratinocyte cell lines. *Hum Exp Toxicol* 20:483-490.
- *Smith HW, Clowes GHA, Marshall JV. 1919. On dichloroethylsulfide (mustard gas). IV. The mechanism of absorption by the skin. *J Pharmacol Exp Ther* 13:1-30.
- *Smith JE, Boyd WB, Mason DW. 1982. Depot Area Air Monitoring System and VX Study. Final Report. Contract DAAK 11-77-c-0087. Task orders 6 and 7. Report # ARCS-CR-82052.
- *Smith KJ, Graham JS, Hamilton TA, et al. 1997a. Immunohistochemical studies of basement membrane proteins and proliferation and apoptosis markers in sulfur mustard induced cutaneous lesions in weanling pigs. *J Dermatol Sci* 15:173-182.
- Smith KJ, Hamilton T, Smith WJ, et al. 1996. Immunohistochemical staining of basement membrane proteins after topical exposure of human skin to nitrogen and sulfur mustard. In: 1996 Medical defense bioscience review: Proceedings. Vol. II. 12-16 May. Aberdeen, MD; N: U.S. Army Medical Research Institute of Chemical Defense; 1093-1103.
- Smith KJ, Hurst CG, Moeller RB, et al. 1995. Sulfur mustard: Its continuing threat as a chemical warfare agent, the cutaneous lesions induced, progress in understanding its mechanism of action, its long-term health effects, and new developments for protection and therapy. *J Am Acad Dermatol* 32:765-778.
- *Smith KJ, Skelton HG, Martin JL, et al. 1997b. CO₂ laser debridement of sulphur mustard (bis-2-chloroethyl sulphide) induced cutaneous lesions accelerates production of a normal epidermis with elimination of cytological atypia. *Br J Dermatol* 137:590-594.
- *Smith PH, Nadkarni MV, Trams EG, et al. 1958. Distribution and fate of alkylating agents. *Ann NY Acad Sci* 68:834-852.
- *Smith WJ, Baskin SI, Filbert MG, et al. 2000. Editorial. Introduction to vesicant supplement of *Journal of Applied Toxicology*. *J Appl Toxicol* 20(Suppl 1):661.
- Smith WJ, Gross CL, Chan P, et al. 1990a. The use of human epidermal keratinocytes in culture as a model for studying the biochemical mechanisms of sulfur mustard toxicity. *Cell Biol Toxicol* 6(3):285-291.
- Smith WJ, Gross CL, Chan P, et al. 1990b. Use of human epidermal keratinocytes in culture as a model for studying the biochemical mechanisms of sulfur mustard toxicity. *Govt Reports Announcements & Index*. NTIS/AD-A230 926/8.
- *Smith WJ, Martens ME, Gross CL, et al. 1998. Biochemical and flow cytometric studies of the mechanism of action of sulfur mustard using human cells in culture. In: Salem H, Katz SA, eds. *Advances in animal alternatives for safety and efficacy testing*. Washington, DC: Taylor and Francis 99-101.
- *Smith WJ, Sanders KM, Ruddle SE, et al. 1993a. Cytometric analysis of DNA changes induced by sulfur mustard. *J Toxicol Cutaneous Ocul Toxicol* 12(4):337-347.

9. REFERENCES

- Smith WJ, Sanders KM, Ruddle SE, et al. 1993b. Cytometric analysis of DNA changes induced by sulfur mustard. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, VA: US Department of Commerce, 189-198.
- Snider TH, Blank JA, Reid FM, et al. 1996. Evaluation of the weanling pig as a model for sulfur mustard induced microvesication. In: 1996 Medical defense bioscience review: Proceedings. Vol. II. 12-16 May. Columbus, OH: Medical Research and Evaluation Facility, 1121-1128.
- Snyder RE, Schulte BE, Mangoba L, et al. 1983. Research and development of hazardous/toxic waste analytical screening procedures: Available field methods for rapid screening of hazardous waste materials at waste sites. Final report. Fort Detrick, Frederick, MD: U.S. Army Medical Research and Development Command. DAMD17-78-C-8075.
- Sokal JE, Lessman EM. 1960. Effects of cancer chemotherapeutic agents on the human fetus. *J Am Med Assoc* 172:1765-1771.
- *Solberg Y, Alcalay M, Belkin M. 1997. Ocular injury by mustard gas. *Surv Ophthalmol* 41(6):461-466.
- *Somani SM. 1992. Toxicokinetics and toxicodynamics of mustard. In: Chemical warfare agents. San Diego, CA: Academic Press Inc., 13-50.
- *Somani SM, Babu SR. 1989. Toxicodynamics of sulfur mustard. *Int J Clin Pharmacol Ther Toxicol* 27:419-435.
- *Sonbati EM, Auerbach C. 1960. The brood pattern for intragenic and intergenic changes after mustard gas treatment of *Drosophila* males. *Zeitschrift fur Vererbungslehre* 91:253-258.
- Spencer PS, Daniels J, Kisby G. 2000. Mustard warfare agents and related substances. In: Spencer PS, Schaumburg HH, Ludolph AC, eds. Experimental and clinical neurotoxicology. 2nd Ed. New York, NY: Oxford University Press, 837-848.
- Spoo JW, Monteiro-Riviere NA, Riviere JE. 1995. Detection of sulfur mustard bis (2-chloroethyl) sulfide and metabolites after topical application in the isolated perfused porcine flap. *Life Sci* 56(17):1385-1394.
- *Stein WH. 1946. Chemical reactions of sulfur and nitrogen mustards. Chemical warfare agents and related chemical problems. Parts III-IV. Summary technical report of Division 9, NRDC, 389-414.
- Stein WH, Moore S, Bergmann M. 1946. Chemical reactions of mustard gas and related compounds. *J Org Chem* 11:664-674.
- *Sterri SH. 1993. Effect of s-mustard on stress response. In: Proceedings of the medical defense bioscience review (1993) held in Baltimore, Maryland on 10-13 May 1993. Vol. 1. Springfield, MA: US Department of Commerce, 285-292.
- Stewart DL, Sass EJ, Fritz LK, et al. 1989. Toxicology studies on lewisite and sulfur mustard agents: Mutagenicity of sulfur mustard in the Salmonella histidine reversion assay. Final Report, PNL-6873. Pacific Northwest Laboratories, Richland, WA. ADA213102.

9. REFERENCES

- *Stutz MH, Sass S. 1969. Qualitative thin-layer chromatography of some mustards (HD, Q, HN-1, HN-2, HN-3, and T). Edgewood Arsenal technical report. Edgewood Arsenal, Maryland: Department of the Army, Edgewood Arsenal, Research Laboratories, Chemical Research Laboratories. EATR 4283.
- *Sugendran K, Jeevaratnam K, Vijayaraghavan R, et al. 1994. Therapeutic efficacy of saline and glucose-saline against dermally applied sulphur mustard intoxication in mice. *Def Sci J* 44(1):21-23.
- Sulzberger MB, Baer RL, Kanof A, et al. 1945. Skin sensitization to vesicant agents of chemical warfare. *Fasciculus on chemical warfare medicine*. Ithaca NY: Cornell University, 16-66.
- *Sulzberger MB, Baer RL, Kanof A, et al. 1947. Skin sensitization to vesicant agents of chemical warfare. *J Invest Dermatol* 8:365-393.
- Suryanarayana MVS, Shrivastava RK, Pandey D, et al. 2001. Simple time weighted average level air-monitoring method for sulfur mustard in work places. *J Chromatogr A* 907:229-234.
- SwRI. 2001. Ensuring environmental safety. Southwest Research Institute. <http://www.swri.com/3pubs/today/summer98/safe.htm>. March 17, 2001.
- Taher AA. 1992. Cleft lip and palate in Tehran. *Cleft Palate Craniofac J* 29:15-16.
- Takeshima Y, Inai K, Bennett WP, et al. 1994. Accelerated paper, p53 mutations in lung cancers from Japanese mustard gas workers. *Carcinogenesis* 15(10):2075-2079.
- ten Berge WF, Zwart A, Appelman LM. 1986. Concentration-time mortality response relationship of irritant and systematically acting vapours and gases. *J Hazard Mater* 13(3):301-309.
- *Thomsen AB, Eriksen J, Smidt-Nielsen K. 1998. Chronic neuropathic symptoms after exposure to mustard gas: A long-term investigation. *J Am Acad Dermatol* 39:187-190.
- *Tokuoka S, Hayashi Y, Inai K, et al. 1986. Early cancer and related lesions in the bronchial epithelium in former worker of mustard gas factory. *Acta Pathologica Japonica* 36:533-542.
- TRI00. 2003. Toxic Chemical Release Inventory. National Library of Medicine, National Toxicology Information Program, Bethesda, MD. <http://www.epa.gov/triexplorer/chemical.htm>. August, 2003.
- *Uhde G, Dunphy EB. 1946. The effect of oily drops on eyes exposed to mustard vapor. Intelligence Division Report No. 2981. Great Britain.
- *Uhrig HT. 1962. Some medical aspects of chemical agents. *J M A Alabama* 32:144-150.
- United States Army Chemical Activity WESTCOM. 1989. Environmental Laboratory Section Operations. SOP No ELS-3.
- *USACHPPM. 1999. Derivation of health-based environmental screening levels for chemical warfare agents. A technical evaluation. U.S. Army Center for Health Promotion and Preventive Medicine.
- *USACHPPM. 2000a. Evaluation of airborne exposure limits for sulfur mustard: occupational and general population exposure criteria. U.S. Army Center for Health Promotion and Preventive Medicine. Technical Report 47-EM-3767-01.

9. REFERENCES

- *USACHPPM. 2000b. Recommendations regarding chronic toxicological criteria for chemical warfare compounds. Memo for Office of the Surgeon General.
- *USACHPPM. 2003. Chemical Warfare Agent Standards Derivation. Environmental Medicine Program. U.S. Army Center for Health Promotion and Preventive Medicine. <http://chppm-www.apgea.army.mil/doem/EMP.asp>.
- U.S. Army. 1973. Medical aid for toxic agent victims. Washington, DC: Foreign Science and Technology Center, U.S. Army. FSTC-HT-23-1074-73.
- *U.S. Army. 1995. Treatment of chemical agent casualties and conventional military chemical injuries. Washington, DC: Department of the Army, FM 8-285. <http://www.adtdl.army.mil/cgi-bin/atdl.dll/query/info/FM+8-285>. March 22, 2001.
- *U.S. Army Dugway Proving Ground. 1985. Technical report: Toxic chemicals in the soil environment: Volume 2. Interactions of some toxic chemicals/chemical warfare agents and soils. Technical Analysis and Information Office, Dugway, Utah. 2-CO-210-049-041. ADA158215.
- *USCWR. 1999. Chemical weapons convention regulations. U.S. Chemical Weapons Convention Regulations. Department of Commerce, Bureau of Export Administration. Federal Register:64:250. 15 CFR Parts 710 through 722. December 30, 1999.
- *VA. 2001. Claims based on chronic effects of exposure. Veterans Affairs. Code of Federal Regulations. 38 CFR 3.316. <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html>. June 3, 2001.
- van Delft JHM, van Weert EJM, Schellekens MM, et al. 1991. The isolation of monoclonal antibodies selected for the detection of imidazole ring-opened N7-ethylguanine in purified DNA and in cells *in situ*. Cross reaction with methyl, 2-hydroxyethyl and sulphur mustard adducts. *Carcinogenesis* 12(6):1041-1049.
- van der Schans GP, Noort D, Mars-Groenendijk RH, et al. 2002. Immunochemical detection of sulfur mustard adducts with keratins in the stratum corneum of human skin. *Chem Res Toxicol* 15:21-25.
- *van der Schans GP, Scheffer AG, Mars-Groenendijk RH, et al. 1994. Immunochemical detection of adducts of sulfur mustard to DNA of calf thymus and human white blood cells. *Chem Res Toxicol* 7:408-413.
- *Venitt S. 1968. Inter strand cross link in the DNA of *Escherichia coli* B-R and B-S-1 and their removal by the resistant strain mustard gas mutagen. *Biochem Biophys Res Commun* 31:355-360.
- *Venkateswaran KS, Malhotra RC, Venkateswaran KS. 1994b. Degradation of bacteriophage λ deoxyribonucleic acid in vitro by sulfur. *Biochem Mol Biol Int* 34(3):429-435.
- *Venkateswaran KS, Neeraja V, Sugendran K, et al. 1994a. Dose dependent effects on lymphoid organs following a single dermal application of sulphur mustard in mice. *Hum Exp Toxicol* 13:247-251.
- *Vieira I, Sonnier M, Cresteil T. 1996. Developmental expression of *CYP2E1* in the human liver: Hypermethylation control of gene expression during the neonatal period. *Eur J Biochem* 238:476-483.
- VIEW Database. 1989. Agency for Toxic Substances and Disease Registry (ATSDR), Office of External Affairs, Exposure and Disease Registry Branch, Atlanta, GA. September 1989.

9. REFERENCES

- *Vijaayaraghavan R. 1997. Modifications of breathing pattern induced by inhaled sulphur mustard in mice. *Arch Toxicol* 71:157-164.
- *Vijayaraghavan R, Kumar P, Joshi U, et al. 2001. Prophylactic efficacy of amifostine and its analogues against sulphur mustard toxicity. *Toxicology* 163:83-91.
- *Vijayaraghavan R, Sugendran K, Pant SC, et al. 1991. Dermal intoxication of mice with bis(2-chloroethyl)sulphide and the protective effect of flavonoids. *Toxicology* 69:35-42.
- *Vogt RF Jr, Dannenberg AM Jr, Schofield BH. 1984. Pathogenesis of skin lesions caused by sulfur mustard. *Fundam Appl Toxicol* 4:71-83.
- *Vojvodic V, Milosavljevic Z, Boskovic B, et al. 1985. The protective effect of different drugs in rats poisoned by sulfur and nitrogen mustards. *Toxicol* 5:S160-S168.
- *Vycudilik W. 1985. Detection of mustard gas bis(2-chloroethyl) sulfide in urine. *Forensic Sci Int* 28:131-136.
- *Vycudilik W. 1987. Detection of bis(2-chloroethyl) sulfide (yperite) in urine by high resolution gas chromatography-mass spectrometry. *Forensic Sci Int* 35:67-71.
- Wada S, Nishimoto Y, Miyaniishi M, et al. 1962. Malignant respiratory tract neoplasms related to poison gas exposure. *Hiroshima J Med Sci* 11:81-91.
- *Wada S, Nishimoto Y, Niyanishi M, et al. 1968. Mustard gas as a cause of respiratory neoplasia in man. *Lancet* 1:1161-1163.
- *Walker IG, Thatcher CJ. 1968. Lethal effects of sulfur mustard on dividing mammalian cells. *Radiat Res* 34:110-127.
- Walker JE, Kaplan DL. 1992. Biological degradation of explosives and chemical agents. *Biodegradation* 3:369-385.
- *Wariishi H, Itoh N, Yoshida M, et al. 2002. Complete degradation of yperite, a chemical warfare agent, by basidiomycetes. *Biotechnol Lett* 24:501-505.
- *Warthin AS, Weller CV. 1919. *The medical aspects of mustard gas poisoning*. St. Louis: C.V. Mosby.
- Waters MD, Garrett NE, Covone-de Serres CM, et al. 1983. Genetic toxicology of some known or suspected human carcinogens. In: de Serres FJ, ed. *Chemical mutagens, principles and methods for their detection*. New York: Plenum Press, 261-341.
- *Watson AP, Griffin GD. 1992. Toxicity of vesicant agents scheduled for destruction by the chemical stockpile disposal program. *Environ Health Perspect* 98:259-280.
- Watson AP, Jones TD, Griffin GD. 1989. Sulfur mustard as a carcinogen application of relative potency analysis to the chemical warfare agents H, HD, and HT. *Regul Toxicol Pharmacol* 10:1-25.
- *Weiss A, Weiss B. 1975. [Carcinogenesis due to mustard gas exposure in man.] *Deutsche Medizinische Wochenschrift* 100:919-923. (German)

9. REFERENCES

- *West JR, Smith HW, Chasis H. 1948. Glomerular filtration rate, effective renal blood flow, and maximal tubular excretory capacity in infancy. *J Pediatr* 32:10-18.
- *Whitfield D. 1987. A literature review upon the toxicology, mechanism of action and treatment of sulphur and nitrogen mustard poisoning. Chemical Defence Establishment, Porton, Wilts, U.K., CDE Technical Note No. 840.
- Whitten B, ed. 1963. Kirk-Othmer encyclopedia of chemical technology. Gas warfare agents, nitrogen mustards. Vol. 7, 1st ed. New York, NY: The Interscience Encyclopedia, 127-130, 144-145.
- *Widdowson EM, Dickerson JWT. 1964. Chemical composition of the body. In: Comar CL, Bronner F, eds. Mineral metabolism: An advanced treatise. Volume II: The elements Part A. New York: Academic Press.
- Wilde PE, Upshall DG. 1994. Cysteine esters protect cultured rodent lung slices from sulphur mustard. *Hum Exp Toxicol* 13:743-748.
- *Willems JL. 1989. Clinical management of mustard gas casualties. *Annales Medicinæ Militaris Belgicæ*, 1989, Vol 3 Supp. Heymans Institute of Pharmacology, University of Ghent Medical School and Royal School of the Medical Services, Leopoldskazerne, B-900 Ghent, Belgium.
- Wils ERJ. 1987. Analysis of thiodiglycol in urine of victims of an alleged attack with mustard gas. Part II. Prins Maurits Laboratorium, Institute for Chemical and Technological Research, The Netherlands. PML 1987-31.
- Wils ERJ, Hulst AJ. 1992. The use of thermospray-liquid chromatography/mass spectrometry for the verification of chemical warfare agents. *Fresenius J Anal Chem* 342:749-758.
- *Wils ERJ, Hulst AG, De Jong AL, et al. 1985. Analysis of thiodiglycol in urine of victims of an alleged attack with mustard gas. *J Anal Toxicol* 9:254-277.
- *Wils ERJ, Hulst AG, de Jong AL. 1992. Determination of mustard gas and related vesicants in rubber and paint by gas chromatography-mass spectrometry. *J Chromatogr* 625:382-386.
- *Wils ERJ, Hulst AG, van Laar J. 1988. Analysis of thiodiglycol in urine of victims of an alleged attack with mustard gas part II. *J Anal Toxicol* 12:15-19.
- *Winternitz MC, Finney WP Jr. 1920. The pathology of mustard poisoning. In: Winternitz MC, ed. Pathology of war gas poisoning. New Haven, CT: Yale University Press, 101-111.
- Woessner JF, Dannenberg AM, Pula PJ, et al. 1990. Extracellular collagenase, proteoglycanase and products of their activity, released in organ culture by intact dermal inflammatory lesions produced by sulfur mustard. *J Invest Dermatol* 95:717-726.
- *Wormser U, Brodsky B, Green BS, et al. 1997. Protective effect of povidone-iodine ointment against skin lesions induced by sulphur and nitrogen mustards and by non-mustard vesicants. *Arch Toxicol* 71:165-170.
- Wormser U, Brodsky B, Reich R. 2002. Topical treatment with povidone iodine reduces nitrogen mustard-induced skin collagenolytic activity. *Arch Toxicol* 76:119-121.

9. REFERENCES

- *Wulf HC, Aasted A, Darre E, et al. 1985. Sister chromatid exchanges in fishermen exposed to leaking mustard gas shells. *Lancet* 1:690-691.
- *Yamada A. 1963. On the late injuries following occupational inhalation of mustard gas, with special references to carcinoma of the respiratory tract. *Acta Pathol Jpn* 13(3):131-155.
- *Yamada A. 1974. Patho-anatomical studies on occupational poisoning. *Tr Soc Path Jap* 63:17-61.
- Yamada A, Hirose F, Miyanishi M. 1953. An autopsy of bronchial carcinoma found in a patient succumbed to occupational mustard gas poisoning. *Gann* 44:216-219.
- Yamada A, Hirose F, Nagai M, et al. 1957. Five cases of cancer of the larynx found in persons who suffered from occupational mustard gas poisoning. *Gann* 48:366-368.
- *Yamakido M, Ishioka S, Hiyama K, et al. 1996. Former poison gas workers and cancer: Incidence and inhibition of tumor formation by treatment with biological response modifier N-CWS. *Environ Health Perspect* 104(Suppl. 3):485-488.
- Yamakido M, Ishioka S, Hozawa S, et al. 1992. Effect of nocardia rubra cell-wall skeleton on cancer prevention in humans. *Cancer Immunol Immunother* 34:389-392.
- *Yamakido M, Nishimoto Y, Shigenobu T, et al. 1985. Study of genetic effects of sulfur mustard gas on former workers of Ohkunojima poison gas factory and their offspring. *Hiroshima J Med Sci* 34:311-322.
- Yamakido M, Yanagida J, Ishioka S, et al. 1986. Immune functions of former poison gas workers. I. Mitogenic response of lymphocytes and serum factors. *Hiroshima J Med Sci* 35(2):117-126.
- Yanagida J, Hozawa S, Ishioka S, et al. 1988. Somatic mutation in peripheral lymphocytes of former workers at the Okunojima poison gas factory. *Jpn J Cancer Res* 79:1276-1283.
- *Yang YC, Baker JA, Ward JR. 1992. Decontamination of chemical warfare agents. *Chem Rev* 92:1729-1743.
- *Young L. 1947. Observations on the effects of mustard gas on the rat. *Canadian Journal of Research; Section E: Medical Sciences*, 25:141-151.
- *Yourick JJ, Clark CR, Mitcheltree LW. 1991. Niacinamide pretreatment reduces microvesicle formation in hairless guinea pigs cutaneously exposed to sulfur mustard. *Fundam Appl Toxicol* 17:533-542.
- *Yourick JJ, Dawson JS, Benton CD, et al. 1993. Pathogenesis of 2,2'-dichlorodiethyl sulfide in hairless guinea pigs. In: *Proceedings of the medical defense bioscience review (1993) held in Baltimore Maryland on 10-13, May 1993*. Vol. 1. Springfield, VA: US Department of Commerce, 21-30.
- Yourick JJ, Dawson JS, Mitcheltree LW. 1992. Sulfur mustard-induced microvesicitation in hairless guinea pigs: Effect of short-term niacinamide administration. *Toxicol Appl Pharmacol* 117:104-109.
- Yourick JJ, Dawson JS, Mitcheltree LW. 1995. Reduction of erythema in hairless guinea pigs after cutaneous sulfur mustard vapor exposure by pretreatment with niacinamide, promethazine and indomethacin. *J Appl Toxicol* 15:133-138.

9. REFERENCES

- *Zackaria M, Namdar M, Alavi S, et al. 1998. Development of hematologic malignancies and aplastic anemia following exposure to mustard gas. *Iran J Med Sci* 23(1&2):5.
- *Zhang B-Z, Wu Y. 1987. Toxicokinetics of sulfur mustard. *Chinese J Pharm and Toxicol* 1:188-194.
- Zhang P, Ng P, Caridha D, et al. 2002. Gene expressions in Jurkat cells poisoned by a sulphur mustard vesicant and the induction of apoptosis. *Br J Pharmacol* 137:245-252.
- *Zhang Z, Fine JD, Monteiro-Riviere NA. 1998. Uncein may be a potential target for sulfur mustard alkylation. *Toxicol Meth* 8:27-36.
- *Zhang Z, Riviere JE, Monteiro-Riviere A. 1995. Evaluation of protective effects of sodium thiosulfate, cysteine, niacinamide and indomethacin on sulfur mustard-treated isolated perfused porcine skin. *Chem Biol Int* 96:249-262.
- *Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12:29-34.