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Seminars 2014



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Friday, 21 March - 12:00 noon

ICGEB Seminar Room, W Building



Andrea CAMPISANO

Fondazione Edmund Mach,
Trento, ITALY

***“Interkingdom transfer
of the human pathogen
Propionibacterium acnes
to the plant endosphere,
and its adaptation”***

Host: V. Venturi

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Humans, like most organisms, have established a long-lasting cohabitation with a variety of microbes, including pathogens and gut-associated bacteria. Studies investigating such associations documented numerous cases of bacterial host switches (usually from domestic animals to humans). Much less is known about the exchange of microbial symbionts between humans and plants. We report a surprising and, to our knowledge, unique example of horizontal interkingdom transfer of a human opportunistic pathogen (*Propionibacterium acnes*) to a crop plant (the domesticated grapevine *Vitis vinifera* L.). *P. acnes* was localised in the bark, in xylem fibers, and, more interestingly, inside pith tissues, by fluorescent in-situ hybridization (FISH). Phylogenetic and population genetic analyses indicate that the establishment of the grapevine-associated *P. acnes* as obligate endophyte is compatible with a recent transfer event, likely during the Neolithic, when grapevine was domesticated.

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