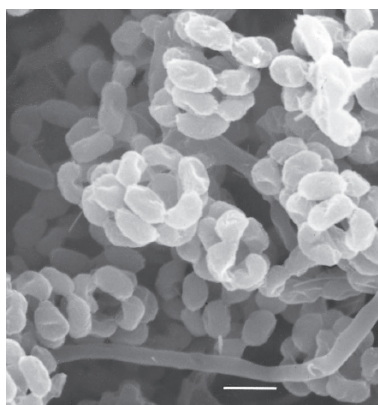


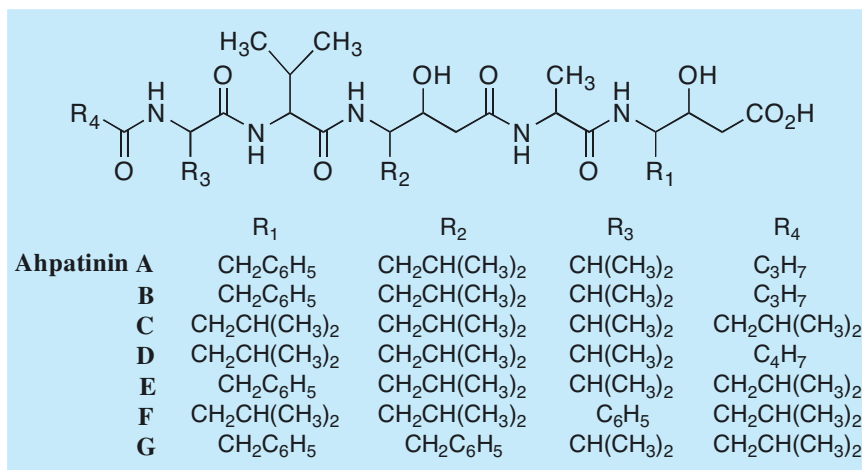
Ahpatinin

1. Discovery, producing organism and structures^{1,2)}

During screening for new renin inhibitors, the actinomycete strain WK-142 was found to produce the new acid protease inhibitors; ahpatinins A, B, D, E, F and G which were active against pepsin and renin. Ahpatinin C is identical to pepstatin A.



Streptomyces sp. WK-142



2. Physical data (Ahpatinin E)

Colorless needles. C₃₇H₆₁N₅O₉; mol wt 719.45. Sol. in DMSO. Slightly sol. in MeOH, H₂O.

3. Biological activity¹⁾

Ahpatinins inhibit not only pepsin activity but also renin activity. They exhibit similar pepsin inhibitory activity, while their ability to inhibit renin varies. Although the IC₅₀ ratio (IC₅₀ pepsin / IC₅₀ renin) for pepstatin A is 3,000, the ratios for the other components are 100-1,000. Ahpatinin G shows the lowest value. Thus, the renin-inhibitory activity of ahpatinins is higher than that of pepstatin A.

4. Reference

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- Y. Sun *et al.*, *J. Nat. Prod.* **77**, 1749-1752 (2014)