Poster presentation /Phytopathology

'*Candidatus* Phytoplasma ulmi' affecting *Ulmus laevis* in Germany

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Phytoplasmas are well-less bacteria and obligate parasites infecting economic important crops and trees worldwide. Elm yellows phytoplasma (EY) belongs to the ribosomal group 16SrV (elm yellows group) subgroup A and is assigned as '*Candidatus* Phytoplasma ulmi'. It is known to cause elm phloem necrosis, leaf yellowing, stunting, witches broom and decline in various elm species, and is listed as an EPPO A1 quarantine pest. Severe epidemics of EY have been observed in North American elm stands. Meanwhile, EY has been reported recently to infect *Ulmus* spp. in Europe too, particularly in Italy, France, Czech Republic and Serbia. This study aims to determine the prevalence of EY in *U. laevis* in Brandenburg and Berlin (Germany).

In 2013 leaf samples from European white elm (*U. laevis*) trees were harvested at three different stands in Brandenburg and Berlin in Germany: 12 trees from Spreewald, 4 trees in the park of castle Caputh and 42 samples from Berlin. Samples were taken from trees exhibiting and not exhibiting chloroses. DNA isolation was performed by a CTAB protocol, followed by direct and nested PCR on partial 16S rRNA using universal diagnostic primers followed by sequencing. 16S rRNA sequences were aligned to EY isolate of 16SrV-A subgroup. EY was detected in 30 out of 58 tested trees by PCR. Sequence analysis through comparison to an EY reference strain allowed the assignment to 16SrV-A and revealed diversity of the strains. This is the first report of the occurrence of '*Ca.* P. ulmi' infecting *U. laevis* trees in Germany.