



XXXVI

Jornadas  
Portuguesas de  
**Genética**

30 DE MAIO A 1 DE JUNHO 2011



# Livro de Resumos

Departamento de Ciências da Vida  
Faculdade de Ciências e Tecnologia  
Universidade de Coimbra

• U



C



## **HydHf, a hydrophobin gene from the saprophytic fungus *Hypholoma fasciculare***

**Daniela Batista<sup>1\*</sup>, Paula Baptista<sup>2</sup>, Rui M. Tavares<sup>1</sup>, Teresa Lino-Neto<sup>1</sup>**

<sup>1</sup> Centre for Biodiversity Functional and Integrative Genomics (BioFIG), Plant Functional Biology Centre, University of Minho, *Campus de Gualtar*, 4710-057 Braga, Portugal.

<sup>2</sup> CIMO / School of Agriculture, Polytechnic Institute of Bragança, *Campus de Santa Apolónia*, Apartado 1172, 5301-854 Bragança, Portugal.

[danimbatista@bio.uminho.pt](mailto:danimbatista@bio.uminho.pt)

European chestnut tree (*Castanea sativa* Mill.) is an economical important culture due to the production of high quality wood and fruit. Portugal is the second largest producer of chestnuts, for which the Northern region contributes for more than 85% of Portuguese production. A saprotrophic fungus was recently isolated from Trás-os-Montes chestnut orchards that interferes with chestnut root mycorrhization and displays strong antagonist activity against soil-borne fungi from orchard. To understand the high ability of this fungus to interact with chestnut tree root system, the involvement of specific proteins in the adhesion of *H. fasciculare* will be studied. Hydrophobins are small hydrophobic proteins, which confer hydrophobicity to fungal surfaces in contact with air and mediate attachment of hyphae to hydrophobic surfaces, such as the root host surface. Predicting a potential role of hydrophobins on high adhesion capacity of *H. fasciculare* to *C. sativa* roots, degenerated primers were designed for amplification of hydrophobin genes in *H. fasciculare* genome. A genomic fragment of 176 pb was obtained, sequenced and used for obtaining the complete sequence of the corresponding transcript. The properties of the predicted protein will be presented, as well as the phylogenetic relations with other fungal hydrophobin proteins. Work supported by FCT (PTDC/AGR-AAM/099556/2008).