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**ORIGIN AND DIVERSITY OF THE SOURCES OF RESISTANCE TO PPV IN
APRICOT: IMPLICATIONS AND USE IN MARKER-ASSISTED RESISTANCE TO
SHARKA**

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Worldwide, sharka disease significantly impacts the economics and productivity of *Prunus* fruit producing countries affecting a wide range of stakeholders from breeders to nurserymen and fruit producers. Natural resistance sources have been identified in few cultivated and wild species of *Prunoideae*, mostly in apricot (*Prunus armeniaca*). Indeed, several apricot cultivars carrying resistance to the *plum pox virus* (PPV), the agent of sharka disease, were described, namely 'Goldrich', 'Harcot', 'SEO', 'Lito', 'Harlayne', 'Stella', 'OrangeRed', 'NJA2' (Martinez-Gomez et al., 2000). In the last 20 years, breeders have used these donors of resistance to introduce PPV resistance into commercial cultivars. However, they likely share the same genomic region on the upper part of linkage group 1 in which a major QTL of resistance to PPV, has been identified (Marandel et al., 2009; Dondini et al., 2010), thus, underpinning future breeding germplasm on a single source of resistance. In the course of the FP7 Small Collaborative **SharCo** project (#204429, 2008-2012), fine-mapping of the resistance was performed (Soriano et al., 2012), F₁, F₂ and BC₁ populations originating from different genitors have been tested in different environments (Czech Republic, Italy, France) in order to check for stability and durability of the resistance controlled by this major QTL. This work was completed, in the frame of the FP7 Marie Curie **STONE** project (#246795, 2011-2014), by a search of the geographical origin and a world-wide genetic diversity analysis of those sources of resistance. These data are currently being incorporated into a whole genome sequence genotyping and association genetics study to explore the broad diverse apricot germplasm for identification of candidate gene(s) for Sharka resistance, as well as for other important agronomical traits in *Prunus* (Project: ANR **ABRIWG** 2012-2014). We will present here a summary of the specific results and deliverables to date and their implication for Marker Assisted Breeding of a durable and stable Resistance to sharka.