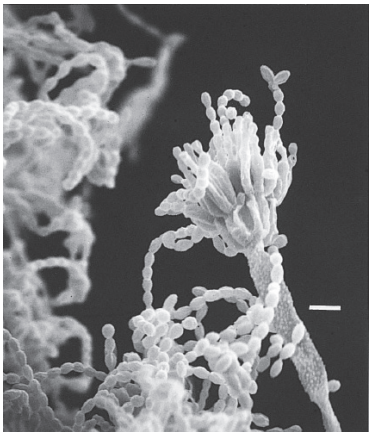
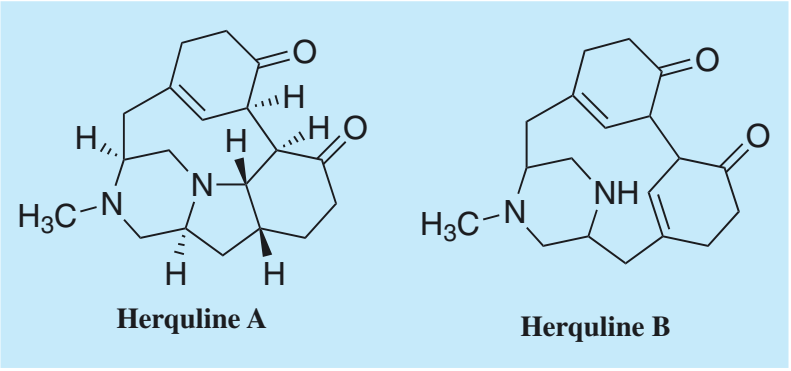
Herquline

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

Herquline was found in the culture broth of the fungal strain *Penicillium herquei* Fg-372 while screening for microbial alkaloids[1)]. The structure and the relative configuration of herquline were elucidated by X-ray crystallographic analysis[2)]. A new analog, herquline B, was found from the broth of the fungal strain Fg-372, and herquline was renamed herquline A[3)].



Penicillium herquei Fg-372
Bar: 5 μm



2. Physical data (Herquline A)

Colorless plates. $C_{19}H_{26}N_2O_2$; mol wt 314.43. Sol. in DMSO, MeOH, $CHCl_3$, benzene. Slightly sol. in hexane. Insol. in H_2O.

3. Biological activity[1,3)]

1) Inhibition of platelet aggregation (induced by ADP *in vitro*, rabbit PRP)
Herquline A, 100 μg/ml; Herquline B, 1 μg/ml
2) Acute toxicity
Herquline A, LD_{50}>100 mg/kg (mice, i.p.)
3) Antimicrobial activity
Herquline A and B were inactive against the following test organisms at 1 mg/ml (paper disc method): *Staphylococcus aureus* FDA209P, *Bacillus subtilis* PCI219, *Micrococcus luteus* PCI1001, *Pseudomonas aeruginosa* P-3, *Xanthomonas oryzae*, *Escherichia coli* NIHJ, *Candida albicans*, *Saccharomyces cervisiae*, *Aspergillus niger*, *Aspergillus brevipus*, and *Pyricularia oryzae*.

4. References

1. [164] S. Ōmura *et al.*, *J. Antibiot.* **32**, 786-790 (1979)
2. [192] A. Furusaki *et al.*, *J. Chem. Soc., Chem. Commun.* **1980**, 698 (1980)
3. [601] Y. Enomoto *et al.*, *J. Antibiot.* **49**, 50-53 (1996)