

10th International Conference on

AGRICULTURE & HORTICULTURE

October 02-04, 2017 London, UK

Biscogniauxia rosacearum new fungal pathogen of rosaceous trees

Antonia Carlucci, Francesco Lops and Maria Luisa Raimondo
Universita' degli Studi di Foggia SAFE, Italy

Statement of the Problem: The genus *Biscogniauxia* is paraphyletic to Xylariaceae and includes at least 52 species to date that are mainly pathogens of dicotyledonous angiosperm trees. Most of these are forest trees, such as *Acacia*, *Acer*, *Alnus*, *Eucalyptus*, *Fraxinus*, *Populus*, *Quercus* and other species of minor importance. *Biscogniauxia* species have been reported as endophytes or secondary invaders that attack only stressed forest plants. During a survey in rosaceous orchards in southern Italy, several charcoal cankers were observed and stroma samples were collected.

Aim: The purposes of this study are to characterize a collection of *Biscogniauxia* isolates from rosaceous hosts and to ascertain their virulence on rosaceous hosts by pathogenicity tests.

Methodology & Theoretical Orientation: By molecular tools the ITS region and the β -tubulin and actin gene were amplified and sequencing to perform the phylogenetic analyses. A detailed morphological study was also carried out. Four isolates of *B. rosacearum* were used in the pathogenicity tests performed on wood stems of about 15–20-year-old pear, plum and quince trees in open fields in orchards.

Findings: Combining morphological and molecular data, a new species of *Biscogniauxia* was found and described as *B. rosacearum*. This new species was isolated for the first time from rosaceous hosts in Apulia. Pathogenicity tests showed that it causes symptoms on stems when artificially inoculated and produces stromata on the bark surface.

Conclusion & Significance: The phylogenetic reconstruction based on ITS and TUB/ACT gene sequences has allowed us to distinguish a new species within the *Biscogniauxia* genus. The presence of charcoal stromata from fruit hosts such as quince, plum and pear is very uncommon. In any case, on the basis of pathogenicity tests, it was possible to assess the ability of *B. rosacearum* isolates to infect quince, plum and pear stems.



Biography

Antonia Carlucci is a Researcher in the Department of Sciences of Agriculture, Food and Environment in Foggia, Italy. She is also head of plant pathology and diagnosis laboratory for quarantine fungal and bacterial pathogens in University of Foggia. Dr. Carlucci received her PhD in Biotechnology of agricultural and food products from University of Bari, Italy. She is expert of morphological and molecular characterization of fungi by phylogenetic studies. She has been involved in many research projects related to Plant Pathology and described ten novel fungal species by molecular approaches. Dr. Carlucci has been interesting to research and study new control means regarding the solarization practice, use of biostimulants, resistance inducers, fungal antagonists and biocides substances.

antonia.carlucci@unifg.it