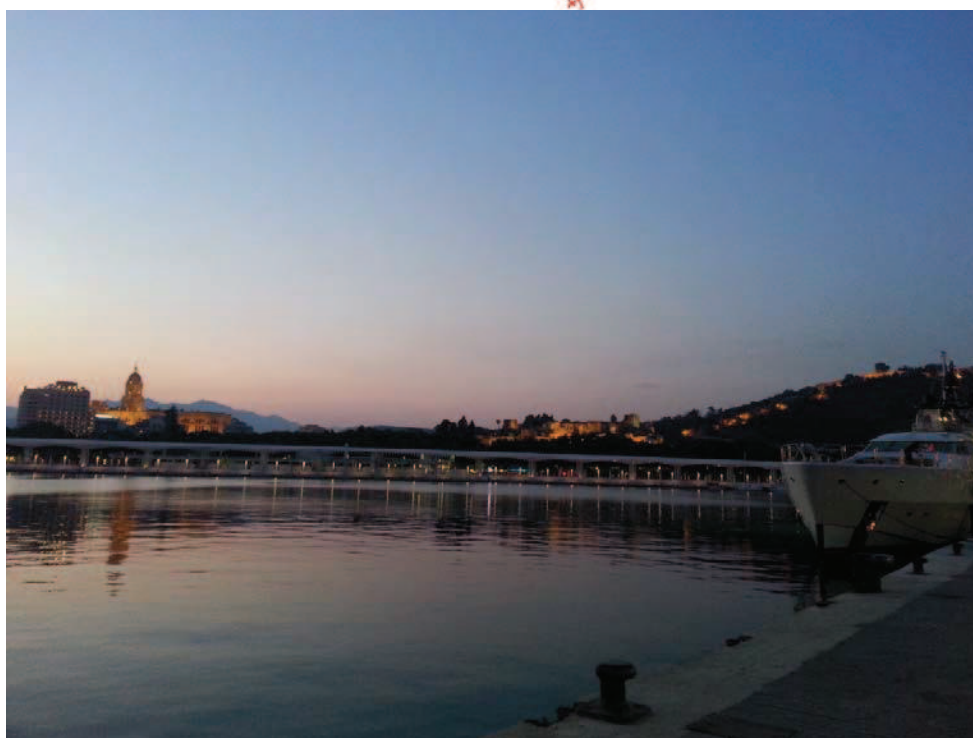


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P17. Far beyond HopQ1 in the interaction between *Nicotiana* spp. and *Pseudomonas syringae sensu lato*

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HopQ1 is an effector secreted by some strains of *P. syringae sensu lato* through the Type Three Secretion System, and which is suggested to be involved in host range determination (Ferrante et al., 2009). To definitely unveil its role in pathogenesis, data from increasing *P. syringae sensu lato* genomes is pivotal, as well as to have several model plants, whose genomic data are accessible or easily achievable, and amenable to molecular techniques (i.e. transformation, targeted mutagenesis and gene-silencing). Besides *Arabidopsis thaliana*, the most popular model plants for many *P. syringae* bacteria also included *Nicotiana benthamiana*, *N. tabacum* and Tomato. The development of similar model pathosystems is particularly useful to speed up studies on *P. syringae* diseases of woody plants, which are often less prone than herbaceous species to genetic manipulation and *in vitro* culture. In this work *N. langsdorffii* was used for the first time as a model species, challenged by *P. savastanoi* pv. *nerii* Psn23, a strain missing the gene coding for the effector HopQ1. This feature was here demonstrated to be mainly associated with pv. *nerii* strains rather than with those from *savastanoi* or *fraxini* pvs. Typical hyperplastic symptoms were induced by Psn23 wild type on *N. langsdorffii*, on which the bacterium multiplied comparably to its host *Nerium oleander*. Similarly, when overexpressed by Psn23, HopQ1 was demonstrated to be a virulence factor in both *N. oleander* and *N. langsdorffii*. Conversely on *N. glauca*, which has an opposite hormonal profile compared to *N. langsdorffii* (Fuoco et al., 2013), no symptoms and bacterial growth were ever observed after inoculation of both Psn23 wild type or overexpressing *hopQ1*. When *N. langsdorffii* hormone profile was altered by stable expression of GR and *rolC* genes (Giannarelli et al. 2010), its master role in the fate of HopQ1 interaction with Psn23 was confirmed.

Key Words: HopQ1, T3SS, *N. langsdorffii*, plant-host interactions, hormone profile, *P. syringae*.

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