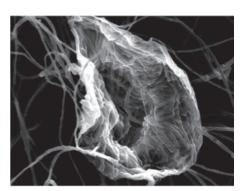
Mangromicin

$\textbf{1. Discovery, producing organism and structures}^{1\text{-}3\text{)}}$

Mangromicins (A-I) were discovered in a culture broth of an actinomycete strain, *Lechevalieria aerocolonigenes* K10-0216, by Physicochemical Screening. They consist of cyclopentadecane skeletons with a 5,6-dihydro-4-hydroxy-2-pyrone moiety. Mangromicins A and B exhibited anti-trypanosomal sctivity.¹⁾ All the mangromicins possess anti-oxdative activity.²⁻³⁾.



Lechevalieria aerocolonigenes K10-0216

2. Physical data (Mangromicin A) White powder. C₂₂H₂₄O₇ mol wt 410.50. Sol. in MeOH, EtOH, Insol. in benzene, CHCl₃

	HO R ₁ O R ₃ O R ₂	O O R ₄ OH CH ₃		
	R ₁	R ₂	R ₃	R ₄
Mangromicin D	-CH ₂ CH ₂ CH ₃	-CH ₂ OH	-H	-CH ₃
Mangromicin F	-CH ₂ CH ₃	-CH ₂ OH	-H	-CH ₃
Mangromicin G	-CH ₂ CH ₂ CH ₃	-CH ₃	-H	-CH ₂ OH
Mangromicin H	-CH ₂ CH ₃	-CH ₃	-H	-CH ₃
Mangromicin I	-CH ₂ CH ₃	=CH ₂	-OCH ₃	-CH ₃
O CH ₃	OH CH3	0	CH ₃ OI	O CH ₃
Mangromicin A		Mangromicin B		
H ₃ C O O O CH ₃	CH ₃	H ₃ C HO	O O CH ₃	O CH₃ CH₃ CH₃
Mangrom	icin E	Mar	gromicin	C
g. omeni z				

3. Biological activity¹⁾

1) *In vitro* antitrypanosomal activity¹⁾

Mangromicins A and B exhibit *in vitro* antitrypanosomal activity against *Trypanosoma brucei* brucei GuTat3.1 with IC₅₀ values of 2.4 and 43.4 μ g/mL, respectively.

2) *In vitro* anti-oxidative activity^{2,3)}

Mangromicins show radical scavenging activity against 1,1-diphenyl-2-picrylhydrazyl (DPPH) free radicals and nitric oxide generated from lipopolysaccharide-stimulated RAW264.7 cells. Mangromicins A and I showed the most potent DPPH radical scavenging activity (IC₅₀: $2.4 \mu M$) and nitric oxide scavenging activity, respectively.

4. References

- 1. [1163] T. Nakashima et al., J. Antibiot. 67, 253-260 (2014)
- 2. [1166] T. Nakashima et al., J. Antibiot. 67, 533-539 (2014)
- 3. [1179] T. Nakashima et al., J. Antibiot. **68**, 220-222 (2015)