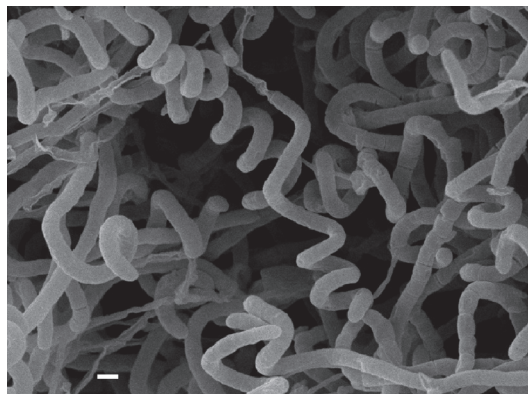


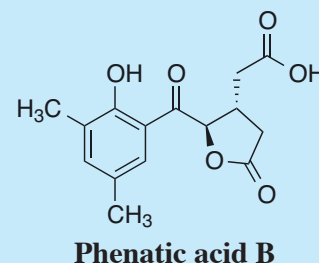
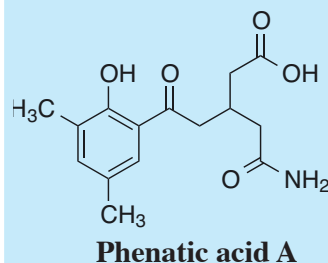
Phenatic acid

1. Discovery, producing organism and structures¹⁾

Phenatic acids were isolated from the culture broth of the actinomycete strain K03-0132 as potentiators of antifungal miconazole activity. Total synthesis of phenatic acid B has been reported by Fernandes's group²⁾.



Streptomyces sp. K03-0132



2. Physical data (Phenatic acid A)

White needle. C₁₅H₁₉NO₅; mol wt 293.32. Sol. in DMSO, MeOH, CHCl₃. Insol. in H₂O, hexane.

3. Biological activity¹⁾

Potential of antifungal miconazole activity

Effect of phenatic acids on miconazole activity against *Candida albicans* was investigated by a paper disk method. Phenatic acids A and B enhanced miconazole activity at higher than 50 µg/disk and 25 µg/disk, respectively.

Compound	Concentration	Inhibition zone (mm)	
	µg/disk	Plate A	Plate B
Phenatic acid A	10	–	–
	25	–	–
	50	–	12
Phenatic acid B	10	–	–
	25	–	11
	50	–	14

Paper disks (8 mm i.d.) containing three concentrations of a compound were put on Plate A (*C. albicans* in GY agar) and Plate B (*C. albicans* in GY agar + 0.06 µM miconazole), and incubated at 27°C. After 24 hours, the diameters of inhibition zones were measured

4. References

- [884] T. Fukuda *et al.*, *J. Antibiot.* **58**, 252-259 (2005)
- R. A. Fernandes *et al.*, *J. Org. Chem.* **74**, 8826-8829 (2009)