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Titolo Venom and Toxin as Targeted Therapy / Hang Fai Henry Kwok

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Sommario/riassunto Targeted therapy has developed significantly in the last one and half

decades, prescribing specific medications for treatment of particular diseases, such as cancer, diabetes, and heart disease. One of the most exciting recent developments in targeted therapies was the isolation of disease-specific molecules from natural resources, such as animal venoms and plant metabolites/toxins, for use as templates for new drug motif designs. In addition, the study of venom proteins/peptides and toxins naturally targeted mammalian receptors and demonstrated high specificity and selectivity towards defined ion channels of cell membranes. Research has also focsed intensely on receptors. The focus of this Special Issue of Toxins addressed the most recent advances using animal venoms, such as frog secretions, bee/ant venoms and plant/fungi toxins, as medicinal therapy. Recent advances in venom/toxin/immunotoxins for targeted cancer therapy and immunotherapy, along with using novel disease-specific venom-based protein/peptide/toxin and currently available FDA-approved drugs for combinationtreatments will be discussed. Finally, we included an overview of select promising toad/snake venom-based peptides/toxins potentially able to address the forthcoming challenges in this field. Both research and review articles proposing novelties or overviews, respectively, were published in this Special Issue after rigorous

evaluation and revision by expert peer reviewers.