

## Butenafine

### A Viewpoint by Masatoshi Itoh

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Butenafine is a novel antifungal agent. It has a benzylamine skeleton and has shown potent fungicidal activity against dermatophytes. In particular, when compared with naftifine, tolnaftate or clotrimazole, the *in vitro* activity of butenafine against the major dermatophytes which cause tinea pedis is fungicidal and very strong. The minimum inhibitory concentration (MIC; indicating fungistatic activity) and minimum fungicidal concentration (MFC) of butenafine are the same (0.012 mg/L) against *Trichophyton mentagrophytes*. The MIC against *T. rubrum* is 0.007 mg/L.<sup>[1]</sup> After topical application of <sup>14</sup>C-labelled butenafine on the dorsal skin of guinea-pigs, butenafine rapidly penetrated to a depth of 300µm in the corneal layer of the epidermis; the concentration of the agent was maintained at a higher level than the MIC 24 hours after the application.<sup>[2]</sup> In an *in vivo* efficacy study against tinea pedis in guinea-pigs, butenafine compared with bifonazole or clotrimazole showed significantly excellent rates in both the cure of the

disease and eradication of the fungi.<sup>[3]</sup> In a skin patch test on healthy volunteers, both butenafine 1% cream and butenafine 1% solution caused very little skin irritation.<sup>[4]</sup> In a clinical trial in patients with tinea pedis, the efficacy rate in a group treated once daily with butenafine 1% cream was similar to that of a group treated twice daily with clotrimazole 1% cream. No drug-related adverse reactions were observed in either group of patients in the trial. It is confirmed that once-daily treatment of 1% butenafine is an effective treatment against tinea pedis.<sup>[5]</sup> ▲

## References

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