

[Skip to main content](#)



Cornell University

[New](#) [Program](#) [Learning](#) [Resources](#) [Events](#) [Maps](#) [&](#) [Stats](#) [Research](#) [Resources](#) [BCERF](#) [Research](#)



SPRECHER
INSTITUTE
for Comparative
Cancer Research

Pesticide Lindane and Breast Cancer Risk Bibliography

This bibliography is provided as a service to our readers. It is compiled from the entries in the [BCERF Environmental Risk Factors Bibliographic Database](#).

This bibliography is arranged topically. The topics include:

- [Review Articles](#)
- [Review Articles and Book Chapters on the Toxicology of Lindane and its Metabolites](#)
- [Studies in Humans](#)
 - [Epidemiological Studies on Breast Cancer Risk](#)
 - [Occupational Exposure and Cancer Risk](#)
 - [Childhood and Cancer Risk](#)
 - [Levels in Human Breast Milk, Adipose Tissue and Blood](#)
 - [Case Reports on Toxicity](#)
- [Studies in Experimental Animals](#)
 - [Long Term Exposure and Cancer Bioassays](#)
 - [Mutagenicity](#)
 - [Toxicity](#)
- [Estrogenicity and Hormone Disruption](#)
- [Reproductive Effects](#)
- [Effects on Cell Proliferation, Cell Cycle, and Cell Communication](#)
- [Immunotoxic Effects](#)
- [Exposure and Pharmacokinetics in Humans and Animals](#)
- [Lindane Residues in Food and Environmental Fate](#)

Review Articles

Ahlborg, U. G., Lipworth, L., Titus-Ernstoff, L., Hsieh, C.-C., Hanberg, A., Baron, J., Trichopoulos, D., and Adami, H.-O. (1995). Organochlorine compounds in relation to breast cancer, endometrial cancer, and endometriosis: An assessment of the biological and epidemiological evidence. *Critical Reviews in Toxicology* 25, 463-531.

ATSDR. (1994). Toxicological Profile for Lindane (Atlanta: Agency of Toxic Substances and Disease Registry, U.S. Public Health Service).

IARC. (1979). Hexachlorocyclohexane (Technical Lindane and Lindane). In *IARC Monographs on the Evaluation of Chemicals to Humans* (Lyon: IARC, World Health Organization), pp. 195-223.

IARC. (1987). Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42; Hexachlorocyclohexanes (Group 2B). In *IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans* (Lyon, France: IARC, World Health Organization), pp. 220-222.

IPCS. (1991). Lindane. In *Environmental Health Criteria 124: United Nations Environment Programme, International Labour Organisation, and the World Health Organization*, pp. 208.

IRIS. (1992). Lindane: National Library of Medicine; TOXNET Database; Integrated Risk Information Service).

Moutschen-Dahmen, J., Moutschen-Dahmen, M., and Degraeve, N. (1984). Mutagenicity, Carcinogenicity, and Teratogenicity of Insecticides. In *Mutagenicity, Carcinogenicity, and Teratogenicity of Industrial Pollutants*, M. Kirsch-Volders, ed.: Plenum Press, New York and London), pp. 127-202.

Review Articles and Book Chapters on the Toxicology of Lindane and its Metabolites

(NOTE: References include letters, commentary and editorials on these studies)

Herbst, M. (1976). Toxicology of Lindane. In *Lindane C.I.E.L.-Informations* (Lyon, pp. 43-66.

Herbst, M., and Bodenstern, G. (1974). Toxicology of Lindane. In *Lindane*, E. Ulmann, ed.: Centre International D'Etudes Du Lindane), pp. 59.

Meister, R. T. (1997). Pesticide Dictionary; Lindane. In *Farm Chemicals Handbook '97*, R. T. Meister, ed. (Willoughby, OH: Meister Publishing Company).

Montgomery, J. H. (1993). Lindane. In *Agrochemicals Desk Reference* (Boca Raton: Lewis Publishers), pp. 114-117.

NTIS. (1994). Toxicological Profile for Hexachlorocyclohexanes (Atlanta, GA: Agency for Toxic Substances and Disease Registry), pp. 199.

Sieper, H. (1972). Residues and Metabolism. In *Lindane: monograph of an insecticide*, E. Ulmann, ed. (Freiburg: Schillinger), pp. 79-107.

Solomon, L. M., Fahrner, L., and West, D. P. (1977). Gamma benzene hexachloride toxicity. *Archives of Dermatology* 113, 353-357.

USEPA. (1990). National Pesticide Survey: Summary Results of EPA's National Survey of Pesticides in Drinking Water Wells: United States Environmental Protection Agency, Office of Water, Office of Pesticides and Toxic Substances).

USEPA. (1990). Suspended, Canceled, and Restricted Pesticides (Washington, DC: United States Environmental Protection Agency, Pesticides and Toxic Substances).

Wang, G. M. (1984). Evaluation of pesticides which pose carcinogenicity potential in animal testing. *Regulatory Toxicology and Pharmacology* 4, 361-371.

Worthing, C., and Hance, R. J. (1991). Gamma-HCH. In *The Pesticide Manual, A World Compendium*, C. Worthing and R. J. Hance, eds. (Surrey, UK: The British Crop Protection Council), pp. 452-454.

Studies in Humans

Epidemiological Studies on Breast Cancer Risk

Adeshina, F., and Todd, E. L. (1990). Organochlorine compounds in human adipose tissue from North Texas. *Journal of Toxicology and Environmental Health* 29, 147-156.

Djordjevic, M., Hoffmann, D., Fan, J., Prokopczyk, B., Citron, M. L., and Stellman, S. D. (1994). Assessment of chlorinated pesticides and polychlorinated biphenyls in adipose breast tissue using a supercritical fluid extraction method. *Carcinogenesis* 15, 2581-2585.

Hoffman, W. (1996). Organochlorine compounds: risk of non-Hodgkin's lymphoma and breast cancer. *Archives of Environmental Health* 51, 189-193.

Hoffman, W. S., Adler, H., Fishbein, W. I., and Bauer, F. C. (1967). Relation of pesticide concentrations in fat to pathological changes in tissues. *Archives of Environmental Health* 15, 758-765.

Kogevinas, M., Saracci, R., Winkelmann, R., Johnson, E., Bertazzi, P. A., Bueno-de-Mesquita, H. B., Kauppinen, T., Littorin, M., Lynge, E., Neuberger, M., and Pearce, N. (1993). Cancer Incidence and mortality in women occupationally exposed to chlorophenoxy herbicides, chlorophenols, and dioxins. *Cancer Causes and Control* 4, 547-553.

Mussalo-Rauhamaa, H., Häsänen, E., Pyysalo, H., Antervo, K., Kauppila, R., and Pantzar, P. (1990). Occurrence of beta-hexachlorocyclohexane in breast cancer patients. *Cancer* 66, 2124-2128.

Radomski, J. L., Deichmann, W. B., and Clizer, E. E. (1968). Pesticide concentrations in the liver, brain and adipose tissue of terminal hospital patients. *Food Cosmetology and Toxicology* 6, 209-220.

Wassermann, M., Nogueira, D. P., Tomatis, L., Mirra, A. P., Shibata, H., Arie, G., Cucos, S., and Wassermann, D. (1976). Organochlorine compounds in neoplastic and adjacent apparently normal breast tissue. *Bulletin of Environmental Contamination and Toxicology* 15, 478-484.

Westin, J. B., and Richter, E. (1990). The Israeli breast-cancer anomaly. *Annals of the New York Academy of Sciences* 609, 269-279.

Xu-Qing, W., Peng-Yuan, G., Yuan-Zhen, L., and Chun-Ming, C. (1988). Studies on hexachlorocyclohexane and DDT contents in human cerumen and their relationships to cancer mortality. *Biomedical and Environmental Sciences* 1, 138-151.

Occupational Exposure and Cancer Risk

Angerer, J., Maab, R., and Heinrich, R. (1983). Occupational exposure to hexachlorocyclohexane. *International Archives of Occupational and Environmental Health* 52, 59-67.

Axelsson, O. (1980). *Chlorinated Hydrocarbons and Cancer: Epidemiologic Aspects*: Hemisphere Publishing Corporation), pp. 1254-1251.

Baumann, K., Angerer, J., Heinrich, R., and Lehnert, G. (1980). Occupational exposure to hexachlorocyclohexane. *International Archives of Occupational and Environmental Health* 47, 119-127.

Brown, L. M., Blair, A., Gibson, R., Everett, G. D., Cantor, K. P., Schumann, L. M., Burmeister, L. F., Van Lier, S. F., and Dick, F. (1990). Pesticide exposures and other agricultural risk factors for leukemia among men in Iowa and Minnesota. *Cancer Research* 50, 6585-6591.

Cantor, K., Everett, G., Blair, A., Gibson, R., Schuman, L., and Isacson, P. (1985). Farming and non-Hodgkin's lymphoma (abstract). *American Journal of Epidemiology* 122, 535.

Cantor, K. P., Blair, A., Brown, L. M., Burmeister, L. F., and Everett, G. (1993). Re: Pesticides and other agricultural risk factors for non-Hodgkin's lymphoma among men in Iowa and Minnesota [letter]. *Cancer Research* 53, 2421.

Czegledi-Janko, G., and Avar, P. (1970). Occupational exposure to lindane: clinical and laboratory findings. *British Journal of Industrial Medicine* 27, 283-286.

Dich, J., Zahm, S. H., Hanberg, A., and Adami, H.-O. (1997). Pesticides and cancer. *Cancer Causes and Control* 8, 420-443.

Eriksson, M., Hardell, L., Berg, N. O., Möller, T., and Axelsson, O. (1981). Soft-tissue sarcomas and exposure to chemical substances: a case-referent study. *British Journal of Industrial Medicine* 38, 27-33.

Hay, A., and Singer, C. R. J. (1991). Wood preservatives, solvents, and thrombocytopenic purpura (letter). *Lancet* 338, 766.

Jedlicka, V. L., Hermanska, Z., Smida, I., and Kouba, A. (1958). Paramyeloblastic leukemia appearing simultaneously in two blood cousins after simultaneous contact with gammexane (hexachlorocyclohexane). *Acta Medica Scandinavica* 161, 447-451.

Kiraly, J., Szentesi, I., Ruzicska, M., and Czeize, A. (1979). Chromosome studies in workers producing organophosphate insecticides. *Archives of Environmental Contamination and Toxicology* 8, 309-319.

Kogevinas, M., Kauppinen, T., Winkelmann, R., Becher, H., Bertazzi, P. A., Bueno-de-Mesquita, H. B., Coggon, D., Green, L., Johnson, E., Littorin, M., Lynge, E., Marlow, D. A., Mathews, J. D., Neuberger, M., Benn, T., Pannett, B., Pearce, N., and Saracci, R. (1995). Soft tissue sarcoma and non-Hodgkin's lymphoma in workers exposed to phenoxy herbicides, chlorophenols, and dioxins: two nested case-control studies. *Epidemiology* 6, 396-402.

Samuels, A. J., and Milby, T. H. (1971). Human exposure to lindane. *Journal of Occupational Medicine* 13, 147-151.

Zahm, S. H., Weisenburger, D. D., Babbitt, P. A., Saal, R. C., Cantor, K. P., and Blair, A. (1988). A case-control study of non-Hodgkin's lymphoma and agricultural factors in eastern Nebraska [abstract]. *American Journal of Epidemiology* 128, 901.

Childhood and Cancer Risk

Caldwell, G. G., Cannon, S. B., Pratt, C. B., and Arthur, R. D. (1981). Serum pesticide levels in patients with childhood colorectal carcinoma. *Cancer* 48, 774-778.

Davis, J. R., Brownson, R. C., and Garcia, R. (1992). Family pesticide use in the home, garden, orchard, and yard. *Archives of Environmental Contamination and Toxicology* 22, 260-266.

Davis, J. R., Brownson, R. C., Garcia, R., Bentz, B. J., and Turner, A. (1993). Family Pesticide use and childhood brain cancer. *Archives of Environmental Contamination and Toxicology* 24, 87-92.

Sesline, D. H. (1994). The effects of prenatal exposure to pesticides. In *Prenatal Exposures to Toxicants: Developmental Consequences* (Baltimore: Johns Hopkins University Press), pp. 223-248.

Levels in Human Breast Milk, Adipose Tissue and Blood

- Adeshina, F., and Todd, E. L. (1990). Organochlorine compounds in human adipose tissue from North Texas. *Journal of Toxicology and Environmental Health* 29, 147-156.
- Astolfi, E., Fernandez, J. C. G., Juarez, M. B., and Piacentino, H. (1973). Chlorinated Pesticides Found in the Fat of Children in the Argentine Republic. In *Papers of the 8th Inter-America Conference on Toxicology and Occupational Medicine, Pesticides and the Environment: Continuing Controversy*, W. B. Deichmann, ed. (New York, pp. 233-243.
- Brady, M. N., and Siyali, D. S. (1972). Hexachlorobenzene in human body fat. *Medical Journal of Australia* 1, 158-161.
- Chandra, H., Pangtey, B. S., Modak, D. P., Singh, K. P., Gupta, B. N., Bharti, R. S., and Srivastava, S. P. (1992). Biological monitoring of chlorinated pesticides among exposed workers of mango orchards: a case study in tropical climate. *Bulletin of Environmental Contamination and Toxicology* 48, 295-301.
- Curley, A., and Kimbrough, R. (1969). Chlorinated hydrocarbon insecticides in plasma and milk of pregnant and lactating women. *Archives of Environmental Health* 18, 156-164.
- D'Ercole, A. J., Arthur, R. D., Cain, J. D., and Barrentine, B. F. (1976). Insecticide exposure of mothers and newborns in a rural agricultural area. *Pediatrics* 57, 869-874.
- Davidow, B., and Frawley, J. P. (1951). Tissue distribution, accumulation and elimination of the isomers of benzene hexachloride. *Proceedings of the Society of Experimental Biology (NY)* 76, 780-783.
- Deichmann, M. B., and Mac Donald, W. E. (1976). Liver cancer deaths in the continental USA from 1930-1972. *American Industrial Hygiene Association Journal* 37, 495-498.
- Dillon, J.-C., Martin, G. B., and O'Brien, H. T. (1981). Pesticide residues in human milk. *Food Cosmetology and Toxicology* 19, 437-442.
- Djordjevic, M., Hoffmann, D., Fan, J., Prokopczyk, B., Citron, M. L., and Stellman, S. D. (1994). Assessment of chlorinated pesticides and polychlorinated biphenyls in adipose breast tissue using a supercritical fluid extraction method. *Carcinogenesis* 15, 2581-2585.
- Flesch-Janys, D., Berger, J., Konietzko, J., Manz, A., Nagel, S., and Wahrendorf, J. (1992). Quantification of exposure to dioxins and furans in a cohort of workers of a herbicide producing plant in Hamburg, FRG. *Chemosphere* 25, 1021-1027.
- Griffith, F. D., Jr., and Blanke, R. V. (1975). Blood organochlorine pesticide levels in Virginia residents. *Pesticides Monitoring Journal* 8, 219-224.
- Hoffman, W. S., Adler, H., Fishbein, W. I., and Bauer, F. C. (1967). Relation of pesticide concentrations in fat to pathological changes in tissues. *Archives of Environmental Health* 15, 758-765.
- Kashyap, R., Iyer, L. R., Singh, M. M., and Kashyap, S. K. (1993). Evaluation of human exposure to the persistent insecticides DDT and HCH in Ahmedabad, India. *Journal of Analytical Toxicology* 17, 211-214.
- Klein, D., Dillon, J. C., Jirou-Najou, J. L., Gagey, M. J., and Debry, G. (1986). Cinetique D'elimination des composes organochlores au cours de la premiere semaine d'allaitement maternel. *Food and Chemical Toxicology* 24, 869-873.
- Knowles, J. A. (1974). Breast milk: A source of more than nutrition for the neonate. *Clinical Toxicology* 7, 69-82.
- Lofroth, G. (1968). Pesticides and catastrophe. *New Scientist* 40, 567-568.
- Longo, L. D. (1980). Environmental pollution and pregnancy: risks and uncertainties for the fetus and infant. *American Journal of Obstetrics and Gynecology* 137, 162-173.
- MacCuaig, R. D. (1976). The occurrence of insecticides in the blood of staff of a locust control organization. *Bulletin of Environmental Contamination and Toxicology* 15, 162-170.
- Macy, A. M., Kutchinsky, L. E., and Wislocki, A. (1979). A comparative cross sectional study of pesticide residue in human breast milk, cow's milk, canned milk, and infant formula in Colorado. *Clinical Toxicology* 15, 467-498.
- Mes, J., Davies, D. J., and Turton, D. (1985). Environmental contaminants in human fat: a comparison between accidental and non-accidental causes of death. *Ecotoxicology and Environmental Safety* 10, 70-74.
- Niessen, K. H., Ramolla, J., Binder, M., Brugmann, G., and Hofmann, U. (1984). Chlorinated hydrocarbons in adipose tissue of infants and toddlers: inventory and studies on their association with intake of mother's milk. *European Journal of Pediatrics* 142, 238-243.

Radomski, J. L., Deichmann, W. B., and Clizer, E. E. (1968). Pesticide concentrations in the liver, brain and adipose tissue of terminal hospital patients. *Food Cosmetology and Toxicology* 6, 209-220.

Sieper, H. (1972). Residues and metabolism. In *Lindane: monograph of an insecticide*, E. Ulmann, ed. (Freiburg: Schillinger), pp. 79-107.

Solly, S. R. B., and Shanks, V. (1974). Polychlorinated biphenyls and organochlorine pesticides in human fat in New Zealand. *New Zealand Journal of Science* 17, 535-544.

Somogyi, A., and Beck, H. (1993). Nurturing and breast-feeding: Exposure to chemicals in breast milk. *Environmental Health Perspectives Supplements* 101, 45-52.

Sonawane, B. R. (1995). Chemical contaminants in human milk: An overview. *Environmental Health Perspectives* 103(Suppl 6), 197-205.

Stockton, D. L., and Paller, A. S. (1990). Drug administration to the pregnant or lactating woman: a reference guide for dermatologists. *Journal of the American Academy of Dermatology* 23, 87-103.

Szokolay, A., Rosival, L., Uhnak, J., and Madaric, A. (1977). Dynamics of benzene hexachloride (BHC) isomers and other chlorinated pesticides in the food chain and in human fat. *Ecotoxicology and Environmental Safety* 1, 349-359.

Wassermann, M., Nogueira, D. P., Tomatis, L., Mirra, A. P., Shibata, H., Arie, G., Cucos, S., and Wassermann, D. (1976). Organochlorine compounds in neoplastic and adjacent apparently normal breast tissue. *Bulletin of Environmental Contamination and Toxicology* 15, 478-484.

Westin, J. B., and Richter, E. (1990). The Israeli breast-cancer anomaly. *Annals of the New York Academy of Sciences* 609, 269-279.

Reports on Toxicity

Scabicides/Pediculicides. In *Drug Facts and Comparisons*. 1992 (A Wolters Kluwer Company, St. Louis).

C. R. R. (1981). Lindane activities. In *Veterinary and Human Toxicology* (comment), pp. 66.

Barkwell, R., and Shields, S. (1997). Deaths associated with ivermectin treatment of scabies. *The Lancet* 349, 1144-1145.

Barnes, J. M. (1976). Hazards to People. In *Pesticides and Human Welfare*, D. L. Gunn and J. G. R. Stevens, eds.: Oxford University Press, pp. 181-192.

Best, W. R. (1963). Drug associated blood dyscrasias. *Journal of the American Medical Association* 185, 140-144.

Duffard, A. M. E., and Duffard, R. (1996). Behavioral toxicology, risk assessment, and chlorinated hydrocarbons. *Environmental Health Perspectives Suppl.* 2, 353-360.

Fleming, L., Mann, J. B., Bean, J., Briggie, T., and Sanchez-Ramos, J. R. (1994). Parkinson's disease and brain levels of organochlorine pesticides. *American Neurological Association* 36, 100-103.

Gaines, T. B. (1969). Acute toxicity of pesticides. *Toxicology and Applied Pharmacology* 14, 515-534.

Hans, R. J. (1976). Aplastic anemia associated with γ -benzene hexachloride. *Journal of the American Medical Association* 236, 1009-1010.

Lisiewicz, J. (1993). Immunotoxic and hematotoxic effects of occupational exposures. *Folia Medica Cracoviensia* 34, 29-47.

Lofroth, G. (1968). Pesticides and catastrophe. *New Scientist* 40, 567-568.

Loge, J. P. (1965). Aplastic anemia following exposure to benzene hexachloride (lindane). *Journal of the American Medical Association* 193, 104-114.

Munk, Z. M., and Nantel, A. (1977). Acute lindane poisoning with development of muscle necrosis. *Canadian Medical Association Journal* 117, 1050-1054.

Nigam, K. K., Karnik, A. B., Cattopadhyay, P., Lakkad, B. C., Venkaiah, K., and Kashyap, S. K. (1993). Clinical and biochemical investigations to evolve early diagnosis in workers involved in the manufacture of hexachlorocyclohexane. *International Archives of Occupational and Environmental Health* 65, S193-S196.

Rathus, E. M. (1967). Agricultural poisons. *The Medical Journal of Australia* 2, 549-550.

Rayner, M. D., Popper, J. S., Carvalho, E. W., and Hurov, R. (1972). Hyporeflexia in workers chronically exposed to organophosphate insecticides. *Research Communications in Chemical Pathology and Pharmacology* 4, 595-603.

- Sanchez-Medal, L., Castanedo, J. P., and Garcia-Rojas, F. (1963). Insecticides and aplastic anemia. *New England Journal of Medicine* 269, 1365-1367.
- Scheele, J., and Niessen, K.-H. (1996). Chlorinated hydrocarbons in human bone marrow of healthy individuals and leukemia patients. *Archives of Environmental Health* 51, 22-25.
- Schnelle, G. B. (1970). Flea collar safety (letter). *Journal of American Veterinary Medical Association* 156, 393-402.
- Sidi, Y., Kiltchevsky, E., Shaklai, M., and Pinkhas, J. (1983). Acute myeloblastic leukemia and insecticide. *New York State Journal of Medicine* 83, 161.
- Srivastava, A. K., Gupta, B. N., Bihari, V., Mathur, N., Pangtey, B. S., and Bharti, R. S. (1995). Chronic effects of hexachlorocyclohexane exposure: clinical, hematologic and electrocardiographic studies. *Veterinary and Human Toxicology* 37, 302-305.
- Stormont, R. T., and Conley, B. E. (1951). Toxic effects of technical benzene hexachloride and its principal isomers. *Journal of the American Medical Association* 147, 571-574.
- Voytek, P. E. (1983). Reproduction: The New Frontier in Occupational and Environmental Health Research. In *Annual RMCOEH Occupational and Environmental Health Conference*, J. E. Lockey, G. K. Lemasters and W. R. Keye, eds. (Park City, Utah: Alan R. Liss, NY), pp. 429-438.
- West, I. (1967). Lindane and hematologic reactions. *Archives of Environmental Health* 15, 97-101.
- Woodliff, H. J., Connor, P. M., and Scopa, J. (1966). Aplastic anemia associated with insecticides. *The Medical Journal of Australia* 1, 628-629.
- Zavon, M. R. (1976). Association vs causation (letter). *Journal of the American Medical Association* 235, 1841.
- Zesch, A. (1986). Short and long-term risks of topical drugs. *British Journal of Dermatology* 115, 63-70.

Studies in Experimental Animals

Long Term Exposure and Cancer Bioassays

- Angsubhakorn, S., Bhamarapavati, N., Pradermwong, A., Im-Emgamol, N., and Sahaphong, S. (1989). Minimal dose and time protection by lindane (g-isomer of 1,2,3,4,5,6-hexachlorocyclohexane) against liver tumors induced by aflatoxin B1. *International Journal of Cancer* 43, 531-534.
- Hanada, M., Yutani, C., and Miyaji, T. (1973). Induction of hepatoma in mice by benzene hexachloride. *Japanese Journal of Cancer Research* 64, 511-513.
- IARC. (1979). Hexachlorocyclohexane (Technical Lindane and Lindane). In *IARC Monographs on the Evaluation of Chemicals to Humans* (Lyon: IARC, World Health Organization), pp. 195-223.
- Ito, N., Nagasaki, H., Aoe, H., Sugihara, S., Miyata, Y., Arai, M., and Shirai, T. (1975). Development of hepatocellular carcinomas in rats treated with benzene hexachloride. *Journal of the National Cancer Institute* 54, 801-805.
- Ito, N., Nagasaki, H., and Arai, M. (1973). Interactions of Liver Tumorigenesis in Mice Treated with Technical Polychlorinated Biphenyls (PCBs) and Benzene Hexachloride (BHC). In *New Methods in Environmental Chemistry and Ecological Chemistry*, F. Coulston, F. Korte and M. Goto, eds. (Tokyo: International Academy Printing Company, Tokyo), pp. 141-147.
- Ito, N., Nagasaki, H., Arai, M., Makiura, S., Sugihara, S., and Hirao, K. (1973). Histopathologic studies on liver tumorigenesis induced in mice by technical polychlorinated biphenyls and its promoting effect on liver tumors induced by benzene hexachloride. *Journal of the National Cancer Institute* 51, 1637-1646.
- Ito, N., Nagasaki, H., Arai, M., Sugihara, S., and Makiura, S. (1973). Histologic and ultrastructural studies on the hepatocarcinogenicity of benzene hexachloride in mice. *Journal of the National Cancer Institute* 51, 817-826.
- Kandarkar, S. V., Munir, K. M., Bhide, S. V., and Sirsat, S. M. (1983). Ultrastructural study of hepatocellular carcinoma induced by hexachlorocyclohexane. *Indian Journal of Medical Research* 78, 155-161.
- Kashyap, S. K., Gupta, S. K., Bhatt, H. V., and Shah, M. P. (1976). Acute oral toxicity of hexachlorocyclohexane (BHC) in albino rats. *Indian Journal of Medical Research* 64, 768-771.
- Kashyap, S. K., Nigam, S. K., Gupta, R. C., Karnik, A. B., and Chatterjee, S. K. (1979). Carcinogenicity of hexachlorocyclohexane (BHC) in pure inbred Swiss mice. *Journal of Environmental Science and Health B14*, 305-318.

- Munir, K. M., and Bhide, S. V. (1984). Deviations in ornithine-related metabolism during hexachlorocyclohexane-induced hepatocarcinogenesis in mice: evidence for conversion of glutamate to ornithine. *Environmental Research* 35, 180-187.
- Munir, K. M., Soman, C. S., and Bhide, S. V. (1983). Hexachlorocyclohexane-induced tumorigenicity in mice under experimental conditions. *Tumorigenesis* 69, 383-386.
- Nagasaki, H., Kawabata, H., Miyata, Y., Inoue, K., Hirao, K., Aoe, H., and Ito, N. (1975). Effect of various factors on induction of liver tumors in animals by the α -isomer of benzene hexachloride. *Japanese Journal of Cancer Research* 66, 185-191.
- Nagasaki, H., Tomii, S., Mega, T., Marugami, M., and Ito, N. (1971). Development of hepatomas in mice treated with benzene hexachloride. *Japanese Journal of Cancer Research* 62, 431.
- Nagasaki, H., Tomii, S., Mega, T., Marugami, M., and Ito, N. (1972). Heptacarcinogenic effect of α -, β -, γ -, and δ - isomers of benzene hexachloride in mice (letter). *Japanese Journal of Cancer Research* 63, 393.
- NCI. (1977). Bioassay of Lindane for Possible Carcinogenicity (CAS No 58-89-9): National Cancer Institute).
- Nigam, S. K., Lakkad, B. C., Karnik, A. B., and Thakore, K. N. (1984). Ultrastructural changes in liver of mice exposed to hexachlorocyclohexane. *Indian Journal of Experimental Biology* 22, 199-204.
- Nigam, S. K., Thakore, K. N., Karnik, A. B., and Lakkad, B. C. (1984). Hepatic glycogen, iron distribution and histopathological alterations in mice exposed to hexachlorocyclohexane. *Indian Journal of Medical Research* 79, 571-579.
- NTP. (1977). TR-14, Bioassay of Lindane for Possible Carcinogenicity (CAS No. 58-89-9) abstract (URL = <<http://ntp-server.niehs.nih.gov/htdocs/LT-studies/TR0014.html>>: National Toxicology Program).
- Orr, J. W. (1948). Absence of carcinogenic activity of benzene hexachloride (Gammexane). *Nature* 162.
- Reuber, M. D. (1980). Carcinogenicity of benzene hexachloride and its isomers. *Journal of Environmental Pathology and Toxicology* 4, 355-372.
- Reuber, M. D. (1979). Carcinogenicity of lindane. *Environmental Research* 19, 460-481.
- Reuber, M. D. (1978). Carcinomas and other lesions of the liver in mice ingesting organochlorine pesticides. *Clinical Toxicology* 13, 231-256.
- Rivett, K. F., Chesterman, H., Kellett, D. N., Newman, A. J., and Worden, A. N. (1978). Effects of feeding lindane to dogs for periods of up to 2 years. *Toxicology* 9, 273-289.
- Theiss, J. C., Stoner, G. D., Shimkin, M. B., and Weisburger, E. K. (1977). Test for carcinogenicity of organic contaminants of United States drinking waters by pulmonary tumor response in strain A mice. *Cancer Research* 37, 2714-2720.
- Thorpe, E., and Walker, A. I. T. (1973). The toxicology of dieldrin(HEOD*). II. Comparative long-term oral toxicity studies in mice with dieldrin, DDT, phenobarbitone, β -BHC and γ -BHC. *Food Cosmetology and Toxicology* 11, 433-442.
- Vesselinovitch, S. D., and Carlborg, F. W. (1983). Lindane bioassay studies and human cancer risk assessment. *Toxicologic Pathology* 11, 12-22.
- Weisse, I., and Herbst, M. (1977). Carcinogenicity study of lindane in the mouse. *Toxicology* 7, 233-238.
- Wolff, G. (1993). Multiple levels of response in carcinogenicity bioassays: regulatory variation among viable yellow (Avy/-) mice. *Journal of Experimental Animal Science* 35, 221-231.
- Wolff, G. L. (1990). Obesity, Cancer and the Viable yellow Avy/a Mouse. In *Progress in obesity research*, Y. e. a. Oomura, ed.: John Libbey & Co.), pp. 445-448.
- Wolff, G. L., Roberts, D. W., Morrissey, R. L., Greenman, D. L., Allen, R. R., Campbell, W. L., Bergman, H., Nesnow, S., and Frith, C. (1987). Tumorigenic response to lindane in mice: potentiation by a dominant mutation. *Carcinogenesis* 8, 1889-1897.

Mutagenicity

- Ahmed, F. E., Hart, R. W., and Lewis, N. J. (1977). Pesticide induced DNA damage and its repair in cultured human cells. *Mutation Research* 42, 161-174.
- Albertini, S., Friederich, U., Holderegger, C., and Wurgler, F. E. (1988). The in vitro porcine brain tubulin assembly assay: effects of a genotoxic carcinogen (aflatoxin B₁), eight tumor promoters and nine miscellaneous substances. *Mutation Research* 201, 283-292.

- Ashby, J., and Tennant, R. W. (1988). Chemical structure, Salmonella mutagenicity and extent of carcinogenicity as indicators of genotoxic carcinogenesis among 222 chemicals tested in rodents by the U.S. NCI/NTP. *Mutation Research* 204, 17-115.
- Ashwood-Smith, M. J. (1972). Mutagenicity of dichlorvos. *Nature* 240, 418-420.
- Benes, V., and Sram, R. (1969). Mutagenic activity of some pesticides in *Drosophila melanogaster*. *Industrial Medicine* 38, 50-52.
- Bhunya, S. P., and Jena, G. B. (1992). Genotoxic potential of the organochlorine insecticide lindane (γ -HCH): an in vivo study in chicks. *Mutation Research* 272, 175-181.
- Dearfield, K. L., Satck, H. F., Quest, J. A., Whiting, R. J., and Waters, M. D. (1993). A survey of EPA/OPP and open literature data on selected pesticide chemicals tested for mutagenicity. *Mutation Research* 297, 197-233.
- Dzwonkowska, A., and Hubner, H. (1986). Induction of chromosomal aberrations in the Syrian hamster by insecticides tested in vivo. *Archives of Toxicology* 58, 152-156.
- Ghosh, S. K., Doctor, P. B., Bhatnagar, V. K., Yadav, S., Derasari, A., Kulkarni, P. K., and Kashyap, S. K. (1997). Response of three microbial test systems to pesticides. *Bulletin of Environmental Contamination and Toxicology* 58, 482-488.
- Glatt, H. R., and Oesch, F. (1987). Species differences in enzymes controlling reactive epoxides. *Archives of Toxicology Supplement* 10, 111-124.
- Gopaldaswamy, U. V., and Nair, C. K. K. (1992). DNA binding and mutagenicity of lindane and its metabolites. *Bulletin of Environmental Contamination and Toxicology* 49, 300-305.
- Hassoun, E., Bagchi, M., Bagchi, D., and Stohs, S. J. (1993). Comparative studies on lipid peroxidation and DNA-strand breaks induced by lindane, DDT, chlordane and endrin in rats. *Comparative Biochemistry and Physiology* 104C, 427-431.
- Herbst, M. (1976). Toxicology of Lindane. In *Lindane C.I.E.L.-Informations* (Lyon, pp. 43-66.
- Herbst, M., and Bodenstern, G. (1974). Toxicology of Lindane. In *Lindane*, E. Ulmann, ed.: Centre International D'Etudes Du Lindane), pp. 59.
- Houk, V. S., and DeMarini, D. M. (1987). Induction of prophage lambda by chlorinated pesticides. *Mutation Research* 182, 193-201.
- IARC. (1987). Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42; Hexachlorocyclohexanes (Group 2B). In *IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans* (Lyon, France: IARC, World Health Organization), pp. 220-222.
- IPCS. (1991). Lindane. In *Environmental Health Criteria 124: United Nations Environment Programme, International Labour Organisation, and the World Health Organization*), pp. 208.
- Ishidate, M., and Odashima, S. (1977). Chromosome tests with 134 compounds on Chinese hamster cells in vitro-a screening for chemical carcinogens. *Mutation Research* 48, 337-354.
- Iverson, F., Ryan, J. J., Lizotte, R., and Hierlihy, S. L. (1984). In vivo and in vitro binding of α - and γ -hexachlorocyclohexane to mouse liver macromolecules. *Toxicology Letters* 20, 331-335.
- Jenssen, D., and Ramel, C. (1980). The micronucleus test as part of a short-term mutagenicity test program for the prediction of carcinogenicity evaluated by 143 agents tested. *Mutation Research* 75, 191-202.
- Junqueira, V. B. C., Koch, O. R., Arisi, A. C. M., Fuzaro, A. P., Azzalis, L. A., Barros, S. B. M., Cravero, A., Farre, S., and Videla, L. A. (1997). Regression of morphological alterations and oxidative stress-related parameters after acute lindane-induced hepatotoxicity in rats. *Toxicology* 117, 199-205.
- Kiraly, J., Szentesi, I., Ruzicska, M., and Czeize, A. (1979). Chromosome studies in workers producing organophosphate insecticides. *Archives of Environmental Contamination and Toxicology* 8, 309-319.
- Kraybill, H. F. (1980). Evaluation of public health aspects of carcinogenic/mutagenic biorefractories in drinking water. *Preventative Medicine* 9, 212-218.
- Lutz, W. K. (1984). Structural characteristics of compounds that can be activated to chemically reactive metabolites: use for a prediction of a carcinogenic potential. *Archives of Toxicology Suppl.* 7, 194-207.
- Moutschen-Dahmen, J., Moutschen-Dahmen, M., and Degraeve, N. (1984). Mutagenicity, Carcinogenicity, and

- Teratogenicity of Insecticides. In *Mutagenicity, Carcinogenicity, and Teratogenicity of Industrial Pollutants*, M. Kirsch-Volders, ed.: Plenum Press, New York and London), pp. 127-202.
- Nagy, Z., Mile, I., and Antoni, F. (1975). The mutagenic effect of pesticides on *Escherichia coli* WP2 try-. *Acta Microbiologica Academiae Scientiarum Hungaricae* 22, 309-314.
- Natarajan, A. T., and Obe, G. (1986). How do in vivo mammalian assays compare to in vitro assays in their ability to detect mutagens? *Mutation Research* 167, 189-201.
- Parry, J. M. (1977). The use of yeast cultures for the detection of environmental mutagens using a fluctuation test. *Mutation Research* 46, 165-176.
- Perocco, P., Colacci, A., Ciello, C. D., and Grilli, S. (1995). Cytotoxic and cell transforming effects of the insecticide lindane (g-hexachlorocyclohexane) on BALB/c 3T3 cells. *Research Communications in Molecular Pathology and Pharmacology* 89, 329-339.
- Pool-Zobel, B. L., Lotzmann, N., Knoll, M., Kuchenmeister, F., Lambertz, R., Leucht, U., Schroder, H.-G., and Schmezer, P. (1994). Detection of genotoxic effects in human gastric and nasal mucosa cells isolated from biopsy samples. *Environmental and Molecular Mutagenesis* 24, 23-45.
- Rocchi, P., Perocco, P., Alberghini, W., Fini, A., and Prodi, G. (1980). Effect of pesticides on scheduled and unscheduled DNA synthesis of rat thymocytes and human lymphocytes. *Archives of Toxicology* 45, 101-108.
- Rubes, J. (1987). Chromosomal aberrations and sister-chromatid exchanges in swine. *Mutation Research* 191, 105-109.
- Rupa, D. S., Reddy, P. P., and Reddi, O. S. (1989). Genotoxic effect of benzene methachloride in cultured human lymphocytes. *Human Genetics* 83, 271-273.
- Sagelsdorff, P., Lutz, W. K., and Schlatter, C. (1983). The relevance of covalent binding to mouse liver DNA to the carcinogenic action of hexachlorocyclohexane isomers. *Carcinogenesis* 4, 1267-1273.
- Sasaki, Y. F., Izumiyama, F., Nishidate, E., Matsusaka, N., and Tsuda, S. (1997). Detection of rodent liver carcinogen genotoxicity by the alkaline single-cell gel electrophoresis 9Comet) assay in multiple organs (liver, lung, spleen, kidney and bone marrow). *Mutation Research* 391, 201-214.
- Savkovic, N. J., Pecevski, D., Alavantic, L., Sunjevaric, V. I., and Radivojevic, D. (1985). Mutagenicity in mice induced by commercial mixture of thimet/phorate + lindane. *Mutation Research* 147, 318.
- Sax, K., and Sax, H. J. (1968). Possible mutagenic hazards of some food additives, beverages and insecticides. *Japanese Journal of Genetics* 43, 89-94.
- Sharma, A. K., and Gosh, S. (1969). A comparative study of the effects of certain chemical agents on chromosomes. *Acta Biologica Academiae Scientiarum Hungaricae* 20, 11-21.
- Shaw, M. W. (1970). Human chromosome damage by chemical agents. *Annual Review of Medicine* 21, 409-431.
- Shirazu, Y., Moriya, M., Kato, K., Furuhashi, A., and Kada, T. (1976). Mutagenicity screening of pesticides in the microbial system. *Mutation Research* 40, 19-30.
- Tsushimoto, G., Chang, C. C., Trosko, J. E., and Matsumura, F. (1983). Cytotoxic, mutagenic, and cell-cell communication inhibitory properties of DDT, lindane, and chlordane on Chinese hamster cells in vitro. *Archives of Environmental Contamination and Toxicology* 12, 721-730.
- Venkat, J. A., Shami, S., Nayak, K. D., Plimmer, J. R., Pfeil, R., and Nair, P. P. (1995). Relative genotoxic activities of pesticides evaluated by a modified SOS microplate assay. *Environmental and Molecular Mutagenesis* 25, 67-76.
- Videla, L. A., Troncoso, P., Arisi, A. C. M., and Junqueira, V. B. C. (1997). Dose-dependent effects of acute lindane treatment on Kupffer cell function assessed in the isolated perfused rat liver. *Xenobiotica* 27, 747-757.
- Voytek, P. E. (1983). Reproduction: The New Frontier in Occupational and Environmental Health Research. In *Annual RMCOEH Occupational and Environmental Health Conference*, J. E. Lockey, G. K. Lemasters and W. R. Keye, eds. (Park City, Utah: Alan R. Liss, NY), pp. 429-438.
- William, G. (1973). Cytological effects of environmental mutagens-pesticides. *Mutation Research* 21, 221-222.
- Williams, G. M. (1981). Epigenetic mechanisms of action of carcinogenic organochlorine pesticides. *The Pesticide Chemist and Modern Toxicology* 160, 45-56.
- Zeiger, E. (1987). Carcinogenicity of mutagens: predictive capacity of the *Salmonella* mutagenesis assay for rodent

carcinogenicity. *Cancer Research* 47, 1287-1296.

Toxicity

Benzene Hexachloride. (1991) In *Handbook of Pesticide Toxicology*, W. J. Hayes, Jr. and E. R. Laws, Jr., eds. (San Diego: Academic Press, Inc.), pp. 791-816.

Bertheussen, K., Yousef, M. I., and Figenschau, Y. (1997). A new sensitive cell culture test for the assessment of pesticide toxicity. *Journal of Environmental Science and Health B32*, 195-211.

Chadwick, R. W., Copeland, M. F., Wolff, G. L., Cooke, N., Whitehouse, D. A., and Mole, M. L. (1985). The effects of age and obesity on the metabolism of lindane by black a/a, yellow Avy/a, and pseudoagouti Avy/a phenotypes of (YS X VY)F1 hybrid mice. *Journal of Toxicology and Environmental Health* 16, 771-796.

Cueto, C. J. (1980). Consideration of the possible carcinogenicity of some pesticides. *Journal of Environmental Science and Health B15*, 949-975.

Dikshith, T. S. S., Datta, K. K., and Chandra, P. (1974). Interaction of lindane and diazinon on the skin of rats. *Experimental Pathology* 9, S.219-224.

Dikshith, T. S. S., Datta, K. K., Kushwah, H. S., and Raizada, R. B. (1978). Histopathological and biochemical changes in guinea pigs after repeated dermal exposure to benzene hexachloride. *Toxicology* 10, 55-64.

Dikshith, T. S. S., Tandon, S. K., Datta, K. K., Gupta, P. K., and Behari, J. R. (1978). Comparative response of male rats to parathion and lindane: histopathological and biochemical studies. *Environmental Research* 17, 1-9.

Junqueira, V. B. C., Koch, O. R., Arisi, A. C. M., Fuzaro, A. P., Azzalis, L. A., Barros, S. B. M., Cravero, A., Farre, S., and Videla, L. A. (1997). Regression of morphological alterations and oxidative stress-related parameters after acute lindane-induced hepatotoxicity in rats. *Toxicology* 117, 199-205.

Kashyap, S. K., Gupta, S. K., Bhatt, H. V., and Shah, M. P. (1976). Acute oral toxicity of hexachlorocyclohexane (BHC) in albino rats. *Indian Journal of Medical Research* 64, 768-771.

Kashyap, S. K., Nigam, S. K., Gupta, R. C., Karnik, A. B., and Chatterjee, S. K. (1979). Carcinogenicity of hexachlorocyclohexane (BHC) in pure inbred Swiss mice. *Journal of Environmental Science and Health B14*, 305-318.

Moser, G. J., and Smart, R. C. (1989). Hepatic tumor-promoting chlorinated hydrocarbons stimulate protein kinase C activity. *Carcinogenesis* 10, 851-856.

Munir, K. M., Soman, C. S., and Bhide, S. V. (1983). Hexachlorocyclohexane-induced tumorigenicity in mice under experimental conditions. *Tumorigenesis* 69, 383-386.

Schnorr, C., and Portig, J. (1988). The potency of gamma-1,2,3,4,5,6-hexachlorocyclohexane (lindane). *Toxicology* 52, 309-321.

Schulte-Herman, R. (1985). Effects of phenobarbital and hypolipidemic drugs on phenotypic appearance of putative cancer pre stages in rat liver. *European Journal of Cancer and Clinical Oncology* 21, 1414.

Thakore, K. N., Nigam, S. K., Karnik, A. B., Lakkad, B. C., Bhatt, D. K., Aravinda Babu, K., Kashyap, S. K., and Chatterjee, S. K. (1981). Early changes in serum protein and liver LDH isoenzymes in mice exposed to technical grade hexachlorocyclohexane (BHC) and their possible relationship to liver tumors. *Toxicology* 19, 31-37.

Estrogenicity and Hormone Disruption

Adamec, O., Kosutzky, J., Bobakova, E., and Fellegiova, M. (1974). The effects of lindane and DDT on the biological activity of estrogens in chicken. *Environmental Quality and Safety supplement* 3, 491-493.

Bradlow, H. L., Davis, D. L., G., L., Sepkovic, D., and Tiwari, R. (1995). Effects of pesticides on the ratio of 16a/2-Hydroxyestrone: A biologic marker of breast cancer risk. *Environmental Health Perspectives* 103, 147-150.

Chadwick, R. W., Cooper, R. L., Chang, J., Rehnberg, G. L., and McElroy, K. W. (1988). Possible antiestrogenic activity of lindane in female rats. *Journal of Biochemical Toxicology* 3, 147-158.

Colborn, T., vom Saal, F. S., and Soto, A. M. (1993). Developmental effects of endocrine-disrupting chemicals in wildlife and humans. *Environmental Health Perspectives* 101, 378-384.

Cooper, R. L., Chadwick, R. W., Rehnberg, G. L., Goldman, J. M., Booth, K. C., Hein, J. F., and McElroy, W. K. (1989). Effect of lindane on hormonal control of reproductive function in the female rat. *Toxicology and Applied Pharmacology* 99, 384-394.

- Flouriot, G., Pakdel, F., Ducouret, B., and Valotaire, Y. (1995). Influence of xenobiotics on rainbow trout liver estrogen receptor and vitellogenin gene expression. *Journal of Molecular Endocrinology* 15, 143-151.
- Jin, L., Tran, D. Q., Ide, C. F., McLachlan, J. A., and Arnold, S. F. (1997). Several synthetic chemicals inhibit progesterone receptor-mediated transactivation in yeast. *Biochemical and Biophysical Research Communications* 233, 139-146.
- Lahiri, P., Chakravarty, S., Mondal, A., and Sircar, S. (1985). Effect of lindane on cytology and cytochemistry of exfoliated vaginal cells. *Experimental and Clinical Endocrinology* 85, 303-308.
- Lahiri, P., and Sircar, S. (1991). Suppression of adrenocortical function in female mice by lindane (γ -HCH). *Toxicology* 66, 75-79.
- Laws, S. C., Carey, S. A., Hart, D. W., and Cooper, R. L. (1994). Lindane does not alter the estrogen receptor or the estrogen-dependent induction of progesterone receptors in sexually immature or ovariectomized adult rats. *Toxicology* 92, 127-142.
- Leng, J.-J., and Greenblatt, R. B. (1972). Hirsutism in adolescent girls. *Pediatric Clinics of North America* 19, 681-703.
- Munir, K. M., Murdia, U. S., and Bhide, S. V. (1983). Influence of estradiol on the benzo(a)pyrene hydroxylase activity induced by hexachlorocyclohexane. *Toxicology Letters* 19, 279-285.
- Naishtein, S. Y., and Leibovich, D. L. (1969). Effect of small doses of DDT and lindane and their mixture on sexual function and embryogenesis in rats. *Hygiene and Sanitation* 36, 190-195.
- Raizada, R. B., Misra, P., Saxena, I., Datta, K. K., and Dikshith, T. S. S. (1980). Weak estrogenic activity of lindane in rats. *Journal of Toxicology and Environmental Health* 6, 483-492.
- Ratnasabapathy, R., Post, C., Rahman, M. M., Tom, M., and Raje, R. (1996). Estrogenic and antiestrogenic non-steroidal xenobiotics alter the stability of apolipoprotein II mRNA in the avian liver by modulating the hepatic expression of the estrogen-regulated mRNA stabilizing factor. *Federation of American Societies of Experimental Biologists, Journal* 10, A459.
- Ratnasabapathy, R., Tom, M., and Post, C. (1997). Modulation of the hepatic expression of the estrogen-regulated mRNA stabilizing factor by estrogenic and antiestrogenic nonsteroidal xenobiotics. *Biochemical Pharmacology* 53, 1425-1434.
- Simic, B., Kniewald, Z., Davies, J. E., and Kniewald, J. (1991). Reversibility of the inhibitory effect of atrazine and lindane on cytosol 5-alpha-dihydrotestosterone receptor complex formation in rat prostate. *Bulletin of Environmental Contamination and Toxicology* 46, 92-99.
- Singh, P. B., Kime, D. E., and Singh, T. P. (1993). Modulatory actions of *Mystus* gonadotropin on γ -BHC-induced histological changes, cholesterol, and sex steroid levels in *Heteropneustes fossilis*. *Ecotoxicology and Environmental Safety* 25, 141-153.
- Singh, S., and Singh, T. P. (1987). Evaluation of toxicity limit and sex hormone production in response to cythion and BHC in the vitellogenic catfish *Claris batrachus*. *Environmental Research* 42, 482-488.
- Sircar, S., and Lahiri, P. (1990). Effect of lindane on mitochondrial side-chain cleavage of cholesterol in mice. *Toxicology* 61, 41-46.
- Sircar, S., and Lahiri, P. (1989). Lindane (γ -HCH) causes reproductive failure and fetotoxicity in mice. *Toxicology* 59, 171-177.
- Tezak, Z., Simic, B., and Kniewald, J. (1992). Effect of pesticides on oestradiol-receptor complex formation in rat uterus cytosol. *Food and Chemical Toxicology* 30, 879-885.
- Tiemann, U., Schneider, F., and Tuchscherer, A. (1996). Effects of organochlorine pesticides on DNA synthesis of cultured oviductal and uterine cells and on estrogen receptor of uterine tissue from heifers. *Archives of Toxicology* 70, 490-496.
- Uphouse, L., and Williams, J. (1989). Diestrous treatment with lindane disrupts the female rat reproductive cycle. *Toxicology Letters* 48, 21-28.
- Uphouse, L. (1987). Decreased rodent sexual receptivity after lindane. *Toxicol. Lett.* 39, 7-14.

Reproductive Effects

- Chakravarty, S., Mandal, A., and Lahiri, P. (1986). Effect of lindane on clutch size and level of egg yolk protein in domestic duck. *Toxicology* 39, 93-103.
- Chowdhary, A. R., Venkatakrisna-Bhatt, H., and Gautam, A. K. (1987). Testicular changes of rats under lindane treatment. *Bulletin of Environmental Contamination and Toxicology* 38, 154-156.

- Cooper, R. L., Chadwick, R. W., Rehnberg, G. L., Goldman, J. M., Booth, K. C., Hein, J. F., and McElroy, W. K. (1989). Effect of lindane on hormonal control of reproductive function in the female rat. *Toxicology and Applied Pharmacology* 99, 384-394.
- Curley, A., Copeland, M. F., and Kimbrough, R. D. (1969). Chlorinated hydrocarbon insecticides in organs of stillborn and blood of newborn babies. *Archives of Environmental Health* 19, 628-632.
- Earl, F. L., Miller, E., and Van Loon, E. J. (1973). Reproductive, teratogenic, and neonatal effects of some pesticides and related compounds in beagle dogs and miniature swine. In *Eighth Inter-America Conference on Toxicology and Occupational Medicine*, W. B. Deishmann, ed., pp. 253-266.
- Gray, L. E., Jr., and Kavlock, R. J. (1984). An extended evaluation of an in vivo teratology screen utilizing postnatal growth and viability in the mouse. *Teratogenesis, Carcinogenesis and Mutagenesis* 4, 403-426.
- Hoffman, D. J., and Albers, P. H. (1984). Evaluation of potential embryotoxicity of 42 herbicides, insecticides, and petroleum contaminants to Mallard eggs. *Archives of Environmental Contamination and Toxicology* 13, 15-27.
- Khera, K. S., Whalen, C., and Angers, G. (1979). Assessment of the teratogenic potential of biphenyl, ethoxyquin, piperonyl butoxide, diuron, thiabendazole, phosalone and lindane in rats. *Toxicology and Applied Pharmacology* 48, A33.
- Khera, K. S., Whalen, C., Trivett, G., and Angers, G. (1979). Teratogenicity Studies on pesticidal formulations of dimethoate, diuron and lindane in rats. *Bulletin of Environmental Contamination and Toxicology* 22, 522-529.
- Lerda, D., and Rizzi, R. (1991). Study of reproductive function in persons occupationally exposed to 2,4-dichlorophenoxyacetic acid (2,4-D). *Mutation Research* 262, 47-50.
- Lindenau, A., Fischer, B., Seiler, P., and Beier, H. M. (1994). Effects of persistent chlorinated hydrocarbons on reproductive tissues in female rabbits. *Human Reproduction* 9, 772-780.
- Longo, L. D. (1980). Environmental pollution and pregnancy: risks and uncertainties for the fetus and infant. *American Journal of Obstetrics and Gynecology* 137, 162-173.
- Naishtein, S. Y., and Leibovich, D. L. (1969). Effect of small doses of DDT and lindane and their mixture on sexual function and embryogenesis in rats. *Hygiene and Sanitation* 36, 190-195.
- Niessen, K. H., Ramolla, J., Binder, M., Brugmann, G., and Hofmann, U. (1984). Chlorinated hydrocarbons in adipose tissue of infants and toddlers: inventory and studies on their association with intake of mother's milk. *European Journal of Pediatrics* 142, 238-243.
- Palmer, A. K., Bottomley, A. M., Worden, A. N., Froberg, H., and Bauer, A. (1978). Effect of lindane on pregnancy in the rabbit and rat. *Toxicology* 9, 239-247.
- Palmer, A. K., Cozens, D. D., Spicer, E. J. F., and Worden, A. N. (1978). Effects of lindane upon reproductive function in a 3-generation study in rats. *Toxicology* 10, 45-54.
- Pius, J., Shivanandappa, T., and Krishnakumari, M. K. (1990). Protective role of vitamin A in the male reproductive toxicity of hexachlorocyclohexane (HCH) in the rat. *Reproductive Toxicology* 4, 325-330.
- Polishuk, Z. W., Wassermann, D., Wassermann, M., Gucos, S., and Ron, M. (1977). Organochlorine compounds in mother and fetus during labor. *Environmental Research* 13, 278-284.
- Savkovic, N. J., Pecevski, D., Alavantic, L., Sunjevaric, V. I., and Radivojevic, D. (1985). Mutagenicity in mice induced by commercial mixture of thimet/phorate + lindane. *Mutation Research* 147, 318.
- Seiler, P., Fischer, B., Lindenau, A., and Beier, H. M. (1994). Effects of persistent chlorinated hydrocarbons on fertility and embryonic development in the rabbit. *Human Reproduction* 9, 1920-1926.
- Willis, W. O., Peyster, A. D., Molgaard, C. A., Walker, C., and MacKendrick, T. (1993). Pregnancy outcomes among women exposed to pesticides through work or residence in an agricultural area. *Journal of Occupational Medicine* 35, 943-949.

Effects on proliferation, Cell Cycle, and Cell Communication

- Angsubhakorn, S., Bhamarapravati, N., Pradermwong, A., Im-Emgamol, N., and Sahaphong, S. (1989). Minimal dose and time protection by lindane (g-isomer of 1,2,3,4,5,6-hexachlorocyclohexane) against liver tumors induced by aflatoxin B1. *International Journal of Cancer* 43, 531-534.
- Busser, M. T., and Lutz, W. K. (1987). Stimulation of DNA synthesis in rat and mouse liver by various tumor promoters. *Carcinogenesis* 8, 1433-1437.

- Criswall, K. A., Loch-Caruso, R., and Stuenkel, E. L. (1995). Lindane inhibition of gap junctional communication in myometrial myocytes is partially dependent on phosphoinositide-generated second messengers. *Toxicology and Applied Pharmacology* 130, 280-293.
- Criswell, K. A., and Loch-Caruso, R. (1995). Lindane-induced elimination of gap junctional communication in rat uterine myocytes is mediated by an arachidonic acid-sensitive cAMP-independent mechanism. *Toxicology and Applied Pharmacology* 135, 127-138.
- Criswell, K. A., Stuenkel, E. L., and Loch-Caruso, R. (1994). Lindane increases intracellular calcium in rat myometrial smooth muscle cells through modulation of inositol 1,4,5-trisphosphate-sensitive stores. *Journal of Pharmacology and Experimental Therapeutics* 270, 1015-1024.
- Decloitre, F., and Hamon, G. (1980). Species-dependent effects of dietary lindane and/or zineb on the activation of aflatoxin B1 into mutagenic derivatives. *Mutation Research* 79, 185-192.
- Glatt, H. R., and Oesch, F. (1987). Species differences in enzymes controlling reactive epoxides. *Archives of Toxicology Supplement* 10, 111-124.
- Jacob, J., Schmoltdt, A., Raab, G., Hamann, M., and Grimmer, G. (1985). Monooxygenase induction by various xenobiotics and its influence on the rat liver microsomal metabolite profile of benz[a]anthracene. *Cancer Letters* 27, 105-113.
- Kitchin, K. T., Brown, J. L., and Setzer, R. W. (1994). Dose-response relationship in multistage carcinogenesis: promoters. *Environmental Health Perspectives Supplements* 102 Suppl 1, 255-264.
- Klaunig, J. E. (1992). Chemopreventive effects of green tea components on hepatic carcinogenesis. *Preventative Medicine* 21, 510-519.
- Klaunig, J. E., Ruch, R. J., and Weghorst, C. M. (1990). Comparative effects of phenobarbital, DDT, and lindane on mouse hepatocyte gap junctional intercellular communication. *Toxicology and Applied Pharmacology* 102, 553-563.
- McCabe, M., and Nowak, M. (1986). Synergistic modulation of lymphocyte mitogenesis by carcinogenic xenobiotics. *Bulletin of Environmental Contamination and Toxicology* 37, 187-191.
- Moser, G. J., and Smart, R. C. (1989). Hepatic tumor-promoting chlorinated hydrocarbons stimulate protein kinase C activity. *Carcinogenesis* 10, 851-856.
- Munir, K. M., and Bhide, S. V. (1984). Deviations in ornithine-related metabolism during hexachlorocyclohexane-induced hepatocarcinogenesis in mice: evidence for conversion of glutamate to ornithine. *Environmental Research* 35, 180-187.
- Munir, K. M., Murdia, U. S., and Bhide, S. V. (1983). Influence of estradiol on the benzo(a)pyrene hydroxylase activity induced by hexachlorocyclohexane. *Toxicology Letters* 19, 279-285.
- Munir, K. M., Rao, K. V. K., and Bhide, S. V. (1984). Effect of hexachlorocyclohexane on diethylnitrosamine-induced hepatocarcinogenesis in rat and its failure to promote skin tumors on dimethylbenz[a]anthracene initiation in mouse. *Carcinogenesis* 5, 479-481.
- Nagasaki, H., Kawabata, H., Miyata, Y., Inoue, K., Hirao, K., Aoe, H., and Ito, N. (1975). Effect of various factors on induction of liver tumors in animals by the a-isomer of benzene hexachloride. *Japanese Journal of Cancer Research* 66, 185-191.
- Pereira, M. A., Herren, S. L., Britt, A. L., and Khoury, M. M. (1982). Sex difference in enhancement of GGTase-positive foci by hexachlorobenzene and lindane in rat liver. *Cancer Letters* 15, 95-101.
- Perocco, P., Colacci, A., Ciello, C. D., and Grilli, S. (1995). Cytotoxic and cell transforming effects of the insecticide lindane (g-hexachlorocyclohexane) on BALB/c 3T3 cells. *Research Communications in Molecular Pathology and Pharmacology* 89, 329-339.
- Ruch, R. J., Klaunig, J. E., and Pereira, M. A. (1987). Inhibition of intercellular communication between mouse hepatocytes by tumor promoters. *Toxicology and Applied Pharmacology* 87, 111-120.
- Ruch, R. J., Klaunig, J. E., and Pereira, M. A. (1985). Selective resistance to cytotoxic agents in hepatocytes isolated from partially hepatectomized and neoplastic mouse liver. *Cancer Letters* 26, 295-301.
- Schroter, C., Parzefall, W., Schroter, H., and Schulte-Hermann, R. (1987). Dose-response studies on the effects of a-, b-, and g-hexachlorocyclohexane on putative preneoplastic foci, monooxygenases, and growth in rat liver. *Cancer Research* 47, 80-88.
- Schulte-Herman, R. (1985). Effects of phenobarbital and hypolipidemic drugs on phenotypic appearance of putative cancer prestages in rat liver. *European Journal of Cancer and Clinical Oncology* 21, 1414.

- Schulte-Hermann, R., Ohde, G., Schuppler, J., and Timmermann-Trosiener, I. (1981). Enhanced proliferation of putative preneoplastic cells in rat liver following treatment with tumor promoters phenobarbital, hexachlorocyclohexane, steroid compounds and nafenopin. *Cancer Research* 41, 2556-2562.
- Siglin, J. C., Weghorst, C. M., and Klaunig, J. E. (1991). Role of Hepatocyte Proliferation in a-hexachlorocyclohexane and Phenobarbital Tumor Promotion in B6C3F1 Mice: Wiley-Liss, Inc).
- Tsushimoto, G., Chang, C. C., Trosko, J. E., and Matsumura, F. (1983). Cytotoxic, mutagenic, and cell-cell communication inhibitory properties of DDT, lindane, and chlordane on Chinese hamster cells in vitro. *Archives of Environmental Contamination and Toxicology* 12, 721-730.
- Videla, L. A., Troncoso, P., Arisi, A. C. M., and Junqueira, V. B. C. (1997). Dose-dependent effects of acute lindane treatment on Kupffer cell function assessed in the isolated perfused rat liver. *Xenobiotica* 27, 747-757.
- Wolff, G. (1993). Multiple levels of response in carcinogenicity bioassays: regulational variation among viable yellow (Avy/-) mice. *Journal of Experimental Animal Science* 35, 221-231.
- Wolff, G. L. (1990). Obesity, Cancer and the Viable yellow Avy/a Mouse. In *Progress in obesity research*, Y. e. a. Oomura, ed.: John Libbey & Co.), pp. 445-448.
- Wolff, G. L., Roberts, D. W., Morrissey, R. L., Greenman, D. L., Allen, R. R., Campbell, W. L., Bergman, H., Nesnow, S., and Frith, C. (1987). Tumorigenic response to lindane in mice: potentiation by a dominant mutation. *Carcinogenesis* 8, 1889-1897.

Immunotoxic Effects

- Banerjee, B. D., Komer, B. C., Ray, A., and Pasha, S. T. (1996). Influence of subchronic exposure to lindane on humoral immunity in mice. *Indian Journal of Experimental Biology* 34, 1109-1113.
- Desi, I. (1976). Lindane - Toxicological studies. In *Lindane, Proceedings of the symposium on lindane: C. I. E. L. Informations*), pp. 67-69.
- Desi, I., Varga, L., and Farkas, I. (1978). Studies on the immunosuppressive effect of organochlorine and organophosphoric pesticides in subacute experiments. *Journal of Hygiene, Epidemiology, Microbiology and Immunology* 22, 115-122.
- Dewan, A., Gupta, S. K., Jani, J. P., and Kashyap, S. K. (1980). Effect of lindane on antibody response to typhoid vaccine in weanling rats. *Journal of Environmental Science and Health B15*, 395-402.
- Kuhns, D. B., Kaplan, S. S., and Basford, R. E. (1986). Hexachlorocyclohexanes, potent stimuli of O₂- production and calcium release in human polymorphonuclear leukocytes. *Blood* 68, 535-540.
- Lisiewicz, J. (1993). Immunotoxic and hematotoxic effects of occupational exposures. *Folia Medica Cracoviensia* 34, 29-47.
- Meera, P., Rao, P. R., Shanker, R., and Tripathi, O. (1992). Immunomodulatory effects of g -HCH (lindane) in mice. *Immunopharmacology and Immunotoxicology* 14, 261-282.
- Meera, P., Tripathi, O., Kamboj, K. K., and Rao, P. R. (1993). Role of calcium in biphasic immunomodulation by g -HCH (lindane) in mice. *Immunopharmacology and Immunotoxicology* 15, 113-129.

Exposure and Pharmacokinetics in Humans and Animals

- Regulating Pesticides in Food, The Delaney Paradox, 1987*. N. R. C. Board on Agriculture, ed. (Washington, D. C.: National Academy Press).
- Astolfi, E., Fernandez, J. C. G., Juarez, M. B., and Piacentino, H. (1973). Chlorinated Pesticides Found in the Fat of Children in the Argentine Republic. In *Papers of the 8th Inter-America Conference on Toxicology and Occupational Medicine, Pesticides and the Environment: Continuing Controversy*, W. B. Deichmann, ed. (New York, pp. 233-243.
- Brady, M. N., and Siyali, D. S. (1972). Hexachlorobenzene in human body fat. *Medical Journal of Australia* 1, 158-161.
- Chadwick, R. W., Chadwick, C. J., Freal, J. J., and Bryden, C. C. (1977). Comparative enzyme induction and lindane metabolism in rats pre-treated with various organochlorine pesticides. *Xenobiotica* 7, 235-246.
- Chadwick, R. W., Cooper, R. L., Chang, J., Rehnberg, G. L., and McElroy, K. W. (1988). Possible antiestrogenic activity of lindane in female rats. *Journal of Biochemical Toxicology* 3, 147-158.
- Chadwick, R. W., Copeland, M. F., Wolff, G. L., Cooke, N., Whitehouse, D. A., and Mole, M. L. (1985). The effects of age and obesity on the metabolism of lindane by black a/a, yellow Avy/a, and pseudoagouti Avy/a phenotypes of (YS X VY)F1 hybrid mice. *Journal of Toxicology and Environmental Health* 16, 771-796.

- Chadwick, R. W., and Freal, J. J. (1972). The identification of five unreported lindane metabolites recovered from rat urine. *Bulletin of Environmental Contamination and Toxicology* 7, 137-145.
- Chadwick, R. W., Simmons, W. S., Bryden, C. C., Chuang, L. T., Key, L. M., and Chadwick, C. J. (1977). Effect of dietary lipid and dimethyl sulfoxide on lindane metabolism. *Toxicology and Applied Pharmacology* 39, 391-410.
- Davidow, B., and Frawley, J. P. (1951). Tissue distribution, accumulation and elimination of the isomers of benzene hexachloride. *Proceedings of the Society of Experimental Biology (NY)* 76, 780-783.
- Engst, R., Macholz, R. M., Kujawa, M., Lewerenz, H.-J., and Plass, R. (1976). The metabolism of lindane and its metabolites gamma-2,3,4,5,6-pentachlorocyclohexene, pentachlorobenzene, and pentachlorophenol in rats and the pathways of lindane metabolism. *Journal of Environmental Science and Health B11*, 95-117.
- Feldman, R. J., and Maibach, H. I. (1974). Percutaneous penetration of some pesticides and herbicides in man. *Toxicology and Applied Pharmacology* 28, 126-132.
- Fenske, R. A., Blacker, A. M., Hamburger, S. J., and Simon, G. S. (1990). Worker exposure and protective clothing performance during manual seed treatment with lindane. *Archives of Environmental Contamination and Toxicology* 19, 190-196.
- Fitzloff, J. F., and Pan, J. C. (1984). Epoxidation of the lindane metabolite, b-PCCH by human- and rat-liver microsomes. *Xenobiotica* 14, 599-604.
- Fitzloff, J. F., Portig, J., and Stein, K. (1982). Lindane metabolism by human and rat liver microsomes. *Xenobiotica* 12, 197-202.
- Freal, J. J., and Chadwick, R. W. (1973). Metabolism of hexachlorocyclohexane to chlorophenols and effect of isomer pretreatment on lindane metabolism in rat. *Journal of Agricultural and Food Chemistry* 21, 424-427.
- Ginsburg, C. M., and Lowry, W. (1983). Absorption of gamma benzene hexachloride following application of Kwell shampoo. *Pediatric Dermatology* 1, 74-76.
- Grover, P. L., and Sims, P. (1965). The metabolism of g-2,3,4,5,6-pentachlorocyclohex-1-ene and g-hexachlorocyclohexane in rats. *Biochemical Journal* 96, 521-525.
- Guardino, X., Serra, C., Obiols, J., Rosell, M. G., Berenguer, M. J., Lopez, F., and Brosa, J. (1996). Determination of DDT and related compounds in blood samples of agricultural workers. *Journal of Chromatography A* 719, 141-147.
- Gupta, S. K., Parikh, J. R., Shah, M. P., Chatterjee, S. K., and Kashyap, S. K. (1982). Changes in the serum hexachlorocyclohexane (HCH) residues in malaria spraymen after short-term occupational exposure. *Archives of Environmental Health* 37, 41-44.
- Kashyap, R., Iyer, L. R., Singh, M. M., and Kashyap, S. K. (1993). Evaluation of human exposure to the persistent insecticides DDT and HCH in Ahmedabad, India. *Journal of Analytical Toxicology* 17, 211-214.
- Kashyap, S. K. (1986). Health surveillance and biological monitoring of pesticide formulations in India. *Toxicology Letters* 33, 107-114.
- Rao, P., Jayaram, M., Visweswariah, K., and Majumdar, S. K. (1975). Determination of residues of BHC components in different tissues of albino rats. *Bulletin of Grain Technology* 13, 18-22.
- Wolff, M. S., McConnell, R., Cedillo, L., and Rivera, M. (1992). Dermal levels of methyl-parathion, organochlorine pesticides and acetylcholinesterase among formulators. *Bulletin of Environmental Contamination and Toxicology* 48, 671-678.

Lindane Residues in Food and Environmental Fate

- Achari, R. G., Sandhu, S. S., and Warren, W. J. (1975). Chlorinated hydrocarbon residues in ground water. *Bulletin of Environmental Contamination and Toxicology* 13, 94-96.
- Arthur, R. D., Cain, J. D., and Barrentine, B. F. (1976). Atmospheric levels of pesticides in the Mississippi Delta. *Bulletin of Environmental Contamination and Toxicology* 15, 129-134.
- Brodthmann, N. V., Jr. (1976). Continuous analysis of chlorinated hydrocarbon pesticides in the lower Mississippi river. *Bulletin of Environmental Contamination and Toxicology* 15, 33-39.
- Clark, D. E., Smalley, H. E., Crookshank, H. R., and Farr, F. M. (1974). Chlorinated hydrocarbon insecticide residues in feed and carcasses of feedlot cattle in Texas-1972. *Pesticides Monitoring Journal* 8, 180-183.

- Estep, C. B., Menon, G. N., Williams, H. E., and Cole, A. C. (1977). Chlorinated hydrocarbon insecticide residues in Tennessee honey and beeswax. *Bulletin of Environmental Contamination and Toxicology* 17, 168-174.
- FAO/WHO (1977). Lindane. FAO Plant Production and Protection Paper 10th Supplement, 333-347.
- Flury, M. (1996). Experimental evidence of transport of pesticides through field soils- a review. *Journal of Environmental Quality* 25, 25-45.
- Hashemy-Tonkabony, S. E., and Langaroodi, F. A. (1976). Detection and determination of chlorinated pesticide residues in Caspian sea fish by gas-liquid chromatography. *Environmental Research* 12, 275-280.
- Herzel, F. (1972). Organochlorine insecticides in surface waters in Germany. *Pesticides Monitoring Journal* 6, 179-187.
- Hiskia, A., Mylonas, A., Tsipi, D., and Elias, P. (1997). Photocatalytic degradation of lindane in aqueous solution. *Pesticides Science* 50, 171-174.
- Kastenbergh, W. E., and Yeh, H. C. (1993). A framework for assessing public health risks of pesticide-contaminated groundwater. *Journal of Environmental Science and Health A28*, 1847-1871.
- Kleivane, L., Skaare, J. U., Bjørge, A., de Ruiter, E., and Reijnders, P. J. H. (1995). Organochlorine pesticide residue and PCBs in the Harbour Porpoise (*phocoena phoecona*) incidentally caught in scandinavian waters. *Environmental Pollution* 89, 137-146.
- Kraybill, H. F. (1980). Evaluation of public health aspects of carcinogenic/mutagenic biorefractories in drinking water. *Preventative Medicine* 9, 212-218.
- Lovell, R. A., McChesney, D. G., and Price, W. D. (1996). Organohalogen and organophosphorus pesticides in mixed feed rations: Findings from FDA's domestic surveillance during fiscal years 1989-1994. *Journal of AOAC International* 79, 544-548.
- MacIntosh, D. L., Spengler, J. D., Özkaynak, H., Tsai, L., and Barry Ryan, P. (1996). Dietary exposures to selected metals and pesticides. *Environmental Health Perspectives* 104, 202-209.
- Macy, A. M., Kutchinsky, L. E., and Wislocki, A. (1979). A comparative cross sectional study of pesticide residue in human breast milk, cow's milk, canned milk, and infant formula in Colorado. *Clinical Toxicology* 15, 467-498.
- Mathur, S. P., and Saha, J. G. (1977). Degradation of lindane-14C in a mineral soil and in an organic soil. *Bulletin of Environmental Contamination and Toxicology* 17, 424-430.
- Nalley, L., Hoff, G., Bigler, W., and Hull, W. (1975). Pesticide levels in the omental fat in Florida racoons. *Bulletin of Environmental Contamination and Toxicology* 13, 741-744.
- Nickerson, P. R., and Barbehenn, K. R. (1975). Organochlorine residues in starlings. *Pesticides Monitoring Journal* 8, 247-254.
- Page, G. W. (1981). Comparison of groundwater and surface water for patterns and levels of contamination by toxic substances. *American Chemical Society* 12, 1475-1481.
- Parejko, R., Johnston, R., and Keller, R. (1975). Chlorohydrocarbons in Lake Superior lake trout (*Salvelinus namaycush*). *Bulletin of Environmental Contamination and Toxicology* 14, 480-488.
- Suzuki, M., Yamato, Y., and Watanabe, T. (1976). Organochlorine insecticide residues in vegetables of the kitakyushu District, Japan-1971-74. *Pesticides Monitoring Journal* 10, 35-40.
- Szokolay, A., Rosival, L., Uhnak, J., and Madaric, A. (1977). Dynamics of benzene hexachloride (BHC) isomers and other chlorinated pesticides in the food chain and in human fat. *Ecotoxicology and Environmental Safety* 1, 349-359.
- Szokolay, A., Uhnák, J., Sackmauerová, M., and Madaric, A. (1975). Analysis of HCB and BHC isomer residues in food. *Journal of Chromatography* 106, 401-404.
- Thomas, T. C., and Seiber, J. N. (1974). Chromosorb 102, an efficient medium for trapping pesticides from air. *Bulletin of Environmental Contamination and Toxicology* 12, 17-25.
- Waliszewski, S. M., Pardo, V. T., Waliszewski, K. N., Chantiri, J. N., Infanzon, R. M., and Rivera, J. (1996). Detection of some organochlorine pesticides in cow's milk. *Food Additives and Contaminants* 13, 231-235.
- Winell, M. (1975). An international comparison of hygienic standards for chemicals in the work environment. *AMBIO* 4, 34-36.

Yamato, Y., Suzuki, M., and Akiyama, T. (1975). Persistence of BHC in river water in the Kitakyushu District, Japan, 1970-1974. *Bulletin of Environmental Contamination and Toxicology* 14, 380-384.

Yess, N. J., Houston, M. G., and Gunderson, E. L. (1991). Food and Drug Administration pesticide residue monitoring of foods: 1978-1982. *Journal of the Association of Official Analytical Chemists* 74, 265-272.

[Back to the top](#)

Prepared by Renu Gandhi, Ph.D., Research Associate, BCERF

We will make every effort to update this bibliography. If you have comments on this bibliography, or have a suggestion of a reference you would like us to review for inclusion in the bibliography, please send this information via email to: breastcancer@cornell.edu

Last Update 05.06.03

© 2009 Cornell University

Program on Breast Cancer and Environmental Risk Factors
Cornell University, College of Veterinary Medicine
Vet Box 31, Ithaca, NY 14853-6401
Phone: 607.254.2893; Fax: 607.254.4730
Email: breastcancer@cornell.edu



We comply with the [HONcode standard for trustworthy health](#) information: [Verify here](#).