



# III INTERNATIONAL SYMPOSIUM ON POSTHARVEST PATHOLOGY

*Using science to increase food availability*

## *Programme & Abstracts*

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## RNA-SEQ ANALYSIS OF UNRIPE AND RIPE STRAWBERRY FRUITS INTERACTING WITH *BOTRYTIS CINEREA*

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Grey mould caused by *Botrytis cinerea* is a major disease of strawberry, causing huge fruit losses worldwide. This fungal pathogen can infect fruits both at unripe or ripe stages, but the disease symptoms develop only on red ripe fruits, mostly during the postharvest storage phase, since, on white unripe fruits, *B. cinerea* stops its growth early after infection and becomes quiescent until the fruit ripen. To investigate the molecular bases of the low susceptibility of unripe fruit stages, RNA-seq analysis was performed on white and red strawberry fruits after 24 h infection with *B. cinerea*. The fruits of diploid woodland strawberry (*Fragaria vesca*) were used instead of the octoploid *Fragaria x ananassa*, because of the availability of genome sequence. RNA-seq analysis showed that a total of 712 genes were significantly regulated in the white and red non-inoculated fruits during ripening, whereas 54 and 41 genes resulted differently expressed in white and red infected fruits, with respect to their mock-inoculated counterparts. These genes were classified according to their annotated functional role and their possible involvement in strawberry fruit response to *B. cinerea* is discussed.

