

HERBAL MEDICINE : MODERN CHEMICAL AND PHARMACOLOGICAL PERSPECTIVE

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Herbal products are being used as 'drug' (the term itself being derived from the French word 'drogue' meaning 'dry herbs') from time immemorial in all parts of the world. During the dawn of civilization either the whole plant or its part was processed and prescribed. But with the advancement of chemical sciences the active ingredients were isolated and characterised. Ultimately these drugs were naturalised in modern medicine e.g., atropine, quinine, morphine, reserpine, digitoxin, etc. The concepts of conformational isomerism, optical isomerism and the application of varieties of chromatography, nuclear magnetic resonance (nmr) spectroscopy, mass spectrometry and computer graphics have revolutionized the understanding of the constitutions and actions of the drugs derived from nature in the molecular levels. 'Combinatorial Chemistry' – the latest development of a new branch of Medicinal Chemistry – has further expanded the scope of drug development from nature. The sudden and overwhelming exposure of the intriguing nature and function of the cells and mechanism of transport of drugs through cell membrane in the last two decades have been helpful in assessing the importance of the herbal drugs. Moreover, the fight took a new turn with the appearance of newer dreadful diseases. More intense search is on at the moment to find out appropriate remedies utilising plant source with the intense application of chemistry and pharmacology. Biotechnological procedures involving genetic engineering are also being developed for production of the useful plant drugs to avoid over-exploitation of bioreserve.

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