

Molecular Taxonomy

Group works on:

Assessment of diversity, molecular systematics and phylogeny of Indian plants. We use morphological and molecular marker techniques to unravel the diversity and taxonomic problems in plants of economic and taxonomic importance. The molecular markers used in these studies include comparative sequencing of chloroplast and nuclear DNA regions and PCR based fingerprinting techniques like RAPD, DAMD, ISSR, PCR-RFLP etc.

Objectives:

- To undertake creative taxonomic revision or monographic studies on selected genera and species complexes of Indian plants for identification and prioritization of candidate species for molecular taxonomic and conservation biological studies.
- To study infra-specific and inter-specific variability and phylogenetic relationships among and between taxonomically interesting taxa through morpho-taxonomic and molecular marker-based techniques.
- To carry out genetic diversity assessment in endemic, rare, endangered, threatened and economically important plant species of India.
- To collaborate with other R & D Groups/Divisions of NBRI and similar institutions to facilitate the multidisciplinary characterization of plant genetic resources.

Achievements:

The group has successfully carried out systematics and diversity studies in: Indian Rutaceae, Trifolieae, Loteae, Genesteae, Thermopsidae and *Astragalus* (Leguminosae), *Tricholepis* (Asteraceae), *Aconitum* (Ranunculaceae) *Chenopodium* (Amaranthaceae), *Podophyllum* (Podophyllaceae), *Phyllanthus* (Phyllanthaceae), *Punica* (Punicaceae), *Sapindus* (Sapindaceae), Phylogeny of Citrus, and Punicaceae (Myrtales). The group is currently pursuing its research activities on significant genera like *Cucurbits*, *Ephedra*, *Ficus*, *Merope*, and *Murraya*.

Publications:

- Books: 4
- Research papers: 130
- Review articles: 5

Feedback required:

Scientists working in the areas of Conservation Biology and Molecular Taxonomy are welcome to interact with this group for exchange of new ideas and information.