Ethnopharmacology and neurodegenerative diseases: Past achievements and future expectations

Neurodegenerative diseases (NDs) cover various pathologies and associated disorders. The most known and disabling are Alzheimer’s disease, Parkinson’s disease and Huntington’s disease, causing motor disorders and dementia. NDs affect the ageing population and represent one of the most challenging public health issues worldwide. The situation is particularly critical due to the increasing number of patients, the cost of treatment, and the societal impact of day-to-day care and dependence. As an example, around 7 million European citizens suffer from Alzheimer’s disease with a total care cost reaching 155 billion euros each year. Besides existing drugs addressing the symptoms rather than the cause, alternative natural solutions based on natural extracts or pure compounds are driving growing interest. This presentation begins with an overview of the current state of the art in the use of natural resources and the products they contain, to combat the potential causes and consequences of NDs. We will then move on to the results we have obtained in the field, by using innovative extraction technologies and controlled biotransformation processes to enhance the effectiveness and the safety of the end products.

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