Aromatic and Medicinal Plants: Why so Interesting Today?

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The content of this journal is dedicated to scientists belonging to the fields of Ethnobotany, Phytoanalysis, Chemistry and Ethnopharmacology, respectively.

The history of plants being used for medicinal purpose is probably as old as the history of mankind. In fact, aromatic and medicinal plants are of special importance taking into account their role in health protection as preventive or supportive therapy for numerous diseases and disorders. The message to eat at least five servings of different fruit, berries and vegetables per day that will increase the diet with compounds that have beneficial health effects is not any more a hypothesis but a 'truth'.

Currently, there is an increased interest for qualitative and quantitative analysis of plants as a source of potential chemotherapeutic agents. Indeed, despite the recent interest in molecular modelling and synthetic chemistry techniques by pharmaceutical companies, natural products, particularly medicinal plants, continue to provide natural product chemist's with valuable bioactive compounds of starting points for the development of new drugs. In fact, natural products and their derivatives represent more than 50% of all the drugs in clinical use in the world; for example, of the 121 prescription drugs in use today for cancer treatment, 90 are derived from plants. In both 2001 and 2002, approximately one quarter of the best-selling drugs worldwide were natural products or derived from natural products.

Also, the aromatic plants are in great demand in the world, for their multiple uses. The demand for these plants is increasing continuously in many important fields e.g. medicinal cure, perfume production, soap and cosmetics, refreshing beverages and nutritious etc. However, unless a continuous scientific study of the aromatic profiles of these plants, there is there no guarantee of authenticity, to protect the consumer to be deceived by doubtful products.

It is estimated that 100,000–200,000 metabolites occur in the plants kingdom. Ethnopharmacology, which is focused on the study of traditional medicine, is now reckoned as being the most efficient approach for the detection of products that can form the basis for new bioactive compounds. Nevertheless, the analysis of secondary metabolites in plants is a challenging task constantly because of their extreme chemical diversity, usually low abundance and variability even within the same species. The fact that one single plant can contain up to several thousand secondary metabolites, makes the need for the development of high performance and rapid extraction methods an absolute necessary.

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