







Special Issue Reprint

## **Ricin Toxins**

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Edited by Nilgun E. Tumer

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The plant toxin ricin is one of the most potent and lethal substances known. Due to its wide availability and the ease of production, ricin has been exploited as an agent of bioterrorism and biological warfare and is classified as a level B threat. Tons of ricin are produced annually worldwide as a by-product of castor oil, leading to exposure. Currently, there is no proven safe treatment for ricin intoxication. Ricin consists of an active A subunit (RTA) covalently linked to a cell binding B subunit (RTB). RTA depurinates a universally conserved adenine in the sarcin–ricin loop (SRL) of the large rRNA and inhibits protein synthesis. RTA-antibody complexes have been explored as immunotoxins against cancer cells. The articles published in this book address the history of ricin research, how ricin enters cells and traffics to the ribosome, how it inactivates ribosomes, how it induces inflammatory signaling pathways and programmed cell death, the design of therapies against ricin intoxication, and innovative assays for ricin detection.





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