

Supplementary Materials:

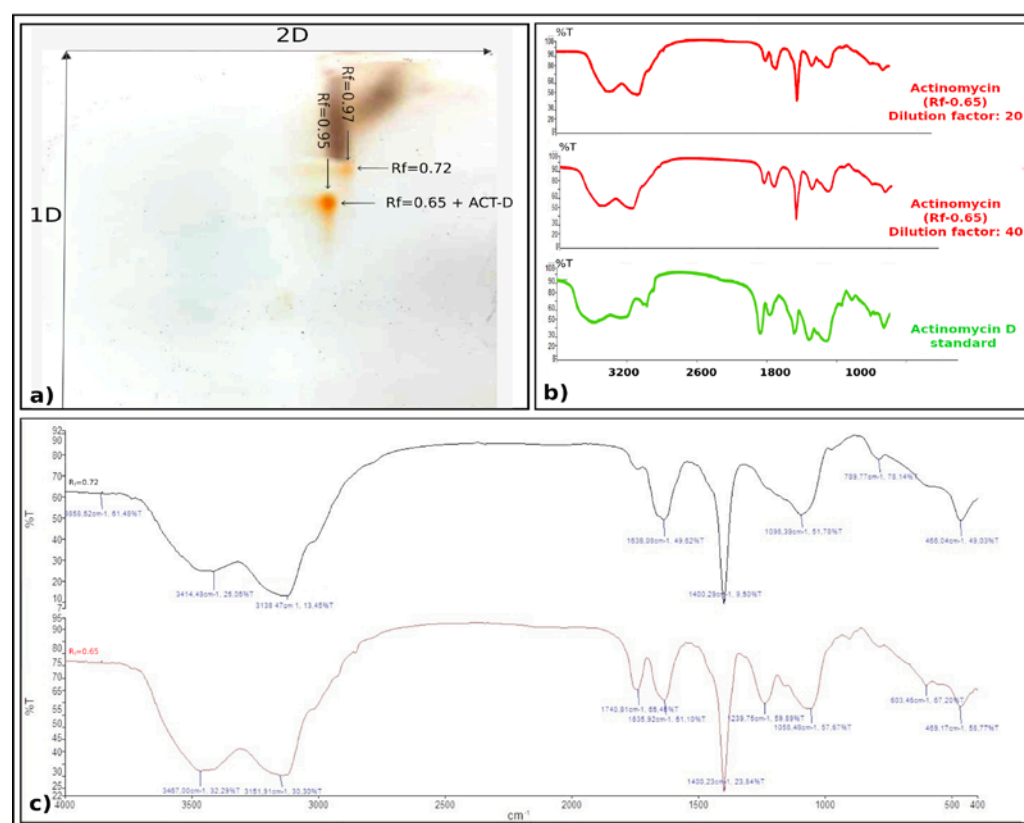


Figure S1. (a) Two-Dimensional Thin layer chromatography of EAE plus actinomycin–D (standard compound); 2D-TLC plate was visualized using 10% sulphuric acid in methanol solution and heated; Ethyl acetate : methanol (9:1, v/v) used as the mobile solvent in 1D-TLC and Ethyl acetate : methanol (8:2, v/v) for 2D-TLC. (b) Standard FTIR spectra of actinomycin with 20 and 40 factor dilution in KBr (red) and standard FTIR spectrum of actinomycin D (green). (c) Comparison of the FTIR spectrum (4000 - 400 cm⁻¹) of purified bands of Rf 0.65 and Rf 0.72;

Table S1. Biosynthetic gene clusters identified in *Streptomyces fildesensis* INACH3013 genome. Biosynthetic gene clusters (% proportion of gene similarity) were determined as indicated in Methods; NRPS, non ribosomal synthesized peptide; RiPP-like, Other unspecified ribosomally synthesized and post-translationally modified peptides; NAPAA, non-alpha poly-amino acids like e-Polylysine; T1PKS, Type I polyketide synthase; T2PKS, Type II polyketide synthase; T3PKS, Type III polyketide synthase; LAP, Linear azol (in)e-containing peptides; CDPS, tRNA-dependent cyclodipeptide synthases).

Cluster	Type	From	To	Most similar known cluster
1	T1PKS, butyrolactone	2	65,59	4-hexadecanoyl-3-hydroxy-2- (hydroxymethyl)-2H-furan-5-one (54%)
2	ectoine	363,243	373,701	ectoine (100%)
3	melanin	328,54	339,025	melanin (100%)
4	siderophore	408,55	423,425	-
5	NAPAA	122,009	156,067	borrelidin (5%)
6	RiPP-like	172,192	184,099	-
7	NRPS	62,864	109,269	diisonitrile antibiotic SF2768 (61%)
8	LAP,T1PKS	114,052	166,046	maduropeptin (3%)
9	terpene,lanthipeptide-	240,249	301,861	geosmin (100%)

	class-iv			
10	T1PKS	1	24,147	lankamycin (23%)
11	other	112,979	154,073	A-503083 A / A-503083 B / A-503083 E / A-503083 F (3%)
12	other	200,776	230,908	actinomycin D (71%)
13	T3PKS,CDPS	112,042	159,177	alkylresorcinol (100%)
14	RiPP-like	93,328	104,176	-
15	NRPS	108,79	152,12	enduracidin (10%)
16	NRPS	21,862	73,37	deimino-antipain (66%)
17	RiPP-like	123,108	133,326	-
18	terpene	135,649	147,335	-
19	siderophore	54,523	69,212	ficellomycin (3%)
20	NRPS	26,169	85,573	s56-p1 (3%)
21	T2PKS, NAPAA	33,495	118,788	spore pigment (83%)
22	NRPS	1	23,446	actinomycin D (25%)
23	T3PKS	75,79	109,188	A-47934 (23%)
24	T1PKS, T2PKS, LAP	16,158	98,54	lysolipin I (65%)
25	terpene	47,016	68,119	pristinol (100%)
26	lanthipeptide-class-iii	45,106	67,961	polyoxin A / polyoxin H (5%)
27	melanin	34,629	45,051	melanin (28%)
28	NRPS	1	51,81	qinichelins (44%)
29	terpene	37,545	54,55	hopene (76%)
30	redox-cofactor	24,817	40,011	lankacidin C (20%)
31	T1PKS,NRPS	1	38,968	laidlomycin (28%)
32	lassopeptide	1	14,708	clavulanic acid (8%)