Proceedings International
Platinum Open Access Journal (ISSN 2668-6384)

Proceedings, Abstract
Volume 3, Issue 5, 2021, 73
https://doi.org/10.33263/Proceedings35.073

Phytochemical Analysis of Bioactive Components of Medicinal Plants †

Arun Bhardwaj [1,*], Amit Singh [2], Ranjana S.Patnaik [3]

[1] PhD Research Scholar Division of Clinical Research ,Department of Biosciences, School of Basic and Applied Sciences, Galgotias University Greater Noida Uttar Pradesh; dr_arun@consultant.com (A.B.);
[2] PhD Guide Department of Pharmacy, School of Medical and Allied Sciences Galgotias University Greater Noida Uttar Pradesh; amitsingh@galgotiasuniversity.edu.in (A.S.);
[3] PhD Co-Guide Division of Clinical Research ,Department of Biosciences, School of Basic and Applied Sciences, Galgotias University Greater Noida Uttar Pradesh; ranjana.patnaik@galgotiasuniversity.edu.in (R.S.P.);
* Correspondence: dr_arun@consultant.com (A.B.);
† International Conference on Advanced Materials for Next Generation Applications, 29th – 30th September, 2021 (AMNGA-2021)

Received: 10.09.2021; Revised: 20.09.2021; Accepted: 21.09.2021; Published: 29.09.2021

Abstract: In the past, natural substances and their structural analogs have made significant contributions to drug treatment Plants are the source of many drugs, such as anticonvulsants, emetics, antibacterial drugs, antipyretics, diarrhea drugs, antioxidants, and antitumor drugs. It is said that many plants have valuable properties in traditional medicine, and they are also widely used by indigenous peoples around the world. The research emphasizes the evaluation and characterization of various plants and plant components for a range of diseases. The detection, evaluation, and extraction of biologically active plant ingredients have always been a difficult task. Improving the qualitative and quantitative determination methods of medicinal plants is very important for quality assessment in the medicinal plant industry. In recent years, several technological and scientific developments, including improved analytical tools, genome mining and engineering strategies, and microbial culturing advances, address such challenges and open up new opportunities. The most important step toward analyzing bioactive compounds present in natural plant extracts is characterization, which includes phytochemical screening assays that give ideas about the presence of secondary metabolites. Highly sophisticated techniques for structure identification of lead molecule bioactive fraction includes high-performance liquid chromatography (HPLC), high-performance thin-layer chromatography (HPTLC), Fourier-transform infrared spectroscopy (FTIR), nuclear magnetic resonance (NMR), and gas chromatography-mass spectrometry (GC–MS). This overview outlines simple and reliable methods for the qualitative and quantitative determination of the most common active ingredient categories.

Keywords: herbal medicine; medicinal plant; analysis; phytochemical screening; quantitative estimation; biologically active constituents; medicinal plants.

Funding

This research received no external funding.

Acknowledgments

Galgotias University.

Conflicts of Interest

The authors declare no conflict of interest.