

Phytopharmacology of herbal biomolecules

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6.1 Introduction

Plant-based drugs commonly called as herbal drugs have been in use for the treatment of human ailments since primitive times. These plant-based therapies are the contribution of the herbal biomolecules which have a multitude pharmacological potential in disease treatment. This chapter focuses on promising biomolecules and their potential of the phytoconstituents in disease treatment. Traditional use of bioactive phytoconstituents laid the foundation to modern use of plant-based therapy. Moreover, several factors such as being cheaper alternative with fewer side effects [1,2], scientific evidence, technological advances, and research trends [3,4] are the reasons for renewed popularity of traditional herbal and plant-derived medications among researchers, [1]. Present research in the field of phototherapy also includes structural changes [5] to be available as “privileged scaffolds” [3], improved, selectivity, and pharmacokinetics of bioactive natural

products through structural modifications, has led to the production of novel drug-like lead compounds. Structural changes may overcome unfavorable toxicities and pharmacokinetics, limiting their clinical potential [3,5].

6.2 Emerging need for phytotherapy

Using natural products as medicinal agents for the treatment of a wide spectrum of diseases has been in practice since a long time with the bountiful of treasure that nature has in store. Records from old era suggest that herbal drugs have formed the basis of sophisticated traditional medicine systems around 2500 BCE; with the best known record as “Ebers Papyrus” dating back to 1500 BCE, which documents over 700 drugs, mostly of plant origin [6]. Similarly, the Compendium of Materia Medica, a Chinese materia medica work written by Li Shizhen is regarded as the most complete and comprehensive medical book ever written in the history of traditional