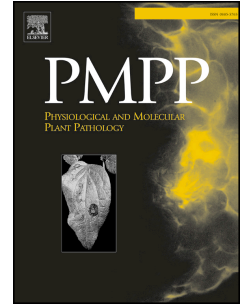


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Bcpks12 gene inactivation substantiates biological functions of sclerotium melanization in *Botrytis cinerea*

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1 ***Bcpks12* gene inactivation substantiates biological functions of sclerotium**
2 **melanization in *Botrytis cinerea***

3
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11
12 **Abstract:**

13 The sclerotium is a highly melanized dormant structure that plays an important role
14 in the survival of many types of fungi. In *Botrytis cinerea*, the polyketide synthase
15 gene, *Bcpks12*, was exclusively required for the melanization of sclerotia that are
16 specifically expressed during sclerotial development. The albino sclerotia of
17 $\Delta bcpks12$ mutants produced in this study displayed hypersensitivity to external
18 stressors, including extreme temperatures, oxidative chemicals, and desiccation.
19 During the sclerotial development process, the initial sclerotia of the wild-type

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