Bibiliography

1. Abdou, K. A. and Zaky, Z. M. 2016. Toxic effects of the fungicide malachite green on catfish (*Clarias gariepinus*). *Ass. Univ. Bull. Environ. Res*. **3** (1): 35-44.
2. Abdul-Farah, M., Ateeq, B., Ali, M. N. and Ahmad, W., 2004. Studies on lethal concentrations and toxicity stress of some xenobiotics on aquatic organisms. *Chemosphere*. **55**: 257–265.
3. Ackermann, M., Stecher, B., Freed, N.E., Songhet, P., Hardt, W.D. and Doebeli, M. 2008. Self-destructive cooperation mediated by phenotypic noise. Nature **454**(7207): 987-990.
4. Adams, S. M. 2002. Biological indicators of aquatic ecosystem stress. American Fisheries Society, Bethesda, Maryland.
5. Adamu, K. M. and Kori-Siakpere, O. 2011. Effects of sublethal concentrations of tobacco (*Nicotiana tobaccum*) leaf dust on some biochemical parameters of Hybrid catfish (*Clarias gariepinus* and *Heterobranchus bidorsalis*). *Brazilian Arch Biol Technol*., **54**(1): 183-196.
6. Adamu, K. M., Isah, M. C., Baba, T. A. and Idris, T. M. 2013. Selected liver and kidney biochemical profiles of hybrid catfish exposed to *Jatropha curcas* leaf. *Croatian J Fisheries*, **71**: 25-31.
7. Adedeji, O. And Agbede, O. 2009. Effects of diazinon on blood parameters in the African catfish (*Clarias gariepinus*). *African Journal of Biotechnology*. **8** : 3940-3946.
8. Adel, M., Dadar, M., Khajavi, S. H., Pourgholam, R., Karımı, B., & Velisek, J. (2016). Hematological, biochemical and histopathological changes in Caspian brown trout

(*Salmo trutta, caspius Kessler*, 1877) following exposure to sublethal concentrations of chlorpyrifos. *Toxin Reviews.* **36**: 73–79.

9. Adham Khadiga, G., Hamed Sherifa, S., Ibrahim H., Saleh, M. and Ramadan, A. 2002. Impaired functions in Nile tilapia, *Oreochromis niloticus* from polluted waters. *Acta Hydrochemica et Hydrobiologica*. **29**: 278-288.
10. Adhikari, S., Sarkar, B., Chatterjee, A., Mahapatra, C.T. and Ayyappan S. 2004. Effects of cypermethrin and carbofuran on certain hematological parameters and prediction of their recovery in a freshwater teleost, *Labeo rohita* (Hamilton). *Ecotoxol Environ Saf* **58**: 220–226.
11. Ael, E.V., Belpaire, C., Breine, J., Geeraerts, C., Van Thuyne, G., Eulaers, I., Blust, R. and Bervoets, L. 2014. Are persistent organic pollutants and metals in eel muscle predictive for the ecological water quality? *Environ. Pollut*. **186**: 165-171.
12. Agamy, E. 2012. Histopathological Liver Alterations In Juvenile Rabbit Fish (*Siganus Canaliculatus*) Exposed To Light Arabian Crude Oil, Dispersed Oil And Dispersant. *Ecotoxicology & Environmental Safety*. **15**: 171 – 179.
13. Agrawal A., Balasubramanian S., Smith E. K., Mad den P. A. F., Bucholz K. K., Heath A. C. Lynskey M. T. 2010. Peer substance involvement modifies genetic influences on regular substance involvement in young women. *Addiction 2010*. **105**: 1844–1853.
14. Agrawal, A. Pandey, R. S. and Sharma, B. 2010. Water Pollution with Special Reference to Pesticide Contamination in India. *J. Water Resource and Protection.* **2**: 432-448.
15. Aguiar, D. R. D. and Santana, J. A. 2002. Asymmetry in farm to retail price transmission: Evidence from Brazil . *Agribusiness*. **18** (1): 37–48.

16. Ahmadivand, A. and Golmohammad, S. 2014. Electromagnetic plasmon propagation and coupling through gold nanoringheptamers: a route to design optimized telecommunication photonic nanostructures. *Applied Optics.* **53**(18) : 3832-3840.
17. Ahmari, N., Schmidt, J. T., Krane, A. G., Malphurs, W., Bruce E. Cunningham, B. E., Owen, J. L , Martyniuk, C. J. and Zubcevic, J. 2015. Loss of bone marrow adrenergic beta 1 and 2 receptors modifies transcriptional networks, reduces circulating inflammatory factors, and regulates blood pressure . *physiolgenomics*. **48:** 526 –536
18. Akerblom, N. and Goedkoop, W. 2003. Stable isotopes and fatty acids reveal that *Chironomus riparius* feeds selectively on added food in standardized toxicity tests. *Environmental Toxicology and Chemistry*. **22** : 1473-1480.
19. Akerman, G., Amcoff. P., Tjarnlund, U., Fogelberg, K., Torrissen, O. and Balk, L. 2003. Paraquat and menadione exposure of rainbow trout (Oncorhynchus mykiss). Studies of effects on the penthose phosphate shunt and thiamine levels in liver and kidney. *Chemical Biology International*. **142**: 269-283.
20. Akinsorotan, A. M., Zelibe, S. A. A., Olele, N. F. 2013. Acute toxicity and behaivoural changes on African catfish (*Clarias gariepinus*) exposed to dizensate (glyphosate herbicide). *Int. J. Sci. Eng. Res*., **4(**3): 2229-5518.
21. Akoto, O. Azuure, A. A. and Adotey, K. D. 2016. Pesticide residues in water, sediment and fish from Tono Reservoir and their health risk implications. *Springerplus*. **5**(1):1849.
22. Aktar, M.W., Sengupta, D. and Chowdhury, A. 2009. Impact of pesticides use in agriculture: their benefits and hazards. *Interdiscip Toxicol* **2**(1):1–12
23. Alexandratos, N. and Bruinsma, J. 2012. World agriculture towards 2030/2050: the 2012 revision. ESA Working paper No. 12–03. FAO, Rome

24. Alvarez-Lajonchere, L. 2012. Relationships of maximum length, length at first sexual maturity, and growth performance index in nature with absolute growth rates of intensive cultivation of some tropical marine fish. *J World Aquacult Soc*. **43**(5):607–620.

25. Amiard-Triquet, C. 2009. Behavioral Disturbances: The Missing Link between Sub-Organismal and Supra-Organismal Responses to Stress? Prospects Based on Aquatic Research, Human and Ecological Risk Assessment. *An International Journal* **15**:1, 87-110.

26. Amin, K. A. and Hashem, K. S. 2012. Deltamethrin-induced oxidative stress and biochemical changes in tissues and blood of catfish (*Clarias gariepinus*): antioxidant defense and role of alpha-tocopherol. *BMC Veterinary Research*. **8**: 45.

27. Anbumani, S. and Mohankumar, MN. 2011. Nuclear and cytoplasmic abnormalities in the fish *Catla catla* (Hamilton) exposed to chemicals and ionizing radiation. *Research Journal of Environmental Science.* **5**(12): 867-877.

28. Anderson, T., Forlin, L, Hardig, J. and Larsson A. 1988. A physiological disturbance in fish living in coastal water polluted with bleached Kraft pulp mill effluents. *Canadian Journal of Fisheries and Aquatic Sciences*. **45**:1525 – 1536

29. Anderson, W.P. 2002. Weed Science: Principles (3rd edition). West Publishing Co., St. Paul, MN 388.

30. Angiras, N. N and Kumar, S. 2005. Efficacy of pyrazosulfuron-ethyl against weeds in rice nursery under mid hill conditions of Himachal Pradesh. *Indian Journal of Weed Science*. **37** (3-4):202-204

31. Ansara-Ross, T. M., Wepener, V., Van Den Brink, P. J. and Ross, M.J. 2012. Pesticides in South African fresh waters. *Afr. J. Aquat. Sci.* **37** (1): 1–16.

32. APHA .1998. Standard Methods for the Examination of Water and Wastewater (20th ed.). Eds. Andrew D Eaton, Lenore S Classer and Arnold E Greenberg. American Public Health Association, Washington DC
33. Arellano, J.M., Storch, V. and Sarasquete, C. 1999. Histological changes and copper accumulation in liver and gills of the *Senegales sole, Solea senegalensis*. *Ecotoxicol Environ Saf*. **44**(1): 62-72
34. Ariweriokuma, S. V., Akinrotimi, O. A. and Gabriel, U. U. 2011. Effects Of Cypermethrin on Condition Factor and Organosomatic Indices of *Clarias gariepinus*. *Journal of Agriculture and Social Research*. **11**(2): 67-72.
35. Ateeq, B., Abul Farah, M., Niamat Ali, M., Ahmad Waseem .2002. Induction of micronuclei and erythrocytes alterations in the catfish (*Clarias batrachus*) by 2,4 dichlorophenoxyacetic acid and butachlor. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis.* **518**(2):135-144.
36. Ayanda, I. O., Yang, M., Yu, Z. and Zha, J. 2018. Cytotoxic and genotoxic effects of perfluorododecanoic acid (PFDoA) in Japanese medaka. *Knowl. Manag. Aquat. Ecosyst*. **419**(9) : 1-7.
37. Ayanda, I. O., Yang, M., Zhang,Y. and Zha, J., 2018. Cytotoxic and genotoxic effects of perfluorododecanoic acid (PFDoA) in Japanese medaka. *Aquatic Ecosystem* 419(9): 1-7.
38. Ayanda, O. I. and Egbamuno, E. A. 2012. Histological examination of the liver and gills of Clarias gariepinus treated with glyphosate, *Environmental Research Journal* **6** (3): 228-234.

39. Ayandiran, T. A. and Fawole O. O. 2014. Seasonal distribution and Condition factor of Clarias gariepinus from polluted Oluwa River, Nigeria. IOSR Journal of Pharmacy and Biological Sciences: **9**(4): 86-93.
40. Ayoola S.O. 2008b. Histopathological effects of glyphosate on juvenile African catfish (*Clarias gariepinus*). *American-Eurasian J. Agric. & Environ. Sci*. **4** (3): 362-367.
41. Ayoola, G. A., Coker, H., Adesegun, S.A., Adepoju-Bello, A. A., Obaweya, K., Ezennia, C., Atangbayila, T. 2008. Phytochemical Screening and Antioxidant Activities of Some Selected Medicinal Plants Used for Malaria Therapy in Southwestern Nigeria. *Tropical Journal of Pharmaceutical Research*, **7** (3): 1019-1024
42. Ayoola, S. O. and Maduekwe, I. A. 2012. Biochemical and Haematological Response of *Clarias gariepinus* (Burchell, 1822) Juveniles Fed with Diet Containing *Mytilusedulis* Shell at Varying Level. *Journal of Fisheries and Aquatic Science*. **7**: 468-474.
43. Ayoola, S.O. 2008a. Toxicity of glyphosate herbicide on Nile tilapia (*Oreochromis niloticus*) juvenile. *African J. Agric. Res.* **3**: 825-834.
44. Azmat, R., Talat, R. and Ahmed, K. 2007. The length- weight relationship, Condition factor and impact of fluoride concentration in *Johnius belangerii* of Arabian Sea. *Res. J. Environ. Toxicol*. **1**: 138-143.
45. Babin, P. J., Carnevali, O., Lubzens, E., Schneider, W. J. Molecular Aspect of Oocyte Vitellogenesis in Fish. In Babin PJ, Cerda J, Lubzens E (Eds.). 2007. The Fish Oocyte : From Basic Studies to Biotechnological Applications. Springer. New York, 2007, 39-76.
46. Baghfalaki, M., Shaluei, F., Hedayati, A., Jahanbakhshi, A. and Khalili, M. 2012. Acute Toxicity Assessment of Tribenuron-Methyl Herbicide in Silver Carp

(*Hypophthalmicthys molitrix*), Common Carp (*Cyprinus carpio*) and Caspian Roach (*Rutilus rutilus caspicus*). *Global Veterinaria*. **8**(3): 280-284.

47. Baghfalaki, T., Ganjali, M. and Verbeke, G. 2016. A shared parameter model of longitudinal measurements and survival time with heterogeneous random-effects distribution. *Journal of Applied Statistics*. **44**(15): 2813-2836
48. Baker, V. 2001. Endocrine disruptors - testing strategies to assess human hazard. *Toxicology in vitro*. **15** (4-5): 413-419.
49. Banaee, M., Haghi, B. N. and Zoheiri, F. 2013. LC50 and bioaccumulation of lead nitrate (Pb(NO3)2) in Goldfish (*Carassius auratus*) *International Journal of Aquatic Biology*. **1**(5): 233-239.
50. Banaee, M., Mirvagefei, A.R., Rafei, G.R. and Majazi, B. A. 2008. Effect of sub-lethal diazinon concentrations on blood plasma biochemistry. *International Journal Environmental Research*. **2**: 189-198
51. Banaee, M., Sureda, A., Mirvaghefi, A.R. and Ahmadi, K. 2011. Effects of diazinon on biochemical parameters of blood in rainbow trout (*Oncorhynchus mykiss). Pesticn Biochem Physiol*. **99**: 1-6.
52. Barad, V. S. and Kulkarni, R. S. 2010. Haematological changes induced by short – term exposure to copper in the Indian freshwater fish, *Notopterus notopterus* (Pallas). *The bioscan* **5** (2): 313-316.
53. Barnhoorn, I. E. J., Van Dyk, J. C., Pieterse, G. M. and Bornman, M. S. 2010. Intersex in feral indigenous freshwater *Oreochromis mossambicus*, from various parts in the Luvuvhu River, Limpopo Province, South Africa. *Ecotoxicology and Environmental Safety*. **73**: 1537–1542.

54. Barrilli, G. H. C., Rocha, O., Negreiros, N. F. and Verani, J. R. 2015. Influence of environmental quality of the tributaries of the Monjolinho River on the relative condition factor (Kn) of the local ichthyofauna. *Biota Neotropica*. **15**(1): e20140107
55. Barshiene, J., Dedonyte, V., Rybakovas, A., Andreikenaite, L., and Andersen, O. K. 2006b Induction of micronuclei and other nuclear abnormalities in peripheral blood and kidney of marine fish treated with crude oil. *Aquatic Toxicology*. **78**(1): 99-104.
56. Barton, B.A. 2002. Stress in Fishes: A Diversity of Responses with Particular Reference to Changes in Circulating Corticosteroids. *Integrative and Comparative Biology*. **42**, (3): 517–525
57. Bastardo, H., Scorza, C. and Sofia, S. 2006. Variables hematologicas y bioquimicas en la trucha arcoiris, relacionadas con la condicion hepatica y la edad. *Zootecnia Tropical.* **24**: 1-15.
58. Battaglin, W. A., Furlong, E. T., Burkhardt, M . R. and Peter C. J. 2000. Occurrence of sulfonylurea, sulfonamide, imidazolinone, and other herbicides in rivers, reservoirs and ground water in the Midwestern United States. *Sci. Total Environ.* **248**(2-3): 123-133.
59. Begum, B. A., Kim, E., Biswas, S. K. and Hopke, P. K. 2004. Investigation of sources of atmospheric aerosol at urban and semi-urban areas in Bangladesh. *Atmos. Environ.* **38**: 3025-3038.
60. Beketov, M. A., Foit, K., Biggs, J. P., Sacchi, A., Schafer, R. B., Schriever, C. A. and Liess, M. 2008. Freshwater Biological Indicators of Pesticide Contamination – An Adaptation of the SPEAR Approach for the UK. Science Report – SC030189/SR4. Environmental Agency, Bristol, UK

61. Belenguera, V., Martinez-Capela, F., Masiab, A. and Pico, Y. 2014. Patterns of presence and concentration of pesticides in fish and waters of the Jucar River (Eastern Spain). *Journal of Hazardous Materials*. **265**: 271– 279.
62. Bennet, R. O. and Wolke, R. C. 2004. The effects of sublethal endrin exposure on rainbow trout *Salmo gaindineri*. *Journal of Fish Biology*. **31**: 375 – 385.
63. Berard, A., Dorigo, U., Humbert, U., Leboulanger, C. and Seguin, E. 2002. Application of the Pollution-Induced Community Tolerance (PICT) method to algal communities: its values as a diagnostic tool for ecotoxicological risk assessment in the aquatic environment. *International Journal of Limnology*. **38**(3): 247-261.
64. Berenzen, N., Lentzen-Godding, A., Probst, M., Schulz, H., Schulz, R. and Liess, M. 2005. A comparison of predicted and measured levels of runoff-related pesticide concentrations in small lowland streams on a landscape level. *Chemosphere* **58** : 683–691.
65. Bergerot, B., Lasne, E., Vigneron, T. and Laffaille, P. 2008. Prioritization of fish assemblages with a view to conservation and restoration on a large scale European basin, the Loire. *Biodivers. Conserv*. **17**: 2247–2262.
66. Bernet, D., Schmidt, H., Meier,W., Burkhardt-Holm, P. and Wahli, T. 1999. Histopathology in fish: proposal for a protocol to assess aquatic pollution. *J. Fish Dis*. **22:** 25–34.
67. Bhagade, A. 2012. Impact of Bioaccumulation of few Pcbs and Pahs in freshwater fish *Rasbora daniconius* and *Puntius ticto*. Thesis Submitted For Ph.D. In Zoology ToRtm Nagpur University, Nagpur.

68. Bhandare, R.Y., Pathan, T.S., Shinde, S.E., More, P.R. and Sonawane, D.L. 2011. Toxicity and behavioural changes in fresh water fish *Puntius stigma* exposed to pesticide (Rogor). *Am-Euras. J. Toxicol. Sci.* **3**(3): 149-152.
69. Bhatnagar, A., Yadav, A.S. and Cheema, N. 2016. Genotoxic Effects of Chlorpyrifos in Freshwater Fish *Cirrhinus mrigala* Using Micronucleus Assay. *Advances in Biology***.** **2016**, Article ID 9276963.
70. Biello, D. 2008. Fertilizer runoff overwhelms streams and rivers— Creating vast "dead zones." *Scientific American*
71. Birendra K. and Banerjee V. 1990. Effects of sublethal toxicity of sevin (Carbaryl) on blood parameters in *Clarias batrachus* (L). *Him. J. Env*. **4**:166-172.
72. Bobmanuel, N. O. K., Gabriel, U. U. and Ekweozor, I. K. E. 2006. Direct toxic assessment of treated fertilizer effluents to *Oreochromis niloticus*, *Clarias gariepinus* and catfish hybrid (*Heterobranchus bidorsalis* x *Clarias gariepinus*) *African Journal of Biotechnology* **5** (8): 635-642.
73. Bohmer, J., Rawer-Jost, C., Zenker, A., Meier, C., Feld, C.K., Biss, R. and Hering, D. 2004. Assessing streams in Germany with benthic invertebrates: development of a multimetric invertebrate based assessment system. *Limnolog*. **34** : 416-432.
74. Bolognesi, C., Perrone, E., Roggieri, P., Pampanin, D.M. and Sciutto, A. 2006. Assessment of micronuclei induction in peripheral erythrocytes of fi sh exposed to xenobiotics under controlled conditions. *Aquat. Toxicol*. **78**: 93-98
75. Boon, J. P., Lewis, W. E., Tjoen-A-Choy, M. R., Allchin, C. R., Law, R. J., De Boer, J. 2002. Levels of polybrominated diphenyl ether (PBDE) flame retardants in animals representing different trophic levels of the North Sea food web. *Environ. Sci. Technol*. **36**(19): 4025-4032.

76. Boran, H., Capkin, E., Altinok, I. and Terzi, E. 2012. Assessment of acute toxicity and histopathology of the fungicide captan in rainbow trout. *Exp Toxicol Pathol*. **64**: 175–179.
77. Botelho, R. G., Froes, C. M. and Santos, J. B. 2012. Toxicity of herbicides on Escherichia coli growth. *Braz. J. Biol*. **72**(1):141-146.
78. Boyd, E. M. and Boyd, M. A. 1997. A note on trepelennamine hydrochloride and locomotor activity. *Journal of pharmacy and pharmacology*. **9**(1): 118-119.
79. Bradley, K. W. 2013. Herbicide-resistance in the Midwest: current status and impacts. *Weed Sci Soc Am Abstr*. 271.
80. Braham, R.P., Blazer, V.S., Shaw, C.H. and Mazik, P.M. 2017. Micronuclei and other erythrocyte nuclear abnormalities in fishes from the Great Lakes Basin, USA. *Environmental and molecular mutagenesis*. **58**, (8): 570-581.
81. Camargo, M. M. P., Martinez, C. B. R. 2007. Histopathology of gills, kidney and liver of a neotropical fish caged in an urban stream. *Neotrop. Ichthyol*. **5**: 327-336.
82. Capkin, E., Terzi, E., Boran, H., Yandi, I. and Altinok, I. 2010. Effects of some pesticides on the vital organs of juvenile rainbow trout (*Oncorhynchus mykiss*).*Tissue Cell*. **42**(6):376-82.
83. Carrasco, M. J. and Consuelo, S. 1997. Toxicity of atrazine and chlorsulfuron to algae. *Toxicological and Environmental Chemistry*. **59**(1-4): 89-99.
84. Carvalho F. P. 2017. Pesticides, environment, and food safety. *Food and Energy Security*. **6**(2): 48–60.
85. Cavalcante, D. G., Martinez, C. B. and Sofia, S. H. 2008. Genotoxic effects of round up on the fish *Prochilodus lineatus. Mutat Res*. **655** (1-2) 41-46.

86. Cavalcantea, G. S. M., Martinez, C. B. R. and Sofia, S. H. 2008.Genotoxic effects of Roundup on the fish *Prochilodus lineatus*. *Mutation Research/Genetic Toxicology and Environmental Mutagenesis* **655**(1–2):41-46.

87. Çavas, T. and Ergene-Gözükara, S. 2005. Induction of micronuclei and nuclear abnormalities in *Oreochromis niloticos* following exposure to petroleum refinery and chromium processing plant effluents. *Aquat Toxicol*. **74**: 264–271.

88. Cavas, T. and Konen, S. 2007. Detection of cytogenetic and DNA damage in peripheral erythrocytes of goldfish (*Carassius auratus*) exposed to a glyphosate formulation using the micronucleus test and the comet assay. *Mutagenesis* **22**: 263-268

89. Çavas, T., Garanko, N. N. and Arkhipchuk, V.V. 2005. Induction of micronuclei and binuclei in blood, gill and liver cells of fishes subchronically exposed to cadmium chlorid and copper sulphate. *Food Chem Toxicol*. **43**:569–574.

90. Chandran, K., Sullivan, N. J., Felbor, U., Whelan, S. P. and Cunningham, J. M. 2005. Endosomal proteolysis of the Ebola virus glycoprotein is necessary for infection. *Science*. **308** (5728): 1643-1645.

91. Chatopadhyay, S., Adhikari, S., Adhikary, S. P., Ayyappan, S. 2006. Evaluation of butachlor for control of submerged microphytes along with its impact on biotic components of fresh water system.*Iran.J.Environ.Sci.Eng*. **3**(2): 103-108.

92. Chaudhry, F. N. and Malik, M. F. 2017. Factors Affecting Water Pollution: A Review. *J Ecosyst Ecography*. **7**(1): 225. doi: 10.4172/2157-7625.1000225.

93. Chu, F. H., Chao, C.-H., Chung, M. H., Chen, C. C. and Yeh, S. D., 2001. Completion of the genome sequence of Watermelon silver mottle virus and utilization of degenerate primers for detecting tospoviruses in five serogroups. *Phytopathology*. **91**: 361-368.

94. Cook, J. R., Langlet, F., Kido, Y., and Accili, D. 2015. Pathogenesis of selective insulin resistance in isolated hepatocytes. *Journal. Biol. Chem*. **290**: 13972-13980.

95. Corlu, A. and Loyer, P.2012. Regulation of the G1/S Transition in Hepatocytes: Involvement of the Cyclin-Dependent Kinase Cdk1 in the DNA Replication. *International Journal of Hepatology*. **2012**: 689324.

96. Coz-Rakovac, R., Topic Popovic, N., Smuc, T., Strunjak-Perovic, I., Jadan, M., 2009. Classification accuracy of algorithms for blood chemistry data for three aquaculture affected marine fish species. *Fish Physiology and Biochemistry***35:** 641-647.

97. Cressey, D. (2015). Widely used herbicide linked to cancer. Nature.

98. Crestani, M., Menezes, C., Glusczak, L., Dos Santos Miron, D., Lazzari, R., Duarte, M. F., Morsch, V. M., Pippi, A. L. and Vieira, V. P. 2006. Effects of clomazone herbicide on hematological and some parameters of protein and carbohydrate metabolism of silver catfish *Rhamdia quelen*. *Ecotoxicol Environ Saf*. **65**(1): 48-55.

99. Csillik, B., Fazakas, J., Nemcsok, J. and Knyihar-Csillik, E. 2000. Effect of the pesticide Deltamethrin on the Mauthner cells of Lake Balaton fish. *Neurotoxicology*. **21:** 343-52.

100. Czédli, H., Csedreki, L., Sziki, A. G., Jolánkai, G., Pataki, B., Hancz, C., Antal, L. and Nagy, S. A. 2014. Investigation of the Bioaccumulation of Copper in Fish. *Fresenius Environmental Bulletin*, **23**(7): 1547- 1552.

101. Da Fonseca, M. B, Glusczak, L., Moraes, B. S, Menezes, C. C. And Pretto, A. 2008. The 2,4-D herbicide effects on acetylcholinesterase activity and metabolic parameters of piava freshwater fish (*Leporinuso btusidens*). *Ecotoxicol Environ Saf.* **69**: 416-420.

102. Da Rocha, C. A., Da Cunha, L. A., Da Silva, P. R. H., De Oliveira B. M., Burbano, R. M. 2011. Studies of micronuclei and other nuclear abnormalities in red blood cells of *Colossoma macropomum* exposed to methylmercury. *Genet Mol Biol*. **34**(4): 694-697.

103. Dalmo, R. A., Ingerbrigtsen, K. and Bogwald, J.1997. Non-specific defence mechanism in fish with special reference to the reticuloendothelial system (RES). *J. Fish Dis*. **20**: 241-273.

104. Daniel, P. H. 2006. Investing in Tomorrow's Liquid Gold. **19**.

105. Dannevig, B. H., Struksnes, G., Skogh, T., Kindberg, G. M. and Berg, T. 1990. Endocytosis via the scavenger and the mannose receptor in rainbow trout (*Salmo gairdneri*) pronephros carried out by non phagocytic cells. Fish Physiol. Biochem. **8**: 229-238.

106. Dannevig, B.H., Falk, K. and Skjerve, E. 1994. Infectivity of internal tissues of Atlantic salmon, *Salmo salar* L., experimentally infected with the etiologic agent of infectious salmon anemia (ISA). *Journal of Fish Diseases*. **17**: 613 - 622.

107. Das, S. and Gupta A. 2014.A study on acute toxicity, behaviour, growth, somatic indices and oxygen consumption in Indian flying barb, *Esomus danricus* (Hamilton-Buchanan) on exposure to organophosphate pesticide, malathion (EC50). *Bioresearch Bulletin*.**4**(1): 1- 6.

108. Das, S. and Gupta, A. 2014. A study on acute toxicity, behavior, growth, somatic indices and oxygen consumption in indian flying barb, Esomus danricus (Hamilton-Buchanan) on exposure to organophosphate pesticides, malathion (EC50). *Bioresearch Bulletin*. 4(1)

109. David, L., Stolovicki, E., Haziz, E. and Braun E. 2010. Inherited adaptation of genome-rewired cells in response to a challenging environment. *HFSP J.* **4**(3-4):131-41.

110. David, N., McKee, L. J., Black, F. J., Flegal, A. R., Conaway, C. H., Schoellhamer, D. H. and Ganju, N. K. 2009. Mercury concentrations and loads in a large river system tributary to San Francisco Bay, California, USA. *Environ. Toxicol. Chem.* **28**: 2091–2100.

111. De la torre, C., Petochi, T., Corsi, I., Dinardo, M. M., Baroni, D., Alcaro, L., Focardi, S., Tursi, A., Marino, G., Frigeric, A. and Amato, E. 2010. DNA damage, severe organ lesions and high muscle levels of As and Hg in two benthic fish species from a chemical warfare agent dumping site in the Mediterranean Sea. *Science of the Total Environment*, **408**(9): 2136- 2145.

112. De Lorenzo M. E., Scott G. I. and Ross P. E. 2001. Toxicity of pesticides to aquatic microorganisms: a re- view. *Environ. Toxicol. Chem*. **20**: 84 – 98.

113. Deivasigamani, S. 2015. Effect of herbicides on fish and histological evaluation of common carp (*Cyprinus carpio*). *International Journal of Applied Research.* **1**(7): 437-440.

114. Dekic, R., Savic, N., Manojlovic, M., Golub, D. and Pavlicevic, J. 2016. Condition factor and organosomatic indices of rainbow trout (*Onchorhynchus mykiss*, wal.) from different brood stock. *Biotechnology in Animal Husbandry*. **32** (2): 229 -237.

115. Dekker, J. and Duke, O.S. 1995. Herbicide resistant field crop. *Adv. Agron*. **54** :69-116.

116. Delcour, I., Spanoghe, P. and Uyttendaele, M. 2015. Literature review: Impact of climate change on pesticide use. *Food Research International*. **68**: 7–15.

117. Denoël, M., Libona, S., Kestemont, P., Brasseurc, C., Focant J. F. and Pauwc E. D. 2013. Effects of a sublethal pesticide exposure on locomotor behavior: A video-tracking analysis in larval amphibians. *Chemosphere*. **90** (3): 945-951.

118. Desai, B and Parikh, P. 2013. Biochemical Alterations On Exposure Of Imidacloprid and Curzate On Fresh Water Fish *O.massambicus* and *L.rohita*. *Indian journal of forensic Medicine and Toxicology.* **7**(2): 87-91.

119. Desai, B. and Parikh, P. 2012 Impact of Curzate (fungicide) on Hematological Parameters of *Oreochromis mossambicus. International Journal of Scientific & Engineering Research*. **3**(7):1-4.

120. Desai, B. and Parikh, P. 2012. Impact of Curzate (fungicide) on Hematological Parameters of *Oreochromis mossambicus*. *International Journal of Scientific & Engineering Research* **3** (7): 1-6.

121. Desai, B., and Parikh, P. 2014. Behavioural responses to acute exposure of Imidacloprid and Curzate on *Labeo rohita* (Hamilton, 1822). *International Journal of Open Scientific Research*. **2**(1): 1- 12.

122. DeSesso, J. M., Scialli, A. R., White, T.E.K. and Breckenridge, C.B. 2014. Multigeneration reproduction and male developmental toxicity studies on atrazine in rats. *Birth Defects Res B Dev Reprod Toxicol*, **101**: 237–253.

123. Dezfuli, B.S., Manera, M, Lorenzoni, M., Pironi, F., Shinn, P.A. and Giari, L. 2015. Histopathology and the inflammatory response of European perch, Perca fluviatilis muscle infected with Eustrongylides sp. (Nematoda). *Parasites and Vectors,* 5**8**:227.

124. Dhanakumar, S., Solaraj, G. and Mohanra, R. 2015. Heavy metal partitioning in sediments and bioaccumulation in commercial fish species of three major reservoirs of river Cauvery delta region, India. *Ecotoxicology and Environmental Safety*, **113**: 145-151.

125. Dhasarathan, P., Palaniappan, R. and Ranjit Singh, A. J. A. 2000. Effect of endosulfan and butachlor on the digestive enzyme and proximate composition of the fish, *Cyprinus carpio. Indian J. Environ. And Ecoplan.* **3**(3): 611- 614.

126. Díez, J., Querejeta, R., López, B., González, A., Larman, M., Martínez, Ubago, J. L. 2002. Losartan-dependent regression of myocardial fibrosis is associated with reduction of left ventricular chamber stiffness in hypertensive patients. *Circulation*. **105** (21): 2512- 2517.

127. Dogan, D. and Can, C. 2011. Endocrine disruption and altered biochemical indices in male *Oncorhynchus mykiss* in response to dimethoate. *Pesticide Biochemistry and Physiology*. **99** (2): 157- 161.

128. Downing, J. A., Cole, J. J., Middelburg, J. J., Striegl, R. G., Duarte, C. M., Kortelainen, P., Prairie, Y. T. and Laube, K. A. 2008 Sediment organic carbon burial in agriculturally eutrophic impoundments over the last century *Global Biogeochemical Cycles*, **22**: GB1018.

129. Dutta, H. M. and Dalal, R. 2008. The effect of endosulfan on the ovary of bluegill sunfish: a histopathological study (*Lepomis macrochirus sp*). *Int J Environ Res*. **2**: 215–224.

130. Dutta, H. M. and Arends, D. A. 2003. Effects of endosulfan on brain acetylcholinesterase activity in juvenile bluegill sunfish. *Environ Res.* **91**(3): 157-162.

131. Dutta, H. M., Munshi, J. S. D., ROY, P. K., Singh, N. K., Adhikari, S. and Killius, J. 1996. Ultrastructural changes in the respiratory lamellae of the catfish, Heteropneustes fossilis after sublethal exposure to melathion. *Environ. Poll*. **92**: 329-341.

132. Duttaa, H. M. and Meijer, H. J. M. 2003. Sublethal effects of diazinon on the structure of the testis of bluegill, *Lepomis macrochirus*: a microscopic analysis. *Environmental Pollution* **125**: 355–360.

133. Ecobichon, D. J. 2001. Pesticide Use in Developing Countries. *Toxicology*. **160**: 27-33.

134. Edori, O. S. 2007. Effect of Monoclotophos on organisomatic indices and enzyme Activity of a hybrid catfish (*Clarias gariepinus*) Msc thesis. Dept. of Chemistry, Rivers Statre Univ. of Sc and tech. 39

135. Ehsanpour, M., Afkhami, M., Khoshnood, R., Reich, K. J. 2014. Determination and maternal transfer of heavy metals (Cd, Cu, Zn, Pb and Hg) in the Hawksbill sea turtle (*Eretmochelys imbricata*) from a nesting colony of Qeshm Island, Iran. *Bulletin of environmental contamination and toxicology*. **92** (6): 667- 673

136. Elia, A.C., Waller, W.T. and Norton, S.J. 2002. Biochemical responses of bluegill sunfish (*Lepomis macrochirus*, Rafinesque) to atrazine induced oxidative stress. *Bull Environ Contam Toxicol.* **68**: 809- 816.

137. El-Sayed, Y. S., Saad, T. T. and El-Bahr, S. M. 2007. Acute intoxication of deltamethrin in monosex Nile tilapia, *Oreochromis niloticus* with special reference to the clinical, biochemical and haematological effects. *Environ Toxicol Pharmacol.* **24**(3): 212–217.

138. Eqani, S.A., Malik, R.N., Cincinelli, A., Zhang, G., Mohammad, A., Qadir, A., Rashid, A., Bokhari, H., Jones, K.C. and Katsoyiannis, A. 2013. Uptake of organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) by river water fish: *The case of River Chenab. Sci. Total Environ*. **450**(451): 83-91.

139. Esteban, M.A., Munoz, J. and Meseguer. 2000. Blood cells of sea bass (Dicentrarchus labrax L.). Flow cytometric and microscopic studies. *Anat. Rec*. **258**(1): 80-89.

140. Fairchild, J. F., Ruessler, D.S. and Carlson, A. R. 2009. Comparative sensitivity of five species of macrophytes and six species of algae to atrazine, metribuzin, alachlor, and metolachlor. *Environ Toxicol Chem*. **17**:1830–1834.

141. Farid, S. S. and El-Sayed El-Deeb M. 2015. Pesticides Toxicity in Fish with Particular Reference to Insecticides. *Asian Journal of Agriculture and Food Sciences*. **3** (1): 40-60.

142. Farombi, E. O., Ajimoko, Y.R. and Adelowo, O.A. 2008. Effect of Butachlor on antioxidant enzyme status and lipid peroxidation in fresh water African Catfish, (*Clarias gariepinus*). *Int. J. Environ. Res. Public Health.* **5:** 423-427.

143. Feiz, S. 2010. Effect of Herbicide Butachlor on Blood Parameters of Pikeperch. MSC Thesis, Islamic Azad University, Lahijan Branch, 110 p.

144. Fidente, P., Carpentiero, C., Morrica, P. and Seccia, S. 2006. Photodegradation of bensulphuron methyl in aqueous solution. *Int. J. Environ. Anal. Chem*. **86**(3-4): 277-287.

145. Finney, D.J. 1971. Probit Analysis. 3rd Edition, Cambridge University Press, Cambridge.

146. Fırat, O., Cogun, H. Y., Yüzereroğlu, T. A., Gök, G., Fırat, O., Kargin, F. and Kötemen, Y.2011. A comparative study on the effects of a pesticide (cypermethrin) and two metals (copper, lead) to serum biochemistry of Nile tilapia, *Oreochromis niloticus. Fish Physiol Biochem.* **37**(3): 657–666.

147. Fishel, F., Ferrell, J., MacDonald, G. and Sellers, B. 2006. Herbicides: How Toxic Are They? PI-133, one of a series of the Pesticide Information Office, UF/IFAS

Extension. Original publication date September 2006. Revised February 2013. Reviewed March 2016. Visit the EDIS website at http://edis.ifas.ufl.edu

148. Fisk, A. T., Hobson, K. A., Norstrom, R. J. 2001. Influence of chemical and biological factors 404 on trophic transfer of persistent organic pollutants in the Northwater Polynya marine 405 food web. *Environ. Sci. Technol*. **35:** 732-738.

149. Fonsecaa, V. F., Franc, S., Serafim, A., Company, R., Lopes B., Bebianno, M. J. and Cabral H.N. 2011b. Short-term variability of multiple biomarker response in fish from estuaries: Influence of environmental dynamics Marine. *Environ. Res*. **72**: 172-178

150. Fonsecaa, V. F., Franc, S., Serafim, A., Company, R., Lopes, B., Bebianno, M. J. and Cabral, H. N. 2011a. Multi-biomarker responses to estuarine habitat contamination in three fish species: *Dicentrarchus labrax*, *Solea senegalensis* and *Pomatoschistus microps*. *Aqua. Toxicol*. **102** (30): 216–227.

151. França, M. B., Panek, A.D. and Eleutherio, E.C.A. 2007. Oxidative stress and its effects during dehydration. Comparative Biochemistry and Physiology Part A: Molecular and Integrative Physiology. **146** (4): 621-631.

152. Frederick, P. 2002. Behavioural Ecotoxicology. **60**: 241-242

153. Frenzilli, G., Bosco, E. , Barale, R. 2000. Validation of single cell gel assay in human leukocytes with 18 reference compounds. *Mutation Research*. **468**(2): 93-108

154. Gaafar, N. 2010. Wheat midges and thrips information system: Monitoring and decision making in central Germany. PhD Dissertation Martin- Luther- University HalleWittenberg, 109 p.

155. Gabriel, U. U., Obomanu, F. G. and Edori O. S. 2010. Biochemical changes in hybrid catfish (*Heterobranchus bidorsalis*×Clarias gariepinus) treated with nuracron. *Chinese J. Appl.Environ. Biol*. **16**(3):353-357

156. Gabriels, W., Lock, K., De Pauw, N. and Goethals, P. L. M. 2010. Multimetric Macroinvertebrate Index Flanders (MMIF) for biological assessment of rivers and lakes in Flanders (Belgium). Limnolog. **40**:199-207.

157. Gammon, D.W., Aldous, C.N., Carr, W. C., Jr, Sanborn, J. R. and Pfeifer, K.F. 2005. A risk assessment of atrazine use in California: human health and ecological aspects. *Pest Manag Sci*. **61**(4): 331-355.

158. Garcia-Diaz, M., Bebenek, K., Krahn, J. M., Pedersen, L. C. and Kunkel, T. A. 2006. Structural analysis of strand misalignment during DNA synthesis by a human DNA polymerase. *Cell* . **124**: 331–342.

159. Gerber, M., Lang, C., Lemola, S., Colledge, F., Kalak, N., Holsboer-Trachsler, E., 2016. Validation of the German version of the insomnia severity index in adolescents, young adults and adult workers: results from three cross-sectional studies. *BMC Psychiatry.***16**: 174.

160. Gerber, R., Wagenaar, G. M., Smith, W., Ikenaka, Y., Smit, N. J. 2017.Insights into the drivers of histopathological changes and potential as bio-indicator of riverine health of an aquatic apex predator from a premier conservation area: a multiple lines of evidence and multivariate statistics approach. *Ecol. Indic.***72**: 530–544.

161. Gerhardt, A. 2007. Aquatic Behavioral Ecotoxicology—Prospects and Limitations *Human and Ecological Risk Assessment: An International Journal*. **13** (3): 481-549.

162. Ghobadian, M., Nabiuni, M., Parivar, K., Fathi, M., Pazooki, J. 2017. Histopathological evaluation of zebrafish (*Danio rerio*) larvae following embryonic exposure to MgO nanoparticles. *Iranian Journal of Fisheries Sciences*. **16**(3): 959-969.

163. Gibbons, D., Morrissey, C. and Mineau, P. 2015. A review of the direct and indirect effects of neonicotinoids and fipronil on vertebrate wildlife. *Environ Sci Pollut Res* **22**: 103–118.

164. Giesy, J. P. Dobson, S. and Soloman, K. R. 2000. Ecotoxicological risk assessment for Roundup® herbicide. *Rev. Environ. Contam. Toxicol*. **167**: 35–120.

165. Gilliom, R. J. 2007. Pesticides in the Nation's Streams and Ground Water. *Environmental Science and Technology*. **41**(10) : 3408–3414

166. Giulio, R. T. and Hinton, D. E. 2008. The Toxicology of Fishes, CRC Press, Taylor and Francis Group, Boca Paton. 1071pp.

167. Glover, C. N., Petri, D., Tollefsen, K.E., Jorum, N., Handy, R. D. and Berntssen, M. H. 2007. Assessing the sensitivity of Atlantic salmon (*Salmo salar*) to dietary endosulfan exposure using tissue biochemistry and histology. *Aquat Toxicol* . **84**:346–355.

168. Glusczak, L., Loro, V., Alexandra P., Bibiana M., Raabe, A., Duarte, M., da Fonseca, M., de Menezes, C. and de Sousa Valladão, C., Acute Exposure to Glyphosate Herbicide Affects Oxidative Parameters in Piava. *Archives of Environmental Contamination and Toxicology* . **61** (4): 624-630.

169. Glusczak, L., Miron, D. S., Crestani, M., Fonseca, M. B., Pedron, F. A., Duarte, M. F. and Vieira, V. L. P. Effect of glyphosate herbicide on acetylcholinesterase activity and metabolic and hematological parameters in piava (*Leporinus obtusidens*). *Ecotoxicol Environ Saf* . **65**: 237–241.

170. Goldar, B. and Banerjee, N. 2004. Impact of Informal Regulation of Pollution on Water Quality in Rivers in India. *Journal of Environmental Management.* **73** (2):117-130.

171. Grisolia, C.K. Rivero,C.L.G., F.L.R.M., da Silva I.C.R., Barbosa, A.C. and Dorea, J.G. 2009. Profile of micronucleus frequencies and DNA damage in different species of fish in a eutrophic tropical lake. *Genet Mol Biol*. **32**(1): 138–143.

172. Guideline of A.W.W.A. and W.P.C.F. 1998. American Public Health Association.; American Water Works Association.; Water Environment Federation. Publisher: Washington, D.C.: APHA-AWWA-WEF, 1998.Edition/Format:Print book : National government publication : English : 20th ed.

173. Gül, S., Belge-Kurutas, E., Yıldız, E., Sahan, A. and Doran, F. 2004 Pollution correlated modifications of liver antioxidant systems and histopathology of fish (Cyprinidae) living in Seyhan Dam Lake, Turkey. *Environ. Int*. **30**: 605-609.

174. Gupta, A. and Kumar, P. 2015. Assessment of the histological state of the healing wound. *Plast Aesthet Res*. **2**: 239-242.

175. Gupta, J. J., Bardoloi, R. K., Reddy, P. B. and Anubrata D. 2009. Performance of crossbred pigs fed on raw and boiled sweet potato tuber at various levels at different stages of growth. *Indian J. Anim. Sci*. **79** (7): 696-699.

176. Halstead, N. T., McMahon, T. A., Johnson, S. A., Raffel, T. R., Romansic, J. M., Crumrine, P. W. and Rohr J. R. 2014. Community ecology theory predicts the effects of agrochemical mixtures on aquatic biodiversity and ecosystem properties. *Ecology Letters*. **17**: 932–941.

177. Hassanein, H. M. 2002. Toxicological effects of the herbicide oxyfluorfen on acetylcholinesterase in two fish species: *Oreochromis niloticus* and *Gambusia affinis*. *J Environ Sci Health A Tox Hazard Subst Environ Eng*. **37**(4): 521-527.

178. Heddle, J. A., Cimino, M. C., Hayashi, M., Romagna, F., Shelby, M. D., Tucker, J. D., Vanparys, P. and MacGregor, J. T. 1991. Micronuclei as an index of cytogenetic damage: past, present, and future. Environ. Mol. Mutagen. **18**: 277-291.

179. Heimo M. 2013. Red blood cells in sports: effects of exercise and training on oxygen supply by red blood cells. *Front Physiol*. **4**: 332.

180. Helfrich, L. A., Weigmann, D. L., Hipkins, P. and Stinson, E. R. 2009. Pesticides and aquatic animals: a guide to reducing impacts on aquatic systems. In: Virginia Polytechnic Institute and State University.

181. Hellou, J. 2011. Behavioural ecotoxicology, an "early warning" signals to assess environmental quality. *Environ Sci Pollut Res Int*. **18** (1): 1–11.

182. Hii, Y. S., Lee, M. Y. and Chuah, T. S. 2007. Acute Toxicity of Organochlorine Insecticide Endosulfan and Its Effect on Behaviour and Some Hematological Parameters of Asian. *Pesticide Biochemistry and Physiology.* **89**: 46-53.

183. Hogan, D. B. 2014. Long-Term Efficacy and Toxicity of Cholinesterase Inhibitors in the Treatment of Alzheimer Disease. *Can J Psychiatry*. **59**(12): 618–623.

184. Hoogeveen, Y., Asquith, M., Jarosinska, D. and Henrichs T. Environmental indicator report -2013 Natural Resources and Human Well-Being In A Green Economy.EEA 2013.

185. Hosdodde, R. 2014. Water Pollution with Constructive Measures with Special Reference to India *Indian Streams Research Journal.* **4** (3).

186. Huang C. B., Wang, B., Ren, D., Jin, W., Liu, J., Peng, J. and Pan, X. 2013. Occurrence, removal and bioaccumulation of steroid estrogens in Dianchi Lake catchment. *Environment International*, **59**: 262-273.

187. Hued, A. C., Oberhofer, S. and De losÁngeles, B. M. 2012. Exposure to a commercial glyphosate formulation (Roundup) alters normal gill and liver histology and affects male sexual activity of *Jenynsiamultidentata* (Anablepidae, *Cyprinodonti formes*). *Arch Environ Contam Toxico.* l**62**: 107-117.

188. Inyang, I. R., Obidiozo, O. Z. and Izah, S. C. 2016. Effects of Lambda Cyhalothrin on Protein and Albumin Content in the Kidney and Liver of *Parpohiocephalus obscurus*. *EC Pharmacology and Toxicology*. **23** (2016): 148-153.

189. Inyang, M. I., Gao, B., Yao, Y., Xue, Y., Zimmerman, A., Mosa, A., Pullammanappallil, P., Ok, Y. S., Cao, X., 2016. A review of biochar as a low-cost adsorbent for aqueous heavy metal removal. *Crit. Rev. Environ. Sci. Technol*. **46:** 406–433.

190. Issaka, S. and Ashraf M. A. 2017. Impact of soil erosion and degradation on water quality: a review. *Geology, Ecology, and Landscapes*. **1**(1): 1-11.

191. Jenkins, J. A. 2004. Fish bioindicators of exosystem condition at the Caleasein estuary, Louisiana National wetlands Research Center (USGS). *J. Aqu. Poll*. **3**(1): 54 - 59.

192. Jenkins, J. C., Chojnacky, D. C., Heath, L. S. and Birdsey, R. A. 2003. National-Scale Biomass Estimators for United States Tree Species. *Forest Science.* **49**(1): 12-35.

193. Jeschke, P., Nauen, R., Schindler, M. and Elbert, A. 2011. Overview of the status and global strategy for neonicotinoids. *J Agric Food Chem*. **59**: 2897–2908.

194. Jiang, L., Yang, Y., Jia, L. X., Lin, J. L., Liu, Y., Pan, B. and Lin, Y. 2016. Biological responses of wheat (*Triticum aestivum*) plants to the herbicide simetryne in soils Ecotoxicol. *Environ. Saf*. **127** : 87-94.

195. Jiraungkoorskul, W., Upatham, E. S., Kruatrachue, M., Sahaphong, S., Vichasri-Grams, S. and Pokethitiyook, P. 2003. Biochemical and histopathological effects of glyphosate herbicide on Nile tilapia (*Oreochromis niloticus*). *Environ. Toxicol.* **18**: 260-267.

196. Jiraungkoorskul, W., Upatham, E.S., Kruatrachue, M., Sahaphong, S., Vichasri-Grams, S. and Pokethitiyook, P. 2002. Histopathological effects of Roundup, a glyphosate herbicide, on Nile tilapia (*Oreochromis niloticus*). *Science Asia* **28**: 121-127.

197. Jiraungkoorskul, W., Upatham, E.S., Kruatrachue, M., Sahaphong, S., Vichasri-Grams, S. and Pokethitiyook, P. 2002. Histopathological effects of roundup, a glyphosate herbicide, on Nile tilapia (*Oreochromisniloticus*). *Science Asia.* **28**: 121-127.

198. Jofre, D. M., Germano Garcia, M. J., Salcedo, R., Morales, M., Alvarez, M., Enriz, D. and Giannini, F. 2013. Fish toxicity of commercial herbicides formulated with glyphosate. *J Environ Anal Toxicol*:**4-**1

199. Jorgensen, P.R., M. Hansen, H. Lindgren, and W. Harrar. 2000. Point and non-point source leaching of pesticides in a clayey till groundwater catchment. Copenhagen, Denmark, Ministry of Environment and Energy Pesticides Research

200. Jorgensen, S.E., Patten, B.C. and Straskraba, M. 2000. Ecosystems emerging: 4. *Growth. Ecol. Modell*. 126: 149–284.

201. Jörundsdóttir, H., Halldorsson, T.I., Gunnlaugsdottir, H. (2014): PFAAs in fish and other seafood products from Icelandic waters. *Journal of Environmental and Public Health*. **1**: 1-6.

202. Josef, V., Alzbeta, S. and Zdenka, S. 2011. The Effects of Pyrethroid and Triazine Pesticides on Fish Physiology. Pesticides in the Modern World-Pests Control and Pesticides Exposure and Toxicity Assessment.

203. Kalyoncu, L., Kıssal S. and Aktumsek, A. 2009. Seasonal changes in the total fatty acid composition of Vimba, Vimba vimba tenella (Nordmann, 1840) in Egirdir Lake, Turkey. *Food Chem*. **116**: 728-730.

204. Kammann, U., Bunke, M., Steinhart, H., Theobald, N. 2001. Apermanent fish cell line (EPS) for genotoxicity testing of marine sediments with the comet assay. *Mutant res*. **498** (1-2): 67-77.

205. Kanno, Y., Vokoun, J.C. and Beauchene, M. 2010. Development of dual fish multi-metric indices of biological condition for streamswith characteristic thermal gradients and low species richness. *Ecol. Indic*. **10**: 565–571.

206. Karaismailoglu, M. C. 2015. Investigation of the potential toxic effects of prometryne herbicide on Allium cepa root tip cells with mitotic activity, chromosome aberration, micronucleus frequency, nuclear DNA amount and comet assay. *International Journal of Cytology, Cytosystematics and Cytogenetics*. **68** (4) 2015: 323-329.

207. Kasimoglu, C. 2014. The Effect of Fish Size, Age and Condition Factor on the Contents of Seven Essential Elements in Anguilla anguilla from Tersakan Stream Mugla (Turkey). *J Pollut Eff Cont* . **2**:123.

208. Kasumyan, A and Sidorov, S. 2005. Taste preferences in fish with chronic anosmia. *Journal of Ichthyology* **. 45**: 526- 534.

209. Kathya, A. M. and Cláudia, B. R. M. 2010. Effects of Roundup Transorb on fish: Hematology, antioxidant defenses and acetyl cholinesterase activity. *Chemosphere*. **81**: 781-787.

210. Katsumiti, A., Domingos, F. X., Azevedo, M., Da Silva, M. D., Damian, R. C., Almeida, M. I., De Assis, H. C., Cestari, M. M., Randi, M. A., Ribeiro, C. A., Freire, C. A. 2009. An assessment of acute biomarker responses in the demersal catfish Cathorops

spixii after the Vicuña oil spill in a harbour estuarine area in Southern Brazil. *Environ Monit Assess.* **152** (1-4): 209-222.

211. Kavanagha, R.J., Frankb, R.A., Solomon, K.R. and Van Der Kraak, G. 2013. Reproductive and health assessment of fathead minnows (*Pimephales promelas*) inhabiting a pond containing oil sands process-affected water Aqua. *Toxicol*. **130**(131): 201– 209.

212. Kavitha, C., Malarvizhi, A., Kumaran, S.S. and Ramesh, M. 2010. Toxicological effects of arsenate exposure on hematological, biochemical and liver transaminases activity in an Indian major carp, *Catla catla*. *Food and Chemical Toxicology*, **48**: 2848-2854.

213. Kazemi, A., Safa, M., Shahbazi, A. 2011. RITA enhances chemosensivity of pre-B ALL cells to doxorubicin by inducing p53-dependent apoptosis. *Hematology*. **16** (4): 225-623.

214. Kazemi, R., Pour Dehghani, M., Yousefi Joordehi, A., Yarmohammadi, M. and Nasri Tajan, M. 2011. The Physiology of Circulatory System of Aquatic Animals and Physiology and Techniques of Fish Hematology. Bazargan Press, Rasht, 194 p.

215. Kerem, Z., Lev-Yadun, S., Gopher, A., Weinberg, P., Abbo, S. 2007. Chickpea domestication in the Neolithic Levant through the nutritional perspective. *Journal of Archaeological Science*. **34**(8):1289-1293.

216. Khajeh Pour, M., Golabkesh, Sh. and Ghiasy Khayat, M. 2011. Examines the Importance of Shadegan International Wetland (Values, Threats and Ways to Improve It). The National Conference of Wetlands and Their Role in Integrated Water Resources Management.

217. Khalili, J. S., Liu, S., Rodríguez-Cruz, T. G, Whittington, M., Wardell, S., Liu, C., Zhang, M., Cooper, Z. A. , Frederick, D. T. , Li, Y., Zhang, M., Joseph, R. W., Bernatchez, C., Ekmekcioglu, S., Grimm, E., Radvanyi, L.G., Davis, R. E., Davies, M. A. , Wargo, J. A. , Hwu, P. and Lizée, G. 2012. Oncogenic BRAF (V600E) promotes stromal cell-mediated immune suppression via induction of interleukin-1 in melanoma. *Clin Cancer Res*. **18**(19): 5329-5340.

218. Khan, A., Muhammad Yousafzai, A., Shah, N., Ahmad, M. S., Farooq, M., Aziz1, F., Adnan, M., Rizwan, M., Jawad, S. M. 2016. Enzymatic Profile Aactivity of Grass Carp (*Ctenopharyngodon idella*) After Exposure to the Pollutant Named Atrazine (Herbicide). *Pol. J. Environ. Stud*. **25**(5): 2001-2006.

219. Knauer, K., Lampert, C. and Gonzalez-Valero, J. 2007. Comparison of in vitro and in vivo acute fish toxicity in relation to toxicant mode of action. *Chemosphere* **68:** 1435–1441

220. Kondo, N., Takahashi, A., Ono, K. and Ohnishi, T. 2010. DNA damage induced by alkylating agents and repair pathway. *Jornal of nucleic acids*. **2010**: 543531,7 pages

221. Könen, S. and Cavaş T. 2008. Genotoxicity testing of the herbicide trifluralin and its commercial formulation Treflan using the piscine micronucleus test.*Environ Mol Mutagen*. **49**(6):434-438.

222. Kori-Siakpere, O., Adamu, K.M. and Madukelum, I.T. 2007. Acute Haematological Effect of Sublethal of Paraquat on the African Catfish, *Clarias gariepinus* (Osteichthyes: Clariidae). *Research Journal of Environmental Sciences*, **1:** 331-335.

223. Kori-Siakpere, O., Ake, J.E.G. and Avworo, U.M. 2006. Sublethal effects of cadmium on some selected haematological parameters of heteroclarias (A Hybrid of *Heterobranchus bidorsalis* and *Clarias gariepinus*). *Int. J. Zool. Res*., **2**: 77-83.

224. Kori-Siakpere, O., Jeg, A. and Idoge, E. 2005. Haematological characteristics of the African Snakehead, *Parachanna obscura*. *Afri. J. Biotechnol.* **4**: 527-530.

225. Kostal J., Voutchkova-Kostal A., Anastas, P.T., and Zimmerman, J. B.2014. Identifying and designing chemicals with minimal acute aquatic toxicity. PNAS. **112** (20) : 6289-6294.

226. Kosygin, L., Dhamendra, H. and Gyaneshwari, R. 2007. Pollution status and conservation strategies of Moirang River, Manipur with a note on its aquatic bio-resources. *J. Environ. Biol.* **28**(3): 669-673.

227. Kousar,S., and Javed, M. 2015. Studies on Induction of Nuclear Abnormalities in Peripheral Blood Erythrocytes of Fish Exposed to Copper. *Turkish Journal of Fisheries and Aquatic Sciences*.**15**: 879-886.

228. Kovyrshina, T. B. and Rudneva, I. I. 2012. Seasonal dynamics of activity of oxidative modification of proteins and oxidation-inhibiting enzymes in the blood of goby *Neogobius melanostomus* inhabiting the Black Sea and the Sea of Azov. *Journal of Ichthyology*. **52**(4): 277-283.

229. Kumar P. N., Antony JesuPrabhu, A. K., Pal, S., Remya Md., AklakurRana, R. S., RP Subodh Gupta, R. P., Raman, S., Jadhao, B. 2011. Anti-oxidative and immuno-hematological status of Tilapia (*Oreochromis mossambicus*) during acute toxicity test of endosulfan. *Pesticide Biochemistry and Physiology*. **99**: 45–52.

230. Kumar, M., Trivedi, S.P., Mishra, A. and Sharma, S. 2007. Histopathological changes in testis of the freshwater fish *Heteropneustes fossilis* (Bloch) exposed to linear alkyl benzene sulphonate (LAS): *Abstract. J. Environ. Biol.*, **28**: 679-684

231. Ladipo, M. K. 2011. Acute Toxicity, Behavioural Changes and Histopathological Effect of Paraquat Dichloride on Tissues of Catfish *(Clarias gariepinus*).*International Journal of Biology.* **3** (2): 67-74.

232. Ladipo, M. K., Doherty, V. F. and Oyebadejo, S. A. 2011. Acute Toxicity, Behavioural Changes and Histopathological Effect of Paraquat Dichloride on Tissues of Catfish (*Clarias gariepinus*). *International Journal of Biology*. **3**(2): 1-8.

233. Langiano, C. and Martinez, C. B. 2008. Toxicity and effects of a glyphosate-based herbicide on the Neotropical fish *Prochilodus lineatus*. *Comp Biochem Physiol C Toxicol Pharmacol*. **147**(2): 222-231.

234. Langiano, Vdo C. and Martinez, C. B. R. 2008. Toxicity and effects of a glyphosate-based herbicide on the neotropical fish *Prochiloduslineatus*. *Comp Biochem Physiol C Toxicol Pharmacol.* **147**: 222-231.

235. Lavanya, R. and Veerappan, N. 2011 Antibacterial potential of six seaweeds collected from Gulf of Mannar of Southeast Coast of India. *Adv. Biol. Res*. **5**: 38-44.

236. Lavanya, S., Ramesh, M., Kavitha, C., Malarvizhi, A. 2011. Hematological, biochemical and ionoregulatory responses of Indian major carp Catla catla during chronic sublethal exposure to inorganic arsenic. *Chemosphere*. **82**: 977-985.

237. Le Cren, C. D. 1951. The length-weight relationship and seasonal cycle in gonad weight and condition in the perch (*Perca fluviatilis*). *J. Anim. Ecol*. **20**: 201-219.

238. Le Menn, F., Cerda, J., Babin, P.J. Ultrastructure Aspects of The Ontogeny and Differentiation of Ray Finned Fish Ovarian Follicles. In Babin, P.J.; J. Cerda; E. Lubzens (Eds.). The Fish Oocyte : From Basic Studies to Biotechnological Applications. Springer. New York, 2007; 1-37.

239. Lefevre, S., Mckenzie, D. J. and Gorane, E. L. 2017. Models projecting the fate of fish populations under climate change need to be based on valid physiological mechanisms. Global Change Biology. **23**: 3449–3459, doi: 10.1111/gcb.13652.

240. Leknes, L. 2004. Melano-macrophage centres in the liver of platyfish, *Xiphophorus maculatus, Poeciliidae: Teleostei*. *Zoology*. **107**(3): 201-204.

241. Lermen, C. L., Lappe, R., Crestani, M., Vieira, V. P., Gioda, C. R., Schetinger, M. R. C., Baldisseretto, B., Moraes, G. and Morsch, V. M. 2004. Effect of Different Temperature Regimes on Metabolic and Blood Parameters of Silver Catfish *Rhamdia quelen*. *Aquaculture Research.* **239**: 497-507.

242. Liu, Q.Y., Wu, Z.L., Lv, W.J. Yan, Y.C. and Li, Y. P. 2007. Developmental expression of cyclin H and Cdk7 in zebra fish: the essential role of cyclin H early embryo development. *Cell Res*. 17 (2): 163-173.

243. Livingstone, D. R. 2001. Contaminant-stimulated reactive oxygen species production and oxidative damage in aquatic organisms. *Bulletin of Marine Pollutants*, **42**: 656-666.

244. Livingstone, D.W. 2002. Expanding notions of work and learning: Profiles of latent power.*New Directions For Adult And Continuing Education*, **2001**(92): 19-30.

245. Lizama, M. de los A. P. and Ambrosio, A. M. 2002. Condition Factor in Nine Species of Fish of the Characidae Family in the Upper Parana River Floodplain, Brazil. *Braz. J. Biol*. **62**(1): 113-124.

246. Lizama, Map. and Ambrosio, A. M. 2002. Condition factor in nine species of fish of the Characidae family in the high Parana River floodplain, Brazil. *Revista Brasileira de Biologia*. **62**(1): 113-124.

247. Long, J. M. and Walker, D. J. 2005. Small scale application and assessment of an Index of Biotic Integrity for a large boreal river. *Hydrobiol*. **544** :177–187

248. Lowerre-Barbieri, S., Brown-Peterson, N., Murua, H., Tomkie wicz, J., Wyanski, D. and Saborido-Rey, F. 2011. Emerging issues and methodological advances in fisheries reproductive biology. *Mar Coast Fish Dyn Manag Ecosyst Sci*. **3**: 32 - 51

249. Lushchak, O. V., Kubrak, O. I., Storey, J. M. and Lushchak, V. I. 2009. Low toxic herbicide Roundup induces mild oxidative stress in goldfish tissues. *Chemosphere*. **76**: 932–937.

250. Luskova, V., Svoboda, M. and Kolarova, J. 2002. The effects of diazinon on blood plasma biochemistry in carp (*Cyprinus carpio*). *Acta Vet Brno*. **71**: 117–125.

251. Macek, K. J. and Mcallister, W. A. 1970. Insecticide Susceptibility of Some Common Fish Family Representatives. Transaction of American Fisheries Society. 99(1): 20-27.

252. Mallory-Smith, C. A. and Retzinger E. J. 2003. Revised classification of herbicides by site of action for weed resistance management strategies. *Weed Technol*. **17**:605–619.

253. Maradona A., Marshall, G., Mehrvar M., Pushchak,R., . Laursen, A.E., McCarthy L.H, Bostan, V. and Gilbride K.A. 2012.Utilization of multiple organisms in a proposed early-warning biomonitoring system for real-time detection of contaminants: preliminary results and modelling. *J. Hazard. Mater.* **219–220**: 95-102

254. Marchand, M. J., Van Dyk, J. C., Barnhoorn, I. E. J. and Wagenaar, G. M. Histopathological changes in two potential indicator fish species from a hyper-eutrophic freshwater ecosystem in South Africa: a baseline study.2012. *African Journal Of Aquqtic Science*. **37** (1): 39-48

255. Marchand, M. J., Van Dyk, J. C., Pieterse, G. M., Barnhoorn, E. J. and Bornman, M. S.2009. Histopathological alterations in the liver of the sharptooth catfish *Clarias gariepinus* from polluted aquatic systems in South Africa. *Environmental Toxicology*, **24**: 133–147

256. Marcon, L., Bazzoli, N., Honor Mounteer, A. and Dos Anjos Benjamin, L. 2015. Histological and Histometric Evaluation of the Liver in *Astyanax Bimaculatus* (Teleostei: Characidae), Exposed to Different Concentrations of an Organochlorine Insecticide. *The Anatomical Record*. **298**: 1754–1764.

257. Mariyadasu, P., Vivek, C. H., VenkataRathnamma, V. 2013. Thiodicarb(Larvin 75% wp) toxicity and its impact on biochemical changes and oxygen consumption of freshwater fish, *Labeo rohita* (Hamilton*). Int. J. Rec. Sci. Res*., **4** (12): 2143-2148

258. Mariyadasu, P. Kumari, P. 2017. Histopathological changes in the gill, liver, and kidney of the fish labeo rohita (Hamilton) exposed to thiodicarb 75% WP. *Bulletin of Pure and Applied Sciences- Zoology*. **36** (2): 102-116.

259. Martinez, C. B., and Souza, M.M.2002. Acute effects of nitrite on ion regulation in two neotropical fish species. *Comp Biochem Physiol A Mol Integr Physiol*. **133**(1): 151-160.

260. Martinez, M. J. 2004. Genomic analysis of stationary-phase and exit in Saccharomyces cerevisiae: gene expression and identification of novel essential genes. *Mol Biol Cell.* **15**(12): 5295-5305.

261. Masser, M. P., Murphy, T. R. and Shelton, J. L. 2013. Aquatic weed management: herbicides. *Southern Regional Aquaculture Center*. **361**: 8

262. Matsumoto, R. 2006. Search for novel stress-responsive protein components using a yeast mutant lacking two cytosolic Hsp70 genes, SSA1 and SSA2. *Mol Cells* **21**(3): 381-388.

263. Maxwell, L. B. and Dutta, H. M. 2005. Diacinon induced endocrine disruption in sole gill sun fish *Lepomis macrochirus*. *Ecotoxicology and Environmental Safety*. **60**:21-27.

264. Maya, L., Groner and Relyea R. A. 2011. A tale of two pesticides: How common insecticides affect aquatic communities. *Freshwater Biology*. **56**: 2391–2404

265. Mayer A. 2013. Climate change already challenges agriculture. **Bioscience**. 63(10): 781- 787.

266. Mazumder, S.K., Das, S. K., Bakar, Y. and Ghaffar, M. A. 2016. Effects of temperature and diet on length-weight relationship and condition factor of the juvenile Malabar blood snapper (*Lutjanus malabaricus* Bloch & Schneider, 1801). *J Zhejiang Univ Sci B.* **17**(8): 580-590.

267. McHugh, K. A., Allen, J. B., Barleycorn, A. A., Wells, R. S.2011. Natal philopatry, ranging behaviour, and habitat selection of juvenile bottlenose dolphins in Sarasota Bay, Florida, *Journal of Mammalogy*. **92** (6): 1298–1313

268. Meixler, M.S. 2011. Application of the target fish community model to an urban river system. *J. Environ. Manage*. **92**: 1138–1147.

269. Melvin, S. D. and Wilson, S.P. 2013. The utility of behavioral studies for aquatic toxicology testing: a meta-analysis. *Chemosphere*. **93**(10): 2217-2223.

270. Mikula, P., Modra, H., Nemethova, D., Groch, L. and Svobodova, Z. 2008. Effects of Subchronic Exposure to LASSO MTX® (Alachlor 42% W/V) on Hematological Indices and Histology of the Common Carp, *Cyprinus carpio* L. *Bulletin of Environmental Contamination and Toxicology*. **81**: 475-479.

271. Miller, S. A and Harley, J. P. 2004. Zoology (2ed) W.C. Browm Publ. 424.

272. Mishra, D., Rai, R., Srivastav, S.K. and Srivastav, A.K.2011.Histological alterations in the Prolactin cells of a Teleost, *Heteropneustes fossilis*, after exposure to Cypermethrin. *Environmental Toxicology*. **26**(4): 359-363.

273. Mohamed, F. A. S. 2009. Histopathological Studies on Tilapia *zillii* and *Solea vulgaris* from Lake Qarun, Egypt. *World J Fish Marine Sci*. **1** (1): 29-39.

274. Mohi-ud-Din M. T., Senthilkumar, C. S., Akhtar S. and Ganesh, N. 2011. Micronuclei as an evidence of DNA damage in fresh water catfish *Heteropneustes fossilis* (bloch) exposed to synthetic sindoor. *ARPN Journal of Agricultural and Biological Science*. **6** (5): 41-44.

275. Montaser, M., Magdy, E., Mahfouz, Samir, A.M., El-Shazly, Gamal, H., Abdel-Rahman and Sayed Bakry.2010 Toxicity of Heavy Metals on Fish at Jeddah Coast KSA: Metallothionein Expression as a Biomarker and Histopathological Study on Liver and Gills. *World Journal of Fish and Marine Sciences* **2** (3): 174-185.

276. Montenegro, D. and González, M. T. 2012. Evaluation of somatic indexes, hematology and liverhistopathology of the fish *Labrisomus philippiifrom* San Jorge Bay, northern Chile, as associated with environmental stress. *Revista de Biología Marina y Oceanografía.* **47**(1): 99-107

277. Moore, A. and Waring, C. P. 2001. The effects of a synthetic pyrethroid pesticide on some aspects of reproduction in Atlantic salmon (*Salmo salar L*.). *Aquatic Toxicology* **52:** 1–12.

278. Moraes, B. S., Clasen, B., Loro, V. L., Pretto, A., Toni, C., de Avila, L. A., Marchesan, E, Machado, S. L., Zanella, R., Reimche, G. B. 2011. Toxicological responses of *Cyprinus carpio* after exposure to a commercial herbicide containing imazethapyr and imazapic. *Ecotoxicol Environ Saf.* **74**(3): 328-335.

279. Moraes, B. S., Loro,V. L., Glusczak, L., Pretto, A., Menezes, C., Marchezan, E., de Oliveira Machado S. 2007. Effects of four rice herbicides on some metabolic and

toxicology parameters of teleost fish (*Leporinus obtusidens). Chemosphere*. **68** (8):1597-1601.

280. Moss, M. O. 2008. Fungi, quality and safety issues in fresh fruits and vegetables, *Journal of Applied Microbiology* ISSN 1364-5072.

281. Moya, N., Hughes, R. M., Dominguez, E., Gibon, F. M., Goitia, E. and Oberdorff, T. 2011. Macroinvertebrate - based multimetric predictive models for evaluating the human impact on biotic condition of Bolivian streams. *Ecol. Indic*. **11**:840-847.

282. Mukherjee, A., Dutta, S., Karmakar, P. R., Kole, R.K and Bhattacharyya, A. 2006. Dissipation pattern of the herbicide pyrazosulfuron - ethyl in alluvial and red lateritic soils of West Bengal. *Journal of Crop and Weed*. **2** (2): 65-69.

283. Muralidharan, L. 2012. Haemato-biochemical alterations induced by chronic exposure to fenthion in *Cyprinus carpio*. *Trends Fish. Res*. **1:** 19-25.

284. Murthy, K.S., Kiran, B.R. and Venkateshwarlu, M. 2013. A review on toxicity of pesticides in Fish. *Int. J. Open Sci. Res.* **1**(1): 15-36.

285. Murthy, T. N. K., Ashok, M., Thirumalesh, T., Umesh, B. U. and Nataraju, O. R. 2013. Effect of partial replacement of Azolla for concentrate supplement on lactating crossbred cows. *Environment and Ecology*. **31** (2): 415-417.

286. Muthukumarave, K., Rajaraman, P., Nathiya, N., Govindarajan, M., Raveendran, S. 2013. Studies on the histopathology of selected organs of freshwater fish *Labeo rohita.* Int J Recent Sci Res. **4**(11): 1728-1735.

287. Muthukumaravel, K., Sukumaran, M. and Sathick, O. 2013. Studies on the acute toxicity of pesticides on the freshwater fish *Labeo rohita*. *International Journal Of Pure And Applied Zoology*. **1**(2): 185-192.

288. Naeemi, A., Jamili, S., Shabanipour, N., Mashinchian, A. and Shariati Feizabadi, S. 2013. Histopathological changes of gill, liver and kidney in *Caspian kutum* exposed to Linear Alkylbenzene Sulfonate. Iranian Journal of Fisheries Sciences. **12**(4): 887-897.

289. Nair, S., Williams, J.T., Brockman, A., Paiphun, L., Mayxay, M., Newton, P.N., Guthmann, J.P., Smithuis, F.M., Hien, T.T., White, N.J., Nosten, F. and Anderson, T.J. 2003. A selective sweep driven by pyrimethamine treatment in southeast Asian malaria parasites. *Molecular and Biochemical Evolution*. **20**:1526–1536.

290. Nakamura, H. and Shimozawa, A. 1994. Phagocytic cells in the fish heart. *Arch. Histol. Cytol.* **57**: 415–425.

291. Nespolo R. F. and Rosenmann, M. 2005. Intraspecific allometry of haematological parameters in *Basilichthys australis*. *Journal of fish biology* **60** (5): 1358-1362

292. Nibamureke, U. M. C., Barnhoorn, I. E. J., Wagenaar, G. M. 2016. Health assessment of freshwater fish species from Albasini Dam, outside a DDT-sprayed area in Limpopo province, South Africa: a preliminary study. *Afr J Aquat Sci.* **41**: 1–12.

293. Nowell, L. H., Norman, J. E., Moran, P. W., Martin, J. D. and Stone, W. W. 2014. Pesticide Toxicity Index - A tool for assessing potential toxicity of pesticide mixtures to freshwater aquatic organisms. *Science of the Total Environment*. **36**(476–477):144–157.

294. Nwani, C. D., Lakra, W. S., Nagpure, N. S., Kumar, R., Kushwaha, B. and Srivastava, S. K. 2010. Mutagenic and genotoxic effects of Carbosulfan in fresh water air-breathing fish *Channa punctatus* (Bloch) using micronucleus assay and alkaline single-cell gel electrophoresis. *Food and Chem. Toxicol.* **48**: 202-208.

295. Nwani, C. D., Lakra, W. S., Nagpure, N. S., Kumar, R., Kushwaha, B. and Srivastava, S. K. 2010. Toxicity of the herbicide atrazine: effectson lipid peroxidation and activities

of antioxidant enzymes in the freshwater fish *Channa punctatus* (Bloch). *Int. J Environ Res Public Health* **7**: 3298–3312.

296. Nwani, C. D., Nagpure, N. S., Kumar, R., Kushwaha, B., Kumar, P. and Lakra W.S. 2013. Induction of micronuclei and nuclear lesions in *Channa punctatus* following exposure to carbosulfan, glyphosate and atrazine. *Drug and Chemical Toxicology*. **37** (4): 370-377.

297. Nwani, C. D., Nagpure, N. S., Kumar, R., Khushwaha, B., Kumar, P., Lakra, W. S. 2010. Mutagenic and genotoxic assessment of atrazine-based herbicide to freshwater fish *Channa punctatus* (Bloch) using micronucleus test and single cell gel electrophoresis. *Environmental Toxicology and Pharmacology*. **31**(2): 314-322.

298. Nwani, C., Omah, M. C., Ivoke, N., Nwamba, H. O., Chijioke A. and Ogbonna, S. U. 2015. Biochemical, haematological and morphological variations in juvenile *Clarias gariepinus* exposed to Carbendazim® fungicide. *African Journal of Aquatic Science* **40:** 63-71.

299. Nwani, C.D., Lakra, W.S., Nagpure, N.S., Kumar, R., Kushwaha B. and Srivastava, S.K. 2010. Mutagenic and genotoxic effects of carbosulfan in freshwater fish *Channa punctatus* (Bloch) using micronucleus assay and alkaline single-cell gel electrophoresis. *Food Chem. Toxicol.* **48**: 202-208.

300. Nwani, P. O., Nwosu, M. C., Asomugha, L. A., Enwereji, K. O., Arinzechi, E. O. and Ogunniyi, A.O. 2015. Epidemiology of active epilepsy in a suburban community in Southeast Nigeria: A door-to-door survey. **18**(4): 527-533.

301. Ofojekwu, P. C., Nwani, C. D. and Ihere R. E. 2008b. Acute Toxicity of Urea Fertilizer to Tilapia zilli Fingerlings. *Bio-Research* . **6** (1) :298-300.

302. Ofojekwu, P.C., Nwani, C. D. and Chinedu C.2008a. Acute Toxicity of Npk (15:15:15) Fertilizer to *Tilapia zilli* Fingerlings. *Nigerian Journal of Fisheries.* **5** (1): 31-37.

303. Okamoto-Nakazato, A., Takahashi, K., Katoh-Semba, R. and Katou, K. 2001. Distribution of yieldin, a regulatory protein of the cell wall yield threshold, in etiolated cowpea seedlings. *Plant Cell Physiology.* **42**: 952–958.

304. Olaifa, F., Olaifa, A., Adelaja, A. A., Owolabi, A. G. 2003. Heavy metal contamination of *Clarias gariepinus* from a Lake and fish farm in Ibadan, Nigeria. *African Journal of Biomedical Research.* 7 (2004): 145 – 148.

305. Osman G. M. and Kloas, W. 2010. Water Quality and Heavy Metal Monitoring in Water, Sediments and Tissues of the African Catfish *Clarias gariepinus* (Burchell, 1822) from the River Nile, Egypt. *Journal of Environ-mental Protection*. **1**: 389-400.

306. Pacheco, G. J., Ciapina., E. M. P., De Barros Gomes, E. and Pereira J. N. 2011. Biosurfactant production by *Rhodococcus erythropolis* and its application to oil removal. *Brazilian J. of Microb*. **41**: 685-693.

307. Pacheco, M. and Santos, M. A. 2002. Biotransformation, genotoxic and histopathological effects of environmental contaminants in European eel, *Anguilla anguilla* L. *Ecotoxicology and Environmental Safety*. **53:** 331-347.

308. Pal, S., Ghosh, R.K., Banerjee, H., Kundu, R. and Alipatra, A. 2012. Effect of pyrazosulfuron-ethyl on yield of transplanted rice. *Indian Journal of Weed Science*. **44**(4): 210–213.

309. Palanivelu, V., Vijayavel, K., Balasubramanian, E. S. and Balasubramanian, M. P. 2005. Impact of fertilizer (urea) on oxygen consumption and feeding the freshwater fish *Oreochromis mossambicus*. *Environ. Toxicol and Pharma*. **19**: 351–355.

310. Pandey S., Kumar, R., Sharma, S., Nagpure, N. S., Srivastava, S. K. and Verma, M.S. 2005. Acute toxicity bioassay of mercuric chloride and malathion on airbreathing fish *Channa punctatus* (Bloch). *Ecotoxicol. Environ. Saf.* **61**: 114-120.

311. Pandey, G., Myers, C. L., and Kumar, V. 2009. Incorporating functional inter-relationships into protein function prediction algorithms. *BMC Bioinformatics.* **10**: 1 - 22.

312. Pandey, R. K., Singh, R. N., Singh, S., Singh, N. N. and Vijai K. D. 2009. Acute toxicity bioassay of dimethoate on freshwater airbreathing catfish, *Heteropneustes fossilis* (Bloch*). Journal of Environmental Biology*. **30**(3): 437-440.

313. Pang, S. S., Guddat, L. W. and Duggleby, R. G. 2003. Molecular basis of sulfonylurea herbicide inhibition of acetohydroxyacid synthase. *Biol Chem.* **278**(9):7639-7644.

314. Parashar, R. S and Benerjee, T.K. 2002. Toxic impact of lethal concentration of lead nitrate solution on the gills of the air-breathing catfish *Heteropneustes fossilis* (Bloch). *Veterinarski Arhiv*. **72** (3): 167-183.

315. Parikh, B. A., Piersma, S. J., Pak-Wittel, M. A., Yang, L., Schreiber, R. D. and Yokoyama, W. M. 2015. Dual Requirement of Cytokine and Activation Receptor Triggering for Cytotoxic Control of Murine Cytomegalovirus by NK Cells. *PLoS Pathog* **11**(12): e1005323.

316. Parikh, K., Ghosh, P. and Binswanger-Mkhize, H. 2013. Double-Digit Inclusive Growth: Not without Robust Agricultural Growth. *Econ. Polit.* **48**(51): 68–73.

317. Parma, M. J., Loteste, A., Campana, M. and Bacchetta, C. 2007. Changes of hematological parameters in *Prochilodus lineatus* (Pisces, Prochilodontidae) exposed to sublethal concentration of cypermethrin. *J Environ Biol.* **28**(1): 147-149.

318. Parris K. 2011. Impact of Agriculture on Water Pollution in OECD Countries: Recent Trends and Future Prospects. *International Journal of Water Resources Development*. **27**(1): 33-52.

319. Pascoli, F., Negrato, E., Di Giancamillo, A., Bertotto, D., Domeneghini, C., Simontacchi, C., Mutinelli, F. and Radaelli, G. 2011. Evaluation of oxidative stress biomarkers in Zosterisessor ophiocephalus from the Venice Lagoon, Italy. *Aquat Toxicol* . **101**: 512–520.

320. Pastor, M. J., Sadd, J.L, Morello-Frosch R. 2004. Waiting to inhale: the demographics of toxic air release facilities in 21st-century California. *Soc Sci Quart* **85**:420–440.

321. Patel, B. and Parikh, P. H. 2014. Haematological Alterations of Freshwater Fish Tilapia (*Oreochromis mossambicus*) and Rohu (*Labeo rohita*) Exposed to Imidacloprid. **1:** 179-186.

322. Pathak, R. U., Mamillapalli, A., Rangaraj, N., Kumar, R.P., Vasanthi, D., Mishra, K. and Mishra, R.K. 2013. AAGAG repeat RNA is an essential component of nuclear matrix in Drosophila. *RNA Biol*. **10** (4): 564--571.

323. Pazhanisamy, K. and Indra, N. 2007. Toxic effects of arsenic on protein content in the fish, *Labeorhita* (Hamilton). *Nature Environment and pollution Technology*. **6**(1): 113-116.

324. Pechiammal, V. and Vasanthi, J. 2017. Toxicological effects of glyphosate on histopathological parameters of fresh water fish, *Cirrhinus mrigala*. *International Journal of Applied Research*. **3** (7): 873-877

325. Peebua, L. P., Kosiyachinda, P., Pokethitiyook, P. and Kruatrachue, M. 2007. Evaluation of alachlor herbicide impacts on Nile Tilapia (*Oreochromis niloticus*) using biochemical biomarkers. *Bull Environ Contam Toxicol*. **78**: 138-141.

326. Peixoto, F. 2005. Comparative effects of the Roundup and glyphosate on mitochondrial oxidative phosphorylation. *Chemosphere*. **61**(8): 1115-1122.

327. Pereira, A. C., Cruz, M. F. A., Paula Junior, T. J., Rodrigues, F. A., Carneiro, J. E. S., Vieira, R. F., Carneiro, P. C. S. 2013. Infection process of *Fusarium oxysporum* f. sp phaseoli on resistant, intermediate and susceptible bean cultivars. *Trop. Plant Pathol*. **38:** 323–328.

328. Pereira, L., Pereira, R., Oliveira, C. S., Apostol, L., Pons, M. G. M.-N., Zahraa, O., and Alves, M. M. 2013. *Journal of Photochemistry and Photobiology*. **89**: 33–39.

329. Pereira, S., Pinto, A. L., Cortes, R., Fontaínhas-Fernandes, A., Coimbra, A. M. and Monteiro, S. M. 2013. Gill histopathological and oxidative stress evaluation in native fish captured in Portuguese northwestern rivers. - *Ecotoxicology and Environmental Safety*. **90**(1): 157- 166.

330. Piancini; L.D.S., Santos; G.S., Tincani; F.H., Cestari, M.M. 2015. Piscine micronucleus test and the comet assay reveal genotoxic effects of Atrazine herbicide in the neotropical fish *Rhamdia quelen. Ecotoxicol. Environ. Contam*. **10:** (1) 55-60.

331. Pier, A. B., Consonni, D., Bachetti, S., Rubagotti, M., Baccarelli, A., Zocchetti, C. and Pesatori, A.C. 2001. Health Effects of Dioxin Exposure: A 20-Year Mortality Study. American J Epidem. **153**(11): 1031–1044.

332. Pieterse, E., 2010. Filling the void: towards an agenda for action of African urbanization.Ch. 1 in Pieterse, E. (ed) Urbanization imperative for Africa: transcending policy inertia. Cape town. African centre for cities.

333. Pimpao, C. T., Zampronio, A. R. and Silva de Assis, H. C. 2007. Effects of deltamethrin on haematological parameters and enzymatic activity in *Ancistrus multispinis*, *Pesticide Biochemistry and physiology*. **88**: 122 – 127.

334. Pinto, B.C.T., Araujo, F.G. and Hughes, R.M. 2006. Effects of landscape and riparian condition on a fish index of biotic integrity in a large southeastern Brazil river. *Hydrobiol*. **556**: 69–83.

335. Pont, D., Hugueny, B., Beier, U., Goffaux, D., Melcher, A., Noble, R., Rogers, C., Roset, N. and Schmutz, S. 2006. Assessing river biotic condition at a continental scale: a European approach using functional metrics and fish assemblages. *J. Appl. Ecol*. **43**: 70–80.

336. Prashanth, M.S. 2011. Environmental sciences histopathological changes observed in the kidney of freshwater fish, *Cirrhinus mrigala* (hamilton) exposed to Cypermethrin. *Recent Research in Science and Technology*. **3**(2): 59-65.

337. Praveen, N. D., Shwetha, A. and Basaling, B. H. 2012 In vivo changes in the activity of (gill, liver and muscle) ATPases from Catla catla as a response of copper cyanide intoxication. *European Journal of Experimental Biology.* **2** (4): 1320-1325.

338. Press, C. M. L., Dannevig, B.H. and Landsverk T. 1994. Immune and enzyme histochemical phenotypes of lymphoid and nonlymphoid cells within the spleen and head kidney of Atlantic salmon (*Salmo salar* L.). *Fish and Shellfish Immunol*. **4**: 79 – 93.

339. Pretto, A., Loro, V. L., Menezes, C., Moraes, B. S., Reimche, G.B., Zanella, R., and de Ávila, L. A. 2011. Commercialformulation containing quinclorac and metsulfuron-methyl herbicides inhibit acetylcholinesterase and inducebiochemical alterations in tissues of *Leporinus obtusidens*. *Ecotoxicology and Environmental Safety***. 74**: 336–341.

340. Rahman, M. Z., Hossain, Z., Mollah, M. F. A., and Ahmed, G. U. 2002. Effect of diazinum 60 EC on Anabas testudineus, *Channa punctatus* and *Barbodes gonionotus* Naga. *The International Center for Living Aquatic Resources Management.* **25**: 8-12.

341. Rajkhowa, D. J., Bohah, N., Barua and Deka. 2006. Effect of pyrozosulfuron-ethyl on weeds and productivity of transplanted rice during rainy season. *Indian j. Weed Sci.* **38** (1-2): 25-28.

342. Ramah, K. 2011. Histopathological study on the effect of rice herbicides on grass carp (*Ctenopharynggodan idella*). *Afr. j. Biotechn*. **10**(7): 1112-1116.

343. Ramesh, M. and Sarvanan, M. 2008. Haematological and biochemical responses in a fresh water fish *Cyprinus carpio* exposed to chlorpyrifos. *International Journal of Integrative Biology*, **3**: 80-83.

344. Ramírez-Duarte, W. F., Rondon-Barragan, L. S., Eslava-Mocha, P. R. 2008. Acute toxicity and histopathological alterations of Roundup® herbicide on "cachama blanca" (*Piaractus brachypomus*). *Pesq Vet Bras.* **28**(11): 547–554.

345. Ramirez-Villegas, J. and Challinor, A. 2012. Assessing relevant climate data for agricultural applications. *Agricult. For. Meteorol.* **161:** 26–45

346. Rao, J. V. 2006. Biochemical alterations in euryhaline fish, *Oreochromis mossambicus* exposed to sub-lethal concentrations of an organo-phosphorus insecticide, monocrotophos. *Chemosphere*. **65**: 1814–1820.

347. Rao, S. C., Coleman, S. W. and Mayeux, H.S., 2002. Forage production and nutritive value of selected pigeonpea lines in the southern Great Plains. *Crop Sci*. **42**:1259–1263.

348. Rao, S. V. R., Raju, M. V. L. N. , Reddy, M. R. And Panda, A. K., 2005. Utilization of graded levels of finger millet (*Eleusine coracana*) in place of yellow maize in commercial broiler chicken diets. *Asian-Aust. J. Anim. Sci.***18** (1): 80-84.

349. Rao, S.C., Coleman, S.W. and Mayeux, H.S., 2002. Forage production and nutritive value of selected pigeonpea lines in the southern Great Plains. *Crop Sci*. **42**:1259 - 1263.

350. Rao, V.S. 2000. Principles of weed science, 2nd edn. CRC Press, New Hampshire.

351. Rasmussen, C., Troch, P.A., Chorover, J., Brooks, P., Pelletier, J. and Huxman T. 2011. An open system framework for integrating critical zone structure and function. *Biogeochemistry* **102**(1-3)*: 15-29.*

352. Rehulka, J. 2002. Effect of polychlorinated biphenyls Delor 103 on some haematological and biochemical indices of the blood plasma of the rainbow trout, *Oncorhynchus mykiss* (Walbaum). In: The second PCB workshop. Recent Advances in the Environmental Toxicology and Health Effects of PCBs. Bruno, Czech Republic. 36.

353. Rezende, K.F.O., Santos, R.M., Borges, J.C.S., Salvo, L.M. and Da Silva, J.R.M.C. 2014.Histopathological and genotoxic effects of pollution on Nile Tilapia (*Oreochromis niloticus*, Linnaeus, 1758) in the Billings Reservoir (Brazil).*Toxicology mechanisms and methods.* **24** (6): 404-411.

354. Ridanovic, S., Nedic, Z. and Ridanovic, L. 2014. First observation of fish condition from Sava river in Bosnia and Herzegovina. *Journal of Survey in Fisheries Sciences.* **1**(2): 27-32.

355. Rigolin, G.M., Cibien, F., Martinelli, S., Formigaro, L., Rizzotto, L., Tammiso, E., Saccenti, E., Bardi, A., Cavazzini, F., Ciccone, M., Nichele, I., Pizzolo, G., Zaja, F.,Fanin, R., Galieni, P., Dalsass, A., Mestichelli, F., Testa, N., Negrini, M. and Cuneo, A. 2012. Chromosome aberrations detected by conventional karyotyping using novel mitogens in chronic lymphocytic leukemia with "normal" FISH: correlations with clinicobiologic parameters. *Blood*. **119**(10):2310-2313.

356. Robinson, C. D., Brown, E., Craft, J. A., Davies, I. M., Megginson, C. 2007. Bioindicators and reproductive effects of prolonged 17β-oestradiol exposure in a marine fish, the sand goby (*Pomatoschistus minutus*). *Aquat Toxicol*. 81: 397–408.

357. Robinson, M. D. and Iris, B. M. 2009. Measures of emotion: A review. *Cognition and Emotion.* **23**(2) : 209-237.

358. Rocco, L., Frenzilli, G., Fusco, D., Peluso, C. and Stingo, V. 2010. Evaluation of zebrafish DNA integrity after exposure to pharmacological agents present in aquatic environments. *Ecotoxicol Environ Saf.* **73**: 1530-1536.

359. Rocco, L., Izzo, A., Zito, G., Peluso C. and Stingo, V. 2011. Genotoxicity in Zebrafish (*Danio rerio*) Exposed to two Pharmacological Products from an Impacted Italian River. *J Environment Analytic Toxicol.* **1**(2): 103.

360. Rohr, J. R. and McCoy, K. A. 2010. A Qualitative Meta-Analysis Reveals Consistent Effects of Atrazine on Freshwater Fish and Amphibians. *Environmental Health Perspectives*. **118**(1): 20-32.

361. Rohr, J. R., Halstead, N. T. and Raffel, T. R. 2012. The herbicide atrazine, algae, and snail populations. *Environ. Toxicol. Chem*. **31**: 973–974.

362. Rombout, J. H. W. M., Huttcnhuis, H. B. T., Picchiettis, A. and Scapigliati, G. 2005. Phylogeny and ontogeny of fish leucocytes. *Fish Physiol. Biochem*. **36**: 323-336.

363. Ronald, W.G. and Bruce, A.B. 1990. Organosomic indices and an autopsy based assessment as indicators of health condition of fish. *American Fisheries Society*. **8**: 93-108.

364. Roset, N., Grenouillet, G., Goffaux, D., Pont, D. and Kestemont, P., 2007. A review of existing fish assemblage indicators and methodologies. *Fish. Manag. Ecol*. **14**: 393-405.

365. Rossi, S. C., Dreyer da Silva, M., Piancini, L. D., Oliveira Ribeiro, C. A., Cestari, M. M. and Silva de Assis, H. C. 2011. Sublethal effects of waterborne herbicides in tropical freshwater fish. *Bulletin of Environmental Contamina-tion and Toxicology*. **87**: 603–607.

366. Rzymski, P., Klimaszyk, P., Kubacki, T. and Poniedzialek B. 2013. The effect of glyphosate-based herbicide on aquatic organisms – a case study. *Limnological Review* **13** (4): 215-220.

367. Sabra, F. S. and Mehana, El-Sayed El-Deeb 2015. Pesticides Toxicity in Fish with Particular Reference to Insecticides. *Asian Journal of Agriculture and Food Sciences* **3** (1): 42- 59.

368. Sadekarpawar, S. and Parikh, P. 2013. Gonadosomatic and Hepatosomatic Indices of Freshwater Fish *Oreochromis mossambicus* in Response to a Plant Nutrient. *World Journal of Zoology.* **8** (1): 110-118.

369. Sadekarpawar, S., Mansuri, R. and Parikh, P. 2015. Hematological and Biochemical Alterations in *Oreochromis mossambicus* and *Labeo rohita* Exposed to Plant Nutrient Librel TM. *International research Journal of Emerging Trends in Multi disciplinary.* **1**(10): 79-91.

370. Sadekarpawar, S., Mansuri, R., Upadhyay, A., Parikh, P. 2015. Biochemical and Oxidative stress response of plant nutrient librel in *Oreochromis mossambicus* and *Labeo rohita*. *International Journal of Advance Research*. **3**(5):1587-1596.

371. Sadekrpawar, S. and Parikh, P. 2013. Gonadosomatic and Hepatosomatic indics of fresh water fish *Orechromis mosambicus* in response to a plant nutrient. World Journal of Zoology. **8**(1): 110-118.

372. Saeed, M., Habib, V.R., Abasali, Z., Elham, M. and Rizvan, K. 2012. The effects of diazinon on behavior and some hematological parameters of fry Rainbow trout *Oncorhynchus mykiss*. *J. Fish Marine Sci*. **4**(4): 369-375

373. Safina Kousar, S. and Muhammad Javed, M. 2015. Studies on Induction of Nuclear Abnormalities in Peripheral Blood Erythrocytes of Fish Exposed to Copper. *Turkish Journal of Fisheries and Aquatic Sciences*. **15**: 879-886.

374. Saha, S. and Kaviraj, A. 2009. Effects of cypermethrin on some biochemical parameters and its amelioration through dietary supplementation of ascorbic acid in freshwater catfish *Heteropneustes fossilis*. *Chemosphere*, **74**: 1254-1259.

375. Salbego, J., A. Pretto, C. R. Gioda, C. C. de Menezes, R. Lazzari, J. Radunz Neto, B. Baldisserotto, and V. L. Loro. Herbicide Formulation with Glyphosate Affects Growth, Acetylcholinesterase Activity, and Metabolic and Hematological Parameters in Piava (*Leporinus Obtusidens*). *Arch Environ Contam Toxicol* **58** (3): 740-745.

376. Samanta, P., Mukherjee, A.K., Pal, S., Kole, D. and Ghosh, A.R. 2016. Toxic effects of glyphosate-based herbicide, Excel Mera 71 on gill, liver, and kidney of *Heteropneustesfossilis* under laboratory and field conditions. *Ultrastructure.* **4**(3):147-155.

377. Samanta, P., Pal, S., Mukherjee, A. K., Senapati, T., Kole, D. and Ghosh, A..R. 2016. Gastrointestinal Pathology in Freshwater Fish , *Oreochromis niloticus* (Linnaeus) Under Almix Exposure . *J Environ Anal Toxicol*. **6**(5) : 399.

378. Sampath, K., Velammal, S., Kennedy and James, R. 1993. Haemetological changes and their recovery in *Oreochromis mossambicus* as a function of exposure level and sublethal level of Ekalux. *Acta Hydrobiol*. **35**: 73-83.

379. Sánchez-Bayo, F., Goka, K. and Hayasaka, D. 2016. Contamination of the Aquatic Environment with Neonicotinoids and its Implication for Ecosystems. *Frontiers in Environmental Science.* **4 :** 71.

380. Sander, H. O. and Cope, O. B. 1968. The relative toxicities of several pesticides to naiads of three species of stoneflies. *Limnology and oceanography*. **13** (1): 112-117.

381. Sani, F. M., Nasir, I. A. and Torhile G. 2016. Mycological Evaluation of Smoked-Dried Fish Sold at Maiduguri Metropolis, Nigeria: Preliminary Findings and Potential Health Implications. *Eur J Health Sci.* **2**(1): 5-10.

382. Sanjoy, D. and Rita, M. 2012 A study on the effect of organophosphorus pesticide malathion on hepato-renal and reproductive organs of *Heteropneustes fossilis* (Bloch). *The Science Probe.* **1 :** 1-13.

383. Saravanan, M., Kumar, P., Ramesh, M. 2011. Haematological and biochemical responses of freshwater teleost fish *Cyprinus carpio* (*Actinopterygii: Cypriniformes*) during acute and chronic sublethal exposure to lindane. *Pestic. Biochem. Physiol*. **100** : 206-211.

384. Sarikaya, R. and Yilmaz, M. 2003. Investigation of Acute Toxicity and the Effect of 2,4-D (2,4-Dichlorophenoxyacetic Acid) Herbicide on the Behavior of the Common Carp (*Cyprinus carpio* L., 1758; Pisces, Cyprinidae). *Chemospher.* **52:** 195-201.

385. Sarkar, A., Ray, D., Shrivastava, A.N. and Sarker, S. 2006. Molecular biomarkers: their significance and application in marine pollution monitoring. *Ecotoxicology.* **15**: 333–340.

386. Sarkar, S. K., Cabral, H., Chatterjee, M., Cardoso, I., Bhattachrya, A., Satpathy, K.K. and Alam, M. A. 2008. Biomonitoring of heavy metals using the bivalve molluscs in

Sunderban mangrove wetland, northeast coast of Bay of Bengal (India): possible risks to human health. *Clean - Soil, Air and Water Pollution*, **36**(2): 187–194.

387. Sarma, K., Pal, A. K., Sahu, N. P., Dalvi, R. S., Chatterjee, N., Mukherjee, S. C. and Baruah, K. 2012. Acute and chronic effects of endosulfan on the haemato-immunological and histopathological responses of a threatened freshwater fish, spotted murrel, *Channa punctatus*. *Fish Physiol Biochem.* **38**: 499–509.

388. Sarmah, A.K. and Sabadie, J. 2002. Hydrolysis of sulfonylurea herbicides in soils and aqueous solutions: a review. *J Agric Food Chem*. **50**(22):6253–6265.

389. Satyavani , G., Gopi, R.A., Ayyappan, S., Balakrishnamurthy, P. and Reddy, P. N. 2011. Toxicity Effect Of Expired Pesticides To Freshwater Fish, *Labeo rohita. The Journal of Agriculture and Environment.* **12** : 1- 10.

390. Sawka, M.N., Convertino, V. A., Eichner, E.R., Schnieder, S. M. and Young, A. J. 2000. Blood volume: importance and adaptations to exercise training, environmental stresses, and trauma/sickness. *Med Sci Sports Exerc*. **32**(2): 332-348.

391. Scott C., BegleyC., Taylor M.J., Pandey G., Momiroski,V., French,N., Brearley,C., Kotsonis,E.S, Selleck,M.J., Carino,F.A., Bajet,C.M., Clarke, C., Oakeshott,J.G. and Russell, R.J. 2011. Pesticide Mitigation Strategies for Surface Water Quality. *Free-Enzyme Bioremediation of Pesticides*. 1075: 155-174

392. Seriani, R. and Ranzani-Paiva, M. J. T. 2012. Alterações hematológicas em peixes: aspectos fisiopatológicos e aplicações em ecotoxicologia aquática, vol 1. In: Silva-Souza AT, Lizama MAP, Takemoto RM, (Eds). Alterações hematológicas em peixes: aspectos fisiopatológicos e aplicações em ecotoxicologia aquática. 1ªed. Massoni, Maringá, pp 221–242.

393. Seriani, R.; Moreira, L. B.; Abessa, D. M. S.; Maranho, L. A.; Abujamara, L. D.; Carvalho, N. S. B.; Kirschbaum, A. A. and Ranzani-Paiva, M. J. T. 2009. Haematological analysis in Micropogonias furnieri from two estuaries at Baixada Santista, São Paulo, Brazil. *Braz. J. Ocean*., **58** (special issue IV SOB): 87-92.

394. Shankar, K.M., Kiran, B.R. and Venkateshwarlu, M. 2013. A review on toxicity of pesticides in Fish. *J. Sci. Res.* **1**(1): 15-36.

395. Silveira-Coffigny, R., Prieto-Trujillo, A. and Ascencio-Valle, F. 2004. Effects of Different Stressors in Haematological Variables in Cultured *Oreochromis aureus* S. Comparative Biochemistry and Physiology Part C: *Toxicology & Pharmacology*, **139**: 245-250.

396. Sindhu, N.V. and John T. K. 2002. Effect of lead on the behaviour of *Oreochromis mossambicus*. *J Ecotoxico Environ Monit.* **12**(3) : 167-175.

397. Singh, A. K., Khera, P., Priyadarshi, R., Patil, V., Dhasmana, M. and Shenoy, V. 2012. Occurance of tifid stigma morphotype in maintainer line of rice (*Oryza sativa* L.). Int. J. Plant Breed. Gen.

398. Singh, P. B. and Canario, A.V.M. 2004. Reproductive endocrine disruption in the freshwater catfish, Heteropneustes fossilis in response to pesticide γ-hexachlorocyclohexane exposure. *Ecotoxicol. Environ. Saf*. **58**: 77-83.

399. Singh, P.B., and Singh, V. 2008. Pesticide bioaccumulation and plasma sex steroids in fishes during breeding phase from North India. *J. Environmental Toxicology and Pharmacology* **25** (3): 342-350

400. Singh, R. N., 2012 Histopathological alterations in the kidney of after exposure to dimethoate (30%). *Indian J. Sci. Res.*, **3**: 127-131.

401. Singh, R. N., 2013. Effects of dimethoate (30%), an organophosphate pesticide on liver of common carp. *J. Environ. Biol.*, **34**: 657- 661.

402. Singh, S. B., Sharma, R. and Singh, N. 2012.Persistence of pyrazosulfuron in rice-field and laboratory soil under Indian tropical conditions. *Pest Manag Sci.* **68**: 828–833.

403. Smalling, K.L., Reilly, T.J., Sandstrom, M.W. and Kuivila, K.M. 2013. Occurrence and Persistence of Fungicides in Bed Sediments and Suspended Solids from Three Targeted Uses Areas in the United States. *Science of the Total Environment.* **447**:179–185.

404. Smith, L. A., Houdijk, J. G. M., Homer, D. and Kyriazakis, I. 2013. Effects of dietary inclusion of pea and faba bean as a replacement for soybean meal on grower and finisher pig performance and carcass quality. *J. Anim. Sci.* **91** (8): 3733-3741

405. Smith, N. A., Clarke, J. A. 2012. Endocranial anatomy of the Charadriiformes: sensory system variation and the evolution of wing-propelled diving. *Plos One.* **7**: e49584.

406. Smith, W. C. 2012. A histology-based health assessment of selected fish species from two rivers in the Kruger National Park Dissertation submitted to University of Johannesburg.

407. Solomon, K. R., Carr, J. A., Du Preez, L. H., Giesy, J. P., Kendall, R. J., Smith, E. E. and Van Der Kraak, G. J. 2008. Effects of Atrazine on Fish, Amphibians, and Aquatic Reptiles: A Critical Review.*Critical Reviews in Toxicology.* **38** (9):721-772.

408. Soorena A, Jourdehi YA, Rezvanollah K, Yazdani MA. 2011. Effects of Atrazine (Herbicide) on Blood Biochemical Indices of Grass Carp (*Ctenopharhyngoden idella*) . Journal of the Persian Gulf (Marine Science). **2**(5): 51-56.

409. Souza I. C., Duarte, I. D., Pimentel, N. Q., Rocha, L. D., Morozesk, M., Bonomo, M. M., Azevedo, V. C., Pereira, C. D. S., Monferrán, M. V., Milanez, C. R. D., Matsumoto, S. T., Wunderlin, D. A. and Fernandes, M. N. 2013. Matching metal pollution with bioavailability, bioaccumulation and biomarkers response in fish (*Centropomus parallelus*) resident in neotropical estuaries. *Environmental Pollution*, **180**: 136-144.

410. Srinivas, M., Chethana, K. C., Padma, R., Suragimath, G., Anil, M., Pai, B.S., Walvekar, A. 2012. A study to assess and compare the peripheral blood neutrophil chemotaxis in smokers and non smokers with healthy periodontium, gingivitis, and chronic periodontitis. *J Indian Soc Periodontol*. **16** (1): 54-58.

411. Srivastava, S., Kumar, A. Srivastava, P., Suprasanna, S. and D'Souza, F. 2009. Comparative biochemical and transcriptional profiling of two contrasting varieties of *Brassica juncea* L. in response to arsenic exposure reveals mechanisms of stress perception and tolerance. *Journal of Experimental Botany*. **60**(12): 3419–3431.

412. Srivastava, T., Garola, R. E., Singh, H. K.2006.Cell-cycle regulatory proteins in the podocyte in collapsing glomerulopathy in children. *Kidney Int*.**70**: 529-535.

413. Staley, Z. R., Harwood, V. J. and Rohr, J. R. 2015. A Synthesis of the Effects of Pesticides on Microbial Persistence in Aquatic Ecosystems. Crit Rev Toxicol. **45**(10):813-836.

414. Stenstrom, J. R. 2013 Mixture Toxicity of Pesticides and Biological Effects in Agricultural Streams. Licentiate Thesis. Swedish University of Agricultural Sciences, Uppsala .

415. Stentiford, G. D., Evans, M., Bateman, K., Feist, S.W. 2003. Co-infection by a yeastlike organism in Hematodinium-infected European edible crabs (*Cancer pagurus*) and velvet swimming crabs(Necorapuber)fromthe*Dis.Aquat. Org***. 54**, 195–202.

416. Stephens, F.J., Raidal, S.R. and Jones, B. 2004. Haematopoietic necrosis in a goldfish Carassius auratus associated with an agent morphologically similar to herpesvirus. *J. Aust. Vet*. **82**(3): 167-169.

417. Strunjak Perovic, I., Topic Popovic N., Coz-Rakovac,R., Jadan, M. 2009. Nuclear ssabnormalities of marine fish erythrocyte. *Journal of Fish Biology*. **74**(10): 2239-2249

418. Subramaniam, A., Yager, P. L., Carpenter, E. J., Mahaffey, C., Bjo¨rkman, K., Cooley, S., Kustka, A. B., Montoya, J. P., Sanudo-Wilhelmy, S. A., Shipe, R. and Capone, D. G. 2008. Amazon River enhances diazotrophy and carbon sequestration in the tropical North Atlantic Ocean. *PNAS* **. 105** (30): 10460–10465.

419. Sutton, S.G., Bult, T.P. and Haedrich, R.L., 2000. Relationships among Fat Weight, Body Weight, Water Weight, and Condition Factors in Wild Atlantic Salmon Parr. *Transactions of the American Fisheries Society.* **129**: 527–538.

420. Suvetha, L., Ramesh, M. and Saravanan M., 2010. Influence of cypermethrin toxicity on ionic regulation and gill Na+/K+ ATPase activity of a freshwater teleost fish *Cyprinus carpio*. *Environmental Toxicology and Pharmacology*. **29**(1): 44-49.

421. Svobodova, Z., Vykusova, B. and Machova, J. 1994. The effects of pollutants on selected haematological and biochemical parameters in fish. In: Sublethal and chronic effects of pollutants on freshwater fish (Eds.: R. Müller and R. Lloyd). Fishing New Books, London.

422. Tan, S. Y., Evans, R. R., Dahmer, M. L., Singh, B. K. and Shaner, D. L. 2005. Imidazolinone-tolerant crops: History, current status and future. *Pest Management Science*, **61**(3) : 246-257.

423. Tejerina-Garro, F. L., Mérona, B., Oberdorff, T. and Hugueny, B. 2006. A fish-based index of large river quality for French Guiana (South America): method and preliminary results. *Aquat. Living Resour*. **19**: 31–46.

424. Tennekes, H. 2010. The systemic insecticides: a disaster in the making. ETS Nederland BV, Zutphen, The Netherlands.

425. Terra, B. F. and Araujob, F. G. 2011. A preliminary fish assemblage index for a transitional river–reservoir system in southeastern Brazil. *Ecol. Indic*. **11**: 874–881.

426. Terry, C., Hrubec, D. V. M., Cardinale, L., Jenifer, L. J. and Stephen, S. 2008. Hematology and Plasma Chemistry Reference Intervals for Cultured Tilapia (*Oreochromis* Hybrid). *Veterinary Clinical Pathology.* **29:** 7-12.

427. Thenmozhi, C., Vignesh, V., Thirumurugan, R. and Arun, S. 2011. Impacts of malathion on mortality and biochemical changes of freshwater fish *Labeo rohita*. *Iran. J. Environ. Health Sci. Eng.* 8(4): 387-394.

428. Thoker, Z., Khan, K., Rashid, I. and Zafar. 2016. Correlation of cardiac troponin I levels with infective endocarditis and its adverse clinical outcome. *International Journal of Cardiology*. **222**: 661-664.

429. Thornton, M. E. 2008. A simple method of applying herbicide spot treatments, *Tropical Pest Management*. **29**(3): 271-273.

430. Tilak, K. V. B. R., Ranganayaki, N., Pal, K. K., De, R., Saxena, A. K., Nautiyal, C. S., Mittal, S., Tripathi, A. K., Johri, B. N.2 005. Diversity of plant growth and soil health supporting bacteria. *Curr Sci*. **89**(1): 136–150.

431. Tilak, K.S., Veeraiah, K., Thathaji, P.B. and Butchiram, M.S. 2007. Toxicity studies of butachlor to the freshwater fish, *Channa punctata* (Bloch). *J Environ Biol*. **28**(2): 485–487.

432. Tiryaki, O. and Temur, C. 2010. The Fate of Pesticide in the Environment. *J. BIOL. ENVIRON. SCI*. **4**(10): 29-38.

433. Tomizawa, M. and Casida, J.E. 2005Neonicotinoid insecticide toxicology: mechanisms of selective action. *Annu Rev Pharmacol Toxicol*. **45**: 247–268.

434. Tsoumani, M., Liasko, R., Moutsaki, P., Kagalou, I. and Leonardos, I. 2006. Length–weight relationships of an invasive cyprinid fish (*Carassius gibelio*) from 12 Greek lakes in relation to their trophic states. *J. Applied Ichthyol*. **22**: 281–284.

435. Tsui, M. T. and Chu, L. M. 2003. Aquatic toxicity of glyphosate-based formulations: comparison between different organisms and the effects of environmental factors. *Chemosphere*. **52**(7):1189-1197.

436. Tyor, A. K. and Harkrishan K. 2016 Effects of imidacloprid on viability and hatchability of 503 embryos of the common carp (*Cyprinus carpio L.*). *International Journal of Fisheries and Aquatic Studies.* **4**(4): 385-389.

437. Ullah, S. and Zorriehzahra, M. J. 2015. Ecotoxicology: a review of pesticides induced toxicity in fish. *Adv. Anim. Vet. Sci*. **3**(1): 40-57.

438. Upadhyay, A. and Parikh, P. 2014. Pyrazosulfuron-Ethyl Induced Alteration In Haematology And Blood Biochemistry Of *Oreochromis Mossambicus*: Sub-Acute Study" *The Experiment*. **18**(3): 1245-1253.

439. Van der Oost, R., Beyer, J. and Vermeulen, N.P.E., 2003. Fish bioaccumulation and biomarkers in environmental risk assessment: a review. *Environ Toxicol Pharmacol*. **13**: 57– 149.

440. Van der Schalie, W. H., Shedd, T.R., Knechtges, P. L., Widder, M. W. 2001. Using higher organisms in biological early warning systems for real-time toxicity detection. *Biosens Bioelectron*. **16**(7-8): 457-465.

441. Van Dyk, J. C., Marchand, M. J., Smit, N. J., Pieterse, G. M. 2009. A histology based fish health assessment of four commercially and ecologically important species from the Okavango Delta panhandle, Botswana. *African Journal of Aquatic Science*. **34**: 273–282.

442. Van Dyke, M. K., Phares, C. R., Lynfield, R., Thomas, A. R., Arnold, K.E., Craig, A. S., Mohle-Boetani, J., Gershman, K., Schaffner, W., Petit, S., Zansky, S.M., Morin, C. A., Spina, N. L., Wymore, K., Harrison, L. H., Shutt, K. A., Bareta, J., Bulens, S. N., Zell, E. R., Schuchat, A., Schrag, S. J. 2009 . Evaluation of universal antenatal screening for group B streptococcus. *N Engl J Med*. **360**(25):26-36.

443. Varadarajan, R. 2010. Strategic marketing and marketing strategy: domain, definition, fundamental issues and foundational premises. *J. of the Acad. Mark. Sci*. **38**:119–140.

444. Vasanth, S., Bupesh, G., Vijaykumar, T.S. and Subramanian P. 2017. Imairment of micronucleus and DNA in the 2-Chloro-4-Ethylamino-6-Isopropylamino-1,3,5-Triazine exposed *Poecilia Sphenops*. *Haematology International Journal*. **1** (2): 000112.

445. Vasanth, S., Arul, G., Karthikeyeni, S., Kumar, T.S., Vignesh, V., Manimegalai, M., Bupesh, G., Thirumurugan, R. and Subramanian, P.2015. Influence of Triazine Herbicide Exposure on Guppies (*Poecilia sphenops*) Aromatase Activities, Altered Sex Steroid Concentration and Vitellogenin Induction. *Indian J Pharm Sci*. **77**(2):156-62.

446. Velisek, J. Stara, A.; Machova, J. and Svobodová, Z. 2012. Effects long-term exposure to simazine in real concentrations on common carp, *Cyprinus carpio* L. *Ecotoxicol. Environ. Saf*. **76**: 79-86.

447. Velisek, J., Sudova, E., Machova, J. And Svobodova, Z. 2010. Effects of sub-chronic exposure to terbutryn in common carp (*Cyprinus carpio* L.). *Ecotoxicology and Environmental Safety*. **73** (2010): 384–390.

448. Velisek, J.; Svobodova, Z. and Piackova, V. 2008. Effect of metribuzin on some biochemical, haematological and histopathological parameters of rainbow trout, (*Oncorhynchus mykiss*). *Toxicol. Lett*. **180** (Suppl.5): S176.

449. Velmurugan, B., Selvanayagam, M., Cengiz, E. I., and Unlu, E. 2007. The effects of fenvalerate on different tissues of freshwater fish, *Cirrhinus mrigala*. *J. Environ. Sci. Health Part B*. **42**(2): 157-163.

450. Vencill, V.K. (Ed.) Herbicide handbook. 8.ed. Lawrence: Weed Science Society of America, 2002. 493p.

451. Ventura, A., Young, A. G., Winslow, M. M., Lintault, L., Meissner, A., Erkeland, S. J., Newman, J., Bronson, R. T., Crowley, D., Stone, J. R. 2008. Targeted deletion reveals essential and overlapping functions of the miR-17 similar to 92 family of miRNA clusters. *Cell*. **132**:875–886.

452. Ventura, B.C., Angelis, D.F. and Marin-Morales, M.A. 2008. Mutagenic and genotoxic effects of the Atrazine herbicide in *Oreochromis niloticus* (Perciformes, Cichlidae) detected by the micronuclei test and the comet assay. *Pesticide Biochemistry and Physiology* **90 :** 42-51.

453. Vigário, Ana F. and Sabóia-Morais, S.M.T. 2014. Effects of the 2,4-D herbicide on gills epithelia and liver of the fish *Poecilia vivipara*. *Pesquisa Veterinária Brasileira*, **34** (6): 523-528.

454. Virag, C., Marta, L., Gindele, R. and Kadas, Z.. Cronica Cercetărilor Arheologice din România. 2007. Campania 2006, CIMEC-Institutul de Memorie Culturală, Bucureşti, 2007, 365-369, nr. 188.

455. Virag, D., Naar, Z. and Kiss, A. 2007. Microbial Toxicity of Pesticide Derivatives Produced with UV-photodegradation. *Bull Environ Contam Toxicol.* **79**: 356–359.

456. Vives, I., Grimalt, J., Fernandez, P. and Rosseland, B. 2004. Polycyclic aromatic hydrocarbons in fish from remote and high mountain lakes in Europe and Greenland. *Science of the Total Environment*. **324**: 67-77.

457. Vryzas, Z., Alexoudis, C., Vassiliou, G., Galanis, K. and Papadopoulou-Mourkidou, E. 2011. Determination and aquatic risk assessment of pesticide residues in riparian drainage canals in northeastern Greece. *Ecotoxicol. Environ. Safe*. **74** (2):174-181.

458. Vulliet, E., Emmelin, C. and Chovelon, J. M. 2004. Influence of pH and irradiation wavelength on the photochemical degradation of sulfonylureas. *J. Photochem. Photobiol. A: Chemistry.* **163**: 69–75.

459. Vulliet, E., Emmelin, C., Grenier-Loustallot, M. F., Paisse, O. and Chovelon, J. M. 2002. Simulated sunlight-induced photodegradations of triasulfuron and cinosulfuron in aqueous solution. *Journal Agricultural and Food Chemistry* **50**: 1081.

460. Vutukuru, S. S. 2003. Chromium induced alterations in some biochemical profiles of the Indian major carps, *Labeo rohita* (Hamilton). *Bull Environ Contam Toxicol*. **70**(1): 118–23.

461. Wagenaar, G., Botha,T. and Barnhoorn, I. 2012. Sperm motility and testicular histology as reproductive indicators in *Clarias gariepinus* from an eutrophic impoundment. *South Africa.J. Appl. Ichthyol*. **28**: 990–997

462. Wannee, K. J., Upatham, E. S., Kruatrachue, M., Sahaphong, S., Vichasri-Grams S. and Pokethitiyook P. 2002. Histopathological effects of round up, a glyphosate herbicide, on Nile tilapia *Oreochromisniloticus*. *Science Asia*. **28**: 121-127.

463. Wasim, A. Dwaipayan, S. and Ashim, C. 2009. Impact of pesticides use in agriculture: their benefits and hazards *Interdisc Toxicol*. **2**(1): 1–12.

464. Wedemeyer, G. A., Saunders, R. L. and Clarke, W. C. 1980. Environmental factors affecting smoltification and early marine survivalof anadromous salmonids. - *Mar. Fish.Rev*.**42**: 1-14.

465. Weston, D.nP. and Lydy, M.nJ. 2014. Toxicity of insecticide fipronil and its degradation to benthic macro invertebrates of urban streams. Environ Sci Technol. **48**(2): 1290 – 1297.

466. Widener, A. 2017. U.S. mass spectrometry database expanded by 25000 chemicals. *Chemical and Engineering News*. **95**(24): 15.

467. Widenfalk, A., Svensson, J. M., and Goedkoop, W. 2004. Effects of the pesticides captan, deltamethrin, isoproturon, and pirimicarb on the microbial community of a freshwater sediment. *Environ. Toxicol. Chem.* **23**: 1920–1927.

468. Wiegand, C., Krause, E., Steinberg, C. and Pflugmacher, S. 2001. Toxicokinetics of atrazine in embryos of the zebrafish (*Danio rerio*). *Ecotox Environ Safe* **49** : 199 -205.

469. Wilson, J. M. and Laurent, P. 2002. Fish gill morphology: inside out. *Journal of experimental zoology banner*. 293 (3): 192-213.

470. Witzmann,F. and Brainerd, E. 2017. Modeling the physiology of the aquatic temnospondyl Archegosaurusdecheni from the early Permian of Germany. *Foss. Rec.* **20** (2): 105-127.

471. Yabu, T., Kishi, S., Okazaki, T. and Yamashita, M. 2001. *Characterization of zebrafish caspase-3 and induction of apoptosis through ceramide generation in fish fathead minnow tailbud cells and zebrafish embryo*. *Biochem J*. **360**: 39–47.

472. Yadav, A.S., Jaggi, S. 2015. Buccal Micronucleus Cytome Assay- A Biomarker of Genotoxicity. *J Mol Biomark Diagn.* **6**: 236.

473. Yancheva, V., Velcheva, I., Stoyanova, S., Georgieva, E. 2015. Histological Biomarkers in Fish as a tool in Ecological Risk Assessment and Monitoring Programs: A Review. *Applied Ecology and Environmental Research.* **14**(1): 47-75.

474. Yanhui, W., Liangwei, Du. and Lianyang, B. 2013. Photochemical Degradation of Pyrazosulfuron-Ethyl in Aqueous Solution. *J. Braz. Chem. Soc.* **24** (1): 26-31.

475. Yaro, I., Lamai, S. and Oladimeji, A. 2005. The Effect of Different Fertilizer Treatments on Water Quality Parameters in Rice Cum Fish Culture Systems. *Journal of Applied Ichthyology.* **21:** 399- 405.

476. Yaron, Z., Levani-Sivan, B. 2011. Endocrine Regulation of Fish Reproduction. In Farrell A.P. (ed.). Encyclopedia of Fish Physiology: From Genome to Environment. Academic Press, San Diego **2011** (2) :1500-1508.

477. Yin, X.U., Zhu, G., Bing,L. X. and. Liu, S. Y. 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**: 2–6.

478. Yousef, M. I., Awad, T. I. and Mohamed, E. H. 2006. Deltamethrin-induced oxidative damage and biochemical alterations in rat and its attenuation by Vitamin E. Toxicology. **227**: 240-247.

479. Zaki, M. S., Moustafa, S., Fawzi, O. M., El-Bellbasi, H., Syame, S. M. and Awad, I. M. 2010. Assessment of lead pollution on *Tilapia zilli*, including hematological, biochemical and immunological parameters. *Reports and Opinion.* **2** (1): 82-87.

480. Zapata, A. G., Chiba A. and Varas A. 1996. Cells and tissues of the immune system of fish. In: The Fish Immune System: Organism, pathogen and Environment , p. 1 – 62, G. Iwama and T. Nakanishi (Eds.), Academic Press, New York

481. Zapata, A.G. and Cooper, E.L. 1990. The Immune System: Comparative Histophysiology. John Wiley and Sons, Chichester. **9**(4):294

482. Zeqiraj, A., Elezaj, S., Gashi, Z., Grunda, B. 2015. Micronucleus test for Californian trout fish after treatment with the herbicide monosan for 48 and 96 hours. *IJISET.***2** (10).

483. Zeyl, J. N., Love, O. P. and Higgs, D. M. 2013. Evaluating gonadosomatic index as an estimator of reproductive condition in the invasive round goby, *Neogobius melanostomus*. *J GreatLakes Res*. **8** (4): 164-171.

484. Zhang, H., Liqiao, C., Qin, J., Zhao, D., Wu, P., Qin, C., Yu, N., Li, E. 2011. Molecular cloning, characterization and expression of a C-type lectin cDNA in Chinese mitten crab, *Eriocheir sinensis*. *Fish and Shellfish Immunology*. **31**: 358-363.

485. Zhao J. L., Liu, Y. S., Liu, W. R., Jiang, Yu, X. H.C., Zhang, Q., Chen, X.-W., Yang, Y.-Y., Chen, J., Liu, Pan, C. G., Huang, G.Y., Ying, G. G. 2015. Tissue-specific bioaccumulation of human and veterinary antibiotics in bile, plasma, liver and muscle tissues of wild fish from a highly urbanized region. *Environmental Pollution*, **198**: 15-24.

486. Zheng, W., Yates, S. R. and Papiernik, S. K. 2008.Transformation kinetics and mechanism of the sulfonylurea herbicides pyrazosulfuron-ethyl and halosulfuron-methyl in aqueous solutions. *J. Agric. Food. Chem.* **56**: 7367–7372.

487. Zhiyi, R. and Haowen, Y. 2004. A method for genotoxicity detection using random amplified polymorphisms DNA with *Danio rerio*. Ecotox. Environ. Saf. 58: 96- 103.

488. Zhu, D. and Chang, J. B. 2008. Annual variations of biotic integrity in the upper Yangtze River using an adapted index of biotic integrity (IBI). Ecol. Indic. **8** (5): 564–572

489. Zimmerli, S., Bernet, D., Burkhardt-Holm, P., Schmidt-Posthaus, H., Vonlanthen, P., Wahli, T. and Segner, H. 2007. Assessment of fish health status in four Swiss rivers showing a decline of brown trout catches. *Aquat. Sci.* **69**:11-25.

490. Zodrow, J. M. and Tanguay, R. L. 2003. 2,3,7,8-tetrachlorodibenzo-p-dioxin inhibits zebrafish caudal fin regeneration. *Toxicol. Sci.* **76**: 151–161.

491. Zubia, M., Rehana, Y., Muhammad, S. H., Omer, M.T., Lakht-e-Zehra and Adeyemi, S.O. 2014. Length- Weight Relationship, Condition and Relative Condition Factor of Four Mugilid Species (Family mugildae) from the Karachi Coast of Pakistan. *J Coast Dev.* **17**(385): 1-6.