

Personal data

Name Marta Alexandra Marques Alves

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Academic degrees

2003. Graduation in Chemistry -Biochemistry at the UTL-IST (Universidade Técnica de Lisboa- Instituto Superior Técnico).

Previous and current scientific and/or professional activities

2010- present. "Molecular studies on the biology of plant storage proteins". BI fellowship from ITQB (034/BI/2010).

2005 - present. "The response of higher plants to boron deficiency". PhD fellowship from FCT (SFRH/ BD/ 18273/ 2004)

2004. "EAN bean (*Phaseolus vulgaris* L.) germplasm collection: molecular characterization and biochemical evaluation". BIC fellowship from ITQB (006/BIC/2004).

2002-2003. "The effect of boron in plants" - practice training at ITQB (Instituto de Tecnologia Química e Biológica) and IST (Instituto Superior Técnico).

Area of scientific activity

Bean trypsin inhibitors characterization;
Plant responses to boron, calcium and water deficiency.

Present research interests

Molecular studies on the biology of plant storage proteins

Other skills/activities

Organisms: *Chlamydomonas reinhardtii*, *Saccharomyces cerevisiae*,
Arabidopsis thaliana,
Medicago truncatula, *Oryza sativa*, *Phaseolus vulgaris* and *Lupinus albus*.

Transcript analysis: RNA extraction, electrophoresis, microarray data analysis, PCR and qRT-PCR.

Protein analysis: Electrophoresis (SDS-PAGE, 2-DE, zymography and reverse zymography).

Metabolite analysis: ¹³C-NMR (major soluble compounds), HPLC (phenols).

Publications

Alves M, Francisco R, Martins I, Ricardo CP (2006) Analysis of *Lupinus albus* leaf apoplastic proteins in response to boron deficiency. *Plant and Soil* 279: 1-11.

Alves M, Chaves I, Carrilho D, Veloso M, Ricardo CP (2010) Detection of nine new trypsin inhibitors in the cotyledons of *Phaseolus vulgaris* seeds. *Journal of Plant Physiology* (*in press*), ref: JPLPH_50919.

Chaves I, **Alves M**, Carrilho D, Duque-Magalhães M, Ricardo CP, Regalado A (2010) Protein changes during programmed cell death in tobacco. *Biologia Plantarum* (*in press*), ref: 9118.

Communications

2009. Alves M "The role of B in higher plants" PhD program presentation at ITQB, Oeiras, Portugal.

2009. Alves M, Saibo N, Ricardo CP "The involvement of transcription factors in water deficit responses" COST dynamic Training School – COST FP0601/FA0603, Orvieto, Italy.

2007. Alves M "The Effect of Boron in Plant Growth and Development"

PhD program

presentation at ITQB, Oeiras, Portugal.

2005. Alves M, Francisco R, Martins I, Ricardo CP "Proteomics of the plant response to boron

deficiency". Third Annual Meeting of ProCura, Cascais, Portugal.