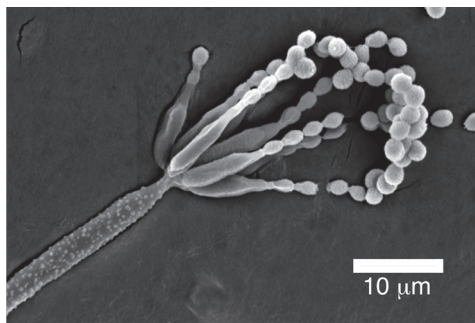


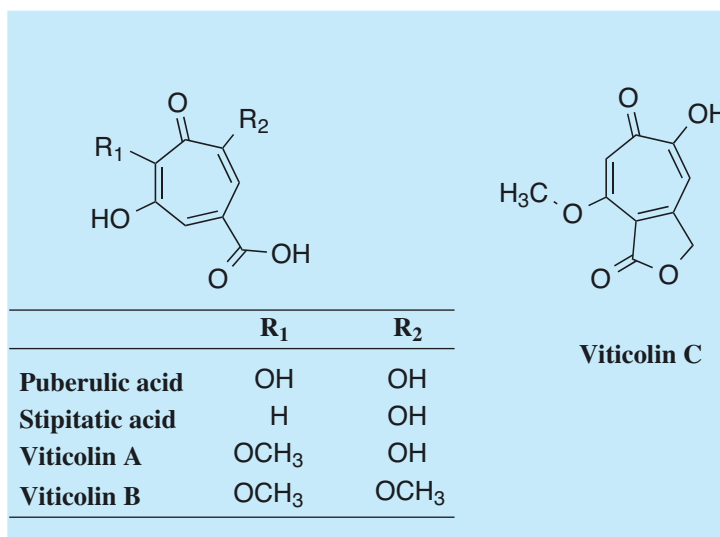
Viticolin

1. Discovery, producing organism and structure¹⁻³⁾

Viticolins A-C were found in a culture broth of a new fungal species, *Penicillium viticola* FKI-4410^T as antimalarial troponoids together with known compounds, puberulic acid and stipitatic acid. These troponoids possess antimalarial characteristics, puberulic acid exhibiting potent *in vitro* antimalarial inhibition against *Plasmodium falciparum* strains.



Penicillium viticola FKI-4410^T



2. Physical data (Viticolin A)

Yellow powder. C₉H₈O₆; mol wt 212.02. Sol. in MeOH, Slightly sol. in. acetone, CH₃CN, Insol. in CHCl₃.

3. Biological activity

1) *In vitro* antimalarial activity against *Plasmodium falciparum* K1 and FCR3 strains²⁾

Puberulic acid showed the highest antimalarial activity against both strains, with an IC₅₀ value of 0.01 μg/ml without cytotoxicity against MRC-5 cells (IC₅₀ 57.2 μg/ml).

2) Inhibitory activity against *Plasmodium falciparum* glyoxalase I³⁾

Puberulic acid did not inhibit *Plasmodium falciparum* glyoxalase I even at 100 μM, which suggested glyoxalase I should not be target of antimalarial activity of puberulic acid.

4. References

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- [1087] M. Iwatsuki *et al.*, *J. Antibiot.* **64**, 183-188 (2011)
- [1164] A. Ishiyama *et al.*, *J. Antibiot.* **67**, 545-547 (2014)