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A glossary for chemical approaches towards unlocking the trove of metabolic treasures in *Actinomyces*

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Table S1. Secondary metabolites detected from different classes of elicitors

Studied genera	Chemical elicitor	Produced SMs	Classification	Reference
Antibiotics				
Marine <i>Streptomyces</i> spp	Bacitracin, tetracycline	Streptophenazines E-H	Elicited	[1]
Marine <i>Streptomyces</i> spp	Tetracycline	Streptophenazines A-D	Enhanced	[1]
<i>S. griseorubiginosus</i> strain 574	Monensin 1	Isonitrile antibiotic SF2768	Elicited	[2]
<i>S. griseus</i>	Lincomycin	streptomycin	Enhanced	[2]
<i>S. lividans</i>	Lincomycin	ACT	Enhanced	[3]
<i>Streptomyces</i> Spp	Chloramphenicol	ACT, CDA and piperidamycin	Enhanced	[4]
<i>S. coelicolor</i> M145	Thiosteptone, spectinomycin	RED	Enhanced	[5]
<i>S. venezuelae</i>	Jadomycin B	Jadomycin B	Enhanced	[6]
<i>S. venezuelae</i>	RED	RED	Enhanced	[7]
<i>S. venezuelae</i> ISP5230	DHU and DHR	Jadomycin B	Enhanced	[7]
<i>S. antibioticus</i>	Chlorothricin, and 2 intermediates	Chlorothricin	Enhanced	[8]
<i>S. chartreusis</i>	Calcimycin	Calcimycin	Enhanced	[8]
<i>S. actuosus</i>	Nosiheptide	Nosiheptide	Enhanced	[9]
<i>Amycolatopsis mediterranei</i> ,	Rifamycin B	Rifamycin B	Enhanced	[9]
<i>S. venezuelae</i>	JdB	JdB	Enhanced	[10]
<i>S. avermitilis</i>	Avenolide	Avermectin	Enhanced	[10]
<i>S. avermitilis</i>	JdB apramycin, hygromycin B and kanamycin	avermectin	Enhanced	[10]

<i>S. coelicolor</i>	RED	RED, ACT, CDA	Enhanced	[10]
<i>S. albidoflavus</i> S4	Candididin	Candididin, antimycin	Enhanced	[11]
<i>S. venezuelae</i>	Jadomycin	Jadomycin, chloramphenicol	Enhanced	[7]
<i>S. autolyticus</i> CGMCC0516	Geldanamycin	Geldanamycin Elaiophylin	Enhanced	[12]
<i>Streptomyces</i> Spp	ARC2	Erythromycin oligomycin, monensin B, and ACT	Enhanced	[13]
<i>S. coelicolor</i>	ARC2	Germicidins A-C	Enhanced	[13]
<i>S. pristinaespiralis</i> ,	ARC2	Desferrioxamine B/E in	Enhanced	[14]
<i>S. peucetius</i>	ARC2	Doxorubicin, baumycin	Enhanced	[14]
<i>S. coelicolor</i>	ARC6	ACT	Enhanced	[14]
<i>S. ghanaensis</i> ATCC 14672,	CI-ARC 1	Oxohygrolidin	Elicited	[15]
<i>S. hygroscopicus</i> ATCC 53653	CI-ARC 1	9-methylstreptimidone	Elicited	[16]
WAC0256	CI-ARC 1	Dynactin,	Elicited	[17]
WAC0256	CI-ARC 1	Nonactin, monactin, trinactin	Enhanced	[17]
Histone deacetylase inhibitors				
<i>S. coelicolor</i> A3 strain M145	Sodium-butyrate, VPA	ACT	Enhanced	[18]
Hormone-like signalling molecules (autoregulators)				
<i>S. coelicolor</i>	A-factor	Streptomycin, virginamycin, Valinomycin and methylenomycin	Enhanced	[19]
<i>S. coelicolor</i>	1,4-butyrolactone	Bitespiramycin and validamycin A	Enhanced	[20]
<i>S. virginiae</i>	Butanolide-C	Virginiamycin	Enhanced	[21]
<i>Streptomyces</i> FRI-5	IM-2	Showdomycin, Minimycin	Enhanced	[22]
<i>S. coelicolor</i>	MMF	Methylenomycin A	Enhanced	[21]

<i>S. viridochromogenes</i>	factor 1	Anthracycline	Enhanced	[21]
<i>S. bikiniensis</i> , <i>S. cyaneofuscatus</i>	Grafe's	Anthracycline	Enhanced	[21]
<i>S. coelicolor</i>	7ae 1	ACT	Elicited	[19]
<i>S. coelicolor</i>	Hydroxymethylfuran	Methylenomycin	Enhanced	[19]
<i>S. avermitilis</i>	<u>Avenolide</u>	Avermectin	Enhanced	[23]
<i>S. avermitilis</i>	<u>SCB2</u>	Avenolide	Elicited	[23]
<i>S. coelicolor</i>	SCB1	ACT	Enhanced	[24]
<i>S. coelicolor</i> M1152	SCB1–3, SCB4–8	Coelimycin	Enhanced	[25]
<i>S. natalensis</i>	PI factor	Pimaricin	Enhanced	[26]
<i>S. globisporus</i> 1912-B2 and <i>S. griseus</i> 1439	MDD 2	Landomycin E and streptomycin	Elicited	[26]
Chemical signals				
<i>Micromonospora</i> sp. RV43	GlcNAc	3-formylindole, guaymasol	Enhanced	[27]
<i>Rhodococcus</i> sp. RV157		Bacillibactin, surfactin Lipopeptide 17	Enhanced	[27]
<i>Actinokineospora</i> sp. EG49	GlcNAc	Actinosporins E-H	Elicited	[28]
<i>Actinokineospora</i> <i>spheciospongiae</i>	GlcNAc	Actinosporins C D G, fridamycins H and I	Elicited	[29]
<i>Amycolatopsis alba</i> DSM 44262Δabm9	GlcNAc	Carbamothioic S-acid derivative, kigamicin derivatives	Elicited	[30]
<i>S. coelicolor</i>	<u>Desferrioxamine</u> E	Streptomycin, neomycin, kanamycin	Enhanced	[31]
Rare earth elements (REEs)				

<i>S. coelicolor</i> , <i>S. antibioticus</i> and <i>S. parvulus</i> , <i>S. griseus</i> and <i>B. subtilis</i> 168	Sc ⁺³	ACT, dactinomycin, actinomycin, streptomycin and bacilysin	Enhanced	[32]
<i>S. coelicolor</i>	Sc ⁺³	ACT	Enhanced	[32]
<i>Actinobacteria</i> strain 818	LaCl ₃	Urauchimycin D	Elicited	[33]
<i>Promicromonospora kermanensis</i> DSM 45485	La	ACT	Enhanced	[33]
Heavy metals				
Marine <i>streptomycetes</i>	Ni	Angucycline-type antibiotic	Elicited	[32]
Marine <i>Streptomyces</i> sp.	Co	Enterocin	Elicited	[34]
<i>Actinomyces</i> species	NiCl ₂	ACT	Elicited	[35]
Organic solvents				
<i>S. venezuelae</i> ATCC 10712 and <i>S. glaucescens</i> ,	Ethanol and DMSO	Chloramphenicol and tetracenomycin C	Enhanced	[36]
<i>S. azureus</i> ATCC 14921	DMSO	Thiostrepton, chloramphenicol and tetracenomycin C	Enhanced	[36]
<i>S. lividans</i>	DMSO	Prodigiosin	Elicited	[36]
<i>Promicromonospora kermanensis</i> DSM 45485	DMSO	ACT	Elicited	[18]
<i>S. venezuelae</i> ISP5230	Ethanol	Jadomycin B	Elicited	[37]
<i>S. glaucescens</i>	Ethanol	Tetracenomycin C	Elicited	[18]
HITES approach				
<i>S. albus</i> J1074—14	Etoposide	Surugamides (A, D, F, F2, F3 and G-J)	Enhanced	[38]

<i>S. albus</i> J1074	Ivermectin b1a, etoposide	Acyl surugamide A, albucyclones A-F, Albuquinone A	Elicited	[38]
<i>S. albus</i> J1074	Etoposide	Mansouramycin C	Elicited	[39]
<i>S. albus</i> J1074	Etoposide	Mansouramycin analog	Elicited	[39]
<i>Saccharopolyspora cebuensis</i>	Procaine, furosemide, fenofibrate	Cebulantin	Elicited	[40]
<i>S. hirosheimensis</i>		Taylorflavins A and B, pyridindolol, ,6,7,8-trimethoxy-3-methyliso-coumarin and 6,8-dihydroxy-3-methylisocoumarin and hirosheidine	Elicited	[41]
<i>S. lavendulae</i> and <i>S. hirosheimensis</i>	7,2'-dimethoxyflavone, isobutylmethylxanthine, and methoxyvone 2	Primaquine and procaine	Elicited	[42] [43]
<i>S. lividans</i>	<u>Goadsporin</u>	RED	Elicited	[44]
<i>Amycolatopsis. keratiniphila</i>	Aspartame, tandutinib	Baccatin III and isoscopoletin	Elicited	[41]
Cumulative effect				
<i>S. tsukubaensis</i>	SB, DMSO and LaCl ₃	Tacrolimus	Enhanced	[45]
Combinatorial engineering approach				
<i>S. hygroscopicus</i>	DMSO	<u>Ascomycin</u>	Enhanced	[46]
<i>S. hygroscopicus</i>	SB, LaCl ₃ , and H ₂ O ₂	<u>Ascomycin</u>	Enhanced	[46]
<i>S. hygroscopicus</i>	GlcNAc and γ -butyrolactones	<u>Ascomycin</u>	Enhanced	[46]

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