

BIBLIOGRAPHY

- Ahmad, L., Khan, A. and Khan, M. Z. (2011). Cypermethrin induced biochemical and hepato-renal pathological changes in rabbits. *Int J Agric Biol*, 13, 865-872.
- Al-Masri, M. G., Rasheed, M. and Alawi, M. (2009). Degradation of organochlorine pesticides in carbonate sediments from the Aqaba Gulf, Red Sea. *Res. J. Environ. Toxicol*, 3, 147-158.
- Ambali, S. F. (2009). Ameliorative effect of antioxidant vitamins C and E on neurotoxicological, haematological and biochemical changes induced by chronic chlorpyrifos exposure in Wistar rats. *Zaria: Ahmadu Bello University*, 356.
- Ambali, S. F., Abubakar, A. T., Shittu, M., Yaqub, L. S., Anafi, S. B. and Abdullahi, A. (2010a). Chlorpyrifos-induced alteration of hematological parameters in Wistar rats: ameliorative effect of zinc. *Research Journal of Environmental Toxicology*, 4(2), 55-66.
- Ambali, S. F., Akanbi, D. O., Shittu, M., Giwa, A., Oladipo, O. O. and Ayo, J. O. (2010b). Chlorpyrifos-induced clinical, haematological and biochemical changes in Swiss albino mice: mitigating effect by co-administration of vitamins C and E. *Life Science Journal*, 7(3), 37-44.
- Ambali, S.F., M. Angani, A.O. Adole, M.U. Kawu, M. Shittu, M.G. Akande and O.O. Oladipo. (2011). Protective effect of vitamin C on biochemical alterations induced by subchronic co-administration of chlorpyrifos and lead in Wistar rats. *Journal of Enviromental Analytical Toxicology* 1 (3):1-7.
- Anderson, T. D., and Lydy, M. J. (2002). Increased toxicity to invertebrates associated with a mixture of atrazine and organophosphate insecticides. *Environmental Toxicology and Chemistry*, 21(7), 1507-1514.
- Araujo, C. F., Lacerda, M. V., Abdalla, D. S. and Lima, E. S. (2008). The role of platelet and plasma markers of antioxidant status and oxidative stress in thrombocytopenia among patients with vivax malaria. *Memorias do Instituto Oswaldo Cruz*, 103(6), 517-521.
- Arshad, N., Shabbir, G., Aleem, S. and Arshad, M. (2007). Effects of α -tocopherol on liver biochemistry of endosulfan intoxicated mice: A preliminary study. *Asian J ExpSci*, 21(2), 239-246.
- Aslam, F., A. A. Khan, M.Z. Khan, S. Sharaf, S.T. Gul and M.K. Saleemi. (2010). Toxicopathological changes induced by cypermethrin in broiler chicks: Their attenuation with Vitamin E and selenium. *Experimental and Toxicology Pathology* 62:441–450.
- Bacci, E., Calamari, D., Gaggi, C. and Vighi, M. (1987). An approach for the prediction of environmental distribution and fate of cypermethin. *Chemosphere*, 16(7), 1373-1380.
- Barger, A. M. (2003). The complete blood cell count: a powerful diagnostic tool. *Veterinary Clinics of North America: Small Animal Practice*, 33(6), 1207-1222.
- Barna-Lloyd, T., Szabo, J. R. and Davis, N. L. (1991). Chlorpyrifos-methyl (Reldan R) rat chronic dietary toxicity/oncogenicity study. *Unpublished Report TXT: K-046193-031 from Dow Chemical, Texas, USA. Submitted to WHO by Dow Elanco, Indianapolis, USA.*

- Benjamin, M. M. (1978). *Outline of veterinary clinical pathology* (No. 3rd edition). Iowa State University Press.
- Betrosian, A., Balla, M., Kafiri, G., Kofinas, G., Makri, R., and Kakouri, A. (1995). Multiple systems organ failure from organophosphate poisoning. *Journal of Toxicology: Clinical Toxicology*, 33(3), 257-260.
- Bhattacharyya, S., and Bhattacharya, D. K. (2006). Pest control through viral disease: mathematical modeling and analysis. *Journal of Theoretical Biology*, 238(1), 177-197.
- Bhushan, B., Pande, S., Saxena, N., and Saxena, P. N. (2013). Serum biochemical responses under stress of cypermethrin in albino rat. *Environ Exp Biol*, 11, 81-89.
- Bianconi, E., Piovesan, A., Facchin, F., Beraudi, A., Casadei, R., Frabetti, F., et al. (2013). An estimation of the number of cells in the human body. *Ann Hum Biol*, 40(6), 463-471.
- Binswanger H, Hazell P and McCalla A (1998). Agriculture and the Environment: Perspectives on Sustainable Rural Development. International Bank for Reconstruction and Development, World Bank, Washington DC.
- Bishop, C. A., Mahony, N. A., Struger, J. N. G. P., Ng, P., and Pettit, K. E. (1999). Anuran development, density and diversity in relation to agricultural activity in the Holland River watershed, Ontario, Canada (1990–1992). *Environmental Monitoring and Assessment*, 57(1), 21-43.
- Blankenship A.L., Hilscherova K.N.M, Coady KK, Villalobos SA, Kannan K, Powell DC, Bursian SJ and Giesy JP. (2003). Mechanisms of TCDD-induced abnormalities and embryo lethality in white leghorn chickens. *Comp.Biochem.Physiol. C Toxicol.Pharmacol.* 136: 47-62.
- Bradbury, S. P., and Coats, J. R. (1989). Toxicokinetics and toxicodynamics of pyrethroid insecticides in fish. *Environmental Toxicology and Chemistry*, 8(5), 373-380.
- Brent, R. L. (1985). Methods of evaluating the alleged teratogenicity of environmental agents. *Prog Clin Biol Res*, 163C, 191-195.
- Brent, R. L., and D. A. Beckman. (1990). Environmental teratogens. *Bulletin of the New York Academy of Medicine* 66 (2):123-63.
- Carey, C., and Bryant, C. J. (1995). Possible interrelations among environmental toxicants, amphibian development, and decline of amphibian populations. *Environmental Health Perspectives*, 103(Suppl 4), 13.
- Casco, V. H., Izaguirre, M. F., Marín, L., Vergara, M. N., Lajmanovich, R. C., Peltzer, P., and Soler, A. P. (2006). Apoptotic cell death in the central nervous system of *Bufo arenarum* tadpoles induced by cypermethrin. *Cell biology and toxicology*, 22(3), 199-211.
- Centers for Disease Control. (2009). Agency for Toxic Substances and Disease Registry. *CDC/ASTDR Strategic Plan for Public Health Workforce Development.* Retrieved November.
- Ceron, J. J., Sancho, E., Ferrando, M. D., Gutierrez, C., and Andreu, E. (1997). Changes in carbohydrate metabolism in the eel *anguillaanguilla*, during short-term exposure to diazinon. *Toxicological and Environmental Chemistry*, 60(1-4), 201-210.

- Chernaki-Leffer, A. M., Bueno, R., Raspantini, L. E., and Górnica, S. L. (2013). Effects of Exposure of Higher Doses of Cypermethrin in Layers Hens. *International Journal of Poultry Science*, 12(6), 362-366.
- Chitra, K., Latchoumycandane, C., and Mathur, P. (1999). Chronic effect of endosulfan on the testicular functions of rat. *DNA*, 1(11.13), 1-35.
- Cho J.H., Park J.M. and Jaen Y.H. (1989). Studies on the diagnosis of organophosphate insecticides poisoning: Clinical and haematological diagnosis. *Research Reports of the Rural Development Administration*. 31 8-13.
- Chung, K. C., Kowalski, C. P., Kim, H. M., and Buchman, S. R. (2000). Maternal cigarette smoking during pregnancy and the risk of having a child with cleft lip/palate. *Plast Reconstr Surg*, 105(2), 485-491.
- Clark, R. F. (2002). Insecticides: organic phosphorus compounds and carbamates. *Goldfrank's Toxicological Emergencies*, 7th edn. New York: McGraw-Hill Professional, 1346-60.
- Clements, R. S., and Bell, D. S. (1985). Complications of diabetes: prevalence, detection, current treatment, and prognosis. *The American journal of medicine*, 79(5), 2-7.
- Cox, C. (1997). Fungicide factsheet: chlorothalonil. *Journal of pesticide reform: a publication of the Northwest Coalition for Alternatives to Pesticides (USA)*.
- Das, B. K., and Mukherjee, S. C. (2003). Toxicity of cypermethrin in Labeorohita fingerlings: biochemical, enzymatic and haematological consequences. *Comparative Biochemistry and Physiology Part C: Toxicology and Pharmacology*, 134(1), 109-121.
- Datta, M., and Kaviraj, A. (2003). Acute toxicity of the synthetic pyrethroid deltamethrin to freshwater catfish *Clarias gariepinus*. *Bulletin of environmental contamination and toxicology*, 70(2), 0296-0299.
- Deepak, V., M. D. Gopal, R. Hugo, and M. D. Rosen. (2000). Abnormal findings on liver function tests: interpreting result to narrow the diagnosis and establish a prognosis. *Postgrad. Med* 107 (2):100-114.
- El-Demerdash, F. M., Yousef, M. I., and Al-Salhen, K. S. (2003). Protective effects of isoflavone on some biochemical parameters affected by cypermethrin in male rabbits. *Journal of Environmental Science and Health, Part B*, 38(3), 365-378.
- El-Tawil, O. S., and Abdel-Rahman, M. S. (1997). Effect of cypermethrin on isolated male and female rat hepatocytes. *Journal of toxicology and environmental health*, 52(5), 461-474.
- Elton, C.S. (1968). *Animal ecology*. Great Britain: William Clowes and Sons Ltd.
- Eskenazi, B., Bradman, A., and Castorina, R. (1999). Exposures of children to organophosphate pesticides and their potential adverse health effects. *Environmental health perspectives*, 107(Suppl 3), 409.
- Fernández-Alba, A. R., Guil, M. H., López, G. D., and Chisti, Y. (2002). Comparative evaluation of the effects of pesticides in acute toxicity luminescence bioassays. *Analytica Chimica Acta*, 451(2), 195-202.

- Fitzpatrick, R.D. (1982). A gas-liquid chromatographic method for the determination of cypermethrin (PP383) in crops, soils, and water. ICI Americas, Agriculture Chemicals Division, Research and Development Department.
- Fletcher, H. P., Akbar, W. J., Peoples, R. W., and Spratto, G. R. (1988). Effect of acute soman on selected endocrine parameters and blood glucose in rats. *Fundamental and Applied Toxicology*, 11(4), 580-586.
- Foo, K. Y., and Hameed, B. H. (2010). Detoxification of pesticide waste via activated carbon adsorption process. *Journal of hazardous materials*, 175(1), 1-11.
- Friedberg, B. H., and Gartner, L. P. (1990). Embryotoxicity and teratogenicity of formocresol on developing chick embryos. *Journal of endodontics*, 16(9), 434-437.
- Garg, U. K., Pal, A. K., Jha, G. J., and Jadha, S. B. (2004). Haemato-biochemical and immuno-pathophysiological effects of chronic toxicity with synthetic pyrethroid, organophosphate and chlorinated pesticides in broiler chicks. *International immunopharmacology*, 4(13), 1709-1722.
- Gaughan, L. C., Engel, J. L., and Casida, J. E. (1980). Pesticide interactions: effects of organophosphorus pesticides on the metabolism, toxicity, and persistence of selected pyrethroid insecticides. *Pesticide biochemistry and physiology*, 14(1), 81-85.
- Gilbertson, M., Kubiak, T., Ludwig, J., and Fox, G. (1991). Great lakes embryo mortality, edema, and deformities syndrome (GLEMEDS) in colonial fish-eating birds: Similarity to chick-edema disease. *Journal of Toxicology and Environmental Health, Part A Current Issues*, 33(4), 455-520.
- Giri, S., Giri, A., Sharma, G. D., and Prasad, S. B. (2003). Induction of sister chromatid exchanges by cypermethrin and carbosulfan in bone marrow cells of mice in vivo. *Mutagenesis*, 18(1), 53-58.
- Goel, A., Dani, V., and Dhawan, D. K. (2006). Role of zinc in mitigating the toxic effects of chlorpyrifos on hematological alterations and electron microscopic observations in rat blood. *BioMetals*, 19(5), 483-492.
- Gowri UK, Patel PV and Suresh B (2010). Evaluation of pesticide induced developmental immunotoxicity in RIR chicks. *Journal of Cell and Tissue Research* 10(2) 2229-2234.
- Greenberg, J., and LaHam, Q. N. (1969). Malathion-induced teratisms in the developing chick. *Canadian journal of zoology*, 47(4), 539-542.
- Gupta, H. K., Prakash, D., Mishra, P. K., and Pathak, V. (2004). Studies on the Kinetics and Thermodynamics of Adsorption of Cypermethrin on Montmorillonite Clays. *Asian Journal of Chemistry*, 16(3-4), 1391-1397.
- Gupta, P. K. (2004). Pesticide exposure—Indian scene. *Toxicology*, 198(1), 83-90.
- Gupta, P. K., and Kumar, S. (1991). Cumulative toxicity of deltamethrin in mice. *Journal of Environmental Biology*, 12(1), 45-50.
- Hall, J. G. (1990). Genomic imprinting. *Arch Dis Child*, 65(10 Spec No), 1013-1015.
- Harcourt-Brown, F. (2002). The rabbit consultation and clinical techniques. *Textbook of rabbit medicine*. London, 52-93.

- Hayes, M. P., Quinn, T., Dugger, D. J., Hicks, T. L., Melchior, M. A., and Runde, D. E. (2006). Dispersion of coastal tailed frog (*Ascaphus truei*): An hypothesis relating occurrence of frogs in non-fish-bearing headwater basins to their seasonal movements. *Journal of Herpetology*, 40(4), 531-543.
- Hazelwood, R. L. (2000). Pancreas. In 'Sturkie's avian physiology' (Ed. GC Whittow) pp. 539-556.
- Hodgson, E., and Levi, P. E. (1987). *Textbook of modern toxicology*. Elsevier.
- Howard, P. H. (1991). *Handbook of Environmental Fate and Exposure Data: For Organic Chemicals, Volume III Pesticides* (Vol. 3). CRC press.
- Hui, T. J. A., Ariffin, M. M., and Tahir, N. M. (2010). Hydrolysis of chlorpyrifos in aqueous solutions at different temperatures and pH. *Malays J Anal Sci*, 14, 50-54.
- Hussain, M. A. (1987). Anticholinesterase properties of methamidophos and acephate in insects and mammals. *Bulletin of environmental contamination and toxicology*, 38(1), 131-138.
- Indyk, F. (1999). Effects of insecticide Propox M on survival, hatching success, and development of the chicken embryo. *Zoologica Poloniae*, 44(1-4).
- Jayasree, U., A. Gopala Reddy, K.S. Reddy, and B. Kalakumar. (2003). Study on the mechanism of toxicity of deltamethrin in poultry. *Indian Journal of Forensic Medicine and Toxicology* 10:111-114.
- Jeyaratnam, J., and Maroni, M. (1994). Organophosphorous compounds. *Toxicology*, 91(1), 15-27.
- Jin-Clark, Y., Lydy, M. J., and Zhu, K. Y. (2002). Effects of atrazine and cyanazine on chlorpyrifos toxicity in *Chironomus tentans* (Diptera: Chironomidae). *Environmental toxicology and chemistry*, 21(3), 598-603.
- John, D., and Bancroft, A. S. (1996). Theory and practice of histological techniques. *None translator*.
- Johnson, D. L., Ambrose, S. H., Bassett, T. J., Bowen, M. L., Crummey, D. E., Isaacson, J. S., ... and Winter-Nelson, A. E. (1997). Meanings of environmental terms. *Journal of Environmental Quality*, 26(3), 581-589.
- Jones, M. C., Kosaki, K., and Bird, L. M. (1995). Disruptive defects of the brain and spinal cord as a consequence of cardiopulmonary bypass and hypothermia at 18 weeks gestation. *Proc Greenwood Genet Ctr*, 14, 58-62.
- Jones, R. R., Barone-Adesi, F., Koutros, S., Lerro, C. C., Blair, A., Lubin, J., ... and Freeman, L. E. B. (2015). Incidence of solid tumours among pesticide applicators exposed to the organophosphate insecticide diazinon in the Agricultural Health Study: an updated analysis. *Occupational and environmental medicine*, oemed-2014.
- Joshi, A. K. R., and Rajini, P. S. (2009). Reversible hyperglycemia in rats following acute exposure to acephate, an organophosphorus insecticide: role of gluconeogenesis. *Toxicology*, 257(1), 40-45.
- Jyotsna, A. P., Arun, J. P., and Sanjay, P. (2003). Biochemical effects of various pesticides on sprayers of Grape garden. *Indian J. Biochem*, 18(21), 16-22.

- Kalatova, B., Jesenska, R., Hlinka, D., and Dudas, M. (2015). Tripolar mitosis in human cells and embryos: Occurrence, pathophysiology and medical implications. *Acta Histochem*, 117(1), 111-125.
- Kale, M., Rathore, N., John, S., and Bhatnagar, D. (1999). Lipid peroxidative damage on pyrethroid exposure and alterations in antioxidant status in rat erythrocytes: a possible involvement of reactive oxygen species. *Toxicology letters*, 105(3), 197-205.
- Karabay, N. U., and Oguz, M. G. (2005). Cytogenetic and genotoxic effects of the insecticides, imidacloprid and methamidophos. *Genetics and Molecular Research*, 4(4), 653-662.
- Karanth, S., and C. Pope. (2000). Carbosylesterase and A-Esterase Activities during Maturation and Aging: Relationship to the Toxicity of Chlorpyrifos and Parathion in Rats. *Toxicology Science* 58:282-289.
- Karnofsky, D. A. (1965). "The chick embryo in drug screening: survey of teratological effects observed in the 4-day chick embryo." *Teratology: principles and techniques*. JG Wilson and J. Warkany, eds. University of Chicago Press, Chicago, IL: 194-213.
- Kaur, H., A. K. Srivastava, S.K. Garg, and D. Prakash. (2000). Subacute oral toxicity of chlorpyrifos in goats with particular reference to blood biochemical and pathomorphological alteration. *Indian Journal of Forensic Medicine and Toxicology* 7:83-90
- Khalil, A. M. (2000). Genotoxicity and Embryotoxicity of the Insecticide Primicid in Chick Embryo.
- Khan, A., Ahmad, L., and Khan, M. Z. (2012). Hemato-biochemical changes induced by pyrethroid insecticides in avian, fish and mammalian species. *Int. J. Agric. Biol*, 14(5), 834-842.
- Khan, A., Faridi, H. A., Ali, M., Khan, M. Z., Siddique, M., Hussain, I., and Ahmad, M. (2009). Effects of cypermethrin on some clinico-hemato-biochemical and pathological parameters in male dwarf goats (*Capra hircus*). *Experimental and Toxicologic Pathology*, 61(2), 151-160.
- Khattak, I. U. D., and Hafeez, M. A. (1996). Effect of malathion on blood parameters of the fish, *Cyprinion watsoni*. *Pakistan Journal of Zoology*, 28(1), 45-49.
- Kidd, H and James, DR (1991). *The agrochemicals Handbook*, A 0791/Aug 91. Third edition, Unwin Borthers limited Old Working, Surrey
- Klasing, K.C. 2000. Comparative Avian Nutrition, Department of Avian Science, College of Agriculture and Environmental Sciences University of California Davis California, USA. CAB International.
- Kollman, Wynetta, and Randall Segawa. "INTERIM REPORT OF THE PESTICIDE CHEMISTRY DATABASE 1995."
- Köprücü, S. Ş., Köprücü, K., Ural, M. Ş., İspir, Ü., and Pala, M. (2006). Acute toxicity of organophosphorous pesticide diazinon and its effects on behavior and some hematological parameters of fingerling European catfish (*Silurus glanis* L.). *Pesticide Biochemistry and Physiology*, 86(2), 99-105.
- Kops, G. J., Weaver, B. A., and Cleveland, D. W. (2005). On the road to cancer: Aneuploidy and the mitotic checkpoint. *Nat Rev Cancer*, 5(10), 773-785.

- Krishna, H., and A.V. Ramachandran. (2009). Biochemical alterations induced by the acute exposure to combination of chlorpyrifos and lead in Wistar rats. *Biol. Med* 1:1-6.
- Krishnamurthy, S. V., and Smith, G. R. (2010). Growth, abnormalities, and mortality of tadpoles of American toad exposed to combinations of malathion and nitrate. *Environmental Toxicology and Chemistry*, 29(12), 2777-2782.
- Kumar, V., Chakraborty, A., Viswanath, G., and Roy, P. (2008). Androgenic endocrine disruptors in wastewater treatment plant effluents in India: their influence on reproductive processes and systemic toxicity in male rats. *Toxicology and applied pharmacology*, 226(1), 60-73.
- Lakkawar, A. W., Chattopadhyay, S. K., Somvanshi, R., and Sharma, A. K. (2006). Experimental cypermethrin toxicity in young rabbits-a hematological and biochemical study. *Praxis veterinaria*, 54, 195-202.
- Latimer, J. R., Prasse, K. W., and Mahaffey, E. A. (1994). *Veterinary laboratory medicine: clinical pathology* (No. Ed. 3). Iowa State University Press.
- Latuszyńska, J., Luty, S., Raszewski, G., Tokarska-Rodak, M., Przebirowska, D., Przylepa, E., and Haratym-Maj, A. (2001). Neurotoxic effect of dermally-applied chlorpyrifos and cypermethrin in Wistar rats. *Ann Agric Environ Med*, 8, 163-70.
- Leahey, J. P. (1985). Metabolism and environmental degradation. *The pyrethroid insecticides*, 263-341.
- Lee, J. E., J. H. Park, I. C. Shin, and H. C. Koh. (2012). Reactive oxygen species regulated mitochondria-mediated apoptosis in PC12 cells exposed to chlorpyrifos. *ToxicolApplPharmacol* 263 (2):148-62.
- Lemaire, G., Balaguer, P., Michel, S., and Rahmani, R. (2005). Activation of retinoic acid receptor-dependent transcription by organochlorine pesticides. *Toxicology and applied pharmacology*, 202(1), 38-49.
- Lenz, W. (1988). A short history of thalidomide embryopathy. *Teratology*, 38(3), 203-215.
- Lide, David R. (1998). *Handbook of Chemistry and Physics* (87 ed.). Boca Raton, FL: CRC Press. 3-126.
- Lokke, H., A. M. Ragas, and M. Holmstrup. (2013). Tools and perspectives for assessing chemical mixtures and multiple stressors. *Toxicology* 313 (2-3):73-82.
- Lumeij, J. T. (1997) "Avian clinical biochemistry." *Clinical biochemistry of domestic animals* 5: 857-883.
- Lusková, V., M. Svoboda, and J. Kolářiová. (2001). The effect of diazinon on blood plasma biochemistry in Carp (*Cyprinus carpio* L.). *Acta Vet. Brno* 71:117-123.
- Ma, P., Wu, Y., Zeng, Q., Gan, Y., Chen, J., Ye, X., and Yang, X. (2013). Oxidative damage induced by chlorpyrifos in the hepatic and renal tissue of Kunming mice and the antioxidant role of vitamin E. *Food and Chemical Toxicology*, 58, 177-183.
- Mackay D, Shiu W-Y, Ma K-C. (1999). Physical-chemical properties and environmental fate handbook (CD). Boca Raton, FL: Chapman and Hall/CRCnetBase

- Malkiewicz, K., Koteras, M., Folkesson, R., Brzezinski, J., Winblad, B., Szutowski, M., and Benedikz, E. (2006). Cypermethrin alters glial fibrillary acidic protein levels in the rat brain. *Environmental toxicology and pharmacology*, 21(1), 51-55.
- Manna, S., D. Bhattacharyya, D.K. Basak, and T. K. Mandal. (2004). Single oral dose toxicity study of α -cypermethrin in rats. *Indian J. Pharmacol* 36:25 – 28.
- Mansour, S.A., and A.H. Mossa. (2010). Oxidative damage, biochemical and histopathological alterations in rats exposed to chlorpyrifos and the antioxidant role of zinc. *Pestic. Biochem. Physiol* 96 (1):14-23
- Matin, M. A., and Siddiqui, R. A. (1982). Effect of diacetylmonoxime and atropine on malathion-induced changes in blood glucose level and glycogen content of certain brain structures of rats. *Biochemical pharmacology*, 31(9), 1801-1803.
- McBride, W. G. (1977). Thalidomide embryopathy. *Teratology*, 16(1), 79-82.
- McEwen, F. L., and Stephenson, G. R. (1979). *The use and significance of pesticides in the environment*. John Wiley and Sons..
- McLaughlin, J., Marliac, J. P., Verrette, M. J., Mutchler, M. K., and Fitzhugh, O. G. (1963). The injection of chemicals into the yolk sac of fertile eggs prior to incubation as a toxicity test. *Toxicology and applied pharmacology*, 5(6), 760-771.
- Michelangeli, F., Robson, M. J., East, J. M., and Lee, A. G. (1990). The conformation of pyrethroids bound to lipid bilayers. *Biochimica et Biophysica Acta (BBA)-Biomembranes*, 1028(1), 49-57.
- Mobarak, Y. M., and Al-Asmari, M. A. (2011). Endosulfan impacts on developing chick embryos: morphological, morphometric and skeletal changes. *International Journal of Zoological Research*, 7(2), 107-127.
- Morgan DP, Stockdale EM, Roberts RJ and Walter HW (1980). Anaemia associated with exposure to lindane. *Archives of Environmental Health* 35 307- 310.
- Moss JA and Hathway DE (1964). Transport of organic compounds in the mammalian partition of dieldrin and telodrin between the cellular components and soluble proteins of blood. *Biochemical Journal* 91 383-93.
- Motulsky, H. (1999). *Analyzing data with GraphPad prism*. GraphPad Software Incorporated.
- Murthy, B.N., M.S. Reddy, Venkateswarll Y., and K.V.R. Rao. (1986). Lindane induced alterations in the protein breakdown and utilization in the selected tissues of freshwater fish, *Tilapia mossambicus* (Peters). *Natl. Acad. Sci. Lett. (India)* 9:27-30.
- Narahashi T (1996) Neuronal ion channels as the target sites of insecticides. *PharmacolToxicol* 79:1–14
- Narahashi T (2000) neuroreceptors and ion channels as the basis for drug action: past, present, and future. *J PharmacolExpTher* 294:1–26
- NASS, U. (2003). Agricultural chemical use database.
- Needham, J., (1959). A history of Embryology. Cambridge University Press, Cambridge

- Nitu, K., Shahani, L., Taparia, N., and Bhatnagar, P. (2012). Teratogenic and biochemical effects of a formulation containing dicofol in the chick embryo. *Toxicological and Environmental Chemistry*, 94(7), 1411-1421.
- Nostrandt, A. C., Padilla, S., and Moser, V. C. (1997). The relationship of oral chlorpyrifos effects on behavior, cholinesterase inhibition, and muscarinic receptor density in rat. *Pharmacology Biochemistry and Behavior*, 58(1), 15-23.
- Obaineh, O. M., and A. O. Matthew. (2009). Toxicological effects of chlorpyrifos and methidathion in young chickens. *African Journal of Biochemistry Research* 3 (3):048-051.
- Ojezele M.O., and Abatan O.M., (2009). Toxicological effects of chlorpyrifos and methidathion in young chickens. *African Journal of Biochemistry Research* 3 48-51.
- Pande, M., Mehta, A., Pant, B. P., and Flora, S. J. (2001). Combined administration of a chelating agent and an antioxidant in the prevention and treatment of acute lead intoxication in rats. *Environmental toxicology and pharmacology*, 9(4), 173-184.
- Paskova, V., Paskerova, H., Pikula, J., Bandouchova, H., Sedlackova, J., and Hilscherova, K. (2011). Combined exposure of Japanese quails to cyanotoxins, Newcastle virus and lead: Oxidative stress responses. *Ecotoxicology and environmental safety*, 74(7), 2082-2090.
- Perger G and Szadkowski D (1994). Toxicology of pyrethroids and their relevance to human health. *Annals of Agricultural and Environmental Medicine* 1 11-17.
- Peterson, Richard E., H. Michael Theobald, and Gary L. Kimmel. (1993). "Developmental and reproductive toxicity of dioxins and related compounds: cross-species comparisons." *CRC Critical Reviews in Toxicology* 23, no. 3: 283-335.
- Petrovová, E., Sedmera, D., Misek, I., Lesnik, F., and Luptáková, L. (2009). Bendiocarbamate toxicity in the chick embryo. *Folia biologica*, 55(2), 61.
- Pinakin, W., Deshpande, S. G., and Salokhe, S. G. (2011). Studies on the effect of the insect growth regulator lufenuron on embryogenesis of chick *Gallus domesticus* (white leghorn strain). *Int. J. Pharm. Bio*, 1, 82-88.
- Pushpanjali, P. A., Singh, SK, Kumar, A., Jadhao, SB, (2005). In ovoembryotoxicity of endosulfan adversely influences liver and brain metabolism and the immune system in chickens. *Pestic. Biochem. Physiol* 82: 103-114.
- Rahimi, R., and Abdollahi, M. (2007). A review on the mechanisms involved in hyperglycemia induced by organophosphorus pesticides. *Pesticide Biochemistry and Physiology*, 88(2), 115-121.
- Rahman, M. F., Siddiqui, M. K. J., Mahboob, M., and Mustafa, M. (1990). Haematological and hepatotoxic effects of isoprocarb in chicken. *Journal of Applied Toxicology*, 10(3), 187-192.
- Rajesh, E., and Pilo, B. (2009). Single dose neurotoxicity screening studies of insecticide combination (Cypermethrin and Profenofos) in Wistar rats. *Toxicology International*, 16(2), 97.

- Rao, J. V. (2006). Toxic effects of novel organophosphorus insecticide (RPR-V) on certain biochemical parameters of euryhaline fish, *Oreochromismossambicus*. *Pesticide Biochemistry and Physiology*, 86(2), 78-84.
- Rashatwar, S. S., and Matsumura, F. (1985). Interaction of DDT and pyrethroids with calmodulin and its significance in the expression of enzyme activities of phosphodiesterase. *Biochemical pharmacology*, 34(10), 1689-1694.
- Ravel, R. (1995)"Various factors affecting laboratory test interpretation." *Ravel R, Clinical Laboratory Medicine*, 6th Edition. St. Louis: Mosby-Year Book, Inc: 1-8.
- Ray, D. E., Ray, D., and Forshaw, P. J. (2000). Pyrethroid insecticides: poisoning syndromes, synergies, and therapy. *Journal of Toxicology: Clinical Toxicology*, 38(2), 95-101.
- Rivarola, V., and H. Balegno. (1991). 2,4-Dichlorophenoxyacetic acid effects on polyamine biosynthesis. *Toxicology* 68 (2):109-19.
- Romanoff AL (1960)The avian embryo. The Macmillan Company, New York
- Sadler, T. W., Denno, K. M., and Hunter, E. S., 3rd. (1993). Effects of altered maternal metabolism during gastrulation and neurulation stages of embryogenesis. *Ann N Y AcadSci*, 678, 48-61.
- Sahu, C. R., and Ghatak, S. (2002). Effects of dimecron on developing chick embryo: malformations and other histopathological changes. *Anatomia, histologia, embryologia*, 31(1), 15-20.
- Saleem, M. A., Shakoori, A. R., and Mantle, D. (1998). Macromolecular and Enzymatic Abnormalities Induced by a Synthetic Pyrethroid, Ripcord (Cypermethrin) in Adult Beetles of a Stored Grain Pest, *Triboliumcastaneum* (Herbst)(Coleoptera: Tenebrionidae). *Archives of insect biochemistry and physiology*, 39(4), 144-154.
- Sancho, E., Ferrando, M. D., Gamon, M., and Andreu-Moliner, E. (1992). Organophosphorus diazinon induced toxicity in the fish *anguillaanguilla* L. *Comparative Biochemistry and Physiology Part C: Comparative Pharmacology*, 103(2), 351-356.
- Schimmel, S. C., Garnas, R. L., Patrick Jr, J. M., and Moore, J. C. (1983). Acute toxicity, bioconcentration, and persistence of AC 222,705, benthicarb, chlorpyrifos, fenvalerate, methyl parathion, and permethrin in the estuarine environment. *Journal of Agricultural and Food Chemistry*, 31(1), 104-113.
- Segalen, M., and Bellaiche, Y. (2009). Cell division orientation and planar cell polarity pathways. *Semin Cell Dev Biol*, 20(8), 972-977.
- Shakoori A.R., Aziz F, Alam J, Ali S.S., (1990). Toxic effects of talastar, a new synthetic pyrethroid, on blood and liver of rabbit. *Pakistan Journal of Zoology*. 23 289-300.
- Sharaf, S., Khan, A., Khan, M. Z., Aslam, F., Saleemi, M. K., and Mahmood, F. (2010). Clinico-hematological and micronuclear changes induced by cypermethrin in broiler chicks: Their attenuation with vitamin E and selenium. *Experimental and Toxicologic Pathology*, 62(4), 333-341.
- Sharma, A., S. Sodhi, A. S. Brar, and J. K. Ghai.(2013). Chlorpyrifos-induced hematological, biochemical and histoarchitectural alterations in albino mice. *International Journal of Advanced Research* 1 (10):825-835.

- Sharma, D., and Ansari, B. (2010). Effect of the synthetic pyrethroid Deltamethrin and the neem-based pesticide Achook on the reproductive ability of zebrafish, *Danio rerio* (Cyprinidae). *Archives of Polish Fisheries*, 18(3), 157-161.
- Singh, R., and Sharma, P. (2011). Hepatoprotective effect of curcumin on lindane-induced oxidative stress in male Wistar rats. *Toxicology international*, 18(2), 124.
- Siroki, O., Ündeger, Ü., Institoris, L., Nehéz, M., Basaran, N., Nagymajtenyi, L., and Dési, I. (2001). A study on geno- and immunotoxicological effects of subacute propoxur and pirimicarb exposure in rats. *Ecotoxicology and environmental safety*, 50(1), 76-81.
- Smegal, D. C. (2000). Human health risk assessment chlorpyrifos. *US Environmental Protection Agency, Office of Prevention, Pesticides and Toxic Substances, Office of Pesticide Programs, Health Effects Division, US Government Printing Office: Washington, DC*, 1-131.
- Smith, D. W., Clarren, S. K., and Harvey, M. A. (1978). Hyperthermia as a possible teratogenic agent. *J Pediatr*, 92(6), 878-883.
- Takahashi, N., Mikami, N., Yamada, H., and Miyamoto, J. (1985). Photodegradation of the pyrethroid insecticide fenpropathrin in water, on soil and on plant foliage. *Pesticide science*, 16(2), 119-131.
- Tebourbi, O., Khémis B R, and Mohsen Sakly. (2011) *Molecular mechanisms of pesticide toxicity*. INTECH Open Access Publisher.
- Tiwari, M. K., and Guha, S. (2008, August). AGRO 28-Sorption of chlorpyrifos on agricultural soils. In *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY* (Vol. 236). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.
- Tomlin C (ed) (2006) *The pesticide manual. 14th edition British Crop Protection Council (BCPC)*, p 1350
- Tung HT, Cook FW, Wyatt RD and Hamilton PB (1975). The anaemia caused by aflatoxin. *Poultry Science* 54 1962-1969.
- U. S. Environmental Protection Agency. 2006. Reregistration Eligibility Decision for Chlorpyrifos
- Uggini, G. K., and Suresh, B. (2013). Genotoxic effects of two different classes of insecticide in developing chick embryos. *Toxicological and Environmental Chemistry*, 95(6), 992-1005.
- Uggini, G. K., Patel, P. V., and Balakrishnan, S. (2012). Embryotoxic and teratogenic effects of pesticides in chick embryos: A comparative study using two commercial formulations. *Environmental toxicology*, 27(3), 166-174.
- US Environmental Protection Agency (1996). National Air Pollutant Emission Trends, 1900-1994, EPA-454/R-96-007, Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, October.
- USEPA Pesticide Fact Sheet Number 1989: Cypermethrin. Office of Pesticides and Toxic Substances US Environmental Protection Agency, Washington, DC, USA (1989) 2-9P

- Van Allen, M., Jilek-Aall, L., and Rwiza, H. T. (1995). Possible fetal chloroquine syndrome. *Proc Greenwood Genet Ctr*, 14, 15.
- Venugopal, N. V. S., Sumalatha, B., Bonthula, S. R., and Veeribabu, G. (2012). Spectrophotometric determination of organophosphate insecticide (chlorpyrifos) based on diazotisation with anthranilic acid. *Malaysian Journal of Analytical Sciences*, 16(2), 180-186.
- Vijverberg, H. P., and vanden Bercken, J. (1990). Neurotoxicological effects and the mode of action of pyrethroid insecticides. *CRC Critical Reviews in Toxicology*, 21(2), 105-126.
- Vijverberg, Henk PM, and Joep vanden Bercken. (1982). "Action of pyrethroid insecticides on the vertebrate nervous system." *Neuropathology and applied neurobiology* 8, no. 6: 421-440.
- Vural S, Cetin ET and Tuzlaci U (1986). *Klinik Teşhiste Laboratuvar*, Nurettin Uygun Cilt ve Basım Sanayii, İstanbul.
- Waldbillig, N. R. S. C. D. (1998). Effects of the pesticides carbofuran, chlorpyrifos, dimethoate, lindane, triallate, trifluralin, 2, 4-D, and pentachlorophenol on the metabolic endocrine and reproductive endocrine system in ewes. *Journal of Toxicology and Environmental Health Part A*, 54(1), 21-36.
- Walker M.H, Keith L.H. (1992) EPA's Pesticide Fact Sheet Database Lewis Publishers, Chelsea, MI, USA
- Walker, G. C., Braden, E. A., Hicks, C. L., and Tuomy, J. M. (1971). *Factors Affecting the Quality of Procurement Grade Shell Eggs* (No. FL-138). Army natick labs ma food lab.
- Waller, G. D. (1988). Pyrethroid residues and toxicity to honeybees of selected pyrethroid formulations applied to cotton in Arizona. *Econ. Entomol* 81 (4):1022-6.
- Wang, H. P., Y. J. Liang, D. X. Long, J. X. Chen, W. Y. Hou, and Y. J. Wu (2009a). Metabolic profiles of serum from rats after subchronic exposure to chlorpyrifos and carbaryl. *Chem Res Toxicol* 22 (6):1026-33.
- Wang, Y. Y., Sui, K. X., Li, H., and Ma, H. Y. (2009b). The effects of lead exposure on placental nf-kappab expression and the consequences for gestation. *Reprod Toxicol*, 27(2), 190-195.
- Wauchop, R. D., Buttler, T. M., Hornsby, A. G., Augustijn-Beckers, P. W. M., and Burt, J. P. (1992). The SCS/ARS/CES pesticide properties database for environmental decision-making. In *Reviews of environmental contamination and toxicology* (pp. 1-155). Springer New York.
- WHO (1989). *Cypermethrin: EHC 82*. Geneva: World Health Organisation.
- Wilson, J. G. (1973). *Environment and birth defects*. Academic "Present status of drugs as teratogens in man." *Teratology* 7, no. 1 (1973): 3-15.
- Yadav, B., S. Taurin, R. J. Rosengren, M. Schumacher, M. Diederich, T. J. Somers-Edgar, and L. Larsen. (2010). Synthesis and cytotoxic potential of heterocyclic cyclohexanone analogues of curcumin. *Bioorg Med Chem* 18 (18):6701-7.

- Yan, C., L. Jiao, J. Zhao, H. Yang, and S. Peng. (2012). Repeated exposures to chlorpyrifos lead to spatial memory retrieval impairment and motor activity alteration. *NeurotoxicolTeratol* 34 (4):442-9.
- Yavasoglu, A., F. Sayim, Y. Uyanikgil, M. Turgut, and N.U.K. Yavasoglu. (2006). The pyrethroidcypermethrin induced biochemical and histological alterations in rat liver. *J. Health Sci*52:774–780.
- Yin, X., Zhu, G., Li, X. B., and Liu, S. (2009). Genotoxicity evaluation of chlorpyrifos to amphibian Chinese toad (Amphibian: Anura) by comet assay and micronucleus test. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis*, 680(1), 2-6.
- Yousef, M. I., F. M. El-Demerdash, and K. S. Al-Salhen. (2003). Protective role of isoflavones against the toxic effect of cypermethrin on semen quality and testosterone levels of rabbits. *J Environ Sci Health B* 38 (4):463-78.
- Yousef, M. I., T. I. Awad, and E. H. Mohamed. (2006). Deltamethrin-induced oxidative damage and biochemical alterations in rat and its attenuation by Vitamin E. *Toxicology* 227 (3):240-7.
- Zellweger, H., McDonald, J. S., and Abbo, G. (1967). Is lysergic-acid diethylamide a teratogen? *Lancet*, 2(7525), 1066-1068.
- Zhou, S., C. Duan, W. H. Michelle, F. Yang, and X. Wang. (2011). Individual and combined toxic effects of cypermethrin and chlorpyrifos on earthworm. *J Environ Sci (China)* 23 (4):676-80.