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EDITORIAL ON APPROACHES IN PHARMACOGNOSY

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EDITORIAL

Pharmacognosy derives from two Greek words, "pharmakon" or drug, and "gnosis" or knowledge. While representing a classical field of science, Pharmacognosy has undergone significant change in recent years and today represents a highly interdisciplinary science which is one of five major areas of pharmaceutical education.

INTRODUCTION

Pharmacognosy is the study about the physical, chemical, biochemical, and biological implications of natural products for medicinal or health benefit purposes. Continuous interest in this field has led to the emergence of many allied fields of study such as natural product, pharmacology, biomedicine, spectrometry, and biotechnology [1].

Some compounds are used as active ingredients in the form directly isolated from plant extracts; others are synthesized to mimic a natural plant compound. Therefore, natural compounds could be good models for developing novel drug molecules. Modelling or modifying is an important action for drug industry. Because in some cases, natural products exert little or even no activity themselves, but by modification and using chemical or biological methods, potent drugs can be produced. A good example for this case could be baccatin III isolated from *Taxus baccata* (yew tree), which is modified into taxol, a potent anticancer drug [2].

Scope

Its scope includes the study of the physical, chemical, biochemical and biological properties of drugs, drug substances, or potential drugs or drug substances of natural origin as well as the search for new drugs from natural sources. Research problems in pharmacognosy include studies in the areas of phytochemistry, microbial chemistry, biosynthesis, biotransformation, chemotaxonomy, and other biological and chemical sciences [3].

Natural products chemistry

A typical protocol to isolate a pure chemical agent from natural origin is bioassay-guided fractionation, meaning step-by-step separation of extracted components based on differences in their physicochemical properties, and assessing the biological activity, followed by next round of separation and assaying. Typically, such work is initiated after a given crude drug formulation (typically prepared by solvent extraction of the natural material) is deemed "active" in a particular in vitro assay.

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