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*Review*

# **Fungal Naphthalenones; Promising Metabolites for Drug Discovery: Structures, Biosynthesis, Sources, and Pharmacological Potential**

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**Table S1.** List of fungal naphthalenones (Fungal source, host, and place).

Compound name	Mol. Wt.	Mol. formula	Fungal source	Host (part, family)	Location	Ref.
3,4-Dihydro-3,4,8-trihydroxy-1(2H)-naphthalenone (= 3,4-Dihydro-3,4,8-trihydroxy-1(2H)-naphthalenone = (3S,4S)-3,4,8-Trihydroxy-3,4-dihydro-1(2H)-naphthalenone = 3-Hydroxyisosclerone) (1)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Pyricularia oryzae</i> Cav. Ken 53-33	Rice blast	Japan	[33]
			<i>Ceratocystis minor</i> (Hedgc.) Hunt	<i>Dendroctonus frontalis</i> (Insect, Scolytidae)	Southern USA	[118]
			<i>Verticillium dahlia</i> brm-2 mutant	Cultured	USA	[119]
			<i>Leptographium wagenieri</i> RH50 (Kendr) var. <i>pserrabtsugae</i> = <i>Verticicladzella wagenieri</i> Kendrick	<i>Pseudotsuga menziesii</i> (Douglas fir, Pinaceae)	USA	[120]
			<i>Hypoxylon mammarum</i>	<i>Populus tremula</i> (Canker margin of infected quaking aspen, Salicaceae)	France	[121]
			<i>Tubakia dryina</i> (Sacc.) PV-6	-	East of Mississippi River, USA	[63]
			<i>Scolecotrichum graminis</i> Fuckel	Cultured	Japan	[122]
			<i>Ceratocystis fimbriata coffea</i>	<i>Coffea arabica</i> (Canker disease, Rubiaceae)	China	[41]
			<i>Nigrospora</i> sp. PSU-F5	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)	Near Similan Island, Thailand	[123]
			<i>Daldinia eschscholzii</i>	<i>Mantis religiosa</i> (Mantis, Mantidae)	China	[27]
			<i>Xylariaceae</i> sp. CR1546C	<i>Sticta fuliginosa</i> (Lichen, Lobariaceae)	Costa Rica	[63]
			<i>Aureobasidium pullulans</i>	<i>Aloe vera</i> (Leaves, Asphodelaceae)	Marrakesh, Morocco	[84]
			<i>Xylariales</i> sp. PSU-ES163	<i>Halophila ovalis</i> (Seagrass leaves, Hydrocharitaceae)	Trang, Thailand	[124]
			<i>Alternaria</i> sp. A744	<i>Morinda officinalis</i> (Twigs, Rubiaceae)	Gaoyao city, Guangdong, China	[82]

			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	Dongzhaigang, Hainan, China	[65]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	South China Sea, Dongzhaigang, Hainan, China	[65]
			<i>Cladosporium</i> sp. HDN17-58	Deep-sea sediment	Western Pacific Ocean, China	[125]
<i>trans</i> -3,4,8-Trihydroxy-1(2 <i>H</i> )-naphthalenone (= (+)- <i>trans</i> -3,4-Dihydro-3,4,8-trihydroxy-1(2 <i>H</i> )-naphthalenone = (3 <i>S</i> ,4 <i>S</i> )-4-Hydroxy-6-dehydroxyscytalone) (2)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Pyricularia oryzae</i> Cav. (Ken 53-33)	Rice blast	Japan	[126]
			<i>Lachnellula</i> sp. A 32-89	<i>Polylepis sericea</i> (Bark, Rosaceae)	Laguna Negra, Venezuela.	[35]
			<i>Massarina</i> sp.	<i>Leptogium hildenbrandii</i> (Lichen, Collemataceae)	Lijiang City, Yunnan, China	[62]
			<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid, roots, Orchidaceae)	Chiang Mai, Thailand	[21]
			<i>Pyricularia grisea</i>	<i>Cenchrus ciliaris</i> (Buffelgrass, Poaceae)	Saguaro National Monument, Arizona, USA	[34]
			<i>Penicillium polonicum</i> AP2T1	<i>Isurus oxyrinchus</i> (Gills of shark, Lamnidae)	China	[127]
			<i>Xenomyrothecium</i> sp. IMBCFP2.11	Unidentified sponge	Quang Nam sea, Vietnam	[128]
			<i>Penicillium</i> sp. KMM 4672	<i>Padina</i> sp. (Brown alga, Dictyotaceae)	Van Phong Bay, South China Sea, Vietnam	[113]
(3 <i>R</i> ,4 <i>S</i> )-3,4,8-Trihydroxy-3,4-dihydronaphthalen-1(2 <i>H</i> )-one (= (3 <i>R</i> ,4 <i>S</i> )-(+)-4-hydroxy-6-deoxyscytalone) (3)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Pyricularia oryzae</i> Cav. (Ken 53-33)	Rice blast	Japan	[129]
			<i>Sclerotinia sclerotiorum</i> (LIB.) DE BARY.	Cultured	Japan	[37]
			<i>Fusidium</i> sp.	<i>Mentha arvensis</i> (Leaves, Lamiaceae)	Hahausen, Lower Saxony, Germany	[130]

			<i>Pseudobotrytis</i> sp. FKA-25	Forest soil	Yakushima, Kagoshima Prefecture, Japan,	[131]
			<i>Colletotrichum gloeosporioides</i>	<i>Cryptocarya mandioccana</i> (Leaves, Lauraceae)	Cerrado and Atlantic Forest, Brazil	[55]
			<i>Colletotrichum acutatum</i> IMI 348489	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	France	
			<i>Colletotrichum acutatum</i> IMI 364856	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	Spain	
			<i>Colletotrichum. acutatum</i> UCA 1028	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	Conil, Cádiz	[132]
			<i>Botrytis fabae</i> Bf-CO-05	<i>Vicia faba</i> (Bean, Fabaceae)	Cordoba field, Institute for Sustainable Agriculture, CSIC, Cordoba, Spain	[44]
			<i>Embellisia eureka</i>	Cultured	Germany	[133]
			<i>Xylariaceae</i> sp. SCSGAF0086	<i>Melitodes squamata</i> (Gorgonian coral, Melithaeinae)	South China Sea, China	[134]
			<i>Xylariaceae</i> sp. CR1546C	<i>Sticta fuliginosa</i> (Lichen, Lobariaceae)	Costa Rica	[63]
(2S,4S)-3,4-Dihydro-2,4,8-trihydroxy-1(2H)-naphthalenone (= (-)- <i>trans</i> -3,4-Dihydro-2,4,8-trihydroxynaphthalen-1(2H)-one) (4)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Urnula craterium</i> (Schw.: Fr.)	Cultured	Canada	[36]
			<i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	Cultured	Madonna del Piano, Ticino, Switzerland	[39]
			<i>Botrytis fabae</i> Bf-CO-05	<i>Vicia faba</i> (Bean, Fabaceae)	Cordoba field, Institute for Sustainable Agriculture, CSIC, Cordoba, Spain	[44]

			<i>Alternaria</i> sp. A744	<i>Morinda officinalis</i> (Twigs, Rubiaceae)	Gaoyao city, Guangdong, China	[82]
			<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(-)- <i>trans</i> -3,4-Dihydro-2,4,8-trihydroxynaphthalen-1(2 <i>H</i> )-one (5)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	Cultured	Madonna del Piano, Ticino, Switzerland	[39]
(+)- <i>cis</i> -3,4-Dihydro-2,4,8-trihydroxynaphthalen-1(2 <i>H</i> )-one (6)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(2 <i>S</i> ,4 <i>R</i> )-2,4,8-Trihydroxy-3,4-dihydronaphthalen-1(2 <i>H</i> )-one (7)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Mycosphaerella fijiensis</i> IMI 105378	<i>Musa sapientum</i> (Musaceae)	San Pedro Sula, Honduras	[40]
Sclerone (= (4 <i>R</i> )-(-)-Regiolone = (4 <i>R</i> )-3,4-Dihydro-4,8-dihydroxy-1(2 <i>H</i> )-naphthalenone = 4,8-Dihydroxytetralone) (8)	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Sclerotinia sclerotiorum</i> (LIB.) DE BARY	Cultured	Japan	[37]
			<i>Scytalidium</i> sp.	Cultured	Japan	[57]
			<i>Verticillium dahlia</i> brm-2 mutant	Cultured	USA	[119]
			<i>Penicillium diversum</i> var. <i>aureum</i>	Cultured	Japan	[83]
			<i>Discula</i> sp.	<i>Cornus florida</i> (Cornaceae)	North Carolina and Georgia, USA	[135]
			<i>Cladosporium cladosporioides</i> <i>Cladosporium sphaerospermum</i>	<i>Cryptocarya mandioccana</i> (Leaves, Lauraceae)	Cerrado and Atlantic Forest, Brazil	[55]
			<i>Caryospora callicarpa</i> YMF1.01026	Submerged woody substrate, freshwater	Yunnan Province, China	[52]
			<i>Colletotrichum acutatum</i> IMI 348489	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	France	

			<i>Colletotrichum acutatum</i> IMI 364856	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	Spain	[132]
			<i>Colletotrichum acutatum</i> UCA 1028	<i>Fragaria ananassa</i> (Strawberry plant, Rosaceae)	Conil, Cádiz	
			<i>Coniothyrium</i> sp. 193H77	<i>Ectyplasia perox</i> (Marine sponges)	Caribbean Sea, Dominica	[136]
			<i>Daldinia eschscholzii</i>	<i>Mantis religiosa</i> (Mantis, Mantidae)	China	[27]
			<i>Xylariaceae</i> sp. SCSGAF0086	<i>Melitodes squamata</i> (Gorgonian coral, Melithaeinae)	South China Sea, China	[134]
			<i>Phialocephala fortinii</i>	<i>Pamelia</i> sp. (Lichen, Parmeliaceae)	Mount Qingliang, Zhejiang, China	[137]
			<i>Pestalotiopsis</i> sp. EJC07	<i>Bauhinia guianensis</i> (Fabaceae)	Belém-PA, Brasil	[138]
			<i>Colletotrichum aotearoa</i> 09F0161	<i>Bredia oldhamii</i> (Leaves, Melastomataceae)	Taiwan	[139]
			<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China	[95]
			<i>Colletotrichum</i> sp. GDMU-1	<i>Santalum album</i> (Leaves, Santalaceae)	Dongguan, Guangdong, China	[112]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	South China Sea, Dongzhaigang, Hainan, China	[65]
4(S)-(+)-Isosclerone (= (4S)-3,4-Dihydro-4,8-dihydroxy-1(2H)-naphthalenone = (-)-(4S)-4,8-Dihydroxy- $\alpha$ -tetralone) (9)	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Sclerotinia sclerotiorum</i> (LIB.) DE BARY	Cultured	Japan	[37]
			<i>Penicillium diversum</i> var. <i>aureum</i>	Cultured	Japan	[83]
			<i>Pyricularia oryzae</i> Cav. (Ken 53-33)	Rice blast	Japan	[126]
			<i>Tubakia dryina</i> (Sacc.) PV-6	East of the Mississippi River	USA	[63]
			<i>Scolecotrichum graminis</i> Fuckel	Cultured	Japan	[122]
			<i>Phaeoacremonium aleophilum</i> (Pal) PVFi69-257	<i>Vitis vinifera</i> (Grapevine, Vitaceae)	Italy	[42]

<i>Urnula craterium</i> (Schw.: Fr.)	Cultured	Canada	[36]
<i>Cytospora eucalypticola</i>	<i>Eucalyptus perriniana</i> (Spinning gum bark, Myrtaceae)	Royal Botanic Gardens, Kew, UK	[140]
<i>Xylariaceous</i> sp. PSU-A80	<i>Garcinia atroviridis</i> (Leaves, Clusiaceae)	Songkhla Province, Thailand	[97]
<i>Caryospora callicarpa</i> YMF1.01026	Submerged woody substrate, freshwater	Yunnan Province, China	[52]
<i>Phaeosphaeria</i> sp.	<i>Bambusa vulgaris</i> (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand	[61]
<i>Papulaspora immersa</i>	<i>Smallanthus sonchifolius</i> (Leaves and roots, Asteraceae)	Ribeirão Preto, São Paulo State, Brazil.	[141]
<i>Neofusicoccum parvum</i>	<i>Vitis vinifera</i> cv. <i>Parellada</i> (Cankered branch, Vitaceae)	Catalonia, NE, Spain	[142]
<i>Botrytis fabae</i> Bf-CO-05	<i>Vicia faba</i> (Bean, Fabaceae)	Cordoba field, Institute for Sustainable Agriculture, CSIC, Cordoba, Spain	[44]
<i>Paraphoma radicina</i> G104	Submerged wood, freshwater lake	Greensboro, North Carolina, USA	[143]
<i>Aspergillus fumigatus</i>	Marine green algae, surface	Seosaeng-myeon, Ulsan, Korea	[58]
<i>Scytalidium album</i> MSX51631	Cultured	Cobb County, GA, USA	[59]
<i>Daldinia eschscholtzii</i> PSUSTD57	<i>Bruguiera gymnorrhiza</i> (Mangrove plant leaves, Rhizophoraceae)	Suratthani, Thailand	[64]

			<i>Neofusicoccum parvum</i> B19	<i>Vitis vinifera</i> (Declining vines of grapevine, Vitaceae)	Inzolia, Sicily	[46]
			<i>Xylariales</i> sp. PSU-ES163	<i>Halophila ovalis</i> (Seagrass leaves, Hydrocharitaceae)	Trang, Thailand	[124]
			<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China	[95]
			<i>Pyricularia grisea</i>	<i>Cenchrus ciliaris</i> (Buffelgrass, Poaceae)	Saguaro National Monument, Arizona, USA	[47]
			<i>Alternaria</i> sp. A744	<i>Morinda officinalis</i> (Twigs, Rubiaceae)	Gaoyao city, Guangdong, China	[82]
			<i>Cytospora eugeniae</i> BCC42696	<i>Arenga pinnata</i> (Petiole, Arecaceae)	Oil palm garden, Trang, Thailand	[144]
			<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China	[145]
			<i>Scytalidium thermophilum</i> YMF 1.04054	Soil	Hotspring National Park, Yunnan, China	[146]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	Dongzhaigang, Hainan, China	[65]
4(S)-(+)-Isosclerone acetate (10)	220	C <sub>12</sub> H <sub>12</sub> O <sub>4</sub>	<i>Cytospora</i> sp.	<i>Ilex canariensis</i> (Aquifoliaceae)	Gomera, Spain	[60]
Xylarenone (11)	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Xylariaceous</i> sp. PSU-A80	<i>Garcinia atroviridis</i> (Leaves, Clusiaceae)	Songkhla Province, Thailand	[97]
			<i>Xylariales</i> sp. PSU-ES163	<i>Halophila ovalis</i> (Seagrass leaves, Hydrocharitaceae)	Trang, Thailand	[124]
(±)-Isosclerone (12)	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Guignardia laricina</i>	<i>Larix leptolepis</i> (Pinaceae)	Japan	[147]
			Unidentified freshwater fungus YMF 1.01029	Split of decaying branches of an unidentified tree	Near Lake Fuxian in Yunnan Province, China	[51]



			<i>Botryosphaeria australis</i> ZJ12-1A	<i>Sonneratia apetala</i> (Mangrove plant, Lythraceae)	Xiamen Haicang mangrove Conservation Area, Fujian, China	[74]
(3 <i>S</i> ,4 <i>R</i> )-4,8-Dihydroxy-3-methoxy-3,4-dihydro-1(2 <i>H</i> )-naphthalenone ( <b>13</b> )	208	C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>Phaeosphaeria</i> sp.	<i>Bambusa vulgaris</i> (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand	[61]
3,8-Dihydroxy-3,4-dihydronaphthalen-1(2 <i>H</i> )-one (= Vermelone) ( <b>14</b> )	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Ceratocystis minor</i> (Hedgc.) Hunt	<i>Dendroctonus frontalis</i> (Insect, Scolytidae)	Southern USA	[118]
			<i>Ceratocystis fimbriata coffea</i>	<i>Coffea arabica</i> (Canker disease, Rubiaceae)	China	[41]
			<i>Phaeosphaeria</i> sp.	<i>Bambusa vulgaris</i> (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand	[61]
(4 <i>S</i> )-4-Hydroxy-3,4-dihydronaphthalen-1(2 <i>H</i> )-one ( <b>15</b> )	162	C <sub>10</sub> H <sub>10</sub> O <sub>2</sub>	<i>Didymella glomerata</i> X223	<i>Saussurea laniceps</i> (Roots, Asteraceae)	Tibet Kangbu hot, Yadong, Shigatse, Tibet, China	[148]
(4 <i>S</i> )-4,6-Dihydroxy-3,4-dihydronaphthalen-1(2 <i>H</i> )-one ( <b>16</b> )	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Didymella glomerata</i> X223	<i>Saussurea laniceps</i> (Roots, Asteraceae)	Tibet Kangbu hot, Yadong, Shigatse, Tibet, China	[148]
(+) -Scytalone (= 3,6,8-Trihydroxytetralone = rac-Scytalone) ( <b>17</b> )	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Scytalidium</i> sp.	Cultured	Japan	[57]
			<i>Verticillium dahlia</i> T9	Cultured	USA	[149]
			<i>Verticillium dahlia</i> brm-2 mutant	Cultured	USA	[119]
			<i>Ceratocystis fimbriata coffea</i>	<i>Coffea arabica</i> (Canker disease, Rubiaceae)	China	[82]
			<i>Phaeoacremonium aleophilum</i> (Pal) PVFi69-257	<i>Vitis vinifera</i> (Grapevine, Vitaceae)	Italy	[42]

			<i>Lachnellula</i> sp. A 32-89	<i>Polylepis sericea</i> (Bark, Rosaceae)	Laguna Negra, Venezuela	[35]
			<i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	Cultured	Madonna del Piano, Ticino, Switzerland	[39]
			<i>Botrytis fabae</i> Bf-CO-05	<i>Vicia faba</i> (Bean, Fabaceae)	Cordoba field, Institute for Sustainable Agriculture, CSIC, Cordoba, Spain	[44]
			<i>Annulohypoxylon</i> sp.	<i>Rhizophora racemosa</i> (Mangrove plant fruits, Rhizophoraceae)	Cameroon	[150]
			<i>Raffaelea quercivora</i> JCM 11526	<i>Platypus quercivorus</i> (Ambrosia beetle, Curculionidae)	Japan	[43]
(3R)-3,8-Dihydroxy-6-methoxy-tetralone (18)	208	C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>Phomopsis</i> sp. sh917	<i>Isodon eriocalyx</i> var. <i>laxiflora</i> (Stem, Lamiaceae)	Kunming Botanical Garden, Kunming, China,	[85]
<i>cis</i> -4-Hydroxyscytalone (= 3 <i>S</i> ,4 <i>R</i> -Hydoxy-scytalone) (19)	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Raffaelea quercivora</i> JCM 11526	<i>Platypus quercivorus</i> (Ambrosia beetle, Curculionidae)	Japan	[43]
	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Mycosphaerella fijiensis</i> IMI 105378	<i>Musa sapientum</i> (Musaceae)	San Pedro Sula, Honduras	[40]
			<i>Ceratocystis fimbriata coffea</i>	<i>Coffea arabica</i> (Canker disease, Rubiaceae)	China	[41]
			<i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	Cultured	Madonna del Piano, Ticino, Switzerland	[39]
			<i>Caryospora callicarpa</i> YMF1.01026	Submerged woody substrate, freshwater	Yunnan Province, China	[52]
			<i>Daldinia eschscholzii</i>	<i>Mantis religiosa</i> (Mantis, Mantidae)	China	[27]
			<i>Alternaria</i> sp. A744	<i>Morinda officinalis</i> (Twigs, Rubiaceae)	Gaoyao city, Guangdong, China	[82]

(±)-Scytalone (= 3,6,8-Trihydroxytetralone) (20)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	Xylariaceae sp. SCSGAF0086	Melitodes squamata (Gorgonian coral, South China Sea, Melithaeinae) China	[134]
6-Hydroxyisosclerone (21)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	Tubakia dryina (Sacc.) PV-6	East of the Mississippi River	USA [63]
			Aureobasidium pullulans	Aloe vera (Leaves, Asphodelaceae)	Marrakesh, Morocco [84]
			Alternaria sp. A744	Morinda officinalis (Twigs, Rubiaceae)	Gaoyao city, Guangdong, China [82]
			Paraphoma sp. HR-12-1	Desert	Beijing, china [87]
4,6,8-Trihydroxy-3,4-dihydronaphthalen-1(2H)-one (22)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	Pyricularia oryzae Cav. (Ken 53-33)	Rice blast	Japan [129]
			Sclerotinia sclerotiorum (LIB.) DE BARY.	Cultured	Japan [37]
			Daldinia eschscholzii	Mantis religiosa (Mantis, Mantidae)	China [27]
			Ceratocystis minor (Hedgc.) Hunt	Dendroctonus frontalis (Insect, Scolytidae)	Southern USA [118]
			Caryospora callicarpa YMF1.01026	Submerged woody substrate, freshwater	Yunnan Province, China [52]
			Phaeosphaeria sp.	Bambusa vulgaris (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand [61]
			Unidentified freshwater fungus YMF 1.01029	Split of decaying branches of an unidentified tree	Near Lake Fuxian in Yunnan Province, China [51]
			Thermomyces lanuginosus YMF 1.04048	Soil	Hotspring National Park, Yunnan, China [146]
Didymelol A (23)	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	Didymella glomerata X223	Saussurea laniceps (Roots, Asteraceae)	Tibet Kangbu hot, Yadong, Shigatse, Tibet, China [148]

(3S,4R)-3,4,6-Trihydroxy-3,4-dihydronaphthalen-1(2H)-one (24)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Didymella glomerata</i> X223	<i>Saussurea laniceps</i> (Roots, Asteraceae)	Tibet Kangbu hot, Yadong, Shigatse, Tibet, China	[148]
(R)-4,6,8-trihydroxy-3,4-dihydro-1(2H)-naphthalenone (25)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Xylariaceae</i> sp. CR1546C	<i>Sticta fuliginosa</i> (Lichen, Lobariaceae)	Costa Rica	[63]
			<i>Xylaria</i> sp. SYPF 8246	<i>Panax notoginseng</i> , roots (Araliaceae)	Wenshan, Yunnan, China	[151]
(3R,4R)-3,4-Dihydro-3,4,6,8-tetrahydroxy-1(2H)-naphthalenone (26)	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Xylariales</i> sp. PSU-ES163	<i>Halophila ovalis</i> (Seagrass leaves, Hydrocharitaceae)	Trang, Thailand	[124]
			<i>Thermomyces lanuginosus</i> YMF 1.04048	Soil	Hotspring National Park, Yunnan, China	[146]
3,4,8-Trihydroxy-6-(hydroxymethyl)-3,4-dihydronaphthalen-1(2H)-one (27)	224	C <sub>11</sub> H <sub>12</sub> O <sub>5</sub>	<i>Daldinia eschscholzii</i>	<i>Mantis religiosa</i> (Mantis, Mantidae)	China	[27]
3,4,6,8-Tetrahydroxy-3,4-dihydronaphthalen-1(2H)-one (28)	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Sclerotinia sclerotiorum</i> (LIB.) DE BARY.	Cultured	Japan	[37]
			<i>Ceratocystis minor</i> (Hedgc.) Hunt	<i>Dendroctonus frontalis</i> (Insect, Scolytidae)	Southern USA	[118]
			<i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	Cultured	Madonna del Piano, Ticino, Switzerland	[39]
			<i>Phaeosphaeria</i> sp.	<i>Bambusa vulgaris</i> (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand	[61]
			<i>Annulohypoxylon</i> sp.	<i>Rhizophora racemosa</i> (Mangrove plant fruits, Rhizophoraceae)	Cameroon	[150]
Phomopsiketone C (29)	224	C <sub>11</sub> H <sub>12</sub> O <sub>5</sub>	<i>Phomopsis</i> sp. sh917	<i>Isodon eriocalyx</i> var. <i>laxiflora</i> (Stem, Lamiaceae)	Kunming Botanical Garden, Kunming, China,	[85]
(3R,4R)-3,4,8-trihydroxy-6-methoxy-3,4-dihydro-1(2H)-naphthalenone (30)	224	C <sub>11</sub> H <sub>12</sub> O <sub>5</sub>	<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China.	[145]

(3S,4S)-3,4,8-Trihydroxy-6-methoxy-3,4-dihydro-1(2H)-naphthalenone (31)	224	C <sub>11</sub> H <sub>12</sub> O <sub>5</sub>	<i>Phaeosphaeria</i> sp.	<i>Bambusa vulgaris</i> (Decaying bamboo stem, Poaceae)	Queen Sirikit Botanic Garden, Chiang Mai, Thailand	[61]
			<i>Neofusicoccum austral</i> BL24 (haplotype H1)	<i>Phoenixian juniper</i> (Symptomatic branch, Cupressaceae)	Natural area on Caprera Island, Italy	[45]
(3S,4S)-4-Hydroxyscytalone (32)	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Penicillium</i> sp. KMM 4672	<i>Padina</i> sp. (Brown alga, Dictyotaceae)	Van Phong Bay, South China Sea, Vietnam	[113]
2,4,6,8-Tetrahydroxy-3,4-dihydronaphthalen-1(2H)-one (33)	210	C <sub>10</sub> H <sub>10</sub> O <sub>5</sub>	<i>Sclerotinia sclerotiorum</i> (LIB.) DE BARY	Cultured	Japan	[37]
Teratosphaerone B (34)	222	C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>	<i>Teratosphaeria</i> sp. FL2137	<i>Pinus clausa</i> (Leaves, Pinaceae)	The ground of a pine dominated scrub forest, Archbold Biological Station in Florida, USA	[152]
(3S,4R)-(+)-3,4,5-Trihydroxy-1-tetralone (= 4-Hydroxy-6-deoxyscytalone) (35)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Xylariaceae</i> sp. SCSGAF0086	<i>Melitodes squamata</i> (Gorgonian coral, Melithaeinae)	South China Sea, China	[134]
(4S)-5-Hydroxy-4-methoxy- $\alpha$ -tetralone (36)	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Cytospora eugeniae</i> BCC42696	<i>Arenga pinnata</i> (Petiole, Arecaceae)	Oil palm garden, Trang, Thailand	[144]
(4R)-(-)-5-O-Methylsclerone (37)	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Xylariaceae</i> sp. SCSGAF0086	<i>Melitodes squamata</i> (Gorgonian coral, Melithaeinae)	South China Sea, China	[134]
(R)-4,5-Dihydroxy-3,4-dihydronaphthalen-1(2H)-one (38)	178	C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	<i>Phialocephala fortinii</i>	<i>Pamelia</i> sp. (Lichen, Parmeliaceae)	Mount Qingliang, Zhejiang, China	[137]
(4R)-(-)-5-Hydroxy-4-methoxy-1-tetralone (39)	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Xylariaceae</i> sp. SCSGAF0086	<i>Melitodes squamata</i> (Gorgonian coral, Melithaeinae)	South China Sea, China	[134]
(3S*,4S*)-3,4,5-trihydroxy-1-tetralone (40)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Neofusicoccum parvum</i> B19	<i>Vitis vinifera</i> (Declining vines of grapevine, Vitaceae)	Inzolia, Sicily	[46]
			<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid roots, Orchidaceae)	Chiang Mai, Thailand	[21]

3,4-Dihydro-3,4,5-trihydroxy-1(2H)-naphthalenone (41)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Hypoxylon mammarium</i>	<i>Populus tremula</i> (Canker margin of an infected quaking aspen, Salicaceae)	France	[121]
Botrytone (42)	194	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	<i>Botrytis fabae</i> Bf-CO-05	<i>Vicia faba</i> (Bean, Fabaceae)	Cordoba field, Institute for Sustainable Agriculture, CSIC, Cordoba, Spain	[44]
(3S)-3,8-Dihydroxy-6,7-dimethyl- $\alpha$ -tetralone (43)	206	C <sub>12</sub> H <sub>14</sub> O <sub>3</sub>	<i>Daldinia eschscholtzii</i> PSUSTD57	<i>Bruguiera gymnorrhiza</i> (Mangrove plant leaves, Rhizophoraceae)	Suratthani, Thailand	[64]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Rhizophoraceae)	South China Sea, Dongzhaigang, Hainan, China	[65]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	Dongzhaigang, Hainan, China	[65]
(-)-cis-(3R*,4S*)-3,4,8-Trihydroxy-6,7-dimethyl-3,4-dihydro-1(2H)-naphthalenone (44)	222	C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>	<i>Nodulisporium</i> sp.	<i>Antidesma ghaesembilla</i> (Fresh twigs, Phyllanthaceae)	Chiang Mai, Thailand	[66]
Nodulone C (45)	222	C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>	<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid roots, Orchidaceae)	Chiang Mai, Thailand	[21]
Asparvenone (46)	224	C <sub>11</sub> H <sub>12</sub> O <sub>5</sub>	<i>Aspergillus parvulus</i>	Cultured	USA	[153]
			<i>Aspergillus parvulus</i> FB6036	Cultured	Japan	[102]
6-O-Methylasparvenone (47)	238	C <sub>12</sub> H <sub>14</sub> O <sub>5</sub>	<i>Aspergillus parvulus</i>	Cultured	USA	[153]
			<i>Lachnum papyraceum</i> A48-88 (Karst.) Karst	Cultured	Germany	[44]
			<i>Aspergillus parvulus</i> FB6036	Cultured	Japan	[102]
			<i>Neofusicoccum austral</i> SYSU-SKS024	<i>Kandelia candel</i> (Mangrove plant branches, Rhizophoraceae)	Shankou, Guangxi, China	[107]
3,4-Dihydro-4,8-dihydroxy-6-methoxy-7-methyl-1(2H)-naphthalenone (48)	222	C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>	<i>Lachnum papyraceum</i> A48-88 (Karst.) Karst (Hyaloscyphaceae)	Cultured	Germany	[44]

(3 <i>R</i> *,4 <i>S</i> *)-3,4-Dihydroxy-7-methyl-3,4-dihydro-1(2 <i>H</i> )-naphthalenone ( <b>49</b> )	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Acremonium roseogriseum</i> (S. B. Saksena) W. Gams	<i>Cladostephus spongius</i> (Brown alga)	Mediterranean Sea, Spanish coast, Moraira	[98]
(3 <i>S</i> *,4 <i>S</i> *)-3,4-Dihydroxy-7-methyl-3,4-dihydro-1(2 <i>H</i> )-naphthalenone ( <b>50</b> )	192	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>	<i>Acremonium roseogriseum</i> (S. B. Saksena) W. Gams	<i>Cladostephus spongius</i> (Brown alga)	Mediterranean Sea, Spanish coast, Moraira	[98]
Corynenone A ( <b>51</b> )	240	C <sub>11</sub> H <sub>12</sub> O <sub>6</sub>	<i>Corynespora cassiicola</i> XS-2009017	Unidentified sponge (XS-2009001)	Xisha Islands coral reef, South China Sea, China	[114]
Corynenone B ( <b>52</b> )	240	C <sub>11</sub> H <sub>12</sub> O <sub>6</sub>	<i>Corynespora cassiicola</i> XS-2009017	Unidentified sponge (XS-2009001)	Xisha Islands coral reef, South China Sea, China	[114]
Botryosphaerone D ( <b>53</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Botryosphaeria australis</i> ZJ12-1A	<i>Sonneratia apetala</i> (Mangrove plant, Lythraceae)	Xiamen Haicang mangrove Conservation Area, Fujian, China	[74]
			<i>Neofusicoccum austral</i> BL24 (haplotype H1)	<i>Phoenicean juniper</i> (Symptomatic branch, Cupressaceae)	Vatural area on Caprera Island, Italy	[45]
			<i>Neofusicoccum austral</i> SYSU-SKS024	<i>Kandelia candel</i> (Mangrove plant branches, Rhizophoraceae)	Shankou, Guangxi, China	[107]
(3 <i>R</i> ,4 <i>R</i> )-3-Methoxyl-botryosphaerone D ( <b>54</b> )	266	C <sub>14</sub> H <sub>18</sub> O <sub>5</sub>	<i>Neofusicoccum austral</i> SYSU-SKS024	<i>Kandelia candel</i> (Mangrove plant branches, Rhizophoraceae)	Shankou, Guangxi, China	[107]
Botryosphaerone E ( <b>55</b> )	266	C <sub>14</sub> H <sub>18</sub> O <sub>5</sub>	<i>Pyrenochaetopsis</i> sp. MSX63693	Cultured	USA	[86]
4,8-Dihydroxy-7-(2-hydroxy-ethyl)-6-methoxy-3,4-dihydro-2 <i>H</i> -naphthalen-1-one ( <b>56</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Mycelia sterilia</i>	Sponge	China	[154]
(-)-4,8-Dihydroxy-7-(2-hydroxy-ethyl)-6-methoxy-3,4-dihydro-2 <i>H</i> -naphthalen-1-one ( <b>57</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(+)-10-Norparvulenone ( <b>58</b> )	236	C <sub>13</sub> H <sub>16</sub> O <sub>4</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City,	[91]

					Guangdong, China	
4,6,8-Trihydroxy-5-methyl-3,4-dihydronaphthalen-1(2H)-one (59)	208	C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>Paraphoma</i> sp. HR-12-1	Desert	Beijing, china	[87]
3S*,4S*-7-Ethyl-4,8-dihydroxy-3,6-dimethoxy-3,4-dihydronaphthalen-1(2H)-one (60)	266	C <sub>14</sub> H <sub>18</sub> O <sub>5</sub>	<i>Delitschia</i> sp. JF16003	Submerged wood	Ariège, Rimont, France	[155]
(3R*,4S*)-7-Ethyl-3,4,6,8-tetrahydroxy-3,4-dihydronaphthalen-1(2H)-one (61)	238	C <sub>12</sub> H <sub>14</sub> O <sub>5</sub>	<i>Delitschia corticola</i>	Submerged wood	Freshwater habitat, Yunnan, China	[67]
(-)-trans-(3R,4R)-3,4,8-Trihydroxy-6,7-dimethyl-3,4-dihydronaphthalen-1(2H)-one (62)	222	C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>	<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Mangrove plant, Rhizophoraceae)	Dongzhaigang, Hainan, China	[65]
			<i>Cladosporium</i> sp. JJM22	<i>Ceriops tagal</i> (Rhizophoraceae)	South China Sea, Dongzhaigang, Hainan, China	[65]
Nodulone (63)	236	C <sub>12</sub> H <sub>12</sub> O <sub>5</sub>	<i>Nodulisporium</i> sp. A4	<i>Aquilaria sinensis</i> (Stems, Thymelaeaceae)	Xinyi, Guangdong Province, China	[156]
			<i>Daldinia eschscholtzii</i>	<i>Mantis religiosa</i> (Mantis, Mantidae)	China	[27]
			<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid roots, Orchidaceae)	Chiang Mai, Thailand	[21]
(-)-cis-(7R*,8S*)-4,7,8-Trihydroxy-3,6,7,8-tetrahydronaphtho[2,3-c]furan-5(1H)-one (64)	236	C <sub>12</sub> H <sub>12</sub> O <sub>5</sub>	<i>Nodulisporium</i> sp.	<i>Antidesma ghaesembilla</i> , (Fresh twigs, Phyllanthaceae)	Chiang Mai, Thailand	[66]
Nodulone B (65)	220	C <sub>12</sub> H <sub>12</sub> O <sub>4</sub>	<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid roots, Orchidaceae)	Chiang Mai, Thailand	[21]
3,4-Dihydro-3-(2(ξ)-hydroxypropyl)-3(ξ),6,8-trihydroxy-1(2H)-naphthalenone (66)	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Botryosphaeria</i> sp. BCC 8200	<i>Musa</i> sp. (Musaceae)	Doi Suthep-Pui National Park, Chiang Mai Province, Thailand	[68]
3,4-Dihydro-3-(2-oxo-propyl)-3(ξ),6,8-trihydroxy-1(2H)-naphthalenone (67)	250	C <sub>13</sub> H <sub>14</sub> O <sub>5</sub>	<i>Botryosphaeria</i> sp. BCC 8200	<i>Musa</i> sp. (Musaceae)	Doi Suthep-Pui National Park, Chiang Mai	[68]



						Province, Thailand	
3,6,8-Trihydroxy-3-[3,5-dimethyl-2-oxo-3( <i>E</i> )-heptenyl]-2,3-dihydronaphthalen-1(4 <i>H</i> )-one (68)	332	C <sub>19</sub> H <sub>24</sub> O <sub>5</sub>	<i>Keissleriella</i> sp. Y4108	Marine sediment	Yellow Sea, Sheyang port, China	[69]	
3,4-Dihydro-3-(4(ξ)-hydroxy-2-oxo-pentyl)-3(ξ),6,8-trihydroxy-1(2 <i>H</i> )-naphthalenone (69)	294	C <sub>15</sub> H <sub>18</sub> O <sub>6</sub>	<i>Botryosphaeria</i> sp. BCC 8200	<i>Musa</i> sp. (Musaceae)	Doi Suthep-Pui National Park, Chiang Mai Province, Thailand	[68]	
Scytalol A (70)	294	C <sub>15</sub> H <sub>18</sub> O <sub>6</sub>	<i>Scytalidium</i> sp. 36-93	Infected body of <i>Basidiomycete</i> growing on wood	Germany	[105]	
Scytalol B (71)	308	C <sub>16</sub> H <sub>20</sub> O <sub>6</sub>	<i>Scytalidium</i> sp. 36-93	Infected body of <i>Basidiomycete</i> growing on wood	Germany	[105]	
Scytalol C (72)	320	C <sub>17</sub> H <sub>20</sub> O <sub>6</sub>	<i>Scytalidium</i> sp. 36-93	Infected body of <i>Basidiomycete</i> growing on wood	Germany	[105]	
			<i>Pleosporales</i> strain 222	Driftwood	Coast of the Greifswalder Bodden, Baltic Sea, Germany	[70]	
			<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]	
Scytalol D (73)	264	C <sub>14</sub> H <sub>16</sub> O <sub>5</sub>	<i>Scytalidium</i> sp. 36-93	Infected body of a <i>Basidiomycete</i> growing on wood	Germany	[105]	
			<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]	
Balticol A (74)	264	C <sub>14</sub> H <sub>16</sub> O <sub>5</sub>	<i>Pleosporales</i> strain 222,	Driftwood	Coast of the Greifswalder Bodden, Baltic Sea, Germany	[70]	

			<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China [157]
			<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China [145]
Balticol B (75)	238	C <sub>12</sub> H <sub>14</sub> O <sub>5</sub>	<i>Pleosporales</i> strain 222	Driftwood	Coast of the Greifswalder Bodden, Baltic Sea, Germany [70]
			<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China [145]
Iso-Balticol B-4,9-acetonide (76)	278	C <sub>15</sub> H <sub>18</sub> O <sub>5</sub>	<i>Teratosphaeria</i> sp. FL2137	<i>Pinus clausa</i> (Leaves, Pinaceae)	The ground of a pine dominated scrub forest, Archbold Biological Station in Florida, USA [152]
Iso-Balticol B (77)	238	C <sub>12</sub> H <sub>14</sub> O <sub>5</sub>	<i>Teratosphaeria</i> sp. FL2137	<i>Pinus clausa</i> (Leaves, Pinaceae)	The ground of a pine-dominated scrub forest, Archbold Biological Station in Florida, USA [152]
Balticol C (78)	254	C <sub>12</sub> H <sub>14</sub> O <sub>6</sub>	<i>Pleosporales</i> strain 222	Driftwood	Coast of the Greifswalder Bodden, Baltic Sea, Germany [70]
(+)-Balticol C (79)	254	C <sub>12</sub> H <sub>14</sub> O <sub>6</sub>	<i>Teratosphaeria</i> sp. FL2137	<i>Pinus clausa</i> (Leaves, Pinaceae)	The ground of a pine-dominated scrub forest, Archbold Biological [152]

						Station in Florida, USA
Balticol D (80)	280	C <sub>14</sub> H <sub>16</sub> O <sub>6</sub>	<i>Pleosporales</i> strain 222	Driftwood		Coast of the Greifswalder Bodden, Baltic Sea, Germany [70]
Balticol E (81)	282	C <sub>14</sub> H <sub>18</sub> O <sub>6</sub>	<i>Pleosporales</i> strain 222	Driftwood		Coast of the Greifswalder Bodden, Baltic Sea, Germany [70]
			<i>Biatrispora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)		Changbai Mountain, Jilin, China [157]
Balticol F (82)	294	C <sub>15</sub> H <sub>18</sub> O <sub>6</sub>	<i>Pleosporales</i> strain 222	Driftwood		Coast of the Greifswalder Bodden, Baltic Sea, Germany [70]
			<i>Biatrispora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)		Changbai Mountain, Jilin, China [157]
Fusaranthraquinone (83)	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	<i>Fusarium</i> spp. PSU-F14 and PSU-F135	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)		Koh Hin Ran Pet, Suratthani, Thailand [72]
9α-Hydroxydihydrodesoxybostrycin (84)	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	PSU-N24	<i>Garcinia nigrolineata</i> (Branch, Clusiaceae)		Ton Nga Chang wildlife sanctuary, Songkhla, southern Thailand [71]
9α-Hydroxyhalorosellinia A (85)	340	C <sub>16</sub> H <sub>20</sub> O <sub>8</sub>	PSU-N24	<i>Garcinia nigrolineata</i> (Branch, Clusiaceae)		Ton Nga Chang wildlife sanctuary, Songkhla, [71]

					southern Thailand	
			<i>Fusarium</i> spp. PSU-F14 and PSU-F135	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)	Koh Hin Ran Pet, Suratthani, Thailand	[72]
Fusarnaphthoquinone A (86)	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium</i> spp. PSU-F14 and PSU-F135	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)	Koh Hin Ran Pet, Suratthani, Thailand	[72]
Fusarnaphthoquinone B (87)	276	C <sub>15</sub> H <sub>16</sub> O <sub>5</sub>	<i>Fusarium</i> spp. PSU-F14 and PSU-F135	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)	Koh Hin Ran Pet, Suratthani, Thailand	[72]
			<i>Fusarium</i> spp. PSU-F14 and PSU-F135	<i>Annella</i> sp. (Gorgonian Sea fan, Gorgoniidae)	Koh Hin Ran Pet, Suratthani, Thailand	[72]
3-Demethoxyl-fusarnaphthoquinone B (88)	246	C <sub>14</sub> H <sub>14</sub> O <sub>4</sub>	<i>Fusarium</i> sp. HP-2	<i>Aquilaria malaccensis</i> (Agarwood, Thymelaeaceae)	Ledong County, Hainan, China	[108]
9S-Hydroxydihydrodesoxybostrycin (89)	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	PSU-N24	<i>Garcinia nigrolineata</i> (Branch, Clusiaceae)	Ton Nga Chang wildlife sanctuary, Songkhla, southern Thailand	[71]
Perenniporide A (90)	334	C <sub>17</sub> H <sub>18</sub> O <sub>7</sub>	<i>Perenniporia</i> sp.	<i>Euops chinensis</i> (Leaf-rolling weevil larva, Attelabidae)	Mingyue Mountain, Jiangxi, China	[73]
			<i>Neofusicoccum parvum</i> B19	<i>Vitis vinifera</i> (Declining vines of grapevine, Vitaceae)	Inzolia, Sicily	[46]
Perenniporide B (91)	366	C <sub>18</sub> H <sub>22</sub> O <sub>8</sub>	<i>Perenniporia</i> sp.	<i>Euops chinensis</i> (Leaf-rolling weevil larva, Attelabidae)	Mingyue Mountain, Jiangxi, China	[73]
Perenniporide C (92)	366	C <sub>18</sub> H <sub>22</sub> O <sub>8</sub>	<i>Perenniporia</i> sp.	<i>Euops chinensis</i> (Leaf-rolling weevil larva, Attelabidae)	Mingyue Mountain, Jiangxi, China	[73]

Perenniporide D (93)	352	C <sub>17</sub> H <sub>20</sub> O <sub>8</sub>	<i>Perenniporia</i> sp.	<i>Euops chinensis</i> (Leaf-rolling weevil larva, Attelabidae)	Mingyue Mountain, Jiangxi, China	[73]
			<i>Neofusicoccum parvum</i> B19	<i>Vitis vinifera</i> (Declining vines of grapevine, Vitaceae)	Inzolia, Sicily	[46]
Botryosphaerone A (94)	268	C <sub>13</sub> H <sub>16</sub> O <sub>6</sub>	<i>Botryosphaeria australis</i> ZJ12-1A	<i>Sonneratia apetala</i> (Mangrove plant, Lythraceae)	Xiamen Haicang mangrove Conservation Area, Fujian, China	[74]
Botryosphaerone B (95)	268	C <sub>13</sub> H <sub>16</sub> O <sub>6</sub>	<i>Botryosphaeria australis</i> ZJ12-1A	<i>Sonneratia apetala</i> (Mangrove plant, Lythraceae)	Xiamen Haicang mangrove Conservation Area, Fujian, China	[74]
			<i>Neofusicoccum austral</i> SYSU-SKS024	<i>Kandelia candel</i> (Mangrove plant branches, Rhizophoraceae)	Shankou, Guangxi, China	[107]
Botryosphaerone C (96)	282	C <sub>14</sub> H <sub>18</sub> O <sub>6</sub>	<i>Botryosphaeria australis</i> ZJ12-1A	<i>Sonneratia apetala</i> (Mangrove plant, Lythraceae)	Xiamen Haicang mangrove Conservation Area, Fujian, China	[74]
(2S,3S,4S)-8-Dehydroxy-8-methoxyl-dihydronaphthalenone (97)	306	C <sub>16</sub> H <sub>18</sub> O <sub>6</sub>	<i>Fusarium</i> sp. HP-2	<i>Aquilaria malaccensis</i> (Agarwood, Thymelaeaceae)	Ledong County, Hainan, China	[108]
Dihydronaphthalenone (2S,3S,4S) (98)	292	C <sub>15</sub> H <sub>16</sub> O <sub>6</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
			<i>Fusarium</i> sp. HP-2	<i>Aquilaria malaccensis</i> (Agarwood, Thymelaeaceae)	Ledong County, Hainan, China	[108]
			<i>Fusarium solani</i> B-18	Inner tissue of the unidentified forest litters	Merapi Mt. area, Sleman,	[158]

					Yogyakarta, Indonesia	
Diastereomer-Dihydronaphthalenone B (2R,3S,4R) ( <b>99</b> )	292	C <sub>15</sub> H <sub>16</sub> O <sub>6</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
			<i>Fusarium solani</i> B-18	Inner tissue of the unidentified forest litters	Merapi Mt. area, Sleman, Yogyakarta, Indonesia	[158]
			<i>Fusarium solani</i> H918	Mangrove sediments	Zhangjiangkou Mangrove National Nature Reserve, Fujian, China	[159]
(3aS,9R,9aS)-1(9a),3(3a),9- Hexahydromonosporascone ( <b>100</b> )	250	C <sub>13</sub> H <sub>14</sub> O <sub>5</sub>	<i>Teratosphaeria</i> sp. FL2137	<i>Pinus clausa</i> (Leaves, Pinaceae)	The ground of a pine-dominated scrub forest, Archbold Biological Station in Florida, USA	[152]
(+)-4,8-Dihydroxy-7-(2-hydroxy-ethyl)-6- methoxy-3,4-dihydro-2H-naphthalen-1-one ( <b>101</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(-)-Leptothalenone A ( <b>102</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(+)-Leptothalenone A ( <b>103</b> )	252	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City,	[91]

						Guangdong, China
4-Hydroxydihydronorjavanicin ( <b>104</b> )	280	C <sub>14</sub> H <sub>16</sub> O <sub>6</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
5-Hydroxydihydrofusarubin ( <b>105</b> )	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium solani</i> T-127	Cultured	Japan	[160]
5-Hydroxydihydrofusarubin A ( <b>106</b> )	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
5-Hydroxy-3-Methoxydihydrofusarubin A ( <b>107</b> )	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand	[75]
5-Hydroxydihydrofusarubin D ( <b>108</b> )	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
			<i>Penicillium polonicum</i>	<i>Camptotheca acuminata</i> , roots (Nyssaceae)	South Central University for Nationalities, Wuhan, Hubei, China	[161]
5-Hydroxy-3-methoxydihydrofusarubin D ( <b>109</b> )	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao	[75]

					National Park, Phetchabun Province, Thailand.	
3,5-Dimethoxydihydrofusarubin D (110)	338	C <sub>17</sub> H <sub>22</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
5-Hydroxydihydrofusarubin B (111)	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
5-Methoxydihydrofusarubin B (112)	324	C <sub>16</sub> H <sub>20</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
3,5-Dimethoxydihydrofusarubin B (113)	338	C <sub>17</sub> H <sub>22</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]
5-Hydroxydihydrofusarubin C (114)	310	C <sub>15</sub> H <sub>18</sub> O <sub>7</sub>	<i>Fusarium</i> sp. BCC14842	<i>Bambusa vulgaris</i> (Bamboo leaf, Poaceae)	Bamboo forest at Nam Nao National Park, Phetchabun Province, Thailand.	[75]



Lentiquinone B (115)	292	C <sub>15</sub> H <sub>16</sub> O <sub>6</sub>	<i>Ascochyta lentis</i>	<i>Lens culinaris</i> (Lentil, Fabaceae)	USA	[47]
Lentiquinone C (116)	292	C <sub>15</sub> H <sub>16</sub> O <sub>6</sub>	<i>Ascochyta lentis</i>	<i>Lens culinaris</i> (Lentil, Fabaceae)	USA	[47]
Pleosporalin H (117)	282	C <sub>14</sub> H <sub>18</sub> O <sub>6</sub>	<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China	[145]
Pleosporalin I (118)	250	C <sub>13</sub> H <sub>14</sub> O <sub>5</sub>	<i>Pleosporales</i> sp. F46	<i>Mahonia fortune</i> (Pedicel, Berberidaceae)	Qingdao, China	[145]
Biatriosporin A (119)	280	C <sub>15</sub> H <sub>20</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin B (120)	266	C <sub>14</sub> H <sub>18</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin C (121)	266	C <sub>14</sub> H <sub>18</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin G (122)	308	C <sub>16</sub> H <sub>20</sub> O <sub>6</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin H (123)	308	C <sub>16</sub> H <sub>20</sub> O <sub>6</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin I (124)	278	C <sub>15</sub> H <sub>18</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Biatriosporin J (125)	276	C <sub>15</sub> H <sub>16</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. 8331C	<i>Pseudosyphellaria</i> sp. (Lichen, Lobariaceae)	Changbai Mountain, Jilin, China	[157]
Pleorubrin B (126)	278	C <sub>15</sub> H <sub>18</sub> O <sub>5</sub>	<i>Biatriospora</i> sp. CCF 4378	<i>Ulmus laevis</i> (Twigs, Ulmaceae)	Libicky Luh Forest near Velky Osek, Czech	[162]
Aspvanicin A (127)	294	C <sub>15</sub> H <sub>18</sub> O <sub>6</sub>	<i>Aspergillus versicolor</i> KU258497	<i>Eichhornia crassipes</i> (Leaves, Pontederiaceae)	Shores of the River Nile in Mansoura, Egypt	[89]

Aspvanicin B (128)	294	C <sub>15</sub> H <sub>18</sub> O <sub>6</sub>	<i>Aspergillus versicolor</i> KU258497	<i>Eichhornia crassipes</i> (Leaves, Pontederiaceae)	Shores of the River Nile in Mansoura, Egypt	[89]
Methylberchemiaside (129)	354	C <sub>17</sub> H <sub>22</sub> O <sub>8</sub>	<i>Colletotrichum</i> sp. GDMU-1	<i>Santalum album</i> (Leaves, Santalaceae)	Dongguan, Guangdong, China	[112]
Phomonaphthalenone A (130)	292	C <sub>15</sub> H <sub>16</sub> O <sub>6</sub>	<i>Phomopsis</i> sp. HCCB04730	<i>Stephaniae Japonicae</i> (Stems, Menispermaceae)	Jin Hua, Zhejiang, China	[90]
Daldionin (131)	318	C <sub>20</sub> H <sub>14</sub> O <sub>4</sub>	<i>Daldinia eschscholtzii</i>	<i>Paphiopedilum exul</i> (Orchid roots, Orchidaceae)	Chiang Mai, Thailand	[21]
6-Ethyl-1-acetonyl-1,5-dihydroxy-2,7-dimethoxy-4-naphthalenone (132)	320	C <sub>17</sub> H <sub>20</sub> O <sub>6</sub>	<i>Guignardia laricina</i>	<i>Larix leptolepis</i> (Pinaceae)	Japan	[48]
			<i>Perenniporia</i> sp.	<i>Euops chinesis</i> (Leaf-rolling weevil larva, Attelabidae)	Mingyue Mountain, Jiangxi, China	[73]
Delitschiapyrone A (133)	458	C <sub>24</sub> H <sub>26</sub> O <sub>9</sub>	<i>Delitschia</i> sp. FL1581	<i>Serenoa repens</i> (Fallen leaf of saw palmetto, Arecaceae)	pine-dominated forest, central Florida, USA	[28]
Variabilone (134)	228	C <sub>15</sub> H <sub>16</sub> O <sub>2</sub>	<i>Paraconiothyrium variabile</i>	<i>Cephalotaxus harringtonia</i> (Taxaceae)	France	[76]
Juglanone C (135)	338	C <sub>20</sub> H <sub>18</sub> O <sub>5</sub>	<i>Phialocephala fortinii</i>	<i>Pamelia</i> sp. (Lichen, Parmeliaceae)	Mount Qingliang, Zhejiang, China	[137]
Juglanone D (136)	340	C <sub>20</sub> H <sub>20</sub> O <sub>5</sub>	<i>Phialocephala fortinii</i>	<i>Pamelia</i> sp. (Lichen, Parmeliaceae)	Mount Qingliang, Zhejiang, China	[137]
Juglanone E (137)	340	C <sub>20</sub> H <sub>20</sub> O <sub>5</sub>	<i>Phialocephala fortinii</i>	<i>Pamelia</i> sp. (Lichen, Parmeliaceae)	Mount Qingliang, Zhejiang, China	[137]
(4S,10R,4'S)-Leptothalenone B (138)	472	C <sub>25</sub> H <sub>28</sub> O <sub>9</sub>	<i>Leptosphaerulina chartarum</i> 3608	(Marine animal, Crinoidea)	Xuwen, Zhanjiang City, Guangdong, China	[91]
(4R,10S,4'S)-Leptothalenone B (139)	472	C <sub>25</sub> H <sub>28</sub> O <sub>9</sub>	<i>Leptosphaerulina chartarum</i> 3608	Crinoid (Marine animal, Crinoidea)	Xuwen, Zhanjiang City,	[91]

						Guangdong, China
Xylarinap A (140)	365	C <sub>21</sub> H <sub>19</sub> NO <sub>5</sub>	<i>Xylaria nigripes</i>	Fresh fruiting bodies	Ailao Moutain, Yunnan, China	[29]
Xylarinap B (141)	336	C <sub>20</sub> H <sub>16</sub> O <sub>5</sub>	<i>Xylaria nigripes</i>	Fresh fruiting bodies	Ailao Moutain, Yunnan, China	[29]
Xylarinap C (142)	336	C <sub>20</sub> H <sub>16</sub> O <sub>5</sub>	<i>Xylaria nigripes</i>	Fresh fruiting bodies	Ailao Moutain, Yunnan, China	[29]
Xylarinap D (143)	350	C <sub>21</sub> H <sub>18</sub> O <sub>5</sub>	<i>Xylaria nigripes</i>	Fresh fruiting bodies	Ailao Moutain, Yunnan, China	[29]
Xylarinap E (144)	350	C <sub>21</sub> H <sub>18</sub> O <sub>5</sub>	<i>Xylaria nigripes</i>	Fresh fruiting bodies	Ailao Moutain, Yunnan, China	[29]
Cladosporol (= Cladosporol A) (145)	352	C <sub>20</sub> H <sub>16</sub> O <sub>6</sub>	<i>Cladosporium cladosporioides</i>	<i>Lactuca sativa</i> L. (Seedlings, Asteraceae)	Japan	[163]
			<i>Cladosporium cladosporioides</i>	<i>Phytophthora capsici</i> (Peronosporaceae)		[164]
			<i>Cladosporium. tenuissimum</i> Cooke	-	-	[165]
			<i>Cladosporium tenuissimum</i> Cooke	<i>Pinus pinaster</i> (Pinaceae)	Tuscany, Italy	[166]
			<i>Cladosporium</i> sp. KcFL6'	<i>Kandelia candel</i> (Rhizophoraceae)	Daya Bay, Shenzhen city, Guangdong, China	[77]
			<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan	[167]
			<i>C. cladosporioides</i> MRCJ-314	<i>Datura innoxia</i> (Roots, Solanaceae)	Jammu, India	[94]
Cladosporol B (146)	350	C <sub>20</sub> H <sub>14</sub> O <sub>6</sub>	<i>C. tenuissimum</i> Cooke	<i>Pinus pinaster</i> (Pinaceae)	Tuscany, Italy	[166]
			<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan	[167]
Cladosporol C (147)	338	C <sub>20</sub> H <sub>18</sub> O <sub>5</sub>	<i>C. tenuissimum</i> Cooke	<i>Pinus pinaster</i> (Pinaceae)	Tuscany, Italy	[166]
			<i>Cladosporium</i> sp. KcFL6'	<i>Kandelia candel</i> (Rhizophoraceae)	Daya Bay, Shenzhen city,	[77]

				Guangdong, China	
			<i>C. cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China [95]
			<i>C. cladosporioides</i> EN-399	<i>Laurencia okamura</i> (Rhodomelaceae)	Qingdao, China [78]
			<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan [167]
			<i>Cladosporium</i> sp. JS1-2	<i>Ceriops tagal</i> (Rhizophoraceae)	Dongzhaigang, Hainan, China [79]
			<i>Cladosporium cladosporioides</i> MCCC 3A00182	Sediment	Southwest Pacific Ocean [115]
Cladosporol D (148)	354	C <sub>20</sub> H <sub>18</sub> O <sub>6</sub>	<i>Cladosporium tenuissimum</i> Cooke	<i>Pinus pinaster</i> (Pinaceae)	Tuscany, Italy [166]
			<i>Cladosporium</i> sp. KcFL6'	<i>Kandelia candel</i> (Rhizophoraceae)	Daya Bay, Shenzhen city, Guangdong, China [77]
			<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan [167]
Cladosporol E (149)	370	C <sub>20</sub> H <sub>18</sub> O <sub>7</sub>	<i>Cladosporium tenuissimum</i> Cooke	<i>Pinus pinaster</i> (Pinaceae)	Tuscany, Italy [166]
			<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China [95]
			<i>Cladosporium</i> sp. JS1-2	<i>Ceriops tagal</i> (Rhizophoraceae)	Dongzhaigang, Hainan, China [79]
Cladosporol F (150)	352	C <sub>21</sub> H <sub>20</sub> O <sub>5</sub>	<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China [95]
			<i>C. cladosporioides</i> EN-399	<i>Laurencia okamura</i> (Rhodomelaceae)	Qingdao, China [78]
			<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan [167]
Cladosporol G (= 2-Chloro-cladosporol D) (151)	388	C <sub>20</sub> H <sub>17</sub> ClO <sub>6</sub>	<i>Cladosporium</i> sp. TMPU1621	<i>Achyranthes aspera</i> var. <i>rubrofusca</i> (Leaves, Amaranthaceae)	Okinawan, Japan [167]

	388	C <sub>20</sub> H <sub>17</sub> ClO <sub>6</sub>	<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China	[95]
Cladosporol G (152)	352	C <sub>21</sub> H <sub>20</sub> O <sub>5</sub>	<i>Cladosporium cladosporioides</i> EN-399	<i>Laurencia okamurai</i> (Rhodomelaceae)	Qingdao, China	[78]
Cladosporol H (153)	336	C <sub>20</sub> H <sub>16</sub> O <sub>5</sub>	<i>Cladosporium cladosporioides</i> EN-399	<i>Laurencia okamurai</i> (Rhodomelaceae)	Qingdao, China	[78]
Cladosporol I (= Cladosperanol A) (154)	338	C <sub>20</sub> H <sub>18</sub> O <sub>5</sub>	<i>Cladosporium cladosporioides</i> EN-399	<i>Laurencia okamurai</i> (Rhodomelaceae)	Qingdao, China	[78]
			<i>Cladosporium</i> sp. KFD33	Blood cockle (Cardiidae)	Haikou Bay, China	[80]
			<i>Cladosporium perangustum</i> FS62	Marine-derived fungus	China	[168]
Cladosporol J (155)	338	C <sub>20</sub> H <sub>18</sub> O <sub>5</sub>	<i>Cladosporium cladosporioides</i> EN-399	<i>Laurencia okamurai</i> (Rhodomelaceae)	Qingdao, China	[78]
Altertoxin XII (156)	322	C <sub>20</sub> H <sub>18</sub> O <sub>4</sub>	<i>Cladosporium</i> sp. KFD33	<i>Tegillarca granosa</i> (Blood cockle, Cardiidae)	Haikou Bay, China	[80]
Cladosporone A (157)	352	C <sub>20</sub> H <sub>16</sub> O <sub>6</sub>	<i>Cladosporium</i> sp. KcFL6'	<i>Kandelia candel</i> (Rhizophoraceae)	Daya Bay, Shenzhen city, Guangdong, China	[77]
Clindanone A (158)	394	C <sub>22</sub> H <sub>18</sub> O <sub>7</sub>	<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China	[95]
Clindanone B (159)	394	C <sub>22</sub> H <sub>18</sub> O <sub>7</sub>	<i>Cladosporium cladosporioides</i> HDN14-342	Sediment	Indian Ocean, Qingdao, China	[95]

Table S2. Biological activities of fungal naphthalenones.

Compound name	Biological activity	Assay, organism, or cell line	Inhibitory concentration	Positive control	Ref.
3,4-Dihydro-3,4,8-trihydroxy-1(2H)-naphthalenone (1)	$\alpha$ -Glucosidase inhibitory	Spectrophotometer/ $\alpha$ -Glucosidase enzyme	34.88 $\mu$ M (IC <sub>50</sub> )	Acarbose 427.34 $\mu$ M (IC <sub>50</sub> )	[82]
(3R,4S)-3,4,8-Trihydroxy-3,4-dihydronaphthalen-1(2H)-one (3)	Immunosuppressive	Immunoassay/IMPDH	4.1 $\mu$ M (IC <sub>50</sub> )	Mycophenolic acid 0.4 $\mu$ M (IC <sub>50</sub> )	[134]
	Immunosuppressive	Radioactively labeled phosphoprotein/PTPIB	13.9 $\mu$ M (IC <sub>50</sub> )	Ursolic acid 2.8 $\mu$ M (IC <sub>50</sub> )	[134]
	Antifungal	Broth dilution/ <i>C. albicans</i>	63.2 $\mu$ g/mL (IC <sub>50</sub> )	Amphotericin B 1.3 $\mu$ g/mL (IC <sub>50</sub> )	[63]
	Antitumor	Immune complex phosphatase/SHP2	41.2 $\mu$ M (IC <sub>50</sub> )	Ursolic acid 2.8 $\mu$ M (IC <sub>50</sub> )	[134]
(2S,4S)-3,4-Dihydro-2,4,8-trihydroxy-1(2H)-naphthalenone (4)	$\alpha$ -Glucosidase inhibitory	Colorimetric/ $\alpha$ -Glucosidase enzyme	102.34 $\mu$ M (IC <sub>50</sub> )	Acarbose 427.34 $\mu$ M (IC <sub>50</sub> )	[82]
4,6-Dihydroxy - 3,4-dihydronaphthalen-1(2H)-one (8)	Nematocidal	Nematotoxin bioassay/ <i>Bursaphelenchus xylophilus</i>	1169.8 mg/L (LC <sub>50</sub> , 12 h)		[52]
			461.3 mg/L (LC <sub>50</sub> , 24 h)		[52]
			229.6 mg/L (LC <sub>50</sub> , 36 h)		[52]
4,8-dihydroxy-3,4-dihydronaphthalen-1(2H)-one (9)	Nematocidal	Nematotoxin bioassay/ <i>Bursaphelenchus xylophilus</i>	540.2 mg/L (LC <sub>50</sub> , 12 h)		[52]
			436.6 mg/L (LC <sub>50</sub> , 24 h)		[52]
			209.7 mg/L (LC <sub>50</sub> , 36 h)		[52]
4(S)-(+)-Isosclerone acetate (10)	Antibacterial	Agar diffusion assay/ <i>B. megaterium</i>	15.0 mm (IZD)	Penicillin 28.0 mm (IZD)	[60]
	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	50 $\mu$ g/mL (MIC)	Isoniazid 0.05 $\mu$ g/mL (MIC) Kanamycin 2.5 $\mu$ g/mL (MIC)	[61]
	Cytotoxicity	SRB/BCA	11.27 $\mu$ g/mL (IC <sub>50</sub> )	Ellipticine 0.11 $\mu$ g/mL (IC <sub>50</sub> ) Doxorubicin 0.21 $\mu$ g/mL (IC <sub>50</sub> )	[61]
		MTT/NCI-H187	7.29 $\mu$ g/mL (IC <sub>50</sub> )	Ellipticine 0.32 $\mu$ g/mL (IC <sub>50</sub> ) Doxorubicin 0.02 $\mu$ g/mL (IC <sub>50</sub> )	[61]
		SRB/Vero	41.84 $\mu$ g/mL (IC <sub>50</sub> )	Ellipticine 0.7 $\mu$ g/mL (IC <sub>50</sub> )	[61]

(3S,4R)-4,8-dihydroxy-3-methoxy-3,4-dihydro-1(2H)-naphthalenone (13)	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	12.5 µg/mL (MIC)	Isoniazid 0.05 µg/mL (MIC)	[61]
	Cytotoxicity	SRB/BCA	19.16 µg/mL (IC <sub>50</sub> )	Kanamycin 2.5 µg/mL (MIC)	[61]
		MTT/NCI-H187	2.86 µg/mL (IC <sub>50</sub> )	Ellipticine 0.11 µg/mL (IC <sub>50</sub> )	[61]
		SRB/Vero	26.59 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.21 µg/mL (IC <sub>50</sub> )	[61]
3,8-dihydroxy-3,4-dihydronaphthalen-1(2H)-one (14)	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	50 µg/mL (MIC)	Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[61]
		MTT/NCI-H187	15.33 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.02 µg/mL (IC <sub>50</sub> )	[61]
3,4,6,8-Tetrahydroxy-3,4-dihydronaphthalen-1(2H)-one (cis-4-hydroxyscytalone) (19)	Nematocidal	Nematotoxin bioassay/ <i>Bursaphelenchus xylophilus</i>	844.9 mg/L (LC <sub>50</sub> , 12 h)		[52]
			468.4 mg/L (LC <sub>50</sub> , 24 h)		[52]
			206.1 mg/L (LC <sub>50</sub> , 36 h)		[52]
4,6,8-Trihydroxy-3,4-dihydronaphthalen-1(2H)-one (22)	Nematocidal	Nematotoxin bioassay/ <i>Bursaphelenchus xylophilus</i>	1011.6 mg/L (LC <sub>50</sub> , 12 h)		[52]
			522.5 mg/L (LC <sub>50</sub> , 24 h)		[52]
			220.3 mg/L (LC <sub>50</sub> , 36 h)		[52]
	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	12.5 µg/mL (MIC)	Isoniazid 0.05 µg/mL (MIC)	[61]
	Cytotoxicity	SRB/BCA	2.96 µg/mL (IC <sub>50</sub> )	Kanamycin 2.5 µg/mL (MIC)	[61]
		MTT/NCI-H187	5.55 µg/mL (IC <sub>50</sub> )	Ellipticine 0.11 µg/mL (IC <sub>50</sub> )	[61]
		SRB/Vero	24.35 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.21 µg/mL (IC <sub>50</sub> )	[61]
(R)-4,6,8-Trihydroxy-3,4-dihydro-1(2H)-naphthalenone (25)	Antibacterial	Broth dilution/ <i>B. subtilis</i>	104.2 µg/mL (IC <sub>50</sub> )	Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[61]
	Antifungal	Broth dilution/ <i>C. albicans</i>	78.2 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.02 µg/mL (IC <sub>50</sub> )	[61]
(3S,4S)-3,4,8-trihydroxy-6-methoxy-3,4-dihydro-1(2H)-naphthalenone (31)	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	25.0 µg/mL (MIC)	Streptomycin sulfate 5.2 µg/mL (IC <sub>50</sub> )	[63]
	Cytotoxicity	SRB/BCA	7.24 µg/mL (IC <sub>50</sub> )	Amphotericin B 1.3 µg/mL (IC <sub>50</sub> )	[63]

		MTT/NCI-H187	12.08 µg/mL (IC <sub>50</sub> )	Ellipticine 0.32 µg/mL (IC <sub>50</sub> ) Doxorubicin 0.02 µg/mL (IC <sub>50</sub> )	[61]
		SRB/Vero	26.35 µg/mL (IC <sub>50</sub> )	Ellipticine 0.7 µg/mL (IC <sub>50</sub> )	[61]
(3R,4R)-3-methoxyl-botryosphaerone (54)	D Indoleamine 2, 3-dioxygenase (IDO) inhibitory	High-Throughput Fluorescence assay/L-tryptophan	6.36 µM (IC <sub>50</sub> )	Epacadostat 0.5 µM (IC <sub>50</sub> )	[107]
(3R*,4S*)-7-Ethyl-3,4,6,8-tetrahydroxy-3,4-dihydronaphthalen-1(2H)-one (61)	Antifungal	Agar diffusion/ <i>Alternaria</i> sp. YMF 1.01991	7.0 mm (IZD)	Ciclopirox 26.0 mm (IZD)	[67]
	Antifungal	Agar diffusion/ <i>Sclerotium</i> sp. YMF 1.01993	8.0 mm (IZD)	Ciclopirox 19.0 mm (IZD)	[67]
	Antifungal	Agar diffusion/ <i>Fusarium</i> sp. YMF 1.01996	7.0 mm (IZD)	Ciclopirox 20.0 mm (IZD)	[67]
	Antibacterial	Agar diffusion/ <i>B. cereus</i> YMF 3.19	12.0 mm (IZD)	Ampicillin sodium 35.0 mm (IZD)	[67]
	Antibacterial	Agar diffusion/ <i>B. laterosporus</i> YMF 3.08	10.0 mm (IZD)	Ampicillin sodium 30.0 mm (IZD)	[67]
	Antibacterial	Agar diffusion/ <i>S. aureus</i> YMF 3.17	20.0 mm (IZD)	Ampicillin sodium 19.0 mm (IZD)	[67]
Nodulone (63)	Cytotoxicity	MTT/Mouse splenic lymphocytes	11.2 µg/mL (IC <sub>50</sub> )	Cyclosporine A 0.06 µg/mL (IC <sub>50</sub> )	[27]
(-)-cis-(7R*,8S*)-4,7,8-Trihydroxy-3,6,7,8-tetrahydronaphtho[2,3-c]furan-5(1H)-one (64)	Antimalarial	Microculture radioisotope-[ <sup>3</sup> H]-hypoxanthine/ <i>P. falciparum</i> (K1, multidrug-resistant strain)	3.125 µg/mL (IC <sub>50</sub> )	Dihydroartemisinin 1.91 nM (IC <sub>50</sub> ) Mefloquine 24.7 nM (IC <sub>50</sub> )	[66]
	Antimycobacterial	GFPMA/ <i>Mycobacterium tuberculosis</i> H37 Ra	11.3 µg/mL (IC <sub>50</sub> )	Rifampicin, ofloxacin, streptomycin, isoniazid, and ethambutol	[66]
3,6,8-Trihydroxy-3-[3,5-dimethyl-2-oxo-3(E)-heptenyl]-2,3-dihydronaphthalen-1(4H)-one (68)	Antifungal	Broth microdilution/ <i>C. albicans</i>	40 µg/mL (MIC)	Ketonazole 1.0 µg/mL (MIC)	[69]
	Antifungal	Broth microdilution/ <i>Tricophyton rubrum</i>	20 µg/mL (MIC)	Ketonazole 10.0 µg/mL (MIC)	[69]
	Antifungal	Broth microdilution/ <i>A. niger</i>	80 µg/mL (MIC)	Ketonazole 30.0 µg/mL (MIC)	[69]
Balticol A (74)	Antiviral	Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	1.0 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]



Balticol B (75)	Antiviral	Dye-uptake assay/Human influenza virus A/WSN/33 (H1N1)	10.0 µg/mL (IC <sub>50</sub> )	Amantadine SO <sub>4</sub> 15.0 µg/mL (IC <sub>50</sub> )	[70]
		Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	1.0 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]
Balticol C (78)	Antiviral	Dye-uptake assay/Human influenza virus A/WSN/33 (H1N1)	1.0 µg/mL (IC <sub>50</sub> )	Amantadine SO <sub>4</sub> 15.0 µg/mL (IC <sub>50</sub> )	[70]
		Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	1.0 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]
Balticol D (80)	Antiviral	Dye-uptake assay/Human influenza virus A/WSN/33 (H1N1)	0.1 µg/mL (IC <sub>50</sub> )	Amantadine SO <sub>4</sub> 15.0 µg/mL (IC <sub>50</sub> )	[70]
		Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	0.1 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]
Balticol E (81)	Antiviral	Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	0.01 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]
Balticol F (82)	Antiviral	Dye-uptake assay/Human influenza virus A/WSN/33 (H1N1)	1.0 µg/mL (IC <sub>50</sub> )	Amantadine SO <sub>4</sub> 15.0 µg/mL (IC <sub>50</sub> )	[70]
		Dye-uptake assay/ <i>Herpes simplex</i> virus type 1 (HSV-1, strain KOS)	0.1 µg/mL (IC <sub>50</sub> )	Aciclovir 0.1 µg/mL (IC <sub>50</sub> )	[70]
9α-Hydroxyhalorosellinia A (85)	Antimycobacterial	MABA/ <i>M. tuberculosis</i> H37 Ra	12.5 µg/mL (MIC)	Rifampicin 0.047 µg/mL (MIC) Kanamycin sulfate 1.25 µg/mL (MIC)	[71]
	Antimalarial	Microculture radioisotope-[ <sup>3</sup> H]-hypoxanthine/ <i>P. falciparum</i> (K1, multidrug-resistant strain)	7.94 µg/mL (IC <sub>50</sub> )	Isoniazid 0.25 µg/mL (MIC) Dihydroartemisinin 0.0012 mg/mL (IC <sub>50</sub> )	[71]
9S-hydroxydihydrodesoxybostrycin (89)	Antimycobacterial	MABA/ <i>Mycobacterium tuberculosis</i> H37 Ra	25.0 µg/mL (MIC)	Rifampicin 0.047 µg/mL (MIC) Kanamycin sulfate 1.25 µg/mL (MIC)	[71]

Perenniporide A (90)	Antifungal	Microplate assay/ <i>F. moniliforme</i>	20 µg/mL (MIC)	Isoniazid 0.25 µg/mL (MIC)	
	Antifungal	Microplate assay/ <i>V. alboatrum</i>	20 µg/mL (MIC)	2-Benzimidazolecarbamate 0.63 µg/mL (MIC)	[73]
	Antifungal	Microplate assay/ <i>Gibberella zeae</i>	20 µg/mL (MIC)	2-Benzimidazolecarbamate 2.5 µg/mL (MIC)	[73]
	Antifungal	Microplate assay/ <i>F. oxysporum</i>	10 µg/mL (MIC)	2-Benzimidazolecarbamate 0.63 µg/mL (MIC)	[73]
	Antifungal	Microplate assay/ <i>A. longipes</i>	10 µg/mL (MIC)	-	[73]
Dihydronaphthalenone (98)	Cytotoxicity	Resazurin microplate/KB	31.69 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/NCI-H187	23.10 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
Diastereomer-dihydronaphthalenone (99)	Antimycobacterial	GFPMA/ <i>M. tuberculosis</i> H37 Ra	25.0 µg/mL (MIC)	Isoniazid 0.03 µg/mL (MIC)	[75]
5-Hydroxydihydrofusarubin (105)	Cytotoxicity	Resazurin microplate/L1210	9.4 µg/mL (IC <sub>50</sub> )	-	[160]
	Antibacterial	Agar plate dilution/ <i>S. aureus</i>	100 µg/mL (MIC)	-	
	Antibacterial	Agar plate dilution/ <i>B. subtilis</i>	100 µg/mL (MIC)	-	[160]
	Antibacterial	Agar plate dilution/ <i>S. pneumoniae</i>	50 µg/mL (MIC)	-	[160]
	Antifungal	Agar plate dilution/ <i>C. albicans</i>	100 µg/mL (MIC)	-	[160]
	Antifungal	Agar platedilution/ <i>Saccharomyces cerevisiae</i>	50 µg/mL (MIC)	-	[160]
5-Hydroxydihydrofusarubin A (106)	Cytotoxicity	Resazurin microplate/KB	21.25 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
		Resazurin microplate/MCF-7	10.99 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.90 µg/mL (IC <sub>50</sub> )	[75]
		Resazurin microplate/NCI-H187	12.14 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
5-Hydroxy-3-methoxydihydrofusarubin A (109)	Antimycobacterial	GFPMA/ <i>M. tuberculosis</i> H37 Ra	50.0 µg/mL (MIC)	Isoniazid 0.03 µg/mL (MIC)	[75]
	Cytotoxicity	Resazurin microplate/KB	25.48 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/MCF-7	14.50 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.90 µg/mL (IC <sub>50</sub> )	[75]

	Cytotoxicity	Resazurin microplate/NCI-H187	26.03 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
5-Hydroxydihydrofusarubin B (111)	Cytotoxicity	Resazurin microplate/KB	31.50 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/NCI-H187	11.89 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
5-Methoxydihydrofusarubin B (112)	Cytotoxicity	Resazurin microplate/KB	23.59 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/MCF-7	23.43 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.90 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/NCI-H187	13.47 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/Vero	28.26 µg/mL (IC <sub>50</sub> )	Ellipticine 1.72 µg/mL (IC <sub>50</sub> )	[75]
5-Hydroxydihydrofusarubin C (114)	Cytotoxicity	Resazurin microplate/KB	9.34 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.28 µg/mL (IC <sub>50</sub> ) Ellipticine 0.32 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/MCF-7	16.58 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.90 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/NCI-H187	9.99 µg/mL (IC <sub>50</sub> )	Doxorubicin 0.07 µg/mL (IC <sub>50</sub> ) Ellipticine 1.21 µg/mL (IC <sub>50</sub> )	[75]
	Cytotoxicity	Resazurin microplate/Vero	26.76 µg/mL (IC <sub>50</sub> )	Ellipticine 1.72 µg/mL (IC <sub>50</sub> )	[75]
Aspvanicin B (128)	Cytotoxicity	MTT/L5178Y	22.8 µM (IC <sub>50</sub> )	Kahalalide F 4.3 µM (IC <sub>50</sub> )	[89]
Phomonaphthalenone A (130)	Cytotoxicity	MTT/A549	92.5 µg/mL (IC <sub>50</sub> )	5-Fluorouracil 75.0 µg/mL (IC <sub>50</sub> )	[90]
	Cytotoxicity	MTT/MDA-MB-231	64.2 µg/mL (IC <sub>50</sub> )	5-Fluorouracil 47.0 µg/mL (IC <sub>50</sub> )	[90]
	Cytotoxicity	MTT/PANC-1	52.7 µg/mL (IC <sub>50</sub> )	5-Fluorouracil 65.0 µg/mL (IC <sub>50</sub> )	[90]
	Anti-HIV	Luciferase assay/293T cells	11.6 µg/mL (IC <sub>50</sub> )	Efavirenz 4.7 × 10 <sup>-4</sup> µg/mL (IC <sub>50</sub> )	[90]
Variabilone (134)	Antibacterial	Microdilution resazurin/ <i>B. subtilis</i>	2.13 µg/mL (IC <sub>50</sub> )	Kanamycin 0.36 µg/mL (IC <sub>50</sub> )	[76]
(4R,10S,4'S)-Leptothalenone B (139)	Anti-inflammatory	Griess assay/LPS-activated NO production/ RAW264.7 cells	44.5 µM (IC <sub>50</sub> )	Indomethacin 37.5 µM (IC <sub>50</sub> )	[91]
Cladosporol C (147)	Cytotoxicity	Trypan blue-cell viability assay/K562	>30.0 µM (IC <sub>50</sub> )	Trichostatin A 0.24 µM (IC <sub>50</sub> )	[77]
		Trypan blue-cell viability assay/A549	33.9 µM (IC <sub>50</sub> )	Trichostatin A 0.05 µM (IC <sub>50</sub> )	[77]
		Trypan blue-cell viability assay/Huh-7	>30.0 µM (IC <sub>50</sub> )	Trichostatin A 0.08 µM (IC <sub>50</sub> )	[77]
		Trypan blue-cell viability assay/H1975	45.6 µM (IC <sub>50</sub> )	Trichostatin A 0.09 µM (IC <sub>50</sub> )	[77]

Antimicrobial		Trypan blue-cell viability assay/MCF-7	>30.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.78 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		Trypan blue-cell viability assay/U937	>30.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.06 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		Trypan blue cell viability assay/BGC823	>30.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.09 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		Trypan blue cell viability assay/HL-60	72.5 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.09 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		Trypan blue cell viability assay/A549	>30.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.11 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		Trypan blue cell viability assay/MOLT-4	14.4 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Trichostatin A 0.03 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
		MTT/A549	14.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Cisplatin 1.3 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[78]
		MTT/HeLa	4.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Paclitaxel 4.9 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[78]
		Microplate assay/ <i>E. coli</i>	8.0 $\mu\text{g/mL}$ (MIC)	Chloramphenicol 0.025 $\mu\text{g/mL}$ (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	32.0 $\mu\text{g/mL}$ (MIC)	Chloramphenicol 0.5 $\mu\text{g/mL}$ (MIC)	[78]
		Microplate assay/ <i>V. harveyi</i>	16.0 $\mu\text{g/mL}$ (MIC)	Chloramphenicol 2.0 $\mu\text{g/mL}$ (MIC)	[78]
		Microplate assay/ <i>S. aureus</i>	6.25 $\mu\text{g/mL}$ (MIC)	Ciprofloxacin 0.39 $\mu\text{g/mL}$ (MIC)	[79]
		Microplate assay/ <i>M. luteus</i>	12.5 $\mu\text{g/mL}$ (MIC)	Ciprofloxacin 0.39 $\mu\text{g/mL}$ (MIC)	[79]
Cladosporol D (148)	Anti-inflammatory	Spectrophotometry/Anti-COX-2/ $\text{PGF}_{2\alpha}$ inhibitor	60.2 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Indomethacin 18.3 $\mu\text{M}$ ( $\text{IC}_{50}$ ) NS-398 1.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[77]
Cladosporol E (149)	Insecticidal activity	Measuring the corrected mortality (CM)	150.0 $\mu\text{g/mL}$ ( $\text{IC}_{50}$ )	Azadirachtin 25.0 $\mu\text{g/mL}$ ( $\text{IC}_{50}$ )	[79]
Cladosporol F (150)	Antimicrobial	Microplate assay/ <i>S. aureus</i>	1.56 $\mu\text{g/mL}$ (MIC)	Ciprofloxacin 0.39 $\mu\text{g/mL}$ (MIC)	[79]
		Microplate assay/ <i>M. luteus</i>	12.5 $\mu\text{g/mL}$ (MIC)	Ciprofloxacin 0.39 $\mu\text{g/mL}$ (MIC)	[79]
	Cytotoxicity	MTT/K562	23.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Doxorubicin 0.6 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[95]
		SRB/HeLa	13.8 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Doxorubicin 0.5 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[95]
		SRB/HCT-116	23.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Doxorubicin 0.2 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[95]
		MTT/A549	15.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Cisplatin 1.3 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[78]
		MTT/HeLa	10.0 $\mu\text{M}$ ( $\text{IC}_{50}$ )	Paclitaxel 4.9 $\mu\text{M}$ ( $\text{IC}_{50}$ )	[78]
Antimicrobial		Microplate assay/ <i>E. coli</i>	32.0 $\mu\text{g/mL}$ (MIC)	Chloramphenicol 0.025 $\mu\text{g/mL}$ (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	64.0 $\mu\text{g/mL}$ (MIC)	Chloramphenicol 0.5 $\mu\text{g/mL}$ (MIC)	[78]

		Microplate assay/ <i>V. harveyi</i>	32.0 µg/mL (MIC)	Chloramphenicol 2.0 µg/mL (MIC)	[78]
Cladosporol G (151)	Cytotoxicity	MTT/K562	8.8 µM (IC <sub>50</sub> )	Doxorubicin 0.6 µM (IC <sub>50</sub> )	[95]
		SRB/HeLa	3.9 µM (IC <sub>50</sub> )	Doxorubicin 0.5 µM (IC <sub>50</sub> )	[95]
		SRB/HCT-116	19.4 µM (IC <sub>50</sub> )	Doxorubicin 0.2 µM (IC <sub>50</sub> )	[95]
Cladosporol G (152)	Cytotoxicity	MTT/A549	13.0 µM (IC <sub>50</sub> )	Cisplatin 1.3 µM (IC <sub>50</sub> )	[78]
		MTT/H446	11.0 µM (IC <sub>50</sub> )	Adriamycin 4.0 µM (IC <sub>50</sub> )	[78]
		MTT/Huh7	10.0 µM (IC <sub>50</sub> )	Fluorouracil 6.2 µM (IC <sub>50</sub> )	[78]
		MTT/L02	11.0 µM (IC <sub>50</sub> )	Cisplatin 13.0 µM (IC <sub>50</sub> )	[78]
		MTT/LM3	14.0 µM (IC <sub>50</sub> )	Cisplatin 9.1 µM (IC <sub>50</sub> )	[78]
		MTT/SW1990	15.0 µM (IC <sub>50</sub> )	Gemcitabine 2.2 µM (IC <sub>50</sub> )	[78]
	Antimicrobial	Microplate assay/ <i>E. coli</i>	64.0 µg/mL (MIC)	Chloramphenicol 0.025 µg/mL (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	128.0 µg/mL (MIC)	Chloramphenicol 0.5 µg/mL (MIC)	[78]
		Microplate assay/ <i>V. harveyi</i>	64.0 µg/mL (MIC)	Chloramphenicol 2.0 µg/mL (MIC)	[78]
Cladosporol H (153)	Cytotoxicity	MTT/A549	5.0 µM (IC <sub>50</sub> )	Cisplatin 1.3 µM (IC <sub>50</sub> )	[78]
		MTT/H446	10.0 µM (IC <sub>50</sub> )	Adriamycin 4.0 µM (IC <sub>50</sub> )	[78]
		MTT/Huh7	1.0 µM (IC <sub>50</sub> )	Fluorouracil 6.2 µM (IC <sub>50</sub> )	[78]
		MTT/LM3	4.1 µM (IC <sub>50</sub> )	Cisplatin 9.1 µM (IC <sub>50</sub> )	[78]
		MTT/MCF-7	10.0 µM (IC <sub>50</sub> )	Paclitaxel 1.8 µM (IC <sub>50</sub> )	[78]
		MTT/SW1990	15.0 µM (IC <sub>50</sub> )	Gemcitabine 2.2 µM (IC <sub>50</sub> )	[78]
	Antimicrobial	Microplate assay/ <i>E. coli</i>	32.0 µg/mL (MIC)	Chloramphenicol 0.025 µg/mL (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	64.0 µg/mL (MIC)	Chloramphenicol 0.5 µg/mL (MIC)	[78]
		Microplate assay/ <i>V. harveyi</i>	4.0 µg/mL (MIC)	Chloramphenicol 2.0 µg/mL (MIC)	[78]
Cladosporol I (154)	Cytotoxicity	MTT/HeLa	10.8 µM (IC <sub>50</sub> )	Paclitaxel 4.9 µM (IC <sub>50</sub> )	[78]
	Antimicrobial	Microplate assay/ <i>E. coli</i>	64.0 µg/mL (MIC)	Chloramphenicol 0.025 µg/mL (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	64.0 µg/mL (MIC)	Chloramphenicol 0.5 µg/mL (MIC)	[78]
		Microplate assay/ <i>V. harveyi</i>	16.0 µg/mL (MIC)	Chloramphenicol 2.0 µg/mL (MIC)	[78]

Cladosporol J (155)	Cytotoxicity	MTT/A549	15.0 $\mu$ M (IC <sub>50</sub> )	Cisplatin 1.3 $\mu$ M (IC <sub>50</sub> )	[78]
		MTT/H446	11.0 $\mu$ M (IC <sub>50</sub> )	Adriamycin 4.0 $\mu$ M (IC <sub>50</sub> )	[78]
		MTT/HeLa	15.0 $\mu$ M (IC <sub>50</sub> )	Paclitaxel 4.9 $\mu$ M (IC <sub>50</sub> )	[78]
		MTT/Huh7	20.0 $\mu$ M (IC <sub>50</sub> )	Fluorouracil 6.2 $\mu$ M (IC <sub>50</sub> )	[78]
	Antimicrobial	MTT/MCF-7	12.0 $\mu$ M (IC <sub>50</sub> )	Paclitaxel 1.8 $\mu$ M (IC <sub>50</sub> )	[78]
		Microplate assay/ <i>E. coli</i>	16.0 $\mu$ g/mL (MIC)	Chloramphenicol 0.025 $\mu$ g/mL (MIC)	[78]
		Microplate assay/ <i>M. luteus</i>	64.0 $\mu$ g/mL (MIC)	Chloramphenicol 0.5 $\mu$ g/mL (MIC)	[78]
		Microplate assay/ <i>V. harveyi</i>	32.0 $\mu$ g/mL (MIC)	Chloramphenicol 2.0 $\mu$ g/mL (MIC)	[78]
Cladosporone A (157)	Cytotoxicity	Trypan blue cell viability assay/K562	14.3 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.24 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/A549	15.7 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.05 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/Huh-7	29.9 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.08 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/H1975	40.6 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.09 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/MCF-7	21.3 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.78 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/U937	10.5 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.06 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/BGC823	17.0 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.09 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/HL-60	10.1 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.09 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/A549	53.7 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.11 $\mu$ M (IC <sub>50</sub> )	[77]
		Trypan blue cell viability assay/MOLT-4	14.6 $\mu$ M (IC <sub>50</sub> )	Trichostatin A 0.03 $\mu$ M (IC <sub>50</sub> )	[77]
	Anti-inflammatory	Spectrophotometry/Anti-COX-2/PGF <sub>2<math>\alpha</math></sub> inhibitor	49.1 $\mu$ M (IC <sub>50</sub> )	Indomethacin 18.3 $\mu$ M (IC <sub>50</sub> )	[77]
				NS-398 1.0 $\mu$ M (IC <sub>50</sub> )	

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