



## Playing with chromatin remodelling in grapevine- *Plasmopara viticola* interactions

### Place of work:

Grapevine Pathogen Systems Lab, C2 building, 4<sup>th</sup> floor, lab 37, BioISI at Faculdade de Ciências da Universidade de Lisboa

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Grapevine (*Vitis vinifera* L.) has high economic impact worldwide with plantation areas over 7.4 Mha (OIV data, 2021) and it also represents one of the most polluting agronomic industries with many tons of pesticides being used on each growing season. Current disease management practices for grapevine downy mildew rely on the intensive use of pesticides. However, directives from the European Union demand more sustainable agriculture practices, with low pesticide input. In the last years, the chromatin remodelling in plant-pathogen interactions has been recognized to have a role in plant defense. To understand the implication of chromatin condensation/relaxation processes in grapevine defense is of extreme relevance to diminish the application of pesticides.

The aim of this project is to characterize the overall histone acetylation levels in grapevine leaves during the interaction with the downy mildew pathogen. We will produce and purify recombinant histone variants and, by using an affinity purification strategy, we will identify potential partners of the histones during this plant- pathogen interaction. These candidates will then be assessed in plant models to verify their role in grapevine defense.

Student may apply to a BioISI Junior fellowship (6 months).