

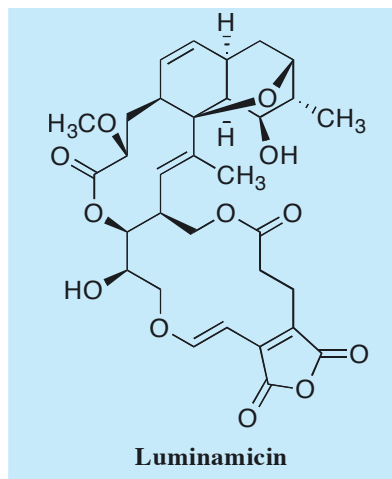
Luminamicin

1. Discovery, producing organism and structure^{1,2,4)}

Luminamicin was isolated from the culture broth of the actinomycete strain OMR-59. It exhibits antibacterial activity against anaerobic bacteria, particularly *Clostridium* sp.^{1,2)}. Luminamicin is identical to coloradocin, discovered by Abbott's group to be an anti-anaerobe antibiotic. The structure of coloradocin/luminamicin was elucidated as shown below^{3,4)}.



Streptomyces sp. OMR-59



2. Physical data

Colorless needles; $C_{32}H_{38}O_{12}$; mol wt 614.24. Sol. in MeOH, acetone, EtOAc. Insol. in H_2O , hexane.

3. Biological activity^{1,2)}

Antimicrobial activity

Test organism	MIC ($\mu\text{g/ml}$)	
	Luminamicin	Vancomycin
<i>Staphylococcus aureus</i> FDA 209P	>100	NT
<i>Bacillus subtilis</i> ATCC 6633	100	NT
<i>Micrococcus luteus</i> ATCC 9341	25	NT
<i>Escherichia coli</i> NIHJ	>100	NT
<i>Salmonella typhimurium</i> KB 20	>100	NT
<i>Klebsiella pneumoniae</i> KB 214	>100	NT
<i>Proteus vulgaris</i> IFO 3167	>100	NT
<i>Pseudomonas aeruginosa</i> IFO 3080	>100	NT
<i>Clostridium perfringens</i> ATCC 3624	3.12	1.56
<i>C. kainantoi</i> IFO 3353	6.25	1.56
<i>C. difficile</i> ATCC 9689	6.25	1.56
<i>C. kluyveri</i> IFO 12016	12.5	1.56
<i>Bacteroides fragilis</i> ATCC 23745	12.5	50
<i>Fusobacterium varium</i> ATCC 8501	>100	>100

NT: Not tested.

4. References

- [330] S. Ōmura *et al.*, *J. Antibiot.* **38**, 1322-1326 (1985)
- [371] S. Taga *et al.*, *Kitasato Arch. Exp. Med.* **60**, 15-24 (1987)
- R. Rasmussen *et al.*, *J. Antibiot.* **40**, 1383-1393 (1987)
- [900] H. Gouda *et al.*, *Proc. Natl. Acad. Sci. USA* **102**, 18286-18291 (2005)