

Pharmacognosy Should Define its Position in Academic Research

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EDITORIAL

Plants are one of the most important and oldest sources of pharmaceutical preparations, and pharmacognosy is an important aspect of pharmacists' academic training. Initially, this specialised field was limited to the identification of therapeutic plants. Pharmacological knowledge, and understanding of their ingredients during the last 20 years, a new paradigm has emerged in terms of side effects and therapeutic efficacy. It has been developed with a specific focus on molecular biology observed. This pattern was linked to biosynthesis studies. Clarification of biologically active molecules' molecular mechanisms of action natural compounds, resulting in the discovery of new targets in order to create new active ingredients for modern pharmaceuticals products.

It has been debated on multiple occasions how pharmacognosy should define its role in academic research and teaching, and discussions on the subject are still taking place in several European nations. Of course, modernization is required because all "traditional" areas must be prepared for the future and in line with scientific and technical advancement. However, original knowledge of plant identification and characteristic ingredients, as well as their effects and efficacy, which is a vital part and a distinctive feature of pharmacists' education, should not be overlooked. This understanding is the foundation for scientific phytotherapy and the use of herbal medical items that are fully recognised as medicines under European law in accordance with European Directive 2004/24/EC.

There appears to be agreement on the need of pharmacognosy for future pharmacists' basic abilities, including knowledge of medicinal plants and proficiency in employing herbal medicinal products. Plant research and molecular biology should thus be considered equally important in modern pharmacognosy. ESCOP believes that biogenic chemicals must be addressed in their whole as a key competency of academic education. As a result, in addition to microbes and animal products, the medicinal plant is a significant target for study on potential active compounds. Primary and secondary chemicals, as well as complex mixes (extracts), biotechnological substances, and living cells, all fall within the pharmacognosy umbrella.

Future pharmacists would be able to describe exact biochemical procedures and synthesise new drugs if academic education only focused on elucidation of biochemical pathways with a selected engineering to produce new active substances, but they would no longer be able to identify medicinal plants, their constituents, and their pharmacological effects and therapeutic efficacy. Understanding a more complex background in terms of research and development of new active chemicals and current pharmaceutical goods will be impossible without such pharmacognosy knowledge. ESCOP would welcome a modern pharmacognosy defining its place alongside all other areas of pharmacists' academic education, such as pharmacology, pharmaceutical chemistry and technology, and clinical pharmacy, while keeping in mind the importance of maintaining pharmacists' unique knowledge about medicinal plants, their effects, and therapeutic efficacy.

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