



Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
DEEMED TO BE UNIVERSITY
University with Graded Autonomy Status
(An ISO 21001 : 2018 Certified Institution)
Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.
FACULTY OF PHARMACY



CENTER OF EXCELLENCE

NATURAL PRODUCT RESEARCH

The Dr. MGR Educational and research Institute (Deemed to be University) has established a Central Research Facility to gain recognition as a centre of excellence in Natural Product research in the year 2020.

The natural product research requires a complete knowledge of botany, chemistry, quality control and pharmacology of medicines form natural sources. Development of herbal drugs is performed by incorporating the traditional insight, current science and modernistic technologies. The department is engaged in imparting expertise in the various fields of natural medicinal plants. The department is fully equipped with research facilities like crude drugs, herbarium specimen of several plant materials, museum; and modern equipments essential for extraction and isolations of natural medicinal products. The department studies will progress in advance for the improvement of the quality, safety, efficacy and validation of crude drugs under the Dr. MGR Educational and Research Institute.

The department is working in the field of pharmacognostical and phytochemical screening of medicinal plants in order to develop standard for the same to be used as drug. The main focus is to generate scholarly works in peer-reviewed scientific journals and other appropriate media.

Thrust areas of Natural Product Research centre includes:

- Extraction of herbal drugs initiating from collection of crude drug, drying in ambient temperature, pulverisation process.
- Standardization of herbal drugs such as morphological, microscopical, physico and chemical properties, biological evaluation etc.
- Morphological studies like observing organoleptic characters; microscopical evaluation of herbal drugs and powdered drugs including stomatal number and

stomatal index, vein islet and vein termination, palisade cells determination, quantitative methods.

- Histochemical analysis of crude drugs
- Physical method of analysis covering a wide range of determinations which includes moisture content, specific gravity, density, optical rotation, refractive index, melting point, viscosity, solubility, ash value like total ash, water soluble ash, acid insoluble ash, sulphated ash and extractive value using different appropriate solvents.
- Phytochemical evaluation of crude extracts which covers preliminary phytochemical studies, acid value, saponification value, ester value, and acetyl value (qualitative and quantitative estimation)
- Chemical assays to determine chemical constituents such as alkaloid content, phenolic content, total flavonoids etc.
- Extraction of volatile oils and fixed oils
- Isolation and characterization of biologically active phytoconstituents
- Formulation and evaluation of herbal formulations
- Evaluation of marketed herbal and ayurvedic formulations

The Department has the following facilities to meet the evolving needs of the herbal and health care industry with advanced research labs. The lab is equipped with sophisticated instruments like UV-Visible spectrophotometer, ATR, Dissolution apparatus, Tablet punching machine (8 station), Muffle furnace, Microtome, Binocular microscopes, vacuum pump, Deionization unit, Polarimeter etc. In addition, the department has established an herbal drug museum unveiling more than 100 crude drugs and a medicinal plant garden to provide a live experience, inspiring student to get involved in natural product research. The department also maintains herbal museum with a display of crude drugs, herbarium and glossary of medicinal plant photographs to promote herbal research.

In a nutshell, the center is capable of providing activities associated with herbal drug standardization, herbal formulation development to facilitate commercialization, and establishment of pharmacological activities of natural products.



Latitude: 13.058831
Longitude: 80.128441
Elevation: 23.89m
Accuracy: 28.7m
Time: 27-01-2022 14:49
Note: Natural Product Research Center



Time: 27-01-2022 14:54
Note: Natural Product Research Center



Latitude: 13.058912
Longitude: 80.128452
Elevation: -68.1m
Accuracy: 34.4m
Time: 27-01-2022 14:33
Note: Natural Product Research Center



Latitude: 13.058584
Longitude: 80.128399
Elevation: -68.2m
Accuracy: 24.3m
Time: 27-01-2022 15:42
Note: Natural Product Research Center



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Stem Modification

Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth
Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth	Epithelial Outgrowth

Latitude: 13.05871
Longitude: 80.128368
Elevation: 91.29m
Accuracy: 9.3m
Time: 28-01-2022 09:57



Time: 27-01-2022 14:51

Note: Natural Product Research Center