

Supplementary material

Genome-Guided discovery of pretilactam from *Actinosynnema pretiosum* ATCC 31565

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Identified secondary metabolite regions							
Region	Type	From	To	Most similar known cluster	Similarity	MIBiG BGC-ID	
The following regions are from record NODE_1:							
Region 1	Terpene	46280	66796	SF2575	polyketide	6%	BGC0000269
Region 2	Lanthipeptide	230028	253096	Tetronasin	polyketide	9%	BGC0000163
Region 3	Terpene	3209146	3229317	Geosmin	other	100%	BGC0001181
Region 4	Bacteriocin	3837575	3848375				
Region 5	Indole	4468806	4489927	Frankiamicin	polyketide	14%	BGC0001197
Region 6	Nrpsfragment-Otherks-T1pks	4936116	4980643				
Region 7	Nrps-T1pks	5169664	5327702	Salinilactam	polyketide	88%	BGC0000142
Region 8	Nucleoside	5384654	5405622	Tunicamycin	other	64%	BGC0000880
Region 9	Nrps-T1pks	5652921	5732628	Tirandamycin	hybrid	40%	BGC0001052
Region 10	Otherks	5814814	5854503	Calcimycin	polyketide	13%	BGC0000032
Region 11	Nrpsfragment-T1pks	5878730	5975542	Ansamitocin	polyketide	97%	BGC0000020
Region 12	Lassoepptide	6034265	6056728	SF2575	polyketide	4%	BGC0000269
Region 13	Nrps-Phosphonate-T1pks	6066797	6154441	Himastatin	NRPS	8%	BGC0001117
Region 14	Nrps-Otherks	6328654	6476784	Naphthyridinomycin	NRPS	60%	BGC0000394
Region 15	Terpene	6599385	6618894	Isorenieratene	terpene	85%	BGC0000664
Region 16	Thiopeptide	6643965	6673418				
Region 17	T1pks	6679293	6719988	Coelimycin	polyketide	8%	BGC0000038
Region 18	T1pks	6828788	6884394				
Region 19	T1pks	6917680	6962500	Kedarcidin	polyketide	6%	BGC0000081
Region 20	T1pks	7248874	7310026	Spinosad	polyketide	8%	BGC0000148
Region 21	Terpene	7319928	7341610	Brasilicardin A	terpene	45%	BGC0000632
Region 22	Nrps	7369240	7462182	Marformycins	NRPS	12%	BGC0001214
Region 23	Nrps	7499669	7542655				
Region 24	Nrpsfragment-Other-T1pks	7542698	7611214	Lasalocid	polyketide	16%	BGC0000087
Region 25	T1pks	7645186	7703975	Coelimycin	polyketide	25%	BGC0000038
Region 26	Oligosaccharide	7915377	7958960				
Region 27	Nrps	8017917	8071251	Erythrochelin	NRPS	85%	BGC0000349

Figure S1 AntiSMASH of the genomic DNA of ATCC 31565

M-2 + #88 RT: 1.33 AV: 1 NL: 1.14E5
T: FTMS + c ESI Full ms [300.00-700.00]

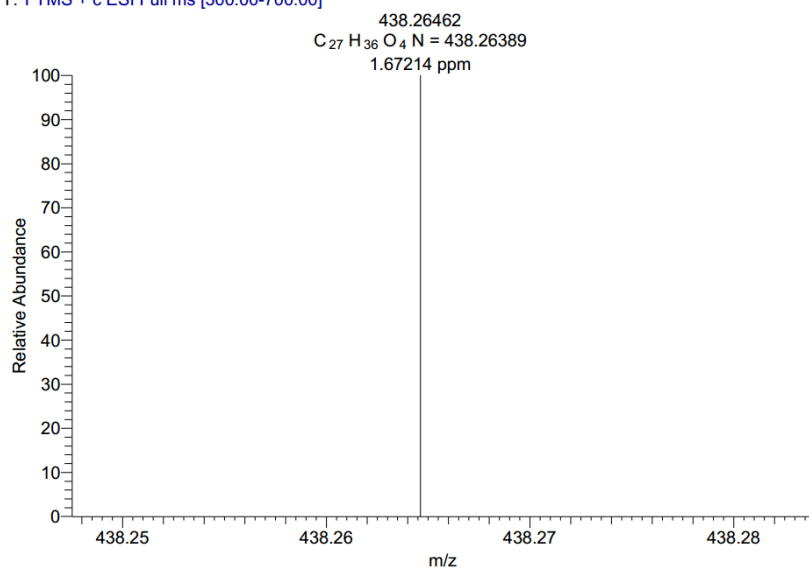


Figure S2 HR(+)-ESIMS of pretilactam (1)

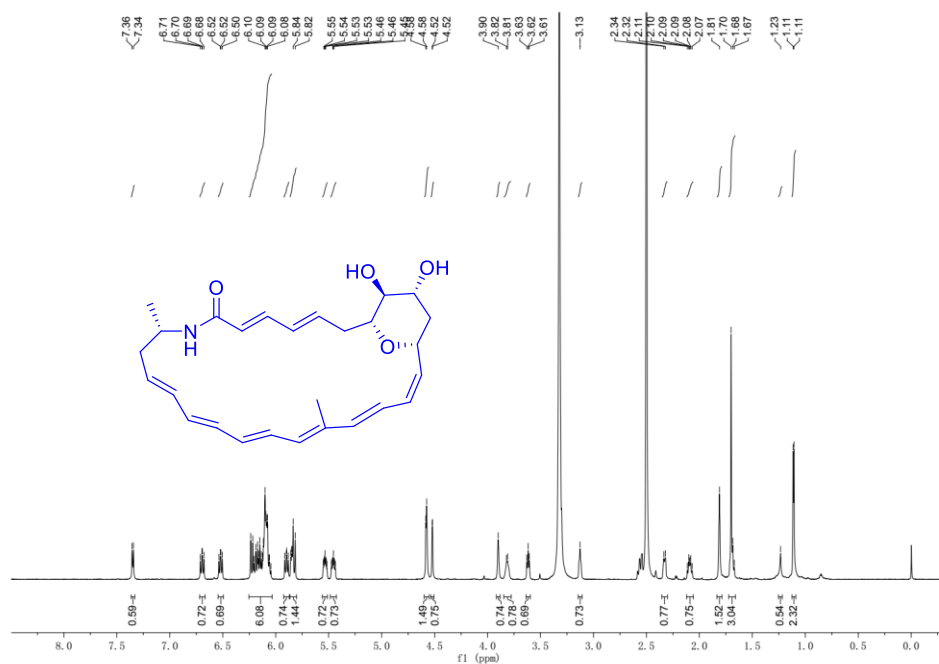


Figure S3 ¹H NMR spectrum (800 MHz) of pretilactam (1) in DMSO-*d*₆

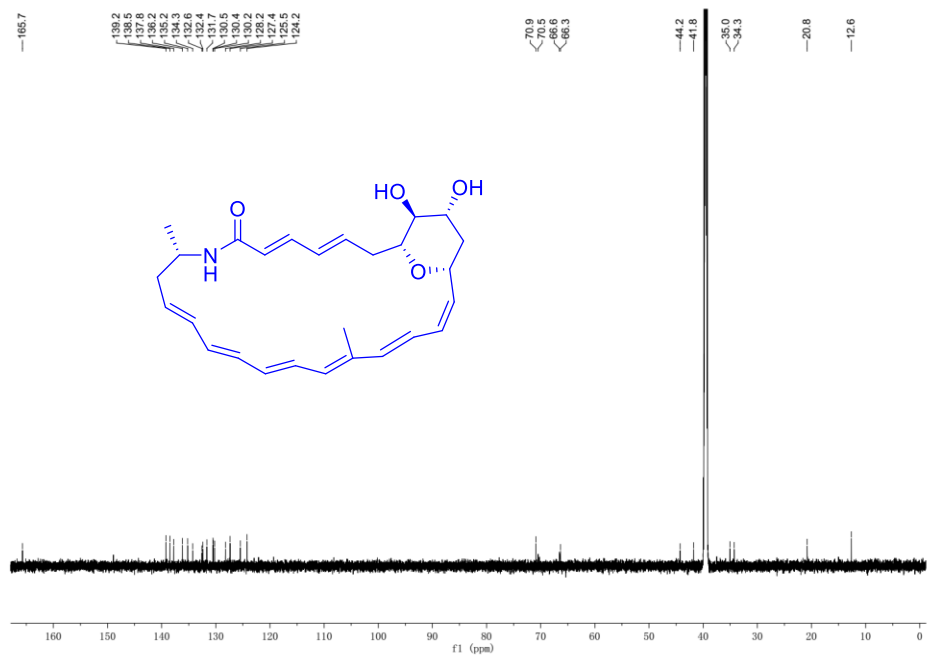


Figure S4 ^{13}C NMR spectrum (200 MHz) of pretilactam (**1**) in $\text{DMSO-}d_6$

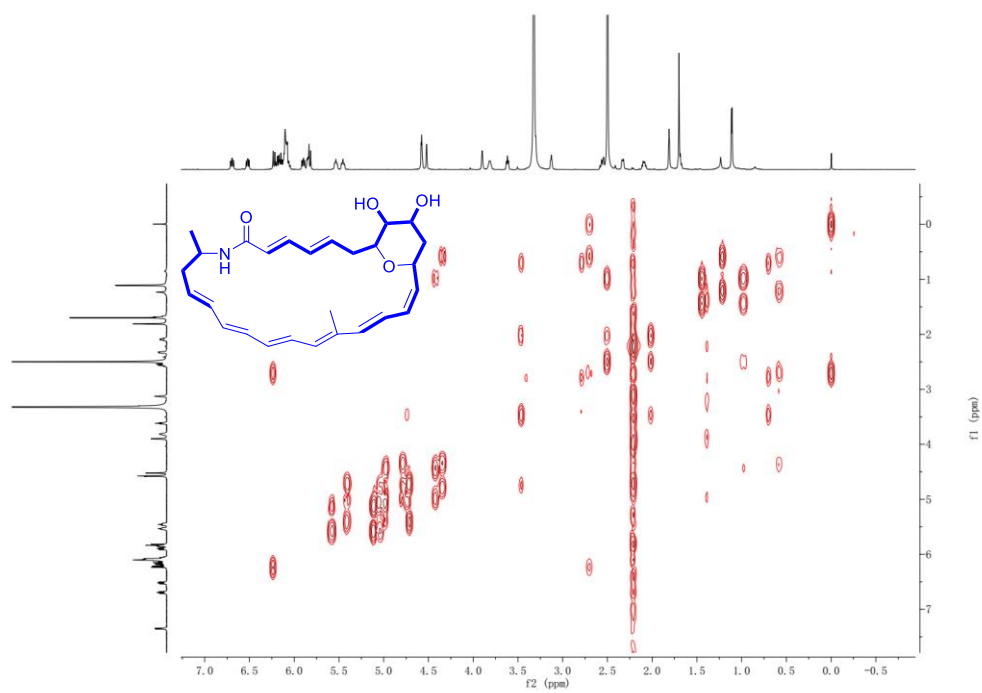


Figure S5 $^1\text{H-}^1\text{H}$ COSY spectrum (800 MHz) of pretilactam (**1**) in $\text{DMSO-}d_6$

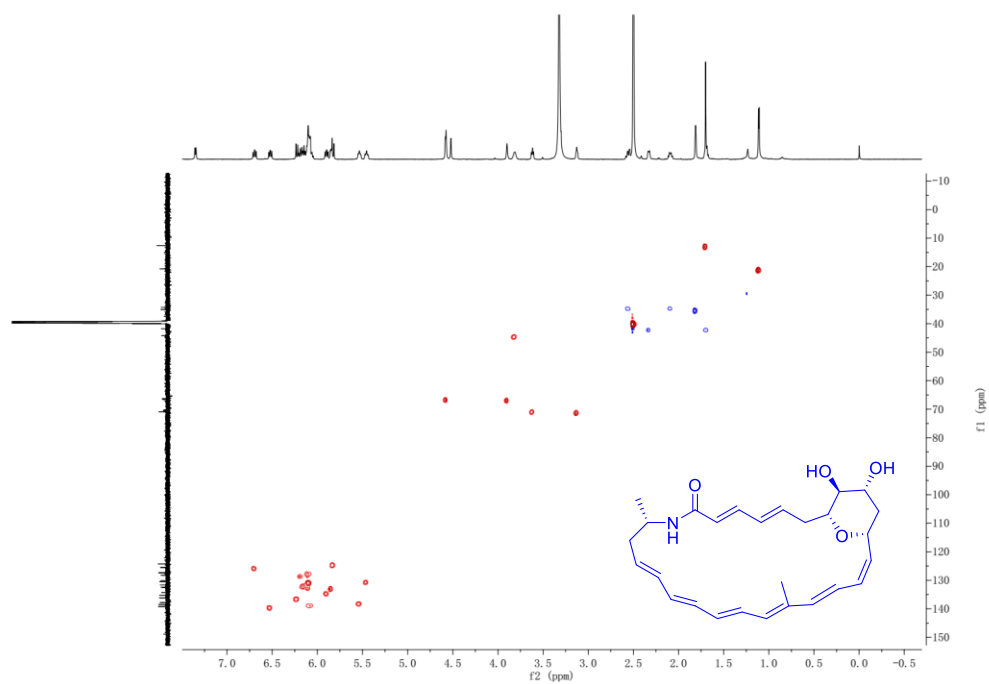


Figure S6 HSQC spectrum (200 MHz) of pretilactam (**1**) in DMSO-*d*₆

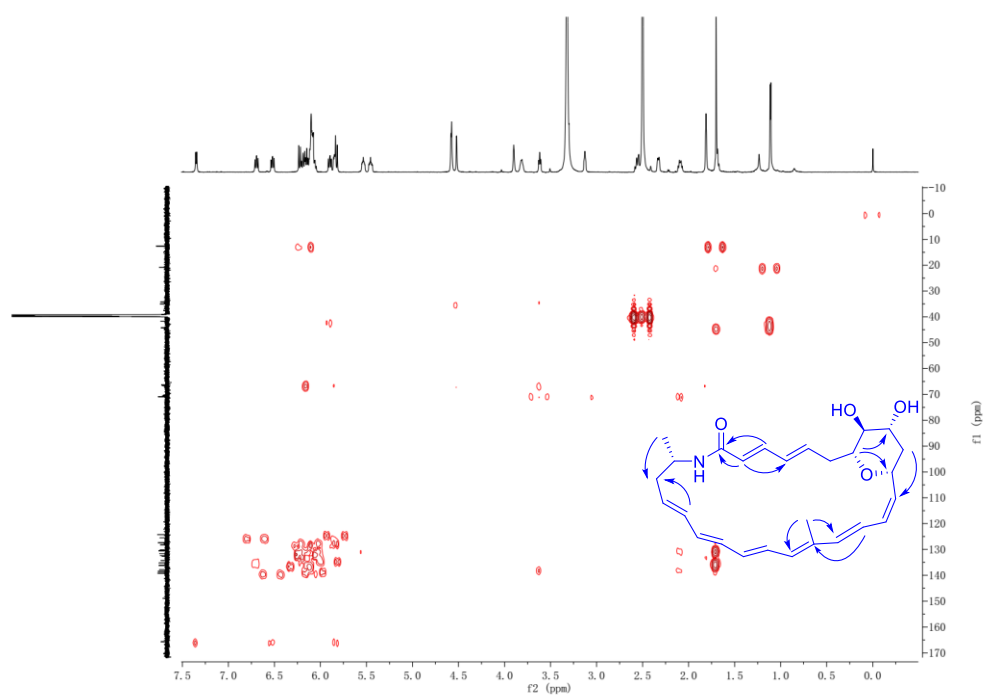


Figure S7 HMBC spectrum (200 MHz) of pretilactam (**1**) in DMSO-*d*₆

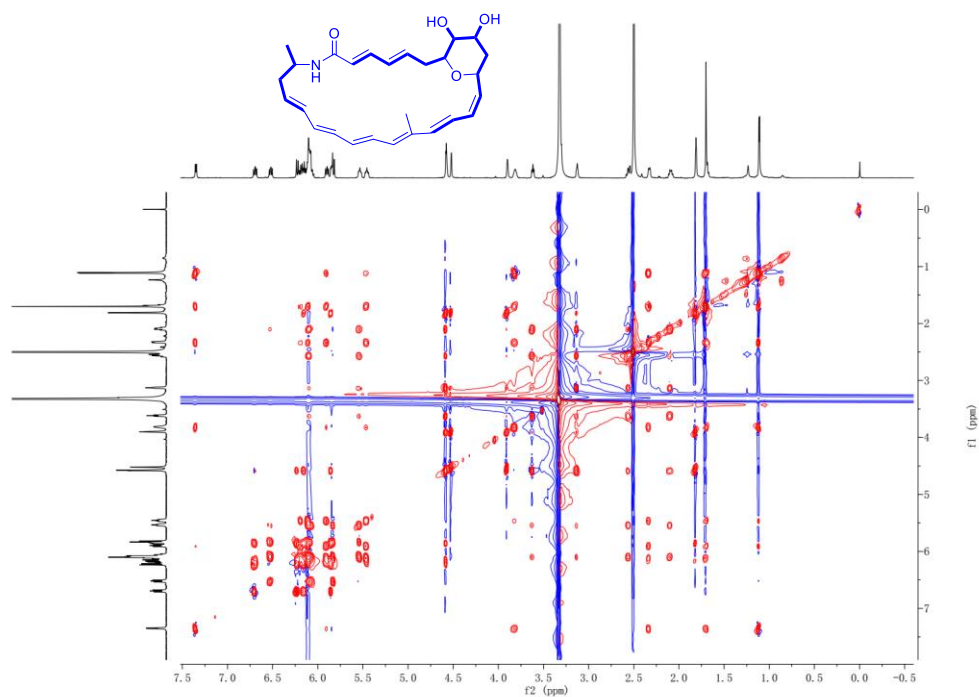


Figure S8 TOCSY spectrum (800 MHz) of pretilactam (**1**) in DMSO- d_6

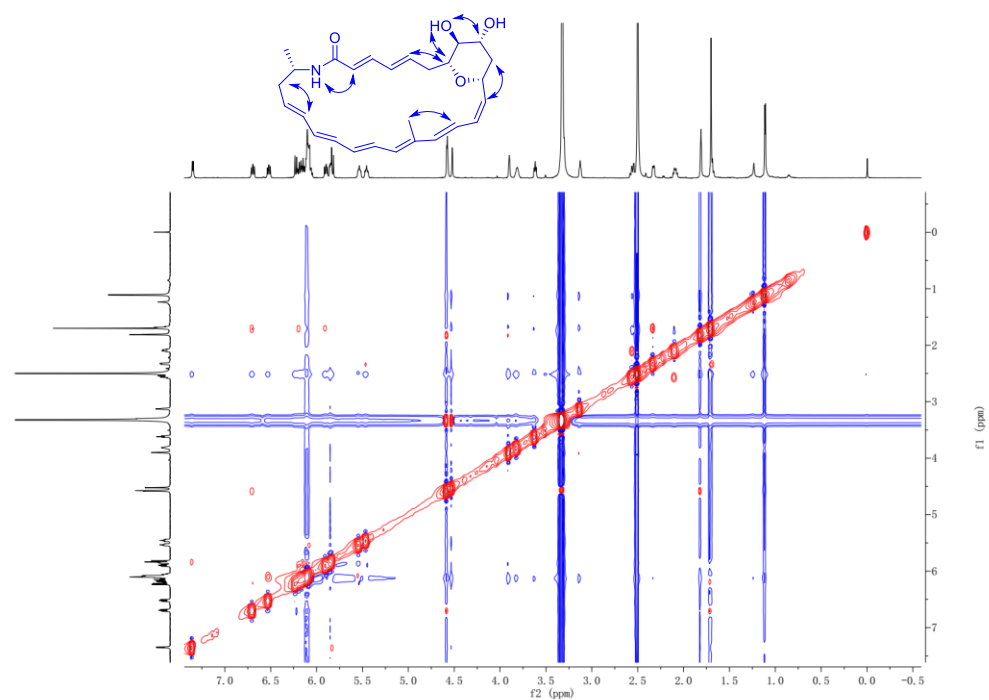


Figure S9 NOESY spectrum (800 MHz) of pretilactam (**1**) in DMSO- d_6

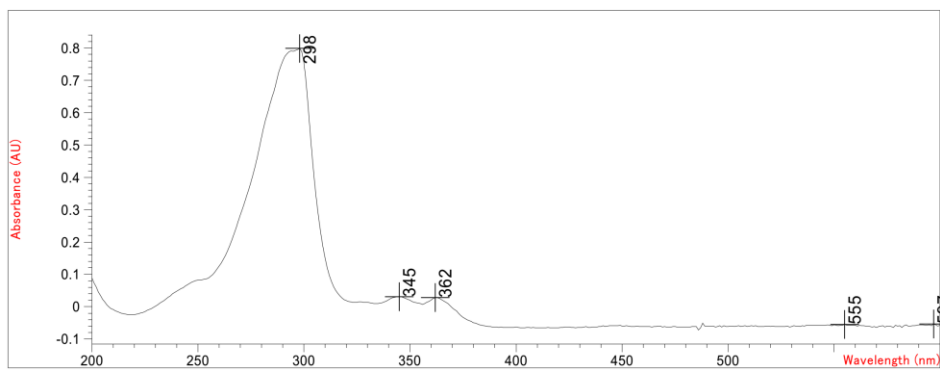


Figure S10 UV spectrum of pretilactam (**1**)

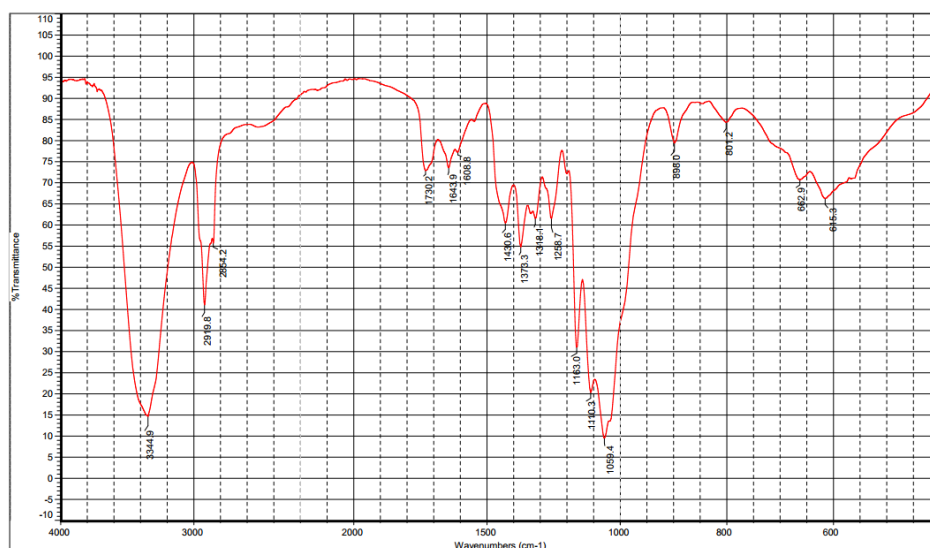


Figure S11 IR spectrum of pretilactam (**1**)