

## **ABSTRACT**

The aim of this study was to determine the species boundaries within the *Aspergillus viridinutans* species complex. The species belonging to this complex are predominantly soil-inhabiting organisms that are increasingly reported as opportunistic human and animal pathogens. A total number of 98 isolates from various substrates and countries was subjected to morphological, physiological and molecular analysis (calmodulin,  $\beta$ -tubulin, actin and RNA polymerase II subunit 2 gene) and mating experiments were provided on different media and temperatures. Some other heterothallic species from section *Fumigati* with unknown sexual state were analysed using similar method as well.

**Key words:** *Aspergillus viridinutans*, *Aspergillus turcosus*, phylogenetic analysis, mating-type genes, anamorph, teleomorph, mating experiments, MAT1-1, MAT1-2