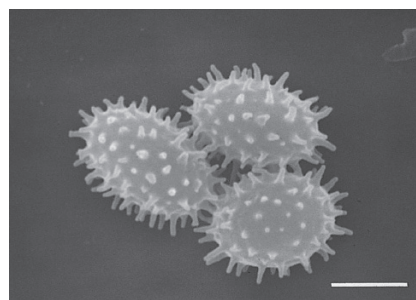


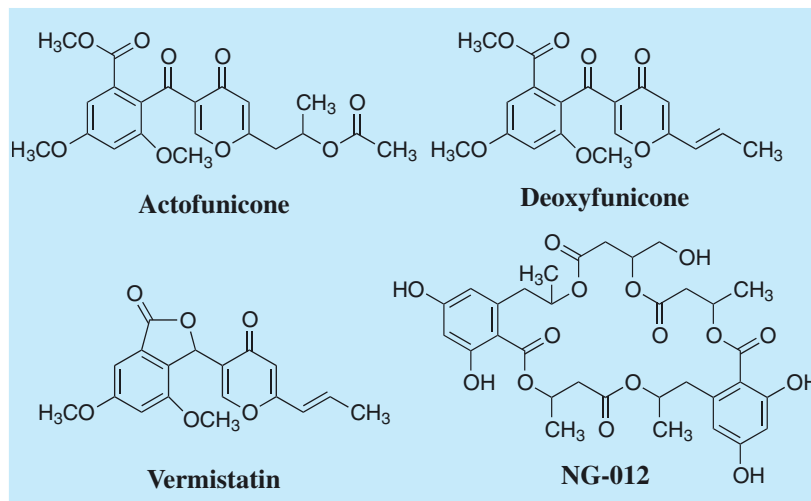
# Actofunicone

## 1. Discovery, producing organism and structure<sup>1)</sup>

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, deoxyfunicone<sup>2)</sup>, vermistatin<sup>3)</sup> and NG-012<sup>4)</sup> were isolated.



*Talaromyces flavus* FKI-0076  
Bar: 2  $\mu\text{m}$



## 2. Physical data (Actofunicone)<sup>1)</sup>

Pale yellow oil.  $\text{C}_{21}\text{H}_{22}\text{O}_9$ ; mol wt 418.13. Sol. in MeOH,  $\text{CHCl}_3$ , acetone, EtOH, EtOAc. Insol. in  $\text{H}_2\text{O}$ , hexane.

## 3. Biological activity<sup>1)</sup>

The  $\text{IC}_{50}$  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  $\text{IC}_{50}$  value of miconazole from 19  $\mu\text{M}$  to 1.6~3.7  $\mu\text{M}$  in the presence of the funicones.

Addition	$\text{IC}_{50}$ of miconazole ( $\mu\text{M}$ )	Ratio (control/+ drug)
No (control)	19.2	1.0
+ Actofunicone (50 $\mu\text{M}$ )	3.7	5.2
+ Deoxyfunicone (50 $\mu\text{M}$ )	1.6	11.8
+ Vermistatin (50 $\mu\text{M}$ )	2.1	9.1
+ NG-012 (50 $\mu\text{M}$ )	2.5	7.7

## 4. References

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- J. Fuska *et al.*, *J. Antibiot.* **39**, 1605-1607 (1986)
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