Virulence and adaptation of *Pseudomonas savastanoi* to woody hosts

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Pseudomonas savastanoi pv. savastanoi (Psv) is a tumour-inducing pathogen of woody hosts, causing olive (*Olea europaea*) knot disease. During epiphytic colonization, Psv can multiply on the surface of healthy olive leaves, and these large epiphytic populations can spread by rain, wind, insects and cultural practices, entering the plant through wounds. During the last few years, our work focused on the molecular mechanisms governing the transition from the epiphytic to the endopathogenic lifestyle in Psv. Besides confirmation of several virulence factors previously associated to *P. savastanoi* infections, such as the phytohormones indole-3-acetic acid and cytokinins and the type-III secretion system, we have identified several novel virulence genes and metabolic pathways required for full fitness of Psv in olive knots. Here, we will present our recent results concerning i) the characterization of a genomic region of the Psv chromosome that is absent in all sequenced *P. syringae* and *P. savastanoi* strains infecting herbaceous plants (non-lignified), but it is shared with other pathovars infecting woody hosts (lignified) and, ii) the role in virulence of two enzymes involved in the metabolism of cyclic diguanylate-GMP (c-di-GMP), which are also encoded by other *Pseudomonas* spp.