Bibliography

Denance N, Legendre B, Briand M, Olivier V, de Boisseson C, Poliakoff F & Jacques M-A. 2017. Several subspecies and sequence types are associated with the emergence of *Xylella fastidiosa* in natural settings in France. Plant Pathology doi: 10.1111/ppa.12695.

Harper SJ, Ward LI, & Clover GRG, 2010. Development of LAMP and Real-Time PCR methods for the rapid detection of *Xylella fastidiosa* for quarantine and field applications. Phytopathology 100:1282–1288.

Yuan X., Morano L., Bromley R., Spring-Pearson S., Stouthamer R., & Nunney, L. (2010). Multilocus sequence typing of *Xylella fastidiosa* causing Pierce's disease and oleander leaf scorch in the United States. Phytopathology 100:601-611.

Xylella fastidiosa in Costa Rica: understanding of the pathogen and containment through collaborative approach

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Abstract: *X. fastidiosa* is endemic in Costa Rica. Since the 1990´s, the appearance of a milder version of CLS was reported as "crespera" in Costa Rica. It was confirmed that the disease was due to *X. fastidiosa* infection. Since then, the bacterium has been detected and isolated from more than 20 different economic important crops and ornamentals. Although the bacterium has great potential for disease and it is widespread throughout the country, the symptoms related to infected plants are usually mild or asymptomatic. In 2015, the European Union closed the importation of ornamentals from Costa Rica, alleging that *X. fastidiosa* was introduced in this matter into Europe, causing great social and economic impact in this activity in Costa Rica. Recently, genomic evidence supports the relatedness of the CoDiRo strains to *X. fastidiosa* ST53 isolates from Costa Rica. Our participation as part of the PonTE and XFactors research efforts are focused on broadening the genetic and phenotipic information related to our circulating strains, this will contribute to dilucidate some specific traits of the *X. fastidiosa* strains found in Italy as in other European countries as well. We are also working on alternative containment strategies for the bacteria. Finally, we have established research initiatives related to endusers in collaboration with phytosanitary authorities to determine the host susceptibility to *X. fastidiosa* of economic important plants such as *Phoenix roebelenii*.

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Bibliography

Montero-Astúa et al., 2008. J. microbiol. 46(5):482-90. Giampertuzzi et al., 2017. Phytopathology. doi: 10.1094/PHYTO-12-16-0420-R

Session 2 - *Xylella fastidiosa*: biology and genetics

Calcium has multiple roles during the interactions between *Xylella fastidiosa* and host plants

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Abstract: Inside the plant host *X. fastidiosa* is restricted to live inside xylem vessels, the vascular system where mineral elements are transported from the roots to the rest of the plant. Previous research by our group has demonstrated that calcium (Ca) increases movement and biofilm formation of *X. fastidiosa* by manipulating protein secondary structure and regulating gene expression. Interestingly, plants infected with *X. fastidiosa* also show accumulation of Ca in their leaves and xylem