

Editorial

Phytomedicine as the alternative drug against the human disease

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Abstract: Phytomedicines have long been used to treat infectious diseases, either in the form of extracts or in other formulations. Even if the widespread use of synthetic medications has significantly reduced the reach of phytomedical modalities, the current era is seeing the slow resurgence of traditional therapies and techniques. It is now essential to identify, analyze, and develop new phytomedicines that are both cost-efficient and effective from both known and undiscovered sources of medicinal flora.

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Background

Herbal medicines, botanicals, phytopharmaceuticals, and phytomedicines are other words that are frequently used to describe medications derived from plants or herbs. In many countries, phytomedicines can be purchased as dietary supplements over-the-counter.

Because of this, they have not been the subject of thorough scientific research on their efficacy, safety, or quality. Some other nations, especially those in Europe, have stricter regulations and require a prescription to obtain phytomedicines [1-6].

Researchers and physicians have been forced to create strict treatment plans against serious, life-threatening diseases due to their ever-increasing epidemiological impact on the global population. Effective therapeutic strategies are also necessary in light of the recent surge in the occurrence of deadly neurodegenerative diseases. Nevertheless, the current conventional treatments for diseases are tainted by unfavourable side effects related to their use. Another reason that limits their utilisation is their outrageous costs. The long-standing practice of using traditional herbal remedies has become the most popular substitute for synthetic pharmaceuticals in order to address these drawbacks.

The best place to find naturally occurring herbs that contain pharmacologically active phytochemicals and phytomedicine is in nature. Their effectiveness against some of the most severe forms of neurological illnesses and consumer trust have been greatly aided by their price, simplicity of accessibility, and, most importantly, their safety and efficacy. Their therapeutic efficacy against conditions including stroke, Alzheimer's disease, Parkinson's disease, Huntington's disease, cancers, infectious diseases, etc., is highly supported by clinical evidence and laboratory investigations [2, 5, 7-12]. Their neuroprotective effects are thought to be caused by their antioxidant and anti-inflammatory properties, while their precise mode of action is still unknown. The impact of different phytochemicals and herbal medications on the now prevalent and deadly neurodegenerative diseases is the main topic of this editorial, along with the reasons why doctors and the afflicted populace are using them as their main medical alternative.

The prevalence of herbal remedies for therapeutic purposes

About 80% of the world's population uses plant-derived medication as their first line of primary healthcare due to its safety and lack of serious adverse effects. These herbal remedies come in a variety of regulatory forms and models, including prescription medications, over-the-counter treatments, traditional medicines, and nutritional supplements. Nonetheless, it is necessary to upgrade and harmonise the regulatory procedures, which are solely based on a synthesis of traditional knowledge and scientific interpretations. In the end, improvements in the domestication of wild plants, the emergence of biotechnological research, and the genetic modification of therapeutic herbs, as opposed to using plants that thrive in the wild, should provide even more benefits. Additionally, this would guarantee high-quality raw materials in reliable batches, which would control the final efficacy, quality, and safety of the medications made from them. In order to assess these herbal medicines' crucial safety and effectiveness aspects in comparison to the established norms and benchmarks, the regulatory bodies were forced to standardise them strictly. This further eliminates the poor product quality and overcomes a significant obstacle in the development of phytomedicines: creating a safe and reliable

formulation for human ingestion. The main component of phytomedicines must be active plant components or their derivatives. The essence of a herbal product is lost when any type of non-plant substance from any source is added externally.

Due to a number of significant circumstances, the use of herbal treatments to treat illnesses has increased recently. These consist of the following: (1) Their claimed efficacy or effectiveness and consumers' growing preference for natural therapies and alternative medicine sources; (2) The perception that herbal products are superior to chemically manufactured ones; (3) The unsatisfactory experience and adverse effects of conventional pharmaceuticals and conventional therapy against diseases, which is topped by the perception that herbal medicines may be more effective in treating certain diseases than conventional therapies and medicines; (4) The affordable prices of herbal drugs in contrast to modern ones; and (5) The improved quality, safety, and efficacy of herbal medicines as a result of scientific and technological advancements and patients may resort to self-medication if they are unhappy with their doctors' diagnoses and treatments and believe that herbal medicines are a far superior option.

There are a number of diseases where herbal drugs have been investigated for therapeutics purpose and the outcome appeared as highly promising and thus there is a need of in-depth investigation of the possibility of using the herbal drugs as the alternatives of synthetic drug or combinatorial therapeutics of herbal and synthetic drugs. We consider that this editorial will be helpful in promoting the research in this direction[9, 12-18].

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