

Region	Type	from	To	Length bp	Most Similar Cluster	Similarity %	Compound Type	Known compound	Antifungal potential	Novelty	Priority score	Notes
1	hgE-KS, T1PKS	86637	139654	52917	leimamycin	2	NRP + Polyketide (Modular Type I + Trans-AT Type I)	Leimamycin	NO	HIGHLY NOVEL	★★	Extremely novel (2%) but anticancer not antifungal
2	Terpene	166891	191654	24763	isorenieraten	100	Terpene	Isorenieraten	NO	KNOWN	★	Pigment - carotenoid
3	Lanthipeptide-class-I	246866	270297	23529	None	0	Lanthipeptide	Unknown	Maybe	HIGHLY NOVEL	★★★	Completely novel - no database match
4	NRP	484260	544387	48927	coelichodin	100	NRP	Coelichodin	NO	KNOWN	★	Siderophore - iron acquisition
5	RPP-LIKE	791701	799942	8241	4informatpeptin	42	RPP-Lanthipeptide	Informalpeptin	YES	NOVEL	★★★★★	TOP 3 - Novel antimicrobial peptide
6	T1PKS	1258218	1297040	38822	herboxidene	8	Polyketide	Herboxidene	MAYBE	HIGHLY NOVEL	★★★★★	Highly novel - some antifungal activity reported
7	ectoine	1980560	2000589	10388	ectoine	100	other	Ectoine	NO	KNOWN	★	Osmolyte - stress protection
8	Melanin	2939366	2949875	10569	Istamycin	4	saccharide	Istamycin	NO	HIGHLY NOVEL	★★	Nivel but melanin production
9	Siderophore	3034832	3045603	10971	Desferrioxamin B/E	83	other	Desferrioxamin	NO	KNOWN	★★	Siderophore - iron acquisition
10	NRP	3524828	3603907	79079	CDAla2a2b2a3b2b4a4b	87	NRP (Ca dependent lipopeptide)	CDAla family	YES	SIMILAR	★★★★★	TOP 1 - PROVEN ANTIFUNGAL
11	T2PKS	5496474	5567376	70902	actinorhodin	100	Polyketide-Type II	Actinorhodin	NO	KNOWN	★★	Blue pigment antibiotic
12	Terpene	5671275	5691836	20561	albaflavonone	100	Terpene	Albaflavonone	NO	KNOWN	★	Sesquiterpene volatile
13	T2PKS	5721665	5824487	72542	Spore pigment	66	Polyketide	Spore pigment	NO	SIMILAR	★	Polyketide pigment for spores
14	Siderophore	6336091	6346368	10277	None	0	Unknown	Unknown	NO	HIGHLY NOVEL	★★	Novel siderophore - no match
15	NRPS-like + T1PKS + prodigiosin	6430010	6475291	45281	undecylprodigiosin	100	NRP + Polyketide	Undecylprodigiosin	NO	KNOWN	★	Red pigment antibiotic
16	RPP-like	6623243	6642659	11216	None	0	Unknown	Unknown	MAYBE	HIGHLY NOVEL	★★★	Novel RPP - investigate further
17	Terpene	6656604	6676224	19520	Gesmin	100	Terpene	Gesmin	NO	KNOWN	★	Earthy odor compound
18	siderophore	6842315	6855522	13207	Enduracidin	6	NRP	Enduracidin-like	MAYBE	HIGHLY NOVEL	★★★★	Only 6% similar
19	T1PKS + bicyclolactone	6861335	6961537	70202	coelmycin P1	100	Polyketide-Modular Type I	Coelmycin P1	NO	KNOWN	★	Polyketide + signaling molecule
20	Thioamide-NRP + NRPS	7088264	7142447	54183	Nagilamycin	40	Polyketide	Nagilamycin	YES	NOVEL	★★★★★	TOP 2 - NOVEL HYBRID
21	lanthipeptide-class-III	7409664	7432456	22792	SapB	100	RPP-Lanthipeptide	SapB	NO	KNOWN	★★	Morphological development peptide
22	Terpene	7506398	7532217	25809	Hopene	100	Terpene	Hopene	NO	KNOWN	★	Membrane hopanoid
23	PKS-like + T1PKS	7578412	7618555	48143	arsazo-polyketide	100	Polyketide	Arsazo-polyketide	NO	KNOWN	★	Arsenate polyketide
24	Lanthipeptide-class-I	7682967	7709360	26453	None	0	Unknown	Unknown	MAYBE	HIGHLY NOVEL	★★	Novel lanthipeptide - no match
25	other + T1PKS	7973470	8047403	73933	Germicidin	100	other	Germicidin	NO	KNOWN	★	Autoregulator polyketide
26	Indole	8268617	8290764	21127	5-isoprenylindole-3-carboxylate	28	other	5-isoprenylindole	MAYBE	NOVEL	★★★	Novel indole derivative
27	T1PKS + NRPS + terpene	8475102	8548352	73250	coelbactin	100	NRP	Coelbactin	NO	KNOWN	★	Zinc-binding siderophore