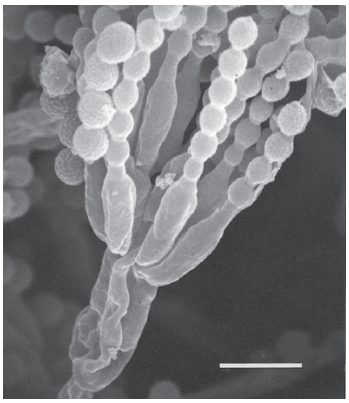
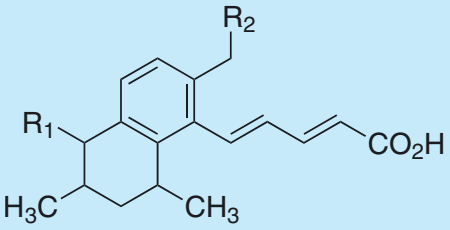
Arohynapene

1. Discovery, producing organism and structures[1-3)]

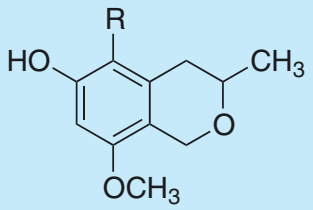
Arohynapenes were isolated from the culture broth of the fungal strain *Penicillium* sp. FO-2295 and identified as anticoccidial agents. Compound C was previously reported as a new metabolite from a hybrid strain derived from *Penicillium citreo-viride* by Lai *et al*.[3)]



Penicillium sp. FO-2295
Bar: 5 μm



Arohynapene A R_1 = OH, R_2 = H
B R_1 = H, R_2 = OH



Compound C R = CH_3
Arohynapene D R = H

2. Physical data

Yellow powder. $C_{18}H_{22}O_3$; mol wt 286.16. Sol. in MeOH, $CHCl_3$, EtOH, EtOAc. Insol. in H_2O.

3. Biological activity[1,2)]

Anticoccidial activity was evaluated by an *in vitro* assay using BHK-21 cells as a host and monensin-resistant *Eimeria tenella* as a parasitic protozoan.

Compound	Minimum effective concentration (μM)		Specifidity (C/A)
	Anticoccidial activity (A)*	Cytotoxicity (C)**	
Arohynapene A	35	140	4.0
Arohynapene B	7.0	140	20
Compound C	67	190	3.0
Arohynapene D	0.51	1.0	2.0

* No mature shizonts were observed in cells at the indicated drug concentration or higher.
** No BHK-21 cells were observed at the indicated drug concentration or higher.

4. References

1. [532] R. Masuma *et al*., *J. Antibiot*. **47**, 46-53 (1994)
2. [565] N. Tabata *et al*., *J. Antibiot*. **48**, 83-84 (1995)
3. S. Lai *et al*., *Chem Lett*. 589-592 (1990)