

2nd International Conference on

TOXICOLOGY AND CLINICAL TOXICOLOGY

November 11-12, 2019 | London, UK

Possible effects of Microplastic pellets on marine fish

AbdulAziz Al-Khubaizi

Kuwait Institute for Scientific Research, Kuwait

Marine debris are found floating at the sea surface, on seafloor and on shorelines. Plastics that represent 60–80% of all marine debris are starting to replace images of sewage as a leading cause of pollution particularly in the ocean.

Microplastics considered as plastic debris pollution that constitute a major threat to marine life due to their persistence, ubiquity and vector for transferring persistence bioaccumulative toxins in the environment. Microplastics are small plastic debris less than 5 mm in size and can pose threat to marine organism. Small plastic pellets used for manufacture of plastic products end up in the marine environment through accidental spillage during transport. Owing to their small size and their occurrence in both pelagic and benthic ecosystems, microplastics have the potential to be ingested by marine biota such as zooplankton, mussels, fish, seabirds and whales. Plastic particles accumulating in the intestine of marine organisms can clog the digestive system and cause false sense of satiation leading to less food consumption. Ingestion of contaminated microplastics represents a unique exposure route of highly toxic chemical pollutants into the food web. Microplastics can act as a vector for the transport of sorbed contaminants and chemical additives when ingested by the living organisms. Ingesting microplastics can facilitate the transport of chemical contaminants to the organism. Recently, a study reported, for the first time, that some aged plastics could release estrogenic compounds in marine environment. Contaminants can incorporate into the marine plastic pellets by two possible mechanisms. The first possible mechanism is the adsorption of hydrophobic chemicals into the surface of the plastic resin pellets from seawater and second possible source is the synthetic chemicals contained in the plastic resin pellets as additives. In general, the microplastics ingestion by fish can interfere with biological processes and might cause health hazards.

Biography

AbdulAziz Al-Khubaizi is a Research Associate in Environment and Life Sciences Research Centre at Kuwait Institute for Scientific Research. He carries out multidisciplinary research in various aspects of environmental sciences. He holds MSc degree in Environmental Resource Assessment from University of Newcastle upon Tyne, UK; and BSc of Honour in Environmental Health and Safety Management from Ferris State University, USA. In addition, He is a member and Certified Personal Trainer at the American College of Sports Medicine, Fitness Nutrition Specialist at the National Academy of Sports Medicine and Sports Nutrition Specialist at the International Society of Sports Nutrition. He holds his highness Prince of Kuwait gold medal for Scientific Excellency. He is a social media influencer in the field of health.

e: akhubaizi@kisir.edu.kw