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Plant mediated natural products as source of drugs

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Plants have been used as a source of medicine since ages in Ayurveda, Unani and Chinese systems for treatment of common diseases. Research has focused on drug discovery from herbal sources as an important group of complementary and alternative medicine. Natural products have been the key sources of history and culture. It is also been established and well documented that natural products are the source of the molecules for modern drug development, especially for antibacterial and anti-tumour agents. More than 80% of the human population in the world relies on herbal system of medicine with the perception that natural products are safe, cheaper and have no residual effect. On the contrary the synthetic products have higher cost although possess time effectiveness, easy quality control, regulation of quality and quick effects and their safety remains questionable. A large number of chemicals have been isolated from medicinal plants for example *Schisandrin C* present in *Schisandra* and has given two potent drug precursors viz. bifendate and bicyclol. Similarly, artemisinin from *Artemisia annua* has given about a dozen of drugs, used as anti-malarials. It has been observed that natural products and their related moieties have been potential source of therapeutic agents. Incidentally, researches in natural products has reduced in the pharma industry due to several reasons i.e., lack of compatibility of the traditional natural product. It is well established that natural product structures have the characteristics of high chemical diversity, specific bio-chemical and molecular properties that make them suitable as lead structures for drug discovery. Significant advances in genomics and structural biology during past few years have given a meaningful picture of the diversity of proteins targeted by natural product molecules. In this paper effects were made to illustrate various approaches of drug discovery from herbal medicines.