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| Soggetti                | Medicine<br>Pharmacology<br>Pharmaceutical technology<br>Life sciences<br>Biochemistry<br>Animal physiology<br>Biomedicine, general<br>Pharmacology/Toxicology<br>Pharmaceutical Sciences/Technology<br>Life Sciences, general<br>Animal Biochemistry<br>Animal Physiology   |
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| Livello bibliografico   | Monografia   |
| Nota di contenuto       | Deadly Innovations: Unraveling the Molecular Evolution of Animal Venoms -- Squamate Reptile Genomics and Evolution -- Venoms of Colubrids -- Phylogenetics of Scorpions of Medical Importance -- Scorpion Venom Gland Transcriptomics and Proteomics: An Overview -- Brown Spider Venom: The Identification and Biotechnological Potential of Venom Toxins -- Venom Toxins of Fire Ants -- The Platypus: A Venomous Mammal -- Structure-Function Relationship of Modular Domains of P-III Class -- Snake Venom Metalloproteinases -- Biological Activities and Assays of the Snake Venom Metalloproteinases (SVMs) -- Three-Dimensional Structures and Mechanisms of Snake Venom Serine Proteinases, Metalloproteinases, and Phospholipase A2s |

-- Structure-Function Relationship in Heterodimeric Neurotoxin PLA2s from Viperidae Snakes Inhabiting Europe, South America, and Asia -- Snake Venom Phospholipase A2: Evolution and Diversity. - Automated Mass Fingerprinting of Venoms in Nanogram Range: Review of Technology -- Snake Venom Peptidomics -- Snake Venom Proteopeptidomics: What Lies Behind the Curtain -- Shotgun Approaches for Venom Analysis -- Purinergic Mechanisms of Prey Acquisition by Venomous Organisms -- Applications of Snake Toxins in Biomedicine -- Industrial Production and Quality Control of Snake Antivenoms.

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### Sommario/riassunto

In recent years, the field of Toxinology has expanded substantially. On the one hand it studies venomous animals, plants and micro organisms in detail to understand their mode of action on targets. While on the other, it explores the biochemical composition, genomics and proteomics of toxins and venoms to understand their three interaction with life forms (especially humans), development of antidotes and exploring their pharmacological potential. Therefore, Toxinology has deep linkages with biochemistry, molecular biology, anatomy and pharmacology. In addition, there is a fast developing applied subfield, clinical toxinology, which deals with understanding and managing medical effects of toxins on human body. Given the huge impact of toxin-based deaths globally, and the potential of venom in generation of drugs for so-far incurable diseases (for example, Diabetes, Chronic Pain), the continued research and growth of the field is imminent. This has led to the growth of research in the area and the consequent scholarly output by way of publications in journals and books. Despite this ever growing body of literature within biomedical sciences, there is still no all-inclusive reference work available that collects all of the important biochemical, biomedical and clinical insights relating to Toxinology. The Handbook of Toxinology aims to address this gap and cover the field of Toxinology comprehensively.

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