# Ahpatinin

## 1. Discovery, producing organism and structures $^{1,2)} \label{eq:coverse}$

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



#### 2. Physical data (Ahpatinin E)

Colorless needles. C<sub>37</sub>H<sub>61</sub>N<sub>5</sub>O<sub>9</sub>; mol wt 719.45. Sol. in DMSO. Slightly sol. in MeOH, H<sub>2</sub>O.

### **3. Biological activity**<sup>1)</sup>

Ahpatinins inhibit not only pepsin activity but also renin activity. They exhibits similar pepsin inhibitory activity, while their ability to inhibit renin varies. Although the  $IC_{50}$  ratio ( $IC_{50}$  pepsin /  $IC_{50}$  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

- 1. [343] S. Ōmura et al., J. Antibiot. 39, 1079-1085 (1986)
- 2. Y. Sun et al., J. Nat. Prod. 77, 1749-1752 (2014)