

Fungal secondary metabolites - strategies to activate silent gene clusters.

Brakhage AA, Schroeckh V (2011) Fungal secondary metabolites - strategies to activate silent gene clusters. *Fungal Genet Biol* 48(1), 15-22.

[Details](#)



Abstract

Filamentous fungi produce a multitude of low molecular weight bioactive compounds. The increasing number of fungal genome sequences impressively demonstrated that their biosynthetic potential is far from being exploited. In fungi, the genes required for the biosynthesis of a secondary metabolite are clustered. Many of these bioinformatically newly discovered secondary metabolism gene clusters are silent under standard laboratory conditions. Consequently, no product can be found. This review summarizes the current strategies that have been successfully applied during the last years to activate these silent gene clusters in filamentous fungi, especially in the genus *Aspergillus*. The techniques take advantage of genome mining, vary from the simple search for compounds with bioinformatically predicted physicochemical properties up to methods that exploit a probable interaction of microorganisms. Until now, the majority of successful approaches have been based on molecular biology like the generation of gene

Involved units

[Molecular and Applied Microbiology Axel Brakhage](#) [Read more](#)

Leibniz-HKI-Authors



Axel A. Brakhage

[Details](#)



Volker Schroeckh

[Details](#)

Identifier

doi: 10.1016/j.fgb.2010.04.004

PMID: 20433937

