Title

Molecular and functional approaches to enhance biomass production in forest trees

Aurhors

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Abstract

Forest trees comprise a large group of angiosperm and gymnosperm species that play a crucial role in global carbon fixation, and maintenance of biodiversity. Forest trees are also of great economic importance since they provide a wide range of products of commercial interest, including wood, pulp, biomass and important secondary metabolites. A sustainable management of forest resources is needed to preserve natural forests and to meet the increasing international demands in the production of wood and other forest-derived products. New advances and developments in biotechnology may contribute to accelerate the domestication of important traits for forest productivity. Nitrogen assimilation and recycling play a key role in tree growth and biomass production and we firmly believe that knowledge on nitrogen metabolism will lead to approaches aimed at increasing forest productivity. We are interested in studying nitrogen metabolism and its regulation in maritime pine (*Pinus pinaster* Aiton), a forest tree species of great economic and ecological importance in the Mediterranean area and a relevant model for conifer genomic research in Europe. An overview of our research programme will be presented and discussed. Research supported by Spanish Ministry of Economy and Competitiveness and Junta de Andalucía (Grants BIO2012-33797, PLE2009-0016 and research group BIO-114).