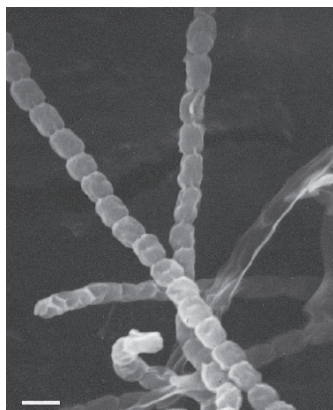


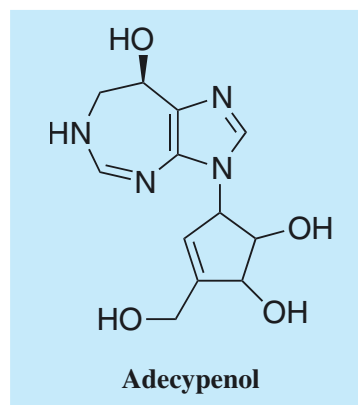
# Adecyphenol

## 1. Discovery, producing organism and structure<sup>1,2)</sup>

Adecyphenol was isolated from the culture broth of an Actinomycete species strain OM-3223 and identified as a potent inhibitor of intestinal adenosine deaminase<sup>3,4)</sup>. The aglycone of adecyphenol is identical to those of coformycin<sup>5)</sup>, 2'-deoxycostamycin<sup>5)</sup>, and adechlorin<sup>6)</sup>.



*Streptomyces* sp. OM-3223



## 2. Physical data

Colorless needles. C<sub>12</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub>; mol wt 280.29. Sol. in H<sub>2</sub>O, MeOH. Insol. in EtOAc, CHCl<sub>3</sub>.

## 3. Biological activity<sup>2-4)</sup>

The *K<sub>i</sub>* value of adecyphenol against calf intestinal adenosine deaminase is 4.7x10<sup>-9</sup> M. Adecyphenol is a semi-tightly binding inhibitor. Adecyphenol exhibits no antimicrobial activity against various bacteria or fungi even at 1.0 mg/ml, and no acute toxicity at 100 mg/kg in mice (i.p.). In addition, adecyphenol is effective in potentiating *in vivo* antitumor activity of ara-A as shown in the table below.

Combination effect of adecyphenol and Ara-A on L-1210 leukemia in mice

Drug	Dose (mg/kg/day)	Increase in life span(%)	Body weight (g)
Adecyphenol	5	0	19.2
Ara-A	100	17	18.2
Adecyphenol /Ara-A	5/100	toxic	
	2/100	94	14.4
	0.4/100	53	17.2
	5/25	44	17.9
	2/25	42	19.4
	0.4/25	28	19.3

## 4. References

- [336] S. Ōmura *et al.*, *J. Antibiot.* **39**, 309-310 (1986)
- [348] S. Ōmura *et al.*, *J. Antibiot.* **39**, 1219-1224 (1986)
- [415] H. Tanaka & S. Ōmura, In "Novel Microbial Products for Medicine and Agriculture" (Eds. A. L. Demain *et al.*) pp.67-72, Elsevier (1989)
- [430] H. Tanaka *et al.*, *J. Antibiot.* **42**, 1722-1724 (1989)
- T. Takeuchi *et al.*, *Aci. Rep. Meiji Seika Kaisha* **11**, 17-21 (1970)
- [323] S. Ōmura *et al.*, *J. Antibiot.* **38**, 1008-1015 (1985)