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Strategies for preventing development of antifungal resistance



Mutualistic bacteria producing antifungals

Induced synergy, suppressive interaction and collateral sensitivity.



Combination of bacterial antifungals and antifungal peptides to reverse antimicrobial resistance



Endogenous antifungal peptides



BACTERIA PRODUCING ANTIFUNGAL MIXTURES

- Horizontal Gene Transfer (HGT)
- Gene rearrangement mutations
- More different mixtures
- Fast replication
- Rapid response to environmental stresses

STRONG FIRST BARRIER

- First defence: peptides are on the cuticle
- Defensins retain their antibacterial activity over millions of years with modest resistance development
- Mixtures are made of few peptides and have minimal variation in structure