Project title	Bioprospecting for industrial utilization of lesser known forest plants
Principal Investigator	Dr. N. Senthilkumar
Co-Investigators	Sri A. Mayavel Dr. S.P. Subramani Smt. R. Sumathi
Project duration (Start & End)	5 years: 2019-2024
Objectives	• Survey, evaluation and prioritization of the targeted LKFPs • Systematic chemical screening of the populations of the prioritized LKFPs and identification of their chemically superior genotypes. • Identification of industrially viable genotypes among the chemically superior genotypes. • Standardization of produce specific protocols for downstream processing of industrially viable genotypes. • Development of technology for production of value added marketable products from qualitatively qualified commercial produces of the industrially viable genotypes. • Extension of the project outcome to various stakeholders for generation of awareness towards plantations of promising LKFPs, commercial applications and improving livelihoods.
Progress	Collected passport data/Documentation and analysis of existing knowledge/information based on the12 criteria such as Habit, Habitat, Distribution, Spatial Distribution, Geographical, physiographic allocation, Status of the species, Economic value, Phenology, Ethnobotanical significance and Scientific Knowledge of 9 Lesser Known Forest Plant species viz., *Amoora wallichii, Balanites aegyptiaca, Careya arborea, Carallia barachiata, Cassine glauca, Dysoxylum malabaricum, Pterocarpus santalinus, Samanea saman* and *Vitex altissima* for their prioritization. The scoring of the selected 9 Lesser Known Forest Plant species was made in the prescribed format. Based on the passport data 4 LKFPS namely *Balanites aegyptiaca, Careya arborea, Cassine glauca* and *Vitex altissima* were prioritized for the study. Technical data base on the targeted 9 LKFPs were prepared and submitted to the NPC. Ripen fruits of *Balanites aegyptiaca* (Nanjunda) were collected processed. *Balanites aegyptiaca* seeds were subjected to oil extraction using various organic solvents *viz.*, Petroleum ether, and n-Hexane. A range of 10-36% of oil was extracted. Of which n-hexane gave maximum yield of oil with 36%. 3 kg barks of *C. arborea* were collected. The samples were shade dried at room temperature, milled and stored for further analysis. Standardized the optimum conditions *viz.*, MLR, time, temperature and pH for extraction of maximum quantity of natural dye form the bark of *Careya arborea.* The maximum natural dye of concentration 1.74% showing an OD of 0.681 was extracted from the bark of *C. arborea* with the optimum material to liquor ratio of 17.5:100 i.e. 1:5.7 using 0.01% sodium carbonate (alkaline) solution at boiling temperature for 55 minutes.
Total budget	Rs. 39.94 lakhs
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