

The electronic form of this issue, available as of April 11, 2012, at www.plantphysiol.org, is considered the journal of record.

On the Cover: Plant pathogenic fungi, such as the grey mold *Botrytis cinerea*, have a very broad host range and cause enormous economic damage in pre- and postharvest crop losses worldwide. In accordance with its necrotrophic life style, *B. cinerea* initially kills host plant cells by a large repertoire of toxins, cell wall-degrading enzymes, and reactive oxygen species and subsequently colonizes the dead tissue to make nutrients accessible for fungal growth. Completion of its life cycle is mainly achieved by producing conidia (asexual spores) that are dispersed in the air. Arabidopsis (*Arabidopsis thaliana*) ecotype Columbia-0 plants are generally resistant towards infection with *B. cinerea* isolate 2100. In contrast, Arabidopsis mutants defective in the gene *WRKY33* encoding a WRKY-type transcription factor are highly susceptible to this fungal pathogen. The image shows a micrograph of an infected Arabidopsis *wrky33* mutant leaf 64 h post inoculation with *B. cinerea* 2100 spores. Fungal hyphae are growing outward from an area of macerated host cells into a region of dying cells made visible by trypan blue, which also darkly stains the vasculature found within this leaf area. Photo credit: Rainer Birkenbihl.

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Peter V. Minorsky

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^[C] Some figures in this article are displayed in color online but in black and white in the print edition.

^[W] Indicates Web-only data.

^[OA] Open Access articles can be viewed online without a subscription.