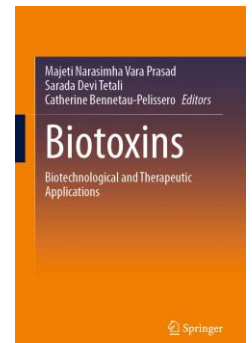


Therapeutic Applications of Plant Toxins Used in Traditional Medicine

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Abstract

Traditional herbal medicines have played a very important role in primary health care systems globally. Also, these medicines of these traditional health systems are used to treat various acute and chronic disease conditions without or least toxic effect. Plants are rich in bioactive phyto-constituents known as secondary metabolites. These secondary metabolites have been used to cure illnesses due to their various pharmacological properties. Plant toxins can be known as a large group of structurally diverse small molecules that result from the plant's secondary metabolism. These toxins may be synthesized by plants themselves or by nonpathogenic endophytic microorganisms living within the plants. Among these plant toxins, some groups show high therapeutic values which can be used to cure various illnesses. Most of these plant toxins are derivatives of important secondary metabolites such as alkaloids, terpenes, steroids, and phenolic compounds. In Ayurveda and Sri Lankan traditional system of medicine used toxic plants such as *Aconitum ferox*, *Strychnus nux-vomica*, *Nerium indicum*, *Datura metal*, *Croton tiglium*, *Papaver somniferum*, and *Gloriosa superba*. The usage parts of these plants are subjected to deep purification procedures before preparing the medicines. These plants were categorized under poisons and semi-poisons in Ayurveda system of medicine. Hence, the prime focus of this review is to identify toxic plants used in traditional systems of medicines and analyze their therapeutic efficacy on human body for various ailments. Also, this review aims to categorize various purification procedures according to the plant toxins and search the evidence-based modern pharmacological properties of these special phyto-constituents.