

P 11 is co-led by Francisco J Ruiz Cantón (P11a) & Fernando Gallardo Alba (P11b)

P11a (UMA, Spain): Francisco J Ruiz Cantón , Dr. e-mail
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Birth date and place: February 9th, 1966. Málaga Spain

PERMANENT POSITION: Professor of Biochemistry and Molecular Biology. Dpto. Biología Molecular y Bioquímica, Universidad de Málaga, E-29071 Málaga. Spain. phone: +34 952 136661; Fax: +34 952 132000;

EDUCATION AND PROFESSIONAL EXPERIENCE

B. Sc. 1989. Biological Sciences. University of Málaga. Málaga. Spain.

Ph. D. 1993. Isolation and molecular characterization of a gene encoding glutamine synthetase from pine . University of Málaga.

Visiting researcher (post-doctoral fellowship funded by the Spanish Ministry of Education and Science). Plant GeneExpression Center, University of Berkeley-USDA. Berkeley, California. USA, 1996-1998

Postdoctoral Researcher. Plant Gene Expression Center, University of Berkeley-USDA. Berkeley, California. USA, 1998-2000

Postdoctoral Researcher. Dpto. Biología Molecular y Bioquímica. University of Málaga, Spain, 2000-2001

Postdoctoral Researcher (Ramón y Cajal Programme from MEC). Dpto. Biología Molecular y Bioquímica. University of Málaga, Spain, 2001-2006

Professor of Biochemistry and Molecular Biology at University of Málaga, Spain, since 2006

RESEARCH ACTIVITIES

26 papers in international journals, 11 books chapters, 1 patent. Supervisor of 4 PhD Thesis. Participation in 15 funded research projects (at national and international level), in 3 of them as PI.

Research areas: Molecular Biology of Nitrogen metabolism and wood formation in conifers, forest tree genomics g

List of 5 publications relevant to the proposal

- 1.** Cantón FR, Suárez MF, Cánovas FM. Molecular aspects of nitrogen mobilization and recycling in trees. *Photosynthesis Research* 83: 265–278 (2005)
- 2.** Cañas RA, de la Torre F, Cánovas FM, Cantón FR. Coordination of *PsAS1* and *PsASPG* expression controls timing of re-allocated N utilization in hypocotyls of pine seedlings. *Planta* 225:1205-19 (2007)
- 3.** Cánovas FM, Avila C, Cantón FR, Cañas R, de la Torre F. Ammonium assimilation and amino acid metabolism in conifers. *Journal of Experimental Botany* 58(9): 2307-18 (2007)
- 4.** Cañas RA, Villalobos DP, Díaz-Moreno SM, Cánovas FM, Cantón FR. Molecular and functional analyses support a role of Ornithine-d-aminotransferase in the provision of glutamate for glutamine biosynthesis during pine germination. *Plant Physiol.* 148(1): 77-88 (2008).
- 5.** Falgueras J, Lara AJ, Fernandez-Pozo N, Canton FR, Perez- Trabado G, Claros MG. SeqTrim: a high-throughput pipeline for preprocessing any type of sequence reads. *BMC Bioinformatics.* 11: 38 (2010)

P11b (UMA, Spain): **Fernando Gallardo Alba, Dr e mail** fgallardo@uma.es

Born 20th April 1964 at Málaga (Spain)

Current Position: Titular Professor. Dpt. Biología Molecular y Bioquímica, Facultad de Ciencias, Universidad de Málaga. 29071 Málaga, Spain. Tel +34-952131579; Fax +34-952132000

Education and Professional Experience:

1992 Ph.D Science, Univ. Málaga, Spain

1992-1993 Postdoctoral Researcher. Institute de Biotechnologie des Plantes, Univ Paris Sud, Orsay, France, (fellowships funded by Ministère de l'Education National et Ministère des Affaires Etrangères, France & FEBS). Two years.

1993-1995 Researcher. Dpt. Biología Molecular y Bioquímica, Univ Málaga (contract from Ministry of Education and Science, Programme Reincorporación Doctores)

1995-1998 Assistant Professor. Dpt. Biología Molecular y Bioquímica, Univ. Málaga

1996 Researcher, Dpt. Biological Sciences, Rutgers University, Newark, New Jersey (contract funded by Rutgers University). 3 months

1998 Invited Professor, Lab Androgenése et Biotech. Univ Picardie Jules Verne, Amiens, 1 month

1998-1999 Interim Professor. Dpt. Biología Molecular y Bioquímica, Universidad de Málaga

1999 – present: Titular Professor, Dpt. Biología Molecular y Bioquímica, Universidad de Málaga

1999 Visiting Associate Professor, Dpt. Biol. Sci, Rutgers Univ, Newark, New Jersey. 3 months

2000 Invited Professor, Lab Androgenése et Biotech. Univ Picardie Jules Verne, Amiens, 1 month

Research Projects:

Researcher in 15 National Projects, 3 as PI. Recent Projects:

- Role of IDH and GAD in the development of tree stems (BIO2003-04590, Spanish National

Biotechnology Program)

- Functional genomic Studies in forest trees (P05AGR-633 Andalusian Regional Goverment)

- Analysis of the regulation of nitrogen metabolism in conifers using a functional genomic approach

(BIO2006-06216, Spanish National Biotechnology Program)

- Vascular differentiation in Populus and glutamate and GABA signalling (AGL2009-11404, Ministry of Science & Technology)

Publications and list of 5 relevants to the proposal

A total of 25 papers in SCI-indexed journals, 14 book-chapters, 1 book, 3 patents

- El-Khatib R, Hamerlynck EP, Gallardo F Kirby EG (2004) Transgenic poplar characterized by ectopic expression of a pine cytosolic glutamine synthetase gene exhibits enhanced tolerance to water stress. *Tree Physiol*, 24: 729-736.
- Jing ZP, Gallardo F, Pascual MB, Sampalo R, Torres de Navarra A, Romero J, Cánovas FM (2004) Improved growth in a field trial of transgenic hybrid poplar overexpressing glutamine synthetase. *New Phytol*, 164: 137-145.
- Cánovas FM, Gallardo F, Jing ZP, Pascual MB (2006) Transgenic approaches to engineer nitrogen metabolism. In *Tree Transgenesis. Recent Developments*. Eds M Fladung and D. Ewald. Springer Verlag, Heidelberg, pp157-178.

- Pascual MB, Jing ZP, Kirby EG, Cánovas FM, Gallardo F. (2008) Response of transgenic poplar overexpressing cytosolic glutamine synthetase to phosphinothricin. *Phytochem*, 69: 382-389.

- Pascual MB, Molina-Rueda JJ, Cánovas FM, Gallardo F (2008) Spatial distribution of cytosolic NADP+- isocitrate dehydrogenase in pine embryos and seedlings. *Tree Physiol* 28:1773-1782

Additional info: Reviewer of internationals journals : *Physiologia Plantarum*, *Journal of Plant Physiology*, *Plant Physiology and Biochemistry*,
,
Plant Growth Regulation, *Plant Physiology*, *Plant Biology*, *Silvae Genetica*, *Tree Physiology*,
Tree Structure & Function.

Thesis supervised and participation in masters/doctorate Studies: Graduate Programme Molecular and Cell Biology, UMA (2000-2006), Master in Molecular and Cell Biology, UMA (2006-2010), Supervisor of 3 Ph D Thesis and 4 Ms Thesis.