

2nd International Conference on **Oceanography**

July 21-23, 2014 Hampton Inn Tropicana, Las Vegas, USA

Emergency medical management of lionfish, scorpionfish & stonefish evenomation

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The venomous nature of scorpionfish, stonefish, and lionfish constitute potentially dangerous marine hazards in a variety of circumstances, such as divers, snorkelers, marine aquarists, fish handlers and fishermen. Lionfish have become a formidable ecological menace to delicate ocean coral reefs, benthic habitats, amidst the fragile coexistence of a wide variety of marine botanicals and aquatic organisms. On a global scale, scorpionfish rank second only to stingrays in total envenomations. Changes in environmental oceanic conditions and distribution of these venomous species of fish have impacted delicate marine ecosystems as serious aquatic hazards to coral reefs. Increase in prevalence of contact with humans, lead to local and systemic symptoms and signs of envenomation, requiring emergency medical intervention. Devil firefish, native to the Indo-pacific Ocean, have been introduced to previously under-inhabited regions, in the rapidly evolving delicate ecosystems of the warm Caribbean Sea, Atlantic Ocean, the Mid-Atlantic Carolina coast, even as far as Bermuda. Relabeled Lionfish, in this non-native new habitat, have become a growing marine medical and ecological hazard, in the Western Hemisphere. Sustainability of delicate aquamarine habitats has been adversely impacted by the rapid proliferation of lionfish; with potentially far-reaching devastating and destructive effects on coral reefs and fragile ecosystems, disturbing the equilibrium in those benthic zones in addition to presenting increasing risk of injury to humans. Medically effective antivenom developed by Australian Commonwealth Serum Laboratories is an antidote for lethal stonefish venom; capable of producing death within 1-2 hours of exposure. This promising development in marine biotechnology represents a formidable achievement in biomedical science and further biotechnological research may elucidate a multitude of additional applications, thereby advancing discovery of marine bioactive molecules in the diagnosis and treatment of a wide variety of additional medical conditions.

Biography

George Schroeder, MD is a Graduate of the University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada, and Master of Science of the University of Texas, School of Graduate Management, affiliated to the Southwestern School of Medicine, University of Texas, Dallas, Texas, USA. Currently he serves as Executive Director of Medical Affairs for the American Academy of Urgent Care Medicine & as member of the Board of Directors of the American Board of Urgent Care Medicine. He is a Clinical Assistant Professor of Emergency Medicine at the University of Central Florida College Of Medicine, Orlando, Florida. He is President & CEO of Global Renaissance Enterprises Corp. He was appointed by the Governor of the State of Florida to the State Pharmaceutical & Therapeutics Committee in September 2009. He is the Senior Medical Editor of the *Journal of the American Academy of Urgent Care Medicine* and has been appointed to the Board of Directors of the International Scientific Advisory Board - Magellan BioScience Corp., Tampa, Florida, USA.

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