1. Record Nr. UNINA9910484982603321

Titolo	Evolution of venomous animals and their toxins / / P. Gopalakrishnakone, editor-in-chief ; Anita Malhotra, editor
Pubbl/distr/stampa	Dordrecht, The Netherlands : , : Springer, , [2017] ©2017
ISBN	94-007-6458-8
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (89 illus., 66 illus. in color. eReference.)
Collana	Toxinology, , 2542-761X
Disciplina	615.9
Soggetti	Toxicology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	A Critique of the Toxicoferan Hypothesis -- Evolution of Resistance to Toxins in Prey -- Evolution of Separate Predation- and Defence-Evoked Venoms in Carnivorous Cone Snails -- Evolutionary Context of Venom in Animals -- Functional and Genetic Diversity of Toxins in Sea Anemones -- Independent Origins of Scorpion Toxins Affecting Potassium and Sodium Channels -- Mutation, Duplication, and More in the Evolution of Venomous Animals and Their Toxins -- Parasitoid Wasps and Their Venoms -- The Strategic Use of Venom by Spiders -- Toxicity in Cephalopods -- Venom Use in Mammals: Evolutionary Aspects -- Venom as a Component of External Immune Defense in Hymenoptera -- Phylogeny of Annelida -- Systematics and Evolution of the Conoidea -- Systematics of Cephalopods -- Systematics of Siphonophores -- Evolution of the Snake Venom Delivery System -- Evolution, Morphology and Development of the Centipede Venom System -- Evolutionary History of Venom Glands in the Siluriformes.
Sommario/riassunto	This volume contains a section on the wider evolutionary context of venom in animals, the molecular evolutionary processes involved in generating diversity, and the concept of venom evolution as being driven by an arms race that also involves evolution of resistance to toxins by prey. It also studies the relationship between the evolution of toxins and the evolution of the animals that they evolved within. The last section discusses the evolution of venom delivery systems. The definition of a venomous animal, as opposed to a poisonous one,

encompasses the evolution not just of toxins but also a specialized mechanism for administering them by injection. .