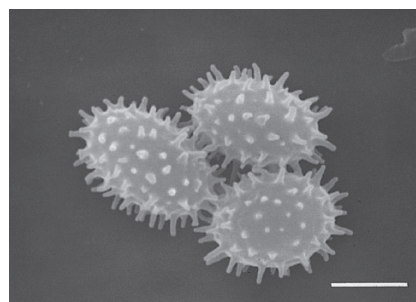


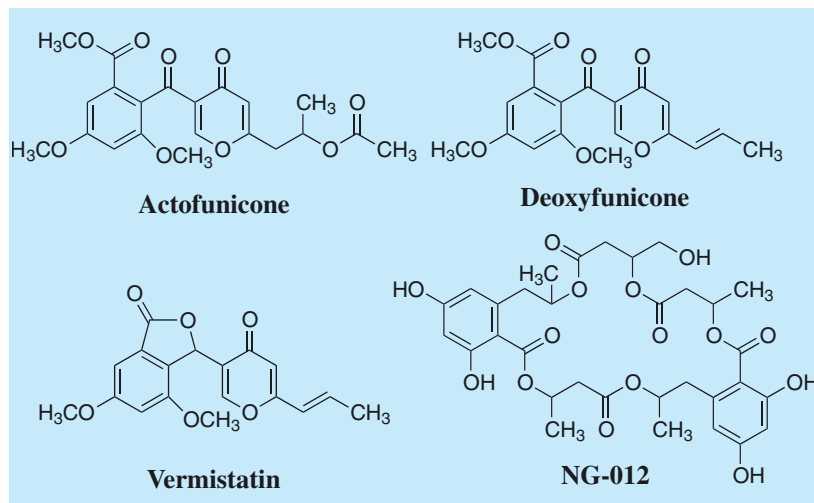
Actofunicone

1. Discovery, producing organism and structure¹⁾

Actofunicone was isolated from the culture broth of the fungal strain *Talaromyces flavus* FKI-0076 and found to be a potentiator of miconazole anti-*Candida albicans* activity. In addition, the structurally related compounds, deoxyfunicone²⁾, vermistatin³⁾ and NG-012⁴⁾ were isolated.



Talaromyces flavus FKI-0076
Bar: 2 μm



2. Physical data (Actofunicone)¹⁾

Pale yellow oil. $\text{C}_{21}\text{H}_{22}\text{O}_9$; mol wt 418.13. Sol. in MeOH, CHCl_3 , acetone, EtOH, EtOAc. Insol. in H_2O , hexane.

3. Biological activity¹⁾

The IC_{50} values of miconazole against growth of *C. albicans* in the absence (control) or presence of various compounds were measured using a microplate dilution assay. These compounds potentiated the anti-*C. albicans* activity of miconazole, decreasing the IC_{50} value of miconazole from 19 μM to 1.6~3.7 μM in the presence of the funicones.

Addition	IC_{50} of miconazole (μM)	Ratio (control/+ drug)
No (control)	19.2	1.0
+ Actofunicone (50 μM)	3.7	5.2
+ Deoxyfunicone (50 μM)	1.6	11.8
+ Vermistatin (50 μM)	2.1	9.1
+ NG-012 (50 μM)	2.5	7.7

4. References

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