Record Nr. UNINA9910298274303321 Biological toxins and bioterrorism / / editors, P. Gopalakrishnakone [et Titolo al.1 Pubbl/distr/stampa New York:,: Springer,, 2015 **ISBN** 94-007-5869-3 Edizione [1st edition 2015.] Descrizione fisica 1 online resource (XXIV, 604 p. 123 illus., 95 illus. in color. eReference.): online resource Toxinology, , 2542-761X Collana Disciplina 358.38 Soggetti Biological monitoring Biological warfare Biological weapons Bioterrorism Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Abrin and Immunoneutralization: A Review -- Abrin: A Review --Aflatoxins -- Aptamers as Antidotes against Toxins -- Artificial Resistance using Antitoxins and Anti-venoms -- Basic Chemistry of Toxins Relevant to Vaccine, Diagnostics, and Countermeasures --Bioactive Peptides Against Bioterror Agents -- Biological Toxin Detection: A Review -- Biology, Ecology and Evolution of Receptor-Based Toxin Resistance -- Biosecurity and Toxins -- Botulinum Toxins Antidotes -- Botulinum Toxins: A Review -- Cellular Assays for Toxins -- Challenges in Developing Inhibitors Against Toxins -- Cholera Toxin -- Counterfeit Botulinum Medical Products and Risk of Bioterrorism --Decoy-Receptor-Like Toxin-Binding Proteins and Their Potential Role in Toxin Resistance -- Diagnostics of Botulism -- Evolutionary Traits of Toxins -- Mycotoxins -- Mycotoxins II -- Pheromones and Amphibian Biology -- Public Health Lab Response to Potential Toxin Bioterrorism -- Review on BTW: Toxins and Contemporary Bioterrorism -- Ricin as Bioweapons -- Ricin: A Review -- Toxins and Food Safety -- Toxins Detection -- Toxins of GID Relevance -- The Biology of Chemical Signals as Toxins and in Venoms. Biological toxins are an important part of our world, a reality with which Sommario/riassunto

we need to cope, so in parallel with understanding their mechanisms of

action and thereby improving our fundamental knowledge, there are successful efforts to utilize them as therapeutics against some debilitating human and animal diseases. In view of the complexity of different types of biotoxins and the broad range of toxin structure, physiology, utility, and countermeasures including regulatory issues, it was thus aimed to compile a book on biotoxins and bioweapons. This reference work in the Toxinology handbook series gathers together knowledge from around the globe about naturally inspired and manufactured biological weapons. The authors describe how they work: how authorities may detect their presence, prevent their use, and diagnose their impacts; and the means by which medical and paramedical professionals may treat victims. Also described are how they have been used to further our knowledge and what insights they have given us into evolutionary and physiological processes. Finally, it is also discussed how these toxins can be used as therapeutics and what the implications of such therapeutics are to their use as biothreat agents. This volume provides a reference accessible to scientists, educators, and medical experts alike with an interest in biotoxins, focusing on the major toxins used as bioweapons. Regulatory agencies will also benet from the information provided in this book. Some in the intended audience may need to understand how they elicit their effects and how we can defend ourselves against them. Others may be interested in the sometimes colorful histories that surround this subset of biotoxins that can be and, in some cases, have been used as weapons.