

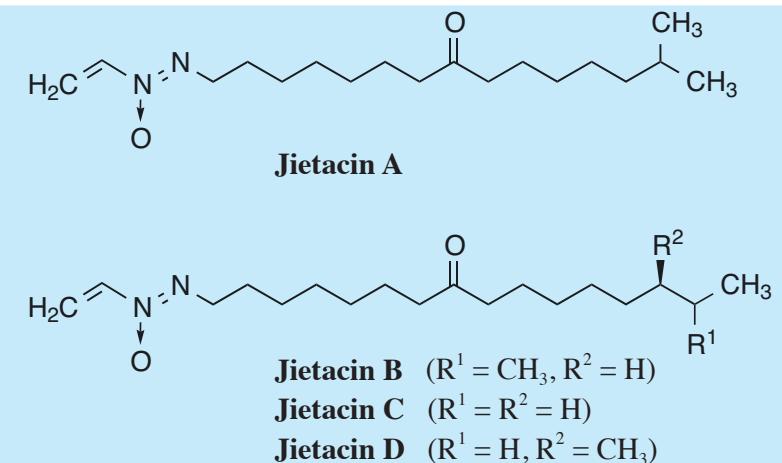
Jietacin

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

Jietacins were isolated during the course of screening for new nematocidal antibiotics from the culture broth of the actinomycete strain KP-197.



Streptomyces sp. KP-197



2. Physical data (Jietacin A)

White crystals. $C_{18}H_{34}N_2O_2$; mol wt 310.26. Sol. in acetone, EtOAc, hexane, hot DMSO. Insol. in MeOH, H_2O .

3. Biological activity¹⁾

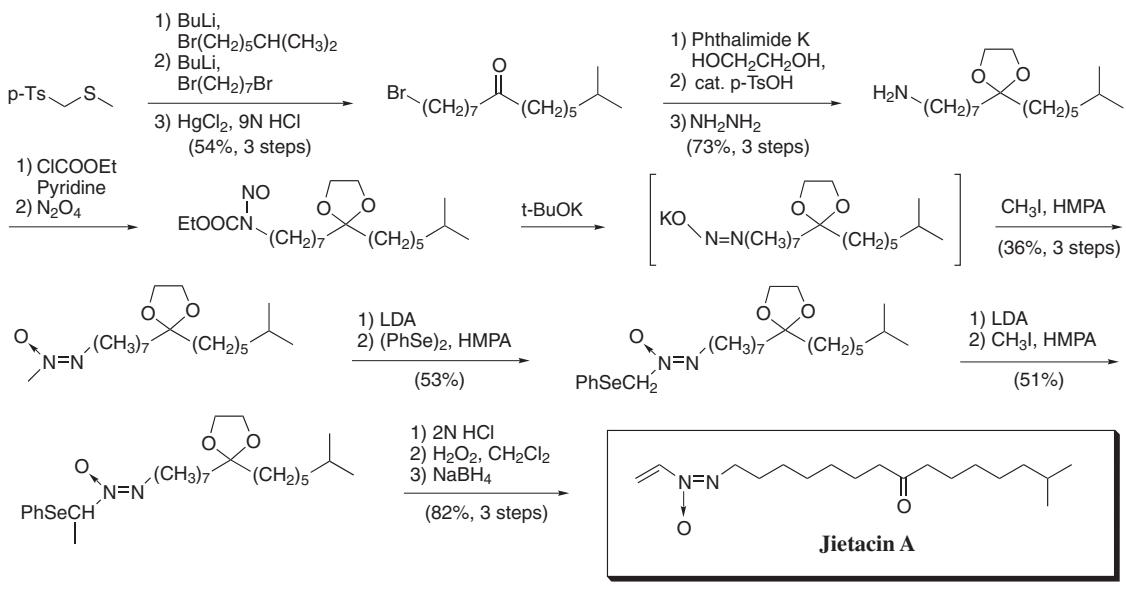
Jietacins show nematocidal activity against *Bursaphelenchus lignicolus*.

Compound	Concentration ($\mu g/ml$)	Mortality (%)	Compound	Concentration ($\mu g/ml$)	Mortality (%)
Jietacin A	0.25	100	Avermectin B1a	2.5	100
	0.125	99		1.25	64
	0.063	86		0.63	58
Jietacin B	0.25	100		0.31	45
	0.125	93			
	0.063	80			

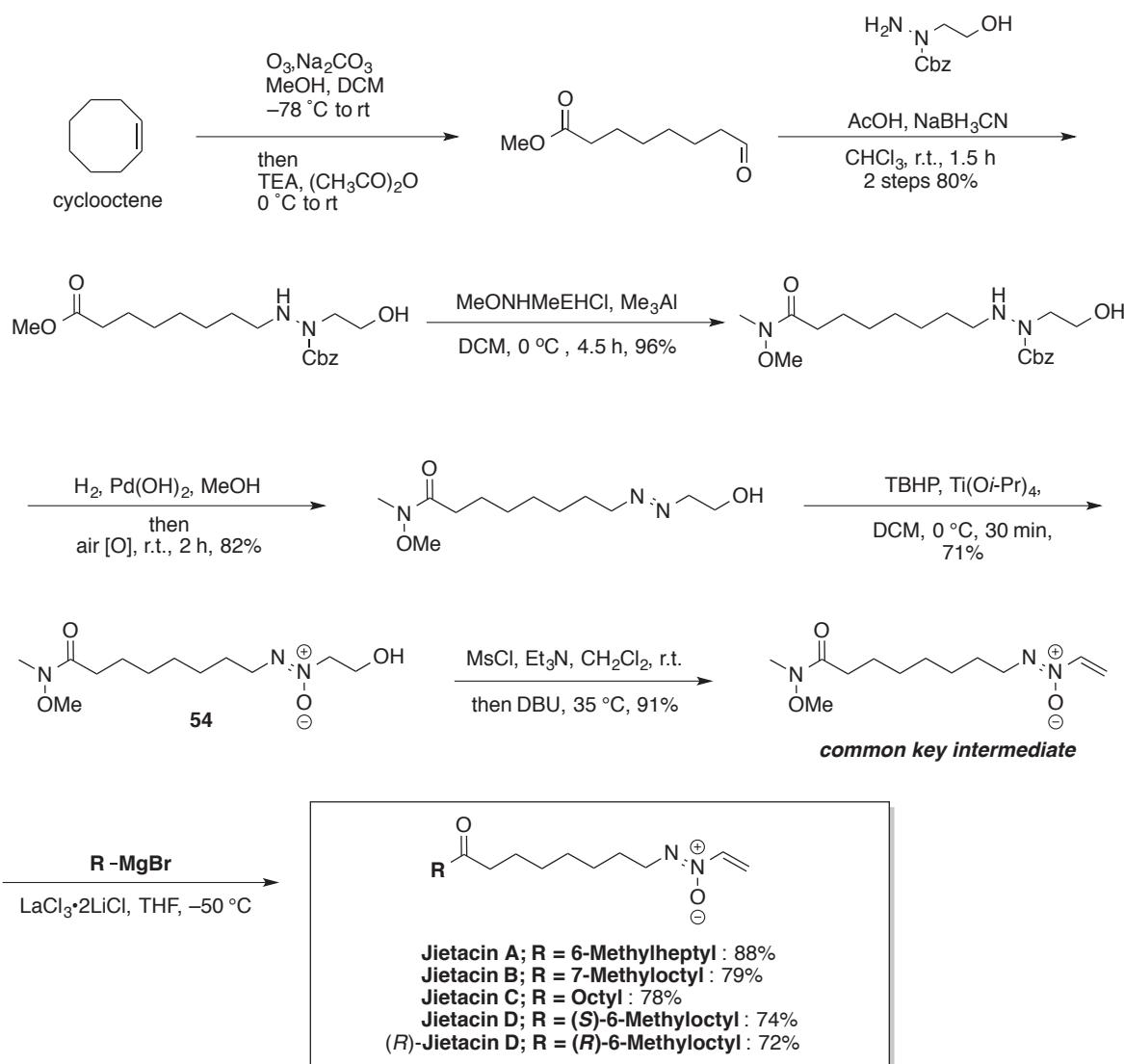
4. Total Synthesis

The total synthesis of jietacins has been reported by two groups. The following two schemes are Ōmura's approaches^{3,4)} (See Appendix-I).

1) First total synthesis of jietacin A³⁾



2) Second total synthesis of jietacin A, B, C and D⁴⁾



5. References

- [365] S. Ōmura *et al.*, *J. Antibiot.* **40**, 623-629 (1987)
- [407] N. Imamura *et al.*, *J. Antibiot.* **42**, 156-158 (1989)
- [467] K. Tsuzuki *et al.*, *J. Antibiot.* **44**, 774-784 (1991)
- [] A. Sugawara *et al.*, *Tetrahedron* **71**, 2149-2157 (2015)