Universidad de Alcalá

# SERVICE OF VEGETATIVE PROPAGATION AND MOLECULAR CHARACTERIZATION OF TREE SPECIES

**TECHNOLOGY OFFER**

## Code

AMBI_UAH_10

## Application areas

- Energy and biomass
- Biological Sciences
- Agriculture and Marine Resources
- Agrofood Industry
- Environment and risk prevention

## Type of collaboration

- Commercial agreement with technical assistancet

## Main researches

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## CONTACT

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## ABSTRACT

The research group on Agroforestry Biotechnology at Alcalá University and the INIA's Unit on Forest Tree Genomics offer a mixed service consisting of vegetative propagation and plant genotyping, mainly tree species, through in vitro culture and molecular markers of high discriminatory power.
The in vitro culture is carried out at facilities of Alcalá University, being the INIA the institution in charge of the plant genotyping for their delivery once they have been molecularly characterized. Other plants obtained by other means can be also genotyped as well.
Both institutions seek to reach commercial agreements with forestry, reforestation, horticultural companies, plant nurseries, companies specialized on cultivation of woody species to obtain biomass, agrarian transformation companies, ornamental companies and municipalities or local administrations interested in the maintenance of native species.
Also, this service would be of special interest for pharmaceutical companies in obtaining bioproducts in general (i.e. willow-Acetyl Salicylic Acid, yew-Taxol, Maritime Pine-Pycnogenol and other active ingredients), and chemical companies interested in obtaining resins and other derivatives.

## ADVANTAGES AND INNOVATIONS

Both groups have experience and know-how generated in both fields; obtained from the development of research in the framework of national and international projects during the last 25 years. This know-how is the base for the development of new protocols or for the optimization of existing protocols, which progressively and actively incorporate advances in micropropagation and in vitro culture, as well as characterization of genetic variability and genotyping of forest tree species.
Experience in transfer of basic information in analysis tools for the multiplication and genetic characterization of materials provided by companies and administrations.
In vitro culture and analysis of the in vitro plants are developed by experts in specialized laboratories.
Uniformity and reproducibility of plant material, guarantee of origin, traceability, homogeneity and specific purity, varietal or clonal, obtaining a "superior" product, greater sanitary control, applicable to a wide spectrum of species, better planning during the year, save space, high multiplication rate ald lower costs.