

## First report of *Erysiphe quercicola* S. Takam. & U. Braun in *Quercus robur* Linnaeus in Brazil

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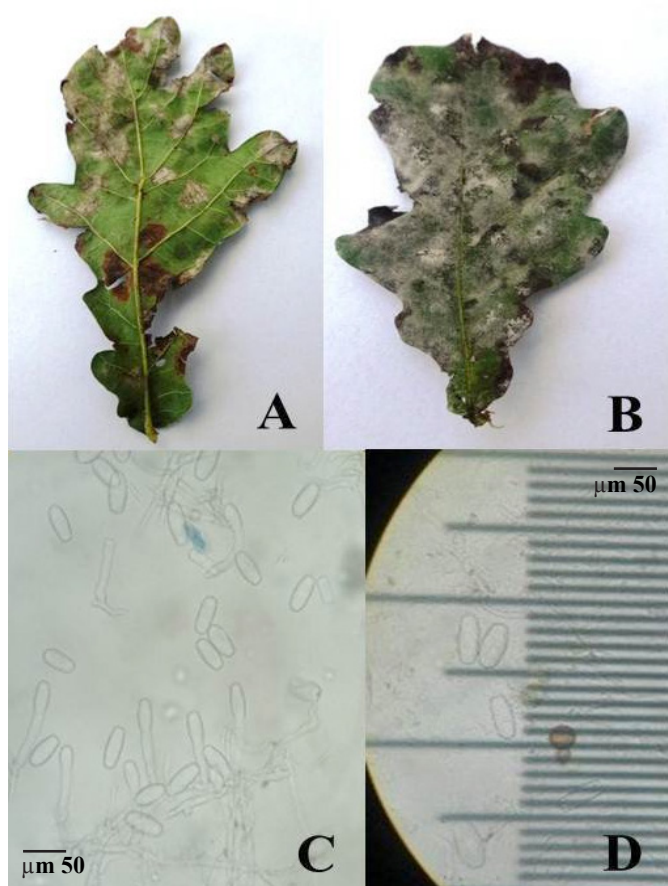
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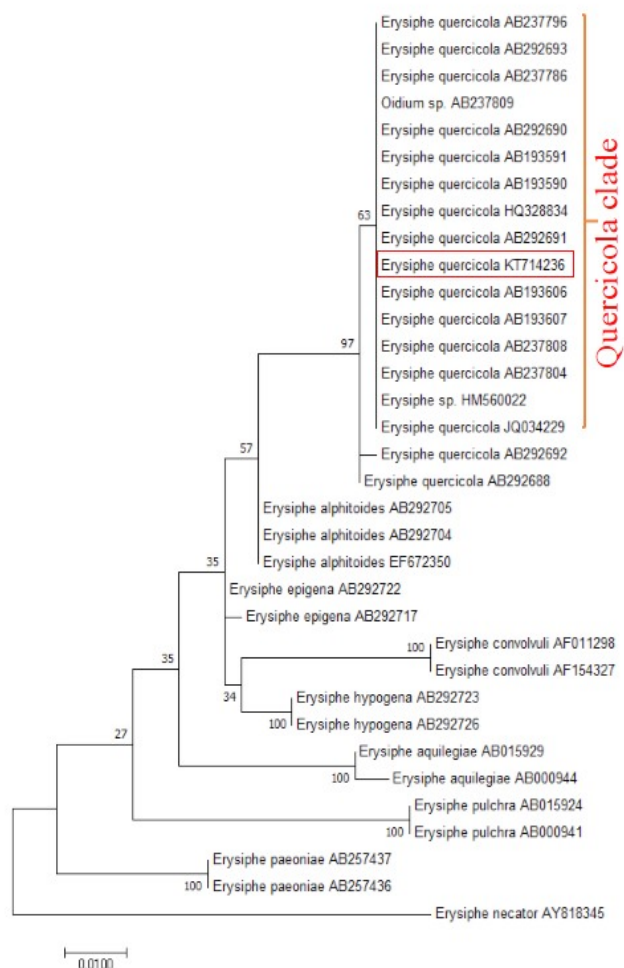
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Powdery mildew was observed on *Quercus robur* Linnaeus plants in the Irati town (State of Paraná, Brazil), in the spring of 2013 and 2016. Neither ascomata nor the formation of cleistothecia was found on the leaves. The distribution of mycelium on the leaves was amphigenetic, epiphytic, thin, white, continuous, septated, and without lobed appressoria. The mycelial growth, conidiophores, and conidia from the leaves were collected for assembly of microscope slides. The conidiophores (Figure 1-C) that were produced had a

cylindrical shape, with a basal cell line, followed by one or two cells before the conidium. The conidium was unbranched, and the hyphae were not dilated at the point where the conidiophore emerges — measuring 50–70 µm long and 10–15 µm wide. The conidium was individually formed and was hyaline and ellipsoidal-cylindrical, measuring 30–40 µm in length and 10–15 µm in width (Figure 1-C-D).



**Figure 1.** *Erysiphe quercicola* in *Quercus robur*: A) Undersurface of the symptomatic *Quercus robur* leaf; B) Top surface of the *Quercus robur* leaf colonized by *Erysiphe quercicola*; C) Conidium and conidiophore; and D) Conidium.



**Figure 2.** Phylogenetic tree based on the ITS-rDNA sequences of *Erysiphe* sp. isolates using the neighbor-joining method along with Bootstrap values, with *Erysiphe necator* as the outgroup

The germination of conidia were catenulate. Microconidiophores and microconidia were absent, and a single unbranched germination tube had formed, originating from the base of the germinated conidium. DNA was extracted from conidia, conidiophores, and mycelium and used to amplify the ITS (ITS1-5.8s-ITS2) region using the ITS1 and ITS4 primers (2) and its sequence (600 nt) was deposited under Accession No. KT714236 in the GenBank. The pathogen isolated from *Quercus robur* plants was found to belong to the species *Erysiphe quercicola* S. Takam. & U. Braun and to the Quercicola

clade (Figure 2). Oidium belongs to class Ascomycetes and family Erysiphales. The pathogen under study has already been described in Brazil in the species *Delonix regia* (Hook) (1). Therefore, this is the first report of *E. quercicola* on *Q. robur* in Brazil.

#### REFERÊNCIAS

1. Dallagnol et al., First report of powdery mildew on flamboyant Tree Caused by *E. quercicola* in Brazil. Plant Disiese, 96, 4, p.589, 2012