Exploring the Pharmaceutical Potential of Traditional Phytopigments

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ABSTRACT

The colossal use of plant extracts to alleviate various ailments was described by healers, merchants, explorers, and missionaries throughout the centuries. The plant extracts, their key bio-actives, and transcendent curing power are no longer an enigma, while it rooted in the emergence of ethnopharmacology. Among these plant-derived bio-actives, phytopigments such as curcumin gained worldwide recognition for their impeccable therapeutic properties and have become an imperative component of the traditional medicine system. Lately, there have been immense endeavors to scientifically validate the therapeutic potential of phytopigments in in vitro and in vivo disease models. Carotenoids, anthocyanins, anthraquinones, and flavonoids are some of the widely investigated and therapeutically utilized phytopigments. Pigments are reported for their therapeutic implications in cardiovascular diseases, ging, neurodegenerative diseases, cancers, respiratory and blood disorders. Phytopigments demonstrated several desirable characteristics of drug candidates, including high molecular mass, high sp3 carbon atoms, hydrogen-bond acceptors and hydrogen donors, and remarkable molecular rigidity. Therefore, phytopigments are a promising solution for the mitigation of several ailments. Furthermore, extensive clinical interventions are obligatory to substantiate their effects on humans.

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