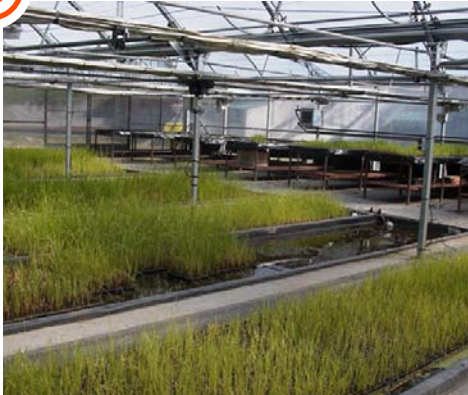




# AGROENERGY GROUP (GA-UPM)



**R&D&I on biomass production from energy crops, biomass conversion to liquid and solid biofuels, residual biomass valuation and biomass potential assessments.**

**R&D&I on low energy consuming processes for waste water treatment by means of macrophytes and microalgae.**

## THE RESEARCH GROUP

The Agroenergy Group of the Technical University of Madrid is located at the Experimental Farm of the College of Agricultural Engineering ("Ciudad Universitaria").

Its research activity started in 1980 and it was officially appointed as UPM Research Group in 2005. GA-UPM has participated in several national and international projects resulting in numerous scientific publications and dissemination activities.



Member of the European Biomass  
Association (AEBIOM):



[www.aebiom.org](http://www.aebiom.org)

## HUMAN RESOURCES

- Head of GA-UPM:
  - Prof. Jesús FERNÁNDEZ
- GA-UPM members:
  - Prof. José María DURÁN
  - Prof. M<sup>a</sup> Dolores CURT
  - Prof. Juan Pablo del MONTE
  - Prof. M<sup>a</sup> Ángeles MENDIOLA
  - Prof. Pedro L. AGUADO
  - 2 Administrative and Service Staff
  - 13 researchers
  - 1 Project manager



## RESOURCES



- Laboratory of organic and inorganic analysis
- Microalgae Lab.
- Plant Physiology Lab.
- Water Testing Lab.
- Plant tissue Culture Lab.
- Facilities for liquid biofuels production
- Solid biofuels pilot plant
- Facilities for biogas production
- Computer resources, classrooms and library
- Microalgae pilot plant.

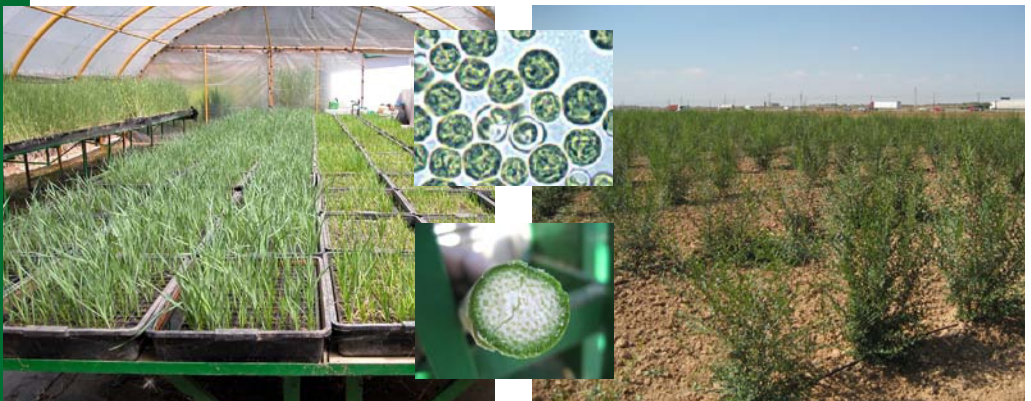
## FIELDS OF RESEARCH

**BIOENERGY:** Biomass, energy crops, biomass characterization, solid biofuels, liquid biofuels, sustainability studies, biomass potential assessments, GIS expertise, energy conversion.

**PLANT PRODUCTION:** New plant species applications, plant growth analysis, plant eco-physiology, weed science, natural resources, land restoration.

**PHYTODEPURATION :** Waste water treatment by means of helophytes and microalgae.

**MICROALGAE:** Microalgae production and use. Advanced design of photobioreactors.



## RESULTS

- 53 R&D projects of competitive public calls:
  - 21 National Projects
  - 32 International Projects
- 59 R&D projects with traded firms and public institutions:
  - 9 with Public Companies (AENA, Endesa, Canal Y II y Tragsatec)
  - 14 with large companies (Abengoa, CESPAs, Fenosa, Unesa, Philip Morris, Repsol, Sener, Urbaser y Valoriza)
  - 17 with SME
  - 14 with Public Administration Organisms
  - 3 UPM collaboration projects with Latin America
  - 2 International projects
- National and international publications in scientific journals and congresses, research studies monographs of public dissemination, educational monograph, edition of scientific books, scientific & technical books
- 11 UPM educational innovation projects
- 30 doctoral thesis
- 67 Master projects and bachelor's projects
- 18 UPM acknowledged research periods
- 15 patents



Plant Production Department:  
Botany and Plant Protection.

College of Agricultural Engineering (ETSIA).  
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