Electronic Supplementary Material (ESI) for Natural Product Reports.

Marine natural products (2021) D2NP00083K

Supplementary Information

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1 Introduction

In the main Review document, only the structures of a selection of highlighted compounds are shown. However, *all* structures are available for viewing, along with names, taxonomic origins, locations, biological activities and other information in this Supplementary Information (SI) document. Each page of the SI document contains at least one array of numbered structures. The numbers are those assigned in the Review document. For structures that have their absolute configurations fully described, the compound number in the diagrams is preceded with the † symbol. Below each structural array, the relevant information for each reference and associated compounds is listed. The first line contains the **Main article reference** #, followed by **Taxonomy**, **Location** and **Article title**. Each section is separated by the // symbol. The following indented line(s) provide information about each compound referred to in the Review for that publication. This information is provided in the following order, again separated by the // symbol (* is inserted where there are no data): **Compound number**, **Status** (**N** for a new compound; **M** for new to marine; **R** for a revision (structure, stereochemistry, stereochemical assignment etc)), **Compound name**, **Biological activity** and **Other information**. To assist viewing, these headings are noted in the footer at the bottom of each page. To conserve space, the **Title** and **Location** data may have been abbreviated, and are not as complete as in the source, MarinLit. Most **Main article reference** numbers are hyperlinked to the relevant DOI or URL. Where those are not available, the full reference is given in a brief Bibliography at the end of this SI document.

1.1 Abbreviations

In the **Biological activity and other information** section, the following abbreviations have been used:

abs. config.	absolute configuration
AChE	acetylcholine esterase
activ.	activity
ABCA1	ATP-binding cassette transporter A1
anti-inflam.	antiinflammatory
antioxid.	antioxidant
bact.	bacteria
BChE	butylcholine esterase
Cbl-b	casitas B-lineage lymphoma proto-oncogene-b
CL	cell line
ConA	concanavalin A
COX-2	cyclooxygenase-2
cytotox.	cytotoxicity/cytotoxic
degrad.	degradation
depolaris.	depolarisation
*h*DHODH	human dihydroorotate dehydrogenase
DRG	dorsal root ganglia
DPPH	2,2-diphenyl-1-picrylhydrazyl
DPP4	dipeptidyl peptidase-4
enant.	enantiomer
HSV-1	herpes simplex virus 1
HTCL	human tumour cell line
hTRPA1	human transient receptor potential subtype A1
hum.	human
IL6	interleukin 6
IA	inactive
inhib.	inhibitor/inhibition/inhibitory
iNOS	inosine-5′-monophosphate dehydrogenase
insep.	inseparable
immunomod.	immunomodulatory
isol.	isolated
ICL	isocitrate lyase
LPS	lipopolysaccharide
LXR	liver X receptor
MAPK	mitogen-activated protein kinase
MIC	minimum inhibitory concentration
Mtb	*Mycobacterium tuberculosis*
Mptp	*M. tuberculosis* protein tyrosine phosphatase
mod.	moderate
microb.	microbial, microbe
mixt.	mixture
NO	nitrous oxide
norm.	normal
nHCL	normal human cell line
nMCL	normal mammalian cell line
NT	not tested
PGE_2	prostaglandin E2
P. falciparum	*Plasmodium falciparum*
prod.	production
PKS	polyketide synthase
pot.	potent
prod.	production
purif.	purify/purified
PR1	pathogenesis-related protein 1
PTP1B	protein-tyrosine phosphatase 1B
PTP	protein-tyrosine phosphatase
QS	quorum sensing
Rac.	Racemic mixture
ref.	reference
Srt A	sortase A lyase
S. aureus	*Staphlococcus aureus*
stereochem.	stereochemistry
struct.	structure
synth.	synthesis/synthetic
TCL	tumour cell line
TCPTP	T cell protein tyrosine phosphatase
TDDFT	time dependent density functional theory
TGF	tissue growth factor
TNBC	triple negative breast cancer
TNF-α	tumour necrosis factor alpha
XRD	X-ray diffraction analysis

1.2 Biological activity definitions

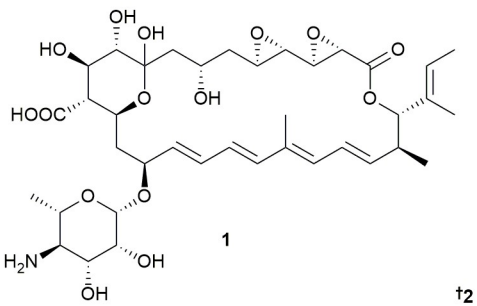
Cytotoxic, antiparasitic, antioxidant, antiinflammatory, enzyme and antiviral activity (IC_{50} <10 µM); any activity reported at a higher dose is deemed inactive (IA)

Potent (pot.) activity:	IC_{50} <100 nM
Moderate (mod.) activity:	IC_{50} <1 µM
Weak activity:	IC_{50} <10 µM

Antibacterial and antifungal activity (MIC <32 µg/ml, <64 µM based on MW 500 Da); any activity reported at a higher dose is deemed inactive (IA)

Potent (pot.) activity:	MIC <1 µg/ml
Moderate (mod.) activity:	MIC <8 µg/ml
Weak activity:	MIC <32 µg/ml

2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



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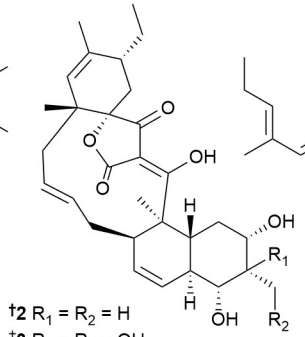
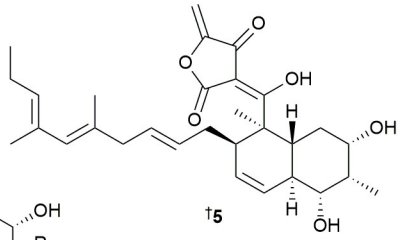


†2 $R_1 = R_2 = H$
†3 $R_1 = R_2 = OH$
†4 $R_1 = OH, R_2 = H$



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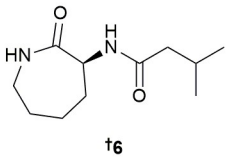

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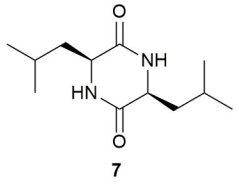

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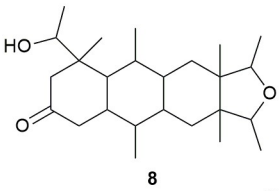


8

†9 X = N
†10 X = CH

3 Actinobacteria *Actinokineospora spheciospongiae* // * // The discovery of actinospene, a new polyene macrolide with broad activity against plant fungal pathogens and pathogenic yeasts
1 // N // actinospene // IA to pot. activ. *vs* 9 fungal strains; IA *vs* 2 bact. strains.

4 Actinobacteria *Actinomadura* sp // Sagami Bay, Japan // Nomimicins B–D, new tetronate-class polyketides from a marine-derived actinomycete of the genus *Actinomadura*
2 // M // nomimicin A // NT.
3 // N // nomimicin B // IA to mod. activ. *vs* 5 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.
4 // N // nomimicin C // IA to mod. activ. *vs* 5 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.
5 // N // nomimicin D // IA to mod. activ. *vs* 5 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.

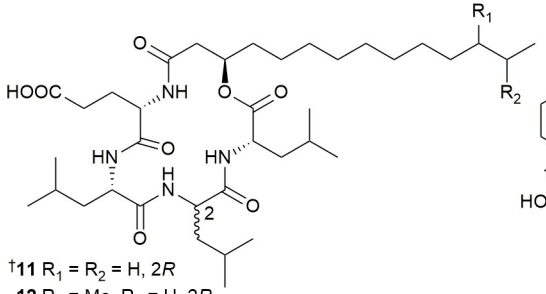
5 Bacteroidetes *Aquimarina* sp // Kosrae, Federated States of Micronesia // Inhibition of A549 lung cancer cell migration and invasion by ent-caprolactin C *via* the suppression of transforming growth factor-β-induced epithelial—mesenchymal transition
6 // N // caprolactin C // IA *vs* 1 HTCL; weak migration and invasion inhib.

6 Firmicutes *Bacillus* sp // Palk Bay of Bengal, Mandapam coast, Tamil Nadu, India // Structural elucidation and antimicrobial activity of a diketopiperazine isolated from a *Bacillus* sp. associated with the marine sponge *Spongia officinalis*
7 // M // (3*S*,6*S*)-3,6-diisobutylpiperazine-2,5-dione // weak activ. *vs* 2 bact. strains.

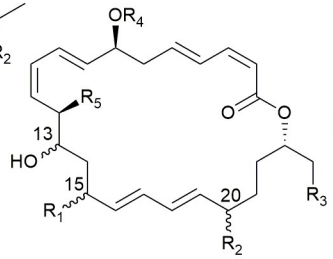
7 Firmicutes *Bacillus* sp // Mangalavanam, Cochin, India // Isolation and characterization of a novel antimicrobial oxatetracyclo ketone from Bacillus stercoris MBTDCMFRI Ba37 isolated from the tropical estuarine habitats of Cochin
8 // N // 1-(1-hydroxyethyl)-1,7,10,12,13,15,17-heptamethyl-16-oxatetracyclo[8.7.0.02,3.012,13]heptadecan-5-one // questionable structure.

8 Firmicutes *Bacillus* sp // Ramrod Key, Florida, USA // Bacillibactins E and F from a marine sponge-associated *Bacillus* sp.
9 // N // bacillibactin E // weak siderophoric activ.
10 // N // bacillibactin F // weak siderophoric activ.

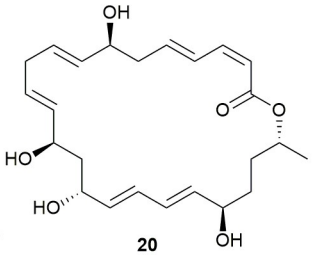
2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



†**11** $R_1 = R_2 = H$, 2*R*
12 $R_1 = Me$, $R_2 = H$, 2*R*
†**13** $R_1 = H$, $R_2 = Me$, 2*R*
†**14** $R_1 = R_2 = H$, 2*S*
15 $R_1 = Me$, $R_2 = H$, 2*S*
†**16** $R_1 = H$, $R_2 = Me$, 2*S*



17 $R_1 = OH$, $R_2 = R_3 = R_4 = R_5 = H$, 13*R**,15*S**
18 $R_1 = R_2 = OH$, $R_3 = Me$, $R_4 = R_5 = H$, 13*S**,15*R**,20*R**
19 $R_1 = H$, $R_2 = OH$, $R_3 = H$, $R_4 = \alpha$-D-glu, $R_5 = H$, 13*S**,20*S**
21 $R_1 = OH$, $R_2 = R_3 = R_4 = H$, $R_5 = OH$, 13*R**,15*R**



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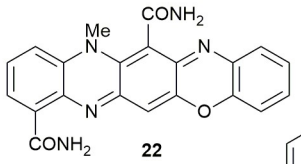

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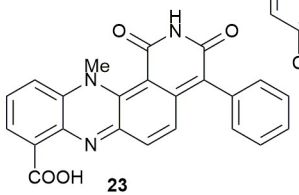

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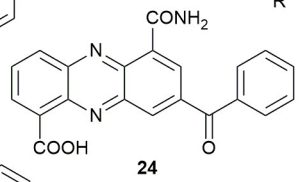

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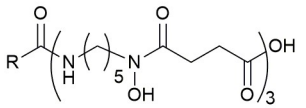


25 R = CH_2Ph
26 R = Me
27 R = Et
28 R = *i*-Pr

9 Firmicutes *Bacillus subtilis* // Gageo reef, Republic of Korea // Anti-mycoplasma activity of bacilotetrins C–E, cyclic lipodepsipeptides from the marine-derived *Bacillus subtilis* and structure revision of bacilotetrins A and B
11 // N // bacilotetrin C // weak activ. *vs* 1 bact. strain.
12 // N // bacilotetrin D // weak activ. *vs* 1 bact. strain.
13 // N // bacilotetrin E // weak activ. *vs* 1 bact. strain.
14 // R // bacilotetrin A // NT.
15 // R // bacilotetrin B // NT; obtained as a mixture of 2 bacilotetrin B isomers
16 // R // bacilotetrin B // NT; obtained as a mixture of 2 bacilotetrin B isomers

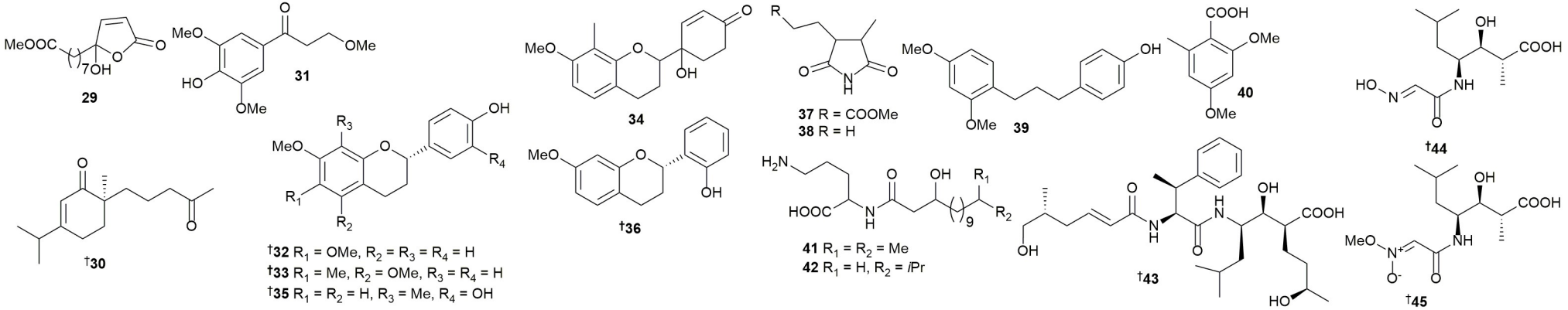
10 Firmicutes *Bacillus siamensis* // Beihai city, Guangxi, China // New 24-membered macrolactins isolated from marine bacteria *Bacillus siamensis* as potent fungal inhibitors against sugarcane smut
17 // N // bamemacrolactin A // weak inhib. of fungal spore germination; IA *vs* mycelium growth.
18 // N // bamemacrolactin B // weak inhib. of fungal spore germination; IA *vs* mycelium growth.
19 // N // bamemacrolactin C // mod. inhib. of fungal spore germination; mod. activ. *vs* mycelium growth.
20 // N // bamemacrolactin D // weak inhib. of fungal spore germination; IA *vs* mycelium growth.
21 // N // bamemacrolactin E // weak inhib. of fungal spore germination; IA *vs* mycelium growth.

11 Actinobacteria *Dermacoccus abyssi* // Mariana Trench // Dermacozine N, the first natural linear pentacyclic oxazinophenazine with UV–Vis absorption maxima in the near infrared region, along with dermacozines O and P isolated from the Mariana Trench sediment strain *Dermacoccus abyssi* MT 1.1T
22 // N // dermacozine N // IA *vs* 5 HTCLs.
23 // N // dermacozine O // IA *vs* 5 HTCLs.
24 // N // dermacozine P // NT.

12 Bacteroidetes, *Fulvivirga* sp // Aoshan Bay, Qingdao, China, // Genome Mining and Biosynthesis of Primary Amine-Acylated Desferrioxamines in a Marine Gliding Bacterium
25 // N // fulvivirgamide A2 // IA to weak cytotox. *vs* 3 HTCLs.
26 // N // fulvivirgamide B2 // IA to weak cytotox. *vs* 3 HTCLs.
27 // N // fulvivirgamide B3 // IA to weak cytotox. *vs* 3 HTCLs.
28 // N // fulvivirgamide B4 // NT.

2 Marine microorganisms and phytoplankton:

2.1 Marine-sourced bacteria



13 Actinobacteria *Isoptericola chiayiensis* // Chiayi County, Taiwan // Chemical constituents from a mangrove-derived actinobacteria *Isoptericola chiayiensis* BCRC 16888 and evaluation of their anti-NO activity

29 // N // isopterfuranone // NT.
30 // N // isopterchiayione // IA *vs* NO prod.
31 // N // isopterinoid // NT.
32 // N // chiayiflavan A // IA *vs* NO prod.
33 // N // chiayiflavan B // weak activ. *vs* NO prod.
34 // N // chiayiflavan C // IA *vs* NO prod.
35 // N // chiayiflavan D // IA *vs* NO prod.
36 // N // chiayiflavan E // IA *vs* NO prod.
37 // M // methyl 3-(4-methyl-2,5-dioxopyrrolidin-3-yl)propanoate // NT.
38 // M // 3-ethyl-4-methylpyrrolidine-2,5-dione // NT.
39 // M // chiayiensol // IA *vs* NO prod.
40 // M // chiayiensic acid // IA *vs* NO prod.

14 Bacteroidetes *Lacinutrix* sp // Barents Sea // Two novel lyso-ornithine lipids isolated from an Arctic marine *Lacinutrix* sp. bacterium

41 // N // 5-amino-2-(3-hydroxy-13-methyltetradecanamido) pentanoic acid // IA *vs* 5 bact. strains; IA *vs* 1 HTCL and 1 nMCL.
42 // N // 5-amino-2-(3-hydroxy-14-methylpentadecanamido) pentanoic acid // IA *vs* 5 bact. strains; IA *vs* 1 HTCL and 1 nMCL.

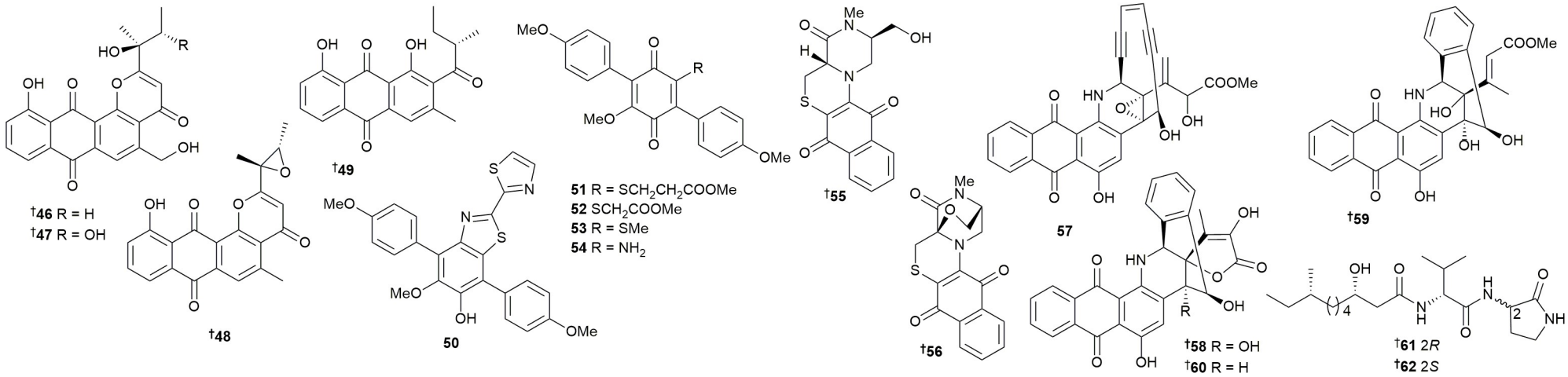
15 Actinobacteria *Micromonospora* sp // * // Micromonosporamide A with glutamine-dependent cytotoxicity from *Micromonospora* sp. MM609M-173N6: isolation, stereochemical determination, and synthesis

43 // N // micromonosporamide A // glutamine-dependent mod. cytotox. *vs* 4 HTCLs; total synth. also achieved.

16 Actinobacteria *Micromonospora* sp // Sagami Bay, Japan // Structure determination, biosynthetic origin, and total synthesis of akazaoxime, an enteromycin-class metabolite from a marine-derived actinomycete of the genus *Micromonospora*

44 // N // akazaoxime // IA *vs* 7 microb. strains; total synth. also achieved.
45 // M // A-76356 // NT.

2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



17 Actinobacteria *Nocardiopsis* aegyptia // Antarctica // Saliniquinone derivatives, saliniquinones G–I and heraclemycin E, from the marine animal-derived N*ocardiopsis aegyptia* HDN19-252
- **46** // N // saliniquinone G // weak to mod. activ. *vs* 6 bact. strains.
- **47** // N // saliniquinone H // mod. activ. *vs* 6 bact. strains.
- **48** // N // saliniquinone I // IA *vs* 6 bact. strains.
- **49** // N // heraclemycin E // IA *vs* 6 bact. strains.

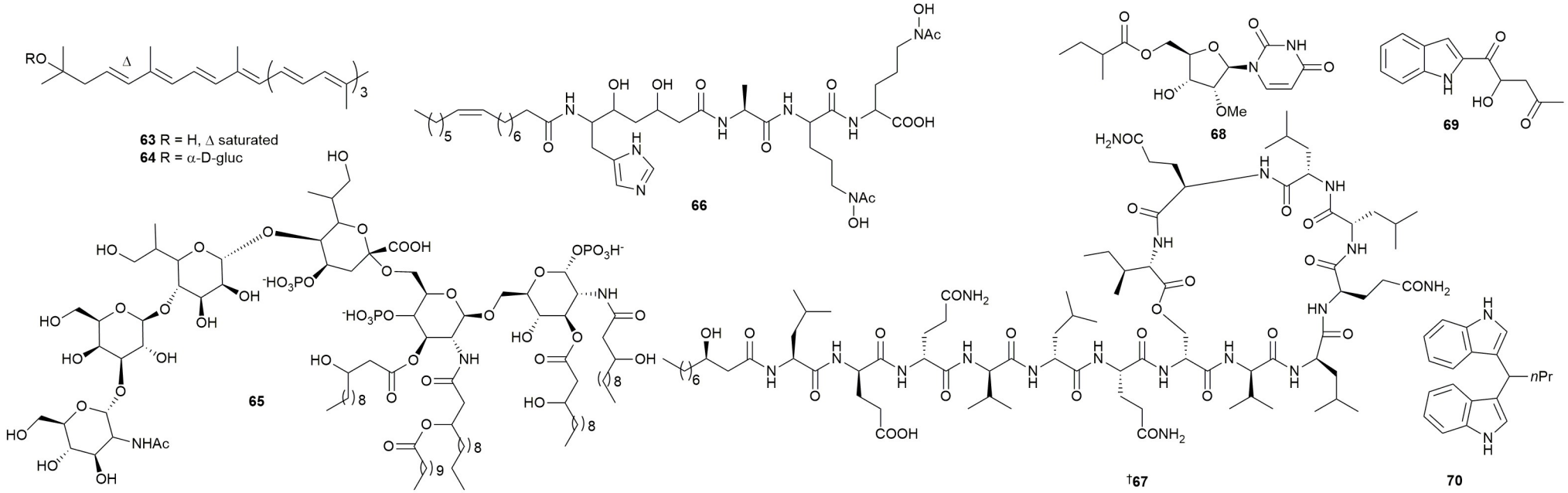
18 Actinobacteria *Nocardiopsis* sp // South China Sea // Antibacterial *p*-terphenyl with a rare 2,2′-bithiazole substructure and related compounds isolated from the marine-derived actinomycete *Nocardiopsis* sp. HDN154086
- ***50*** // N // nocarterphenyl D // IA to mod. activ. *vs* 7 bact. strains; IA *vs* 4 HTCLs.
- **51** // N // nocarterphenyl E // IA to mod. activ. *vs* 7 bact. strains; IA *vs* 4 HTCLs.
- **52** // N // nocarterphenyl F // IA *vs* 4 HTCLs.
- **53** // N // nocarterphenyl G // IA *vs* 4 HTCLs.
- **54** // N // nocarterphenyl H // IA *vs* 4 HTCLs.

19 Actinobacteria *Nocardiopsis dassonvillei* // Yongxing island, South China Sea // Dassonmycins A and B, polycyclic thioalkaloids from a marine sponge-derived *Nocardiopsis dassonvillei* SCSIO 40065
- **55** // N // dassonmycin A // IA to mod. activ. *vs* 6 bact. strains; IA *vs* 4 HTCLs.
- **56** // N // dassonmycin B // IA to mod. activ. *vs* 6 bact. strains; IA *vs* 4 HTCLs.

20 Actinobacteria *Nonomuraea* sp // Japan Trench // Sealutomicins, new enediyne antibiotics from the deep-sea actinomycete *Nonomuraea* sp. MM565M-173N2
- ***57*** // N // sealutomicin A // pot. activ. *vs* 21 bact. strains.
- **58** // N // sealutomicin B // mod. to pot. activ. *vs* 21 bact. strains.
- **59** // N // sealutomicin C // mod. to pot. activ. *vs* 21 bact. strains.
- **60** // N // sealutomicin D // mod. to pot. activ. *vs* 21 bact. strains.

21 Firmicutes *Paenibacillus* sp // Wijdefjorden, Svalbard // Svalbamides A and B, pyrrolidinone-bearing lipodipeptides from Arctic *Paenibacillus* sp.
- **61** // N // svalbamide A // quinone reductase activator; IA *vs* 5 HTCLs.
- **62** // N // svalbamide B // quinone reductase activator; IA *vs* 5 HTCLs.

2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



22 Firmicutes *Planococcus maritimus* // * // Heterologous production of novel and rare C30-carotenoids using *Planococcus* carotenoid biosynthesis genes
63 // N // 5-hydroxy-5,6-dihydro-4,4'-diaponeurosporene // weak singlet oxygen quencher.
64 // N // 5-glucosyl-5,6-dihydro-4,4'-diapolycopenene // weak singlet oxygen quencher.

23 Proteobacteria *Pseudoalteromonas nigrifaciens* // * // Complete lipooligosaccharide structure from *Pseudoalteromonas nigrifaciens* Sq02-Rifr and study of its immunomodulatory activity
65 // N // $C_{102}H_{183}N_3O_{48}P_3$ // TLR-4 and NF-κB activator.

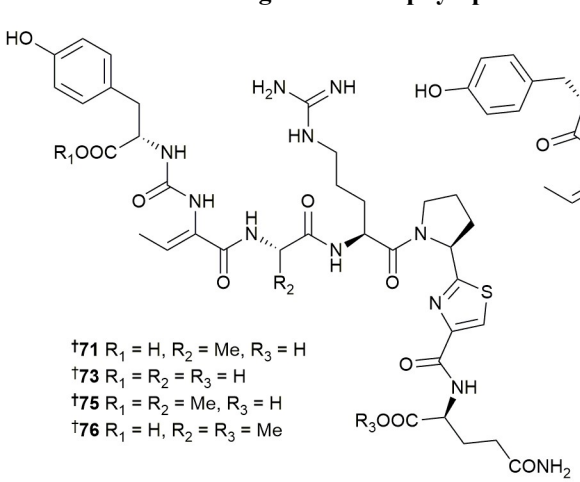
24 Proteobacteria *Pseudoalteromonas piscicida* // Okinawa, Japan // Pseudoalteropeptide A, a novel lipopeptide from the marine bacterium *Pseudoalteromonas piscicida* SWA4_PA4 isolated from marine seaweed
66 // N // pseudoalteropeptide A // IA *vs* 1 HTCL; IA *vs* 2 bact. strains; weak siderophoric activ.

25 Pseudomonadota *Pseudomonas* sp. // * // Structural revision of natural cyclic depsipeptide MA026 established by total synthesis and biosynthetic gene cluster analysis
67 // R // MA026 // tight junction opening activ.; revised by total synth.

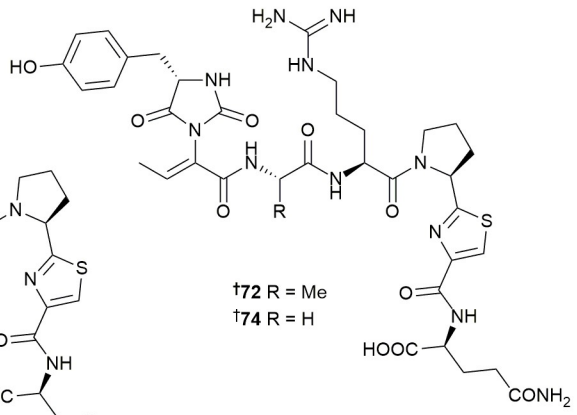
26 Actinobacteria *Pseudonocardia* sp // Luhuitou fringing reef // A new uridine derivative and a new indole derivative from the coral-associated actinomycete *Pseudonocardia* sp. SCSIO 11457
68 // N // 11457 A // IA *vs* 5 HTCLs; IA *vs* 4 bact. strains.
69 // N // 11457 B // IA *vs* 5 HTCLs; IA *vs* 4 bact. strains.

27 Proteobacteria *Pseudovibrio denitrificans* // Green Island, Taiwan // Natural indoles from the bacterium *Pseudovibrio denitrificans* P81 isolated from a marine sponge, *Aaptos* species
70 // M // vibrindole A // weak cytotox. *vs* 1 HTCL.

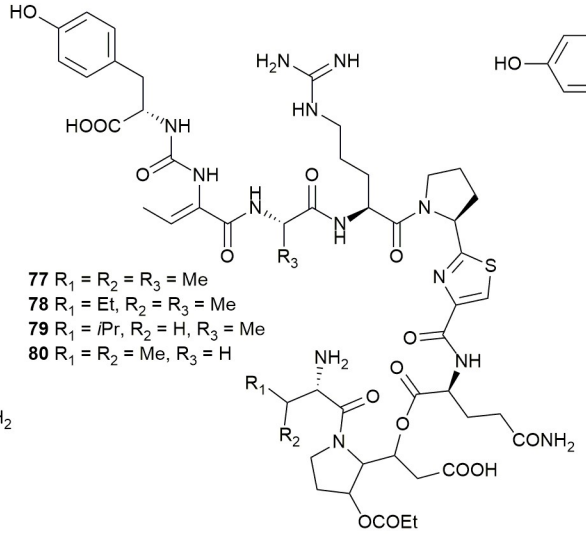
2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



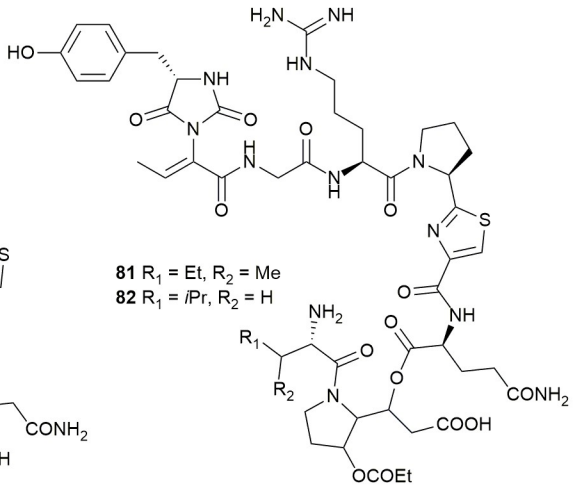
†**71** R_1 = H, R_2 = Me, R_3 = H
†**73** R_1 = R_2 = R_3 = H
†**75** R_1 = R_2 = Me, R_3 = H
†**76** R_1 = H, R_2 = R_3 = Me



†**72** R = Me
†**74** R = H



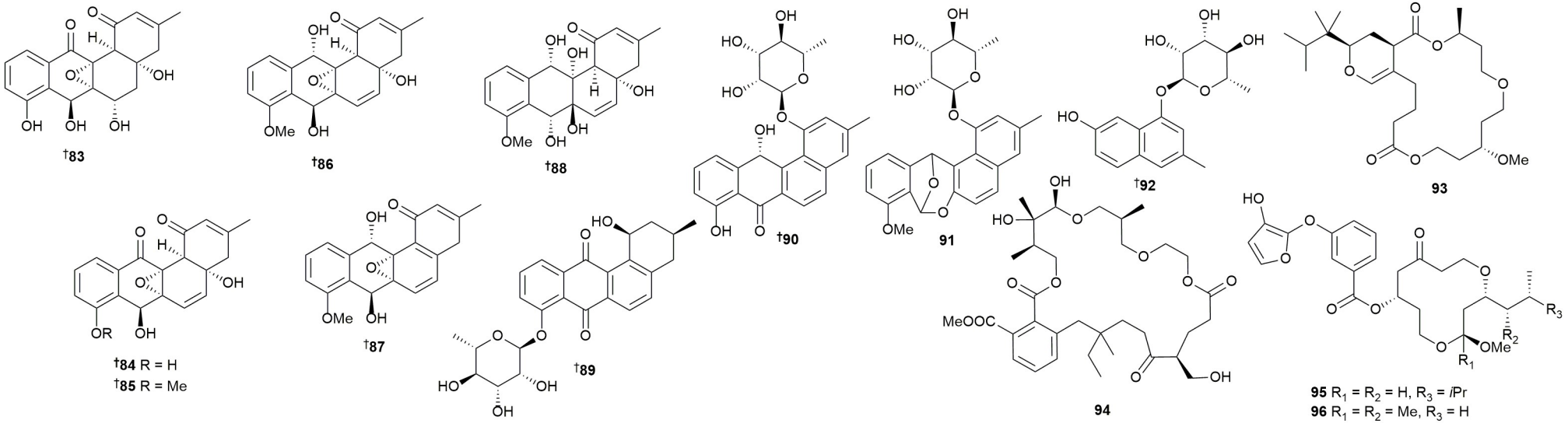
77 R_1 = R_2 = R_3 = Me
78 R_1 = Et, R_2 = R_3 = Me
79 R_1 = *i*Pr, R_2 = H, R_3 = Me
80 R_1 = R_2 = Me, R_3 = H



81 R_1 = Et, R_2 = Me
82 R_1 = *i*Pr, R_2 = H

28 Proteobacteria *Pseudovibrio brasiliensis* // João Fernandinho Beach, Búzios, Rio de Janeiro, Brazil // A family of nonribosomal peptides modulate collective behavior in *Pseudovibrio* bacteria isolated from marine sponges
71 // N // pseudovibriamide A1 // NT.
72 // N // pseudovibriamide A2 // NT.
73 // N // pseudovibriamide A3 // NT.
74 // N // pseudovibriamide A4 // NT.
75 // N // pseudovibriamide A5 // NT.
76 // N // pseudovibriamide A6 // NT.
77 // N // pseudovibriamide B1 // NT.
78 // N // pseudovibriamide B2 // NT.
79 // N // pseudovibriamide B3 // NT.
80 // N // pseudovibriamide B4 // NT.
81 // N // pseudovibriamide B5 // NT.
82 // N // pseudovibriamide B6 // NT.

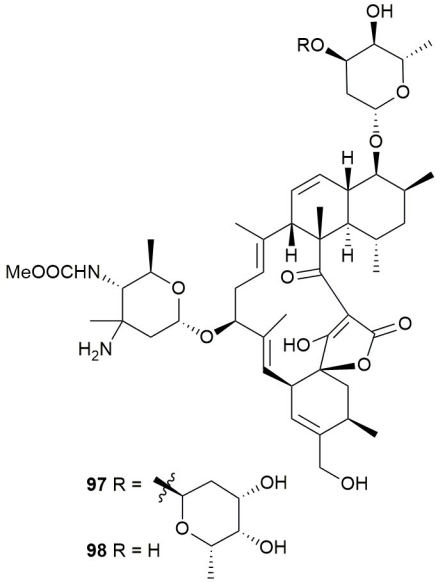
2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria

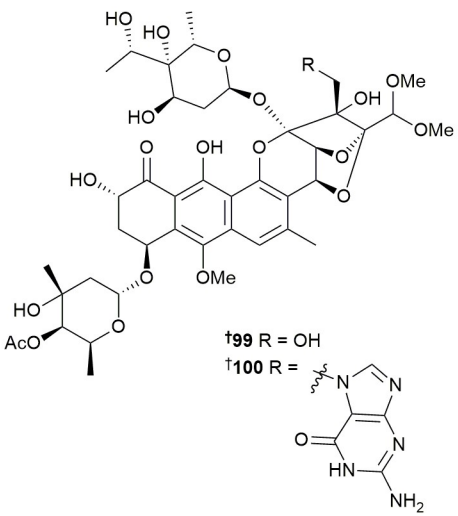


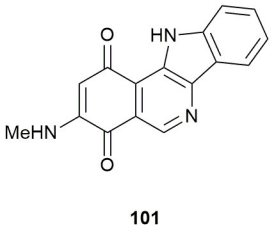
29 Actinobacteria *Saccharothrix* sp // Fushan Bay, Qingdao, China // Genome-guided discovery of highly oxygenated aromatic polyketides, saccharothrixins D-M, from the rare marine actinomycete *Saccharothrix* sp. D09
83 // N // saccharothrixin D // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
84 // N // saccharothrixin E // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
85 // N // saccharothrixin F // weak activ. *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
86 // N // saccharothrixin G // weak activ. *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
87 // N // saccharothrixin H // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
88 // N // saccharothrixin I // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
89 // N // saccharothrixin J // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
90 // N // saccharothrixin K // weak activ. *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
91 // N // saccharothrixin L // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.
92 // N // saccharothrixin M // IA *vs* 7 bact. strains; IA *vs* anti-inflam.; IA *vs* 4 HTCLs.

30 Proteobacteria *Shewanella algae* // Gulf of Mannar, India // Chemical mining of heterotrophic *Shewanella algae* reveals anti-infective potential of macrocyclic polyketides against multidrug-resistant pathogens
93 // N // 20-(20a,20b-dimethylbutan-20a-yl)-9-methoxy-3-methyldodecahydropyrano[3,4-*p*]-2,6,12-trioxacycloocta decine-1,13-dione // questionable structure.
94 // N // methyl-22-ethyl-5,6-dihydroxy-18-(hydroxymethyl)-4,5,9,22-tetramethyl-1,15,19-trioxo-octadecahydro-1*H*-benzo[*o*]-2,7,11,14-tetraoxacyclopentacosine-28-carboxylate // questionable structure.

31 Proteobacteria *Shewanella algae* // Gulf of Mannar, India // Macrocyclic polyketides with siderophore mode of action from marine heterotrophic *Shewanella algae*: prospective anti-infective leads attenuate drug-resistant pathogens
95 // N // 14-(14b,14c-dimethylbutyl)-12-methoxy-18-oxo-11,15-dioxacyclododecan-8-yl 1-((5'-hydroxyfuran-1'-yl)oxy)benzoate // questionable structure.
96 // N // 14-(*sec*-butyl)-12-methoxy-12-methyl-18-oxo-11,15-dioxacyclododecan-8-yl 1-((5'-hydroxyfuran-1'-yl)oxy)benzoate // questionable structure.







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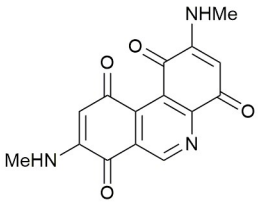

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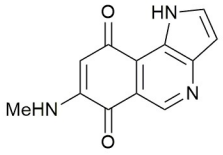

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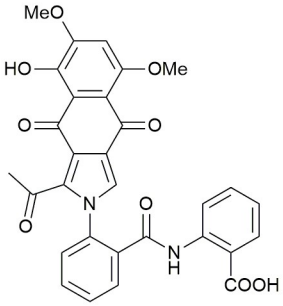


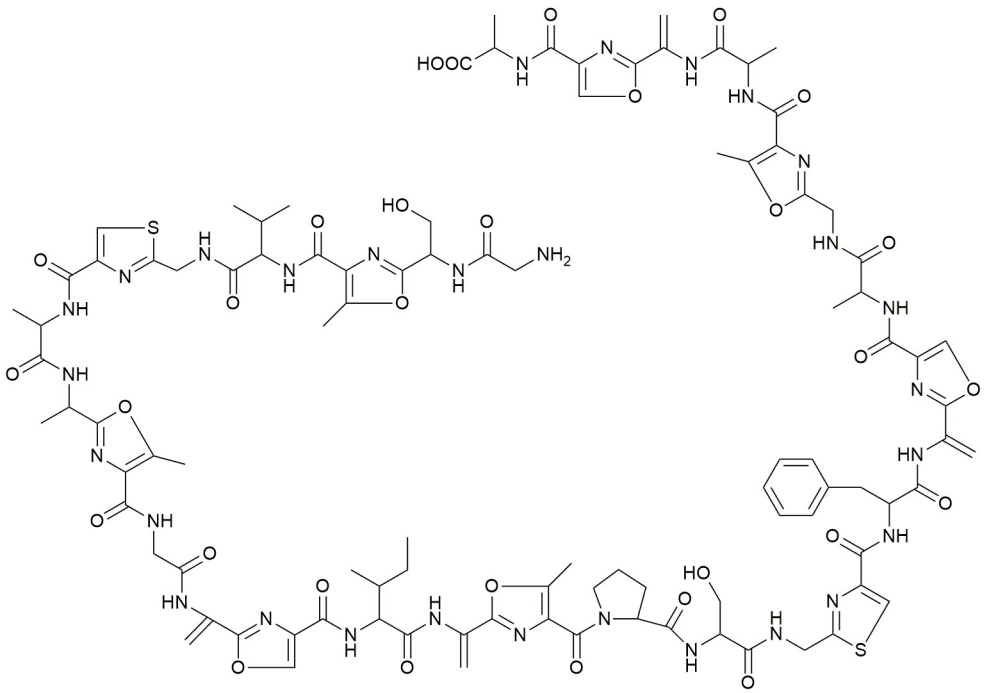
104

32 Actinobacteria *Streptomyces* sp // South China Sea // Antibacterial natural products lobophorin L and M from the marine-derived *Streptomyces* sp. 4506
97 // N // lobophorin L // IA to pot. activ. *vs* 8 bact. strains.
98 // N // lobophorin M // IA *vs* 8 bact. strains.

33 Actinobacteria *Streptomyces sp* // Leizhou Peninsular, China // Metabolomics tools assisting classic screening methods in discovering new antibiotics from mangrove Actinomycetia in Leizhou Peninsula
99 // N // gutingimycin B // NT; potential extraction and isolation artifact.
100 // N // trioxacarcin G // NT; potential extraction and isolation artifact.

34 Actinobacteria *Streptomyces* sp // * // Mansouramycins E-G, cytotoxic isoquinolinequinones from marine *Streptomycetes*
101 // N // mansouramycin E // IA to weak cytotox. *vs* 36 HTCLs.
102 // N // mansouramycin F // IA to weak cytotox. *vs* 36 HTCLs.
103 // N // mansouramycin G // NT.

35 Actinobacteria *Streptomyces* sp // South China Sea // Bhimamycin J, a rare benzo[*f*]isoindole-dione alkaloid from the marine-derived actinomycete *Streptomyces* sp. MS180069
104 // N // bhimamycin J // IA *vs* ACE2.



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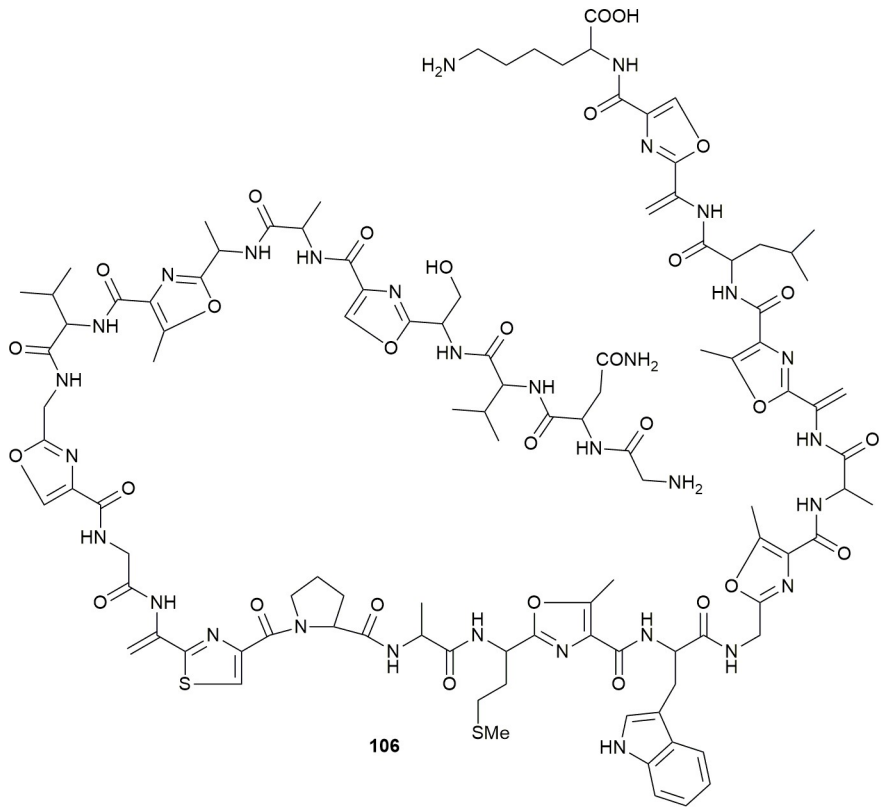
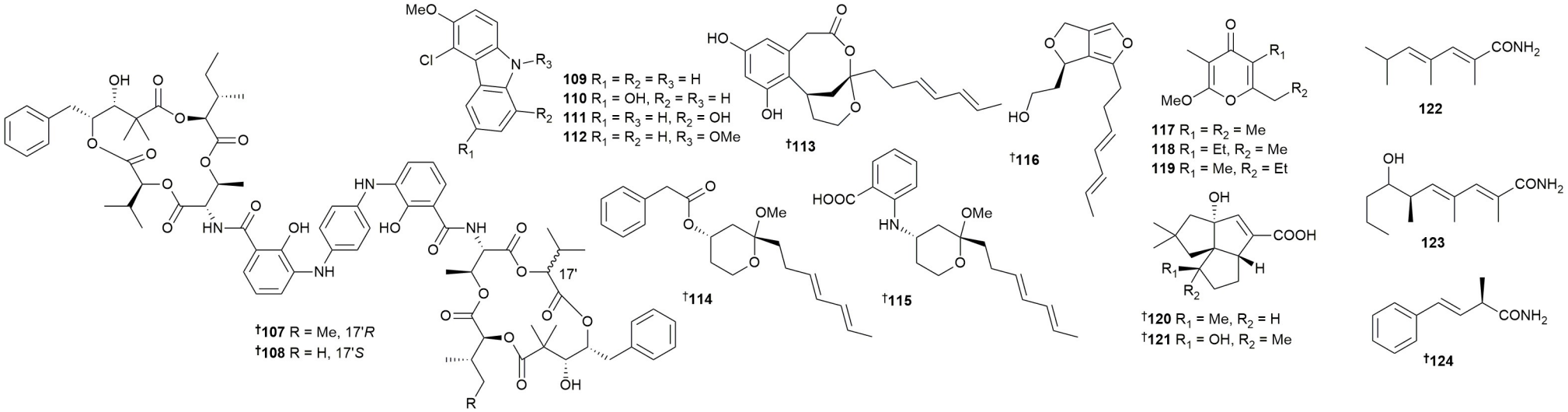


106

36 Actinobacteria *Streptomyces* sp // Ishigaki Island, Okinawa, Japan // Isolation and structure determination of new linear azole-containing peptides spongiicolazolicins A and B from *Streptomyces* sp. CWH03
105 // N // spongiicolazolicin A // IA *vs* 5 bact. strains.
106 // N // spongiicolazolicin B // NT.

37 Actinobacteria Streptomyces sp // Zhaoshu island, Sansha, Hainan, P.R. China // Zhaoshumycins A and B, two unprecedented antimycin-type depsipeptides produced by the marine-derived Streptomyces sp. ITBB-ZKa6
107 // N // zhaoshumycin A // IA *vs* 1 HTCL.
108 // N // zhaoshumycin B // IA *vs* 1 HTCL.



38 Actinobacteria *Streptomyces diacarni* // Sansha, Hainan Province, China // Antimicrobial chlorinated carbazole alkaloids from the sponge-associated actinomycete *Streptomyces diacarni* LHW51701
109 // N // chlocarbazomycin A // IA *vs* 3 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.
110 // N // chlocarbazomycin B // IA *vs* 3 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.
111 // N // chlocarbazomycin C // weak activ. *vs* 3 bact. strains; weak activ. *vs* 1 fungal strain; IA *vs* 1 HTCL.
112 // N // chlocarbazomycin D // IA *vs* 3 bact. strains; IA *vs* 1 fungal strain; IA *vs* 1 HTCL.

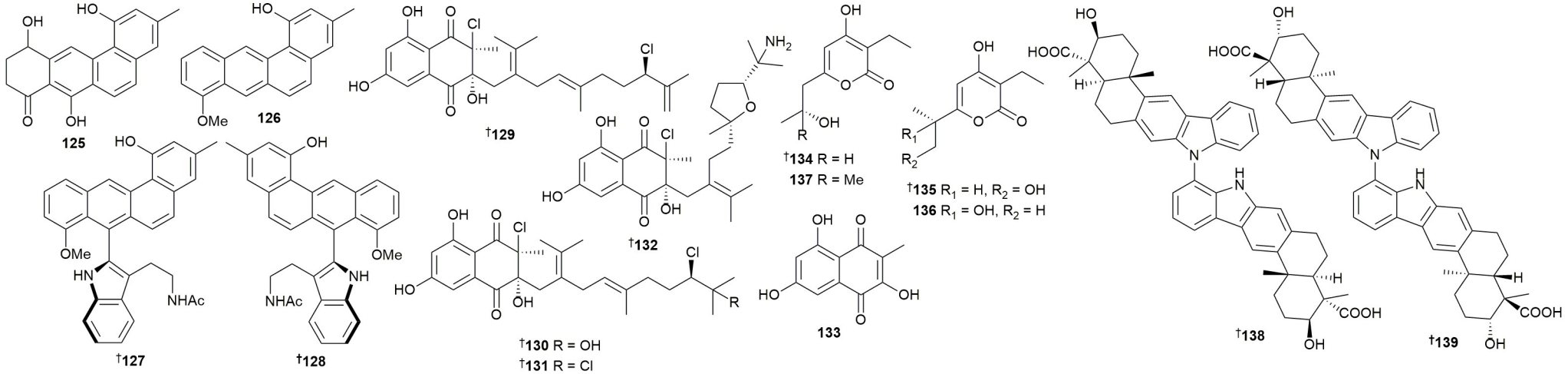
39 Actinobacteria *Streptomyces miharaensis* // Kosrae Island, Federated States of Micronesia // Miharadienes A–D with unique cyclic skeletons from a marine-derived *Streptomyces miharaensis*
113 // N // miharadiene A // IA *vs* anti-inflam.; IA *vs* 1 nMCL.
114 // N // miharadiene B // IA *vs* anti-inflam.; IA *vs* 1 nMCL.
115 // N // miharadiene C // IA *vs* anti-inflam.; IA *vs* 1 nMCL.
116 // N // miharadiene D // weak activ. *vs* anti-inflam.; IA *vs* 1 nMCL.

40 Actinobacteria *Streptomyces psammoticus* // Pearl River estuary, China // Two new α-methoxy-γ -pyrones from the mangrove sediment-derived *Streptomyces psammoticus* SCSIO NS126
117 // M // 2-methoxy-3,5-dimethyl-6-ethyl-γ -pyrone // IA *vs* AChE.
118 // N // 2-methoxy-3-methyl-5,6-diethyl-γ -pyrone // IA *vs* AChE.
119 // N // 2-methoxy-3,5-dimethyl-6-propyl-γ -pyrone // IA *vs* AChE.

41 Actinobacteria *Streptomyces* sp // * // Isolation and identification of pentalenolactone analogs from *Streptomyces* sp. NRRL S-4
120 // N // 1-deoxy-8α-hydroxypentalenic acid // weak activ. *vs* 2 bact. strains.
121 // N // 1-deoxy-9β-hydroxy-11-oxopentalenic acid // weak activ. *vs* 2 bact. strains.

42 Actinobacteria *Streptomyces* sp // Sichang island, Chonburi Province, Thailand // Isolation of manumycin-type derivatives and genome characterization of a marine *Streptomyces* sp. C1-2
122 // N // (2*E*,4*E*)-2,4,6-trimethylhepta-2,4-dienamide // IA *vs* antioxid.; IA *vs* 1 HTCL; IA *vs* 3 fungal strains.
123 // N // (2*E*,4*E*,6*R*)-7-hydroxy-2,4,6-trimethyldeca-2,4-dienamide // IA *vs* antioxid.; IA *vs* 1 HTCL; IA *vs* 3 fungal strains.
124 // N // (*R*,*E*)-2-methyl-4-phenylbut-3-enamide // IA *vs* antioxid.;IA *vs* 1 HTCL; IA *vs* 3 fungal strains.

2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



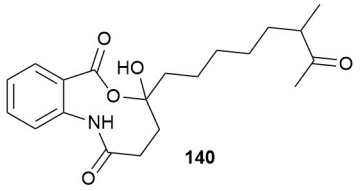
43 Actinobacteria *Streptomyces* sp // Kiaochow Bay, China // Ring D-modified and highly reduced angucyclinones from marine sediment-derived *Streptomyces* sp.
125 // N // actetrophenone A // weak activ. *vs* 10 bact. strains.
126 // N // actetrophenol A // weak to pot. activ. *vs* 10 bact. strains.
127 // N // (*R*a)-actetrophenol B // weak activ. *vs* 10 bact. strains.
128 // N // (*S*a)-actetrophenol B // weak activ. *vs* 10 bact. strains.

44 Actinobacteria *Streptomyces* sp // Oceanside, California, USA // Antibacterial meroterpenoids, merochlorins G-J from the marine bacterium *Streptomyces* sp.
129 // N // merochlorin G // IA to weak activ. *vs* 6 bact. strains.
130 // N // merochlorin H // IA *vs* 6 bact. strains.
131 // N // merochlorin I // IA to pot. activ. *vs* 6 bact. strains.
132 // N // merochlorin J // IA *vs* 6 bact. strains.
133 // N // $C_{11}H_8O_5$ // IA to mod. activ. *vs* 6 bact. strains.

45 Actinobacteria *Streptomyces* sp // Yongxing Island, South China Sea // Structure-based molecular networking for the target discovery of novel germicidin derivatives from the sponge-associated *Streptomyces* sp. 18A01
134 // N // germicidin P // weak inhib. hexokinase II.
135 // N // germicidin Q // weak inhib. hexokinase II.
136 // N // germicidin R // weak inhib. hexokinase II.
137 // N // germicidin S // weak inhib. hexokinase II.

46 Actinobacteria *Streptomyces olivaceus* // South China Sea // Antibiotic dixiamycins from a cold-seep-derived *Streptomyces olivaceus*
138 // N // dixiamycin 12a // weak to mod. activ. *vs* 7 bact. strains.
139 // N // dixiamycin 12b // weak to pot. activ. *vs* 7 bact. strains.

2 Marine microorganisms and phytoplankton: 2.1 Marine-sourced bacteria



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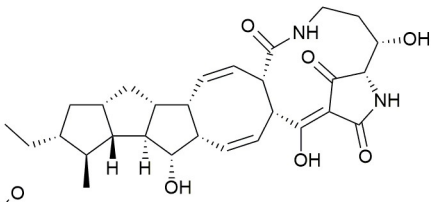

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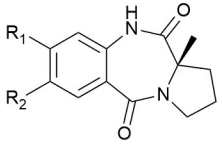
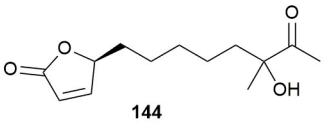


†**141** R_1 = R_2 = H
†**142** R_1 = OH, R_2 = OMe



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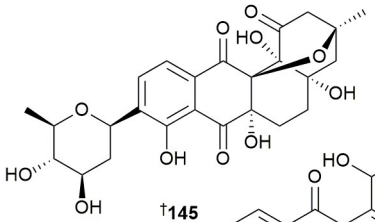
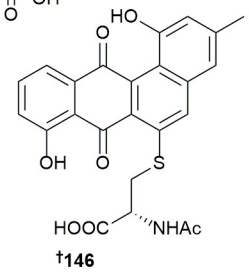
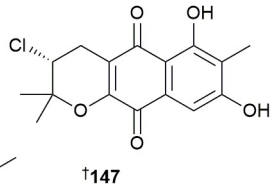


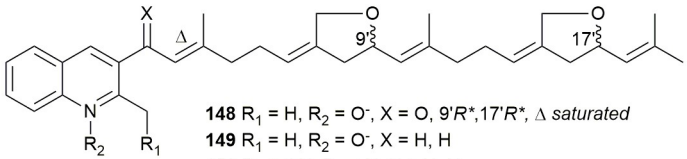
†**145**



†**146**



†**147**



148 R_1 = H, R_2 = O⁻, X = O, 9'*R**,17'*R**, Δ *saturated*
149 R_1 = H, R_2 = O⁻, X = H, H
150 R_1 = OH, R_2 = H, X = H, H

47 Actinobacteria *Streptomyces* sp // Antarctic coast // Antaroide, a novel natural nine-membered macrolide, inhibits melanin biosynthesis in B16F10 murine melanoma cells
140 // N // antaroide // mod. anti-melanogenic activ.

48 Actinobacteria *Streptomyces* sp // Mersin, Turkey // Benzodiazepine derivatives from marine-derived *Streptomyces cacaoi* 14CM034
141 // M // cycloanthranilylproline // weak activ. *vs* 4 bact. strains; weak activ. *vs* 1 fungal strain.
142 // N // 7-methoxy-8-hydroxy cycloanthranilylproline // weak activ. *vs* 4 bact. strains; weak activ. *vs* 1 fungal strain.

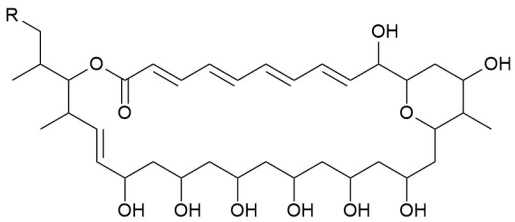
49 Actinobacteria *Streptomyces koyangensis* // * // Genome mining and metabolic profiling uncover polycyclic tetramate macrolactams from *Streptomyces koyangensis* SCSIO 5802
143 // N // koyanamide A // NT.

50 Actinobacteria *Streptomyces koyangensis* // South China Sea // Octyl substituted butenolides from marine-derived *Streptomyces koyangensis*
144 // N // (4*S*)-10-hydroxy-10-methyl-11-oxo-dodec-2-en-1,4-olide // IA *vs* 2 viral strains.

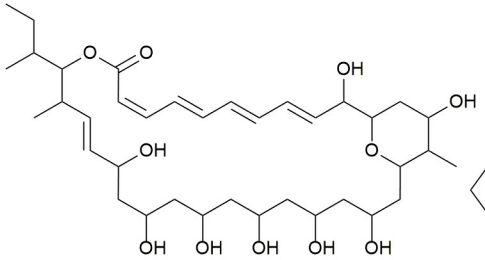
51 Actinobacteria *Streptomyces* sp // Hainan Island, Hainan Province, China // Gephyyamycin and cysrabelomycin, two new angucyclinone derivatives from the *Streptomyces* sp. HN-A124
145 // N // gephyyamycin // IA *vs* 2 HTCLs; IA *vs* 3 microb. strains.
146 // N // cysrabelomycin // IA *vs* 2 HTCLs; IA to weak activ. *vs* 3 microb. strains.

52 Actinobacteria *Streptomyces* sp // Mangkang mangrove forest, Semarang, Central Java, Indonesia // TMKS8A, an antibacterial and cytotoxic chlorinated α-lapachone, from a sea slug-derived actinomycete of the genus *Streptomyces*
147 // N // TMKS8A // IA to mod. activ. *vs* 5 microb. strains; weak cytotox. *vs* 1 HTCL.

53 Actinobacteria // La Jolla, California, USA // Marinoterpins A–C: rare linear merosesterterpenoids from marine-derived actinomycete bacteria of the family Streptomycetaceae
148 // N // marinoterpin A // NT.
149 // N // marinoterpin B // NT.
150 // N // marinoterpin C // NT.



151 R = H
152 R = Me



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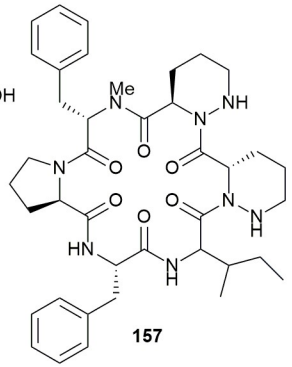

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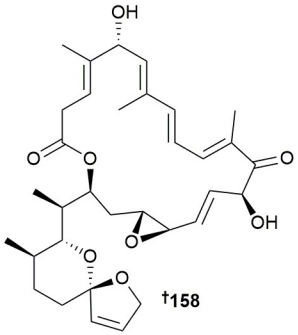
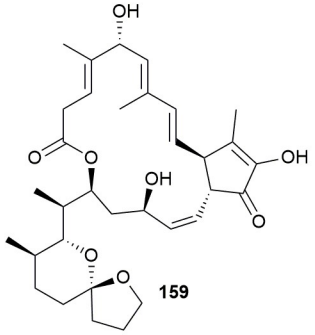


†**158**



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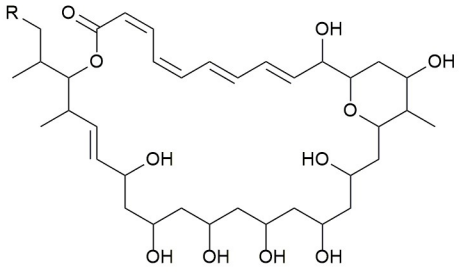
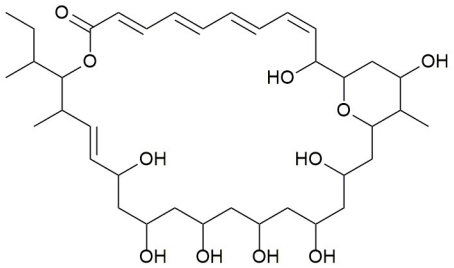


153 R = H
154 R = Me



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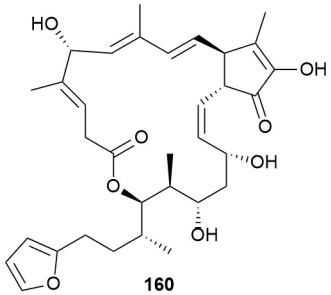

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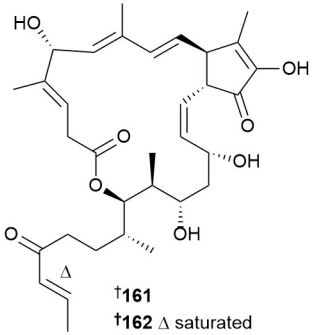
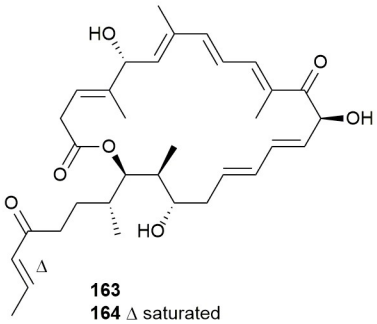


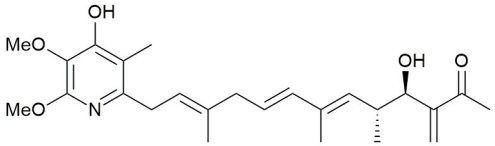
†**161**
†**162** Δ saturated



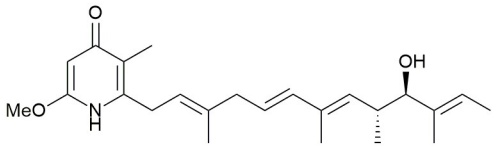
163
164 Δ saturated

54 Actinobacteria *Streptomyces* sp // South China Sea // Antibacterial polyene-polyol macrolides and cyclic peptides from the marine-derived *Streptomyces* sp. MS110128
151 // N // pyranpolyenolide A // IA *vs* 5 bact. strains; IA *vs* 1 fungal strain.
152 // N // pyranpolyenolide B // IA *vs* 5 bact. strains; IA *vs* 1 fungal strain.
153 // N // pyranpolyenolide C // NT.
154 // N // pyranpolyenolide D // NT.
155 // N // pyranpolyenolide E // NT.
156 // N // pyranpolyenolide F // NT.
157 // N // $C_{40}H_{54}N_8O_6$ // IA to pot. *vs* 5 bact. strains; IA *vs* 1 fungal strain.

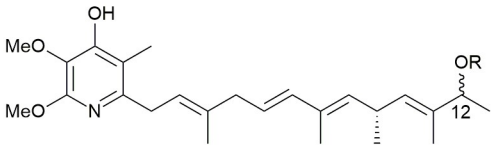
55 Actinobacteria *Streptomyces* sp // Shuangdaowan Bay, Weihai, China // Discovery of polycyclic macrolide shuangdaolides by heterologous expression of a cryptic trans-AT pot. gene cluster
158 // N // shuangdaolide A // NT.
159 // N // shuangdaolide B // NT.
160 // N // shuangdaolide C // NT.
161 // N // shuangdaolide D // NT.
162 // M // dumulmycin // IA *vs* 15 microb. strains; IA *vs* 3 HTCLs and 2 nMCLs.
163 // N // shuangdaolide E // NT.
164 // N // shuangdaolide F // NT.



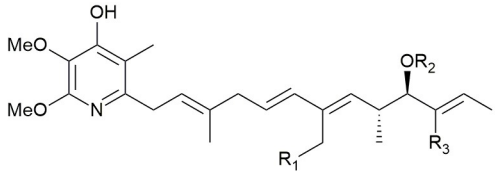
†165



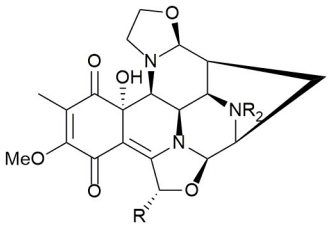
†166



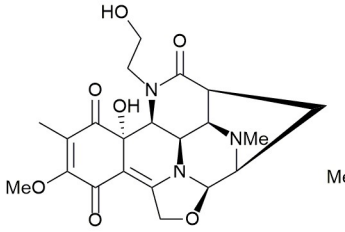
†167 R = H, 12*S*
†168 R = Me, 12*R*



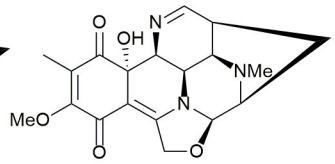
†169 R_1 = H, R_2 = Me, R_3 = H
†170 R_1 = Me, R_2 = H, R_3 = Me
†171 R_1 = H, R_2 = H, R_3 = Me
†172 R_1 = H, R_2 = α–D-glu, R_3 = H



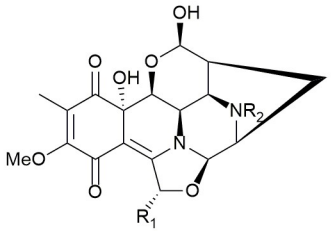
†173 R_1 = H, R_2 = Me
†174 R_1 = OH, R_2 = Me
†175 R_1 = OH, R_2 = H



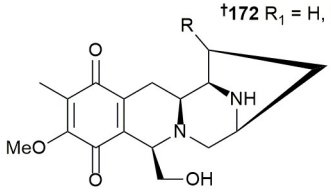
†176



†177



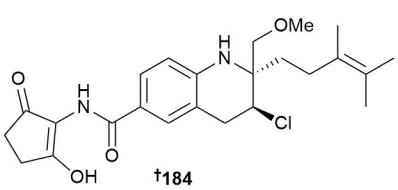
178 R_1 = H, R_2 = Me
179 R_1 = R_2 = H
180 R_1 = OH, R_2 = Me
181 R_1 = OH, R_2 = H

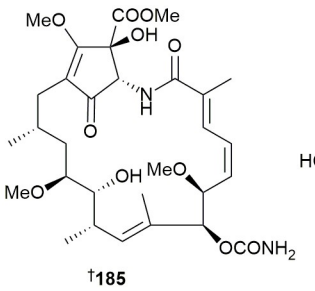


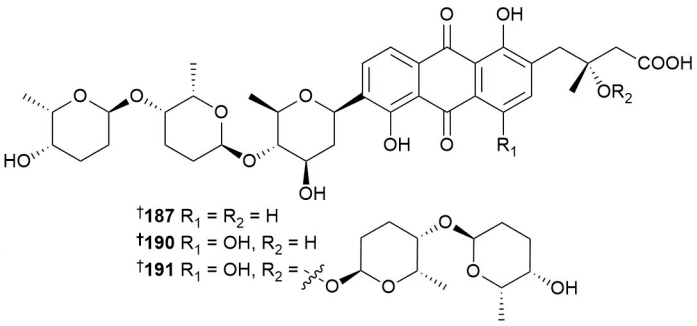
182 R = COOH
183 R = CH_2OH

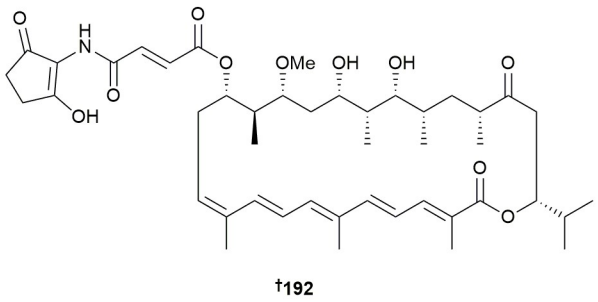
56 Actinobacteria *Streptomyces psammoticus* // Pearl River estuary, China // Cytotoxic minor piericidin derivatives from the actinomycete strain *Streptomyces psammoticus* SCSIO NS126
165 // N // piericidin L // IA to weak cytotox. *vs* 6 HTCLs.
166 // N // piericidin N // IA to pot. cytotox. *vs* 6 HTCLs.
167 // N // piericidin Q // IA to pot. cytotox. *vs* 6 HTCLs.
168 // N // piericidin O // IA to pot. cytotox. *vs* 6 HTCLs.
169 // N // piericidin P // IA to mod. cytotox. *vs* 6 HTCLs.
170 // N // piericidin M // IA to weak cytotox. *vs* 6 HTCLs.
171 // M // piericidin R // IA *vs* 6 HTCLs.
172 // N // 11-demethyl-glucopiericidin A // IA to weak cytotox. *vs* 6 HTCLs.

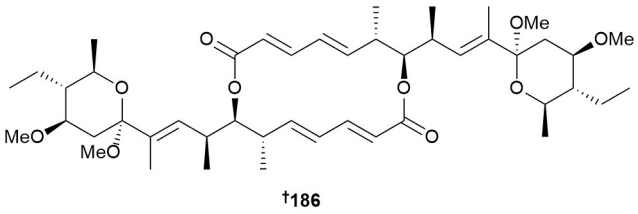
57 Actinobacteria *Streptomyces niveus*, Actinobacteria *Actinoalloteichus cyanogriseus* // South China Sea // Genome-directed discovery of tetrahydroisoquinolines from deep-sea derived *Streptomyces niveus* SCSIO 3406
173 // R // aclidinomycin A // IA to weak activ. *vs* 6 bact. strains.
174 // R // aclidinomycin B // IA *vs* 6 bact. strains.
175 // N // aclidinomycin C // IA *vs* 6 bact. strains.
176 // N // aclidinomycin D // IA to weak activ. *vs* 6 bact. strains.
177 // N // aclidinomycin E // IA to weak activ. *vs* 6 bact. strains.
178 // N // aclidinomycin F // IA *vs* 6 bact. strains.
179 // N // aclidinomycin G // IA to mod. activ. *vs* 6 bact. strains.
180 // N // aclidinomycin H // IA *vs* 6 bact. strains.
181 // N // aclidinomycin I // IA *vs* 6 bact. strains.
182 // N // aclidinomycin J // weak to mod. activ. *vs* 6 bact. strains.
183 // N // aclidinomycin K // weak activ. *vs* 6 bact. strains.

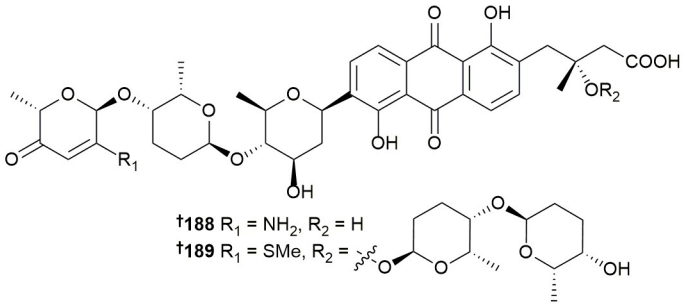


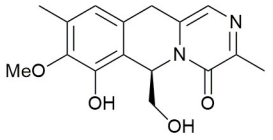


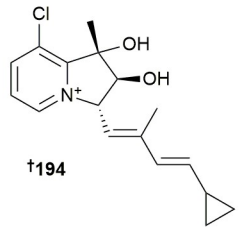












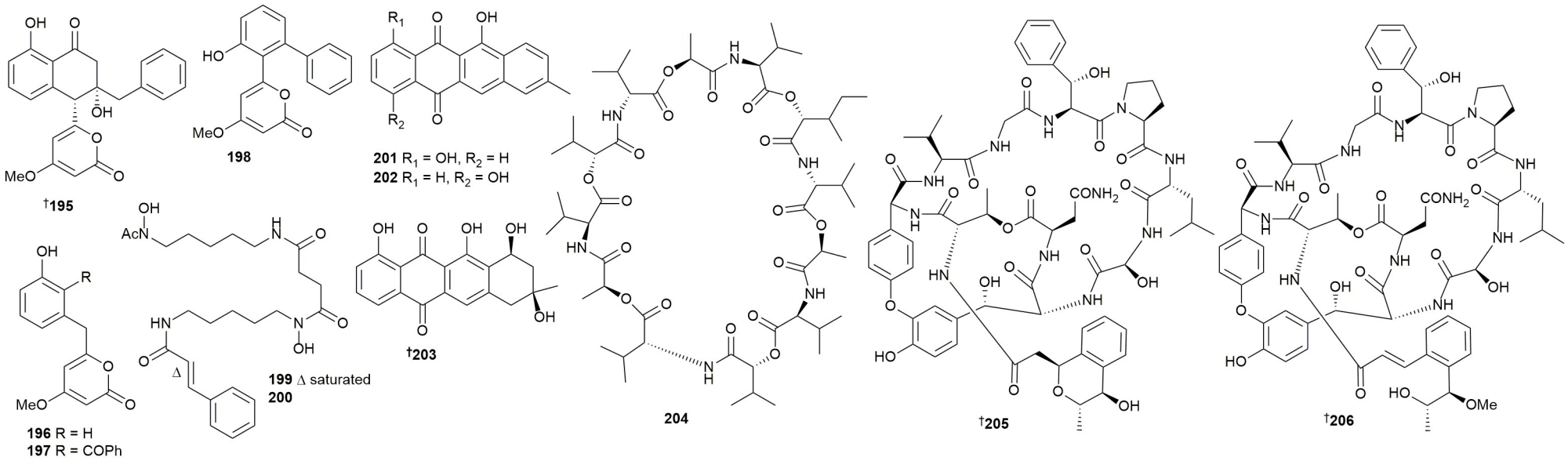
58 Actinobacteria *Streptomyces malaysiensis* // Wenchang, Hainan province, China // Cyclopentenone-containing tetrahydroquinoline and geldanamycin alkaloids from *Streptomyces malaysiensis* as potential anti-androgens against prostate cancer cells
184 // N // malaymycin // mod. to pot. cytotox. *vs* 5 HTCLs; mod. cytotox. *vs* 1 nMCL; weak inhib. of AR expression.
185 // N // mccrearamycin E // IA *vs* 5 HTCLs.
186 // N // 9,9′-diene-11,13,11′,13′-tetra-O-methylelaiolide // IA to weak cytotox. *vs* 5 HTCLs.

59 Actinobacteria *Streptomyces* sp // South San Diego Bay, California, USA // Grincamycins P–T: rearranged angucyclines from the marine sediment-derived *Streptomyces* sp. CNZ-748 inhibit cell lines of the rare cancer pseudomyxoma peritonei
187 // N // grincamycin P // IA *vs* 4 HTCLs.
188 // N // grincamycin Q // IA *vs* 4 HTCLs.
189 // N // grincamycin R // IA to weak cytotox. *vs* 4 HTCLs.
190 // N // grincamycin S // weak cytotox. *vs* 4 HTCLs.
191 // N // grincamycin T // weak cytotox. *vs* 4 HTCLs.

60 Actinobacteria *Streptomyces* sp // Jimei, Xiamen, China // Targeted discovery of the polyene macrolide hexacosalactone A from *Streptomyces* by reporter-guided selection of fermentation media
192 // N // hexacosalactone A // IA to weak activ. *vs* 11 microb. strains; IA *vs* 3 HTCLs.

61 Actinobacteria *Streptomyces* sp // Laizhou Bay, China // Strepyrazinone, a tricyclic diketopiperazine derivative with cytotoxicity from a marine-derived actinobacterium
193 // N // strepyrazinone // IA to mod. cytotox. *vs* 2 HTCLs.

62 Actinobacteria *Streptomyces* sp // Hainan province, China // A new indolizinium alkaloid from marine-derived *Streptomyces* sp. HNA39
194 // N // cyclizidine J // IA *vs* 1 HTCL; IA *vs* 2 kinases.

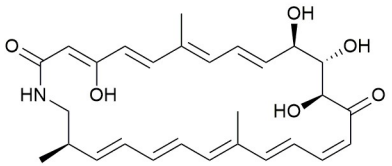


63 Actinobacteria *Streptomyces* sp // Zhanqiao Beach, Qingdao, China // Aromatic polyketides and hydroxamate siderophores from a marine-algae-derived *Streptomyces* species
195 // N // wailupemycin M // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL.
196 // N // wailupemycin N // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL.
197 // N // wailupemycin O // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL.
198 // N // wailupemycin P // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL.
199 // N // streptamide A // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL; weak siderphoric activ.
200 // N // streptamide B // IA *vs* 6 microb. strains; IA *vs* 1 murine TCL; weak siderphoric activ.

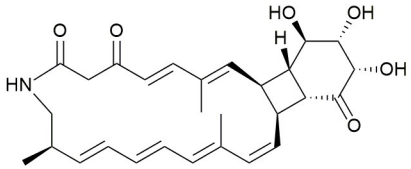
64 Actinobacteria *Streptomyces* sp // Caeciliengroden marshland, Germany // Boshramycinones A-C: new anthracyclinones produced by a marine-derived *Streptomyces* sp.: isolation, structure elucidation and biological activities
201 // N // boshramycinone A // IA to mod. cytotox. *vs* 36 HTCLs; IA *vs* 7 microb. strains.
202 // N // boshramycinone B // IA to mod. cytotox. *vs* 36 HTCLs; IA *vs* 7 microb. strains.
203 // N // boshramycinone C // NT.

65 Actinobacteria *Streptomyces* sp // Lampung, Indonesia // Anti-infective and antiviral activity of valinomycin and its analogues from a sea cucumber-associated bacterium, *Streptomyces* sp. SV 21
204 // N // streptodepsipeptide SV21 // IA to mod. activ. *vs* 8 microb. strains; mod. activ. *vs* 1 viral strain; IA *vs* 1 nMCL.

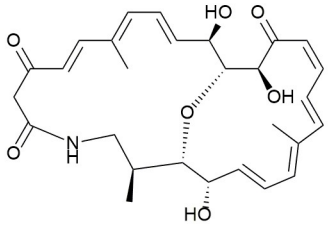
66 Actinobacteria *Streptomyces* sp // Nyuzen Deep-sea Water Park, Toyama, Japan // Nyuzenamides A and B: bicyclic peptides with antifungal and cytotoxic activity from a marine-derived *Streptomyces* sp.
205 // N // nyuzenamide A // weak cytotox. *vs* 1 HTCL; IA to mod. activ. *vs* 8 microb. strains.
206 // N // nyuzenamide B // weak cytotox. *vs* 1 HTCL; IA to mod. activ. *vs* 8 microb. strains.



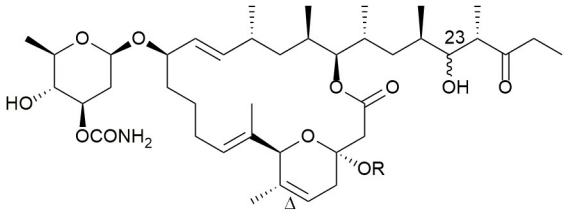
†207



†208



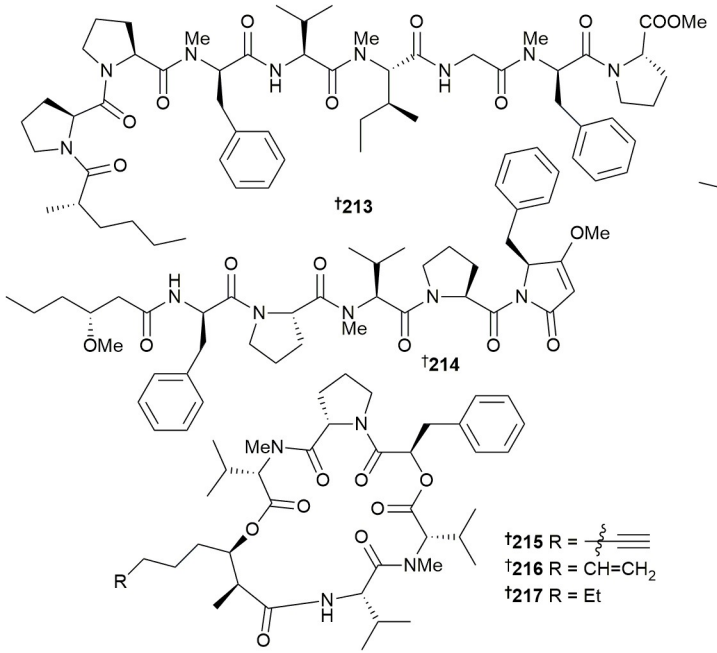
†209

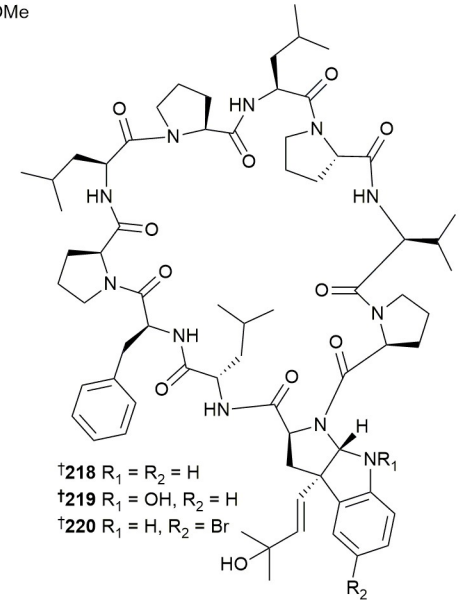


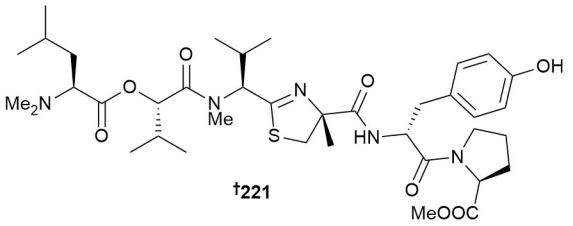
†**210** R = Me, 23*S*
†**211** R = H, Δ saturated, 23*S*
†**212** R = H, Δ saturated, 23*R*

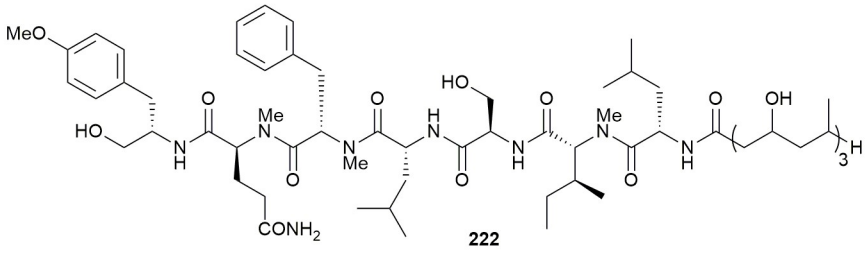
67 Actinobacteria *Streptomyces* sp // South Mid-Atlantic Ridge // Novel macrolactams from a deep-sea-derived *Streptomyces* species
207 // N // streptolactam A // IA *vs* 4 HTCLs; IA to weak activ. *vs* 6 microb. strains.
208 // N // streptolactam B // NT.
209 // N // streptolactam C // IA *vs* 4 HTCLs; IA to weak activ. *vs* 6 microb. strains.

68 Actinobacteria *Streptomyces* sp // * // Discovery of venturicidin congeners and identification of the biosynthetic gene cluster from *Streptomyces* sp. NRRL S-4
210 // N // venturicidin D // weak cytotox. *vs* 1 HTCL.
211 // N // venturicidin E // mod. cytotox. *vs* 1 HTCL.
212 // N // venturicidin F // IA *vs* 1 HTCL









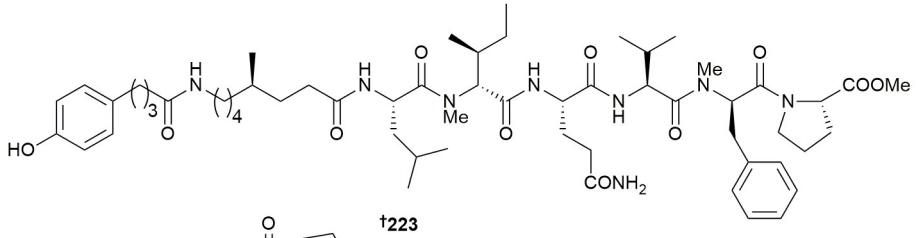
105 Cyanobacteria *Caldora penicillata* // Odo, Okinawa, Japan // Komesuamide and odopenicillatamide, two linear lipopeptides from the marine cyanobacterium *Caldora penicillata*
213 // N // komesuamide // IA *vs* 1 murine CL; stimulated glucose uptake in murine CL.
214 // N // odopenicillatamide // IA *vs* 1 murine CL; stimulated glucose uptake in murine CL.

106 Cyanobacteria *Symploca hydnoides* // Trikora beach, Bintan Island, Indonesia // Trikoveramides A-C, cyclic depsipeptides from the marine cyanobacterium *Symploca hydnoides*
215 // N // trikoveramide A // IA *vs* 1 HTCL; IA *vs* QS inhibitory assay.
216 // N // trikoveramide B // weak cytotox. *vs* 1 HTCL; IA *vs* QS inhibitory assay.
217 // N // trikoveramide C // IA *vs* 1 HTCL; IA *vs* QS inhibitory assay.

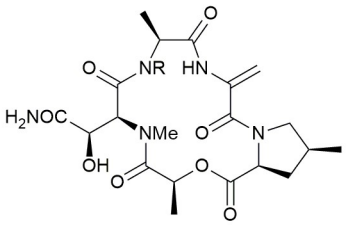
107 Cyanobacteria *Symploca hydnoides* // Trikora beach, Bintan Island, Indonesia // Trikoramides B–D, bioactive cyanobactins from the marine cyanobacterium *Symploca hydnoides*
218 // N // trikoramide B // weak cytotox. *vs* 1 HTCL; IA *vs* QS inhibitory assay.
219 // N // trikoramide C // NT.
220 // N // trikoramide D // weak cytotox. *vs* 1 HTCL; weak QS activ.

108 Cyanobacteria *Salileptolyngbya* sp // Kinenhama beach, Kagoshima, Japan // Isolation and total synthesis of kinenzoline, an antitrypanosomal linear depsipeptide isolated from a marine *Salileptolyngbya* sp. cyanobacterium
221 // N // kinenzoline // weak activ. *vs T. brucei rhodesiense*; IA *vs* 1 nMCL; total syn. achieved.

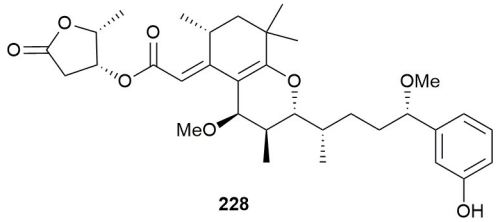
109 Cyanobacteria *Neolyngbya* sp // Bangtang Bay, Wenchang District, Hainan Province, China // Metabolomic characterization of a cf. *Neolyngbya* cyanobacterium from the South China Sea reveals wenchangamide A, a lipopeptide with *in vitro* apoptotic potential in colon cancer cells
222 // N // wenchangamide A // IA *vs* 1 HTCL.



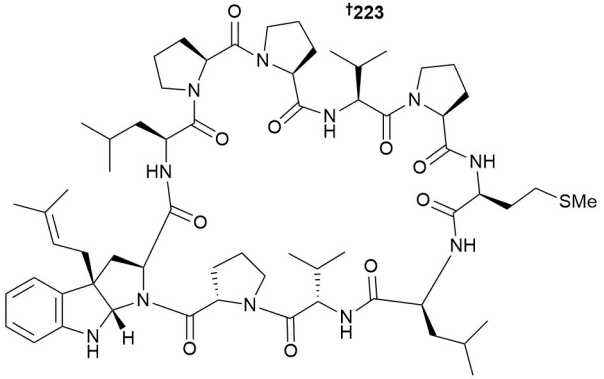
†223



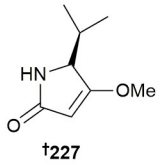
†225 R = OH
†226 R = H



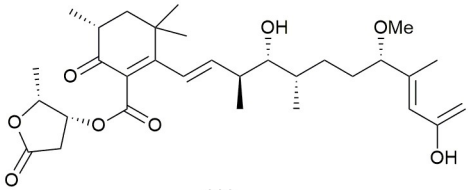
228



†224



†227



229

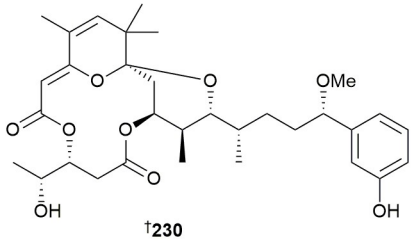
110 Cyanobacteria *Caldora penicillata* // Ikei Island, Okinawa, Japan // Isolation, structure determination, and total synthesis of hoshinoamide C, an antiparasitic lipopeptide from the marine cyanobacterium *Caldora penicillata*
223 // N // hoshinoamide C // mod. activ. *vs P. flaciparum*; weak activ. *vs T. b. rhodesiense*; IA *vs* 2 HTCLs.

111 Cyanobacteria *Leptolyngbya* sp // Bise, Okinawa Island, Okinawa Prefecture, Japan // Motobamide, an antitrypanosomal cyclic peptide from a *Leptolyngbya* sp. marine cyanobacterium
224 // N // motobamide // weak activ. *vs T. b. rhodesiense*; IA *vs* 1 nHCL and 2 HTCLs.

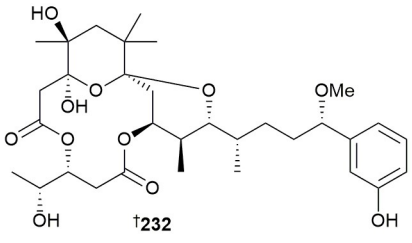
112 Cyanobacteria *Lyngbya* sp // Broward County, Florida, USA // Gatorbulin-1, a distinct cyclodepsipeptide chemotype, targets a seventh tubulin pharmacological site.
225 // N // gatorbulin-1 // mod. to pot. cytotox. *vs* NCI 60 CLs; novel tubulin binder; total synth. achieved.
226 // N // gatorbulin-2 // IA *vs* 1 HTCL.

113 Cyanobacteria *Dapis* sp // Noho Island, Okinawa, Japan // First total synthesis and structure–activity relationship of iheyamide A, an antitrypanosomal linear peptide isolated from a *Dapis* sp. marine cyanobacterium
227 // M // iheyanone // weak activ. *vs T. b. rhodesiense*; IA *vs* nMCL; total syn. achieved.

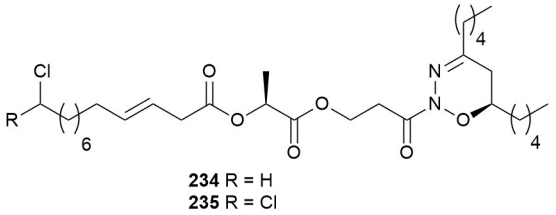
114 Cyanobacteria *Moorea producens* // Kuba Beach, Nakagusuku, Okinawa, Japan // Debromooscillatoxins G and I from the cyanobacterium *Moorea producens*
228 // N // debromooscillatoxin G // IA *vs* 1 murine TCL; weak inhib. *vs* diatom assay.
229 // N // debromooscillatoxin I // IA *vs* 1 murine TCL; weak inhib. *vs* diatom assay.



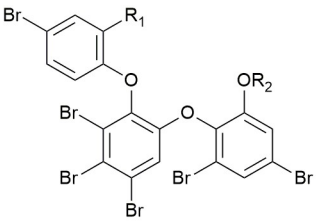
†230



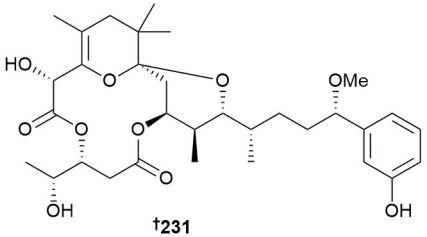
†232



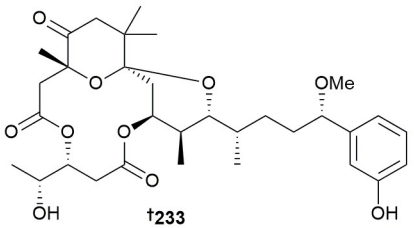
234 R = H
235 R = Cl



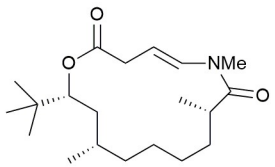
236 R_1 = Br, R_2 = SO_3H
237 R_1 = I, R_2 = SO_3H
238 R_1 = Br, R_2 = H
239 R_1 = I, R_2 = H



†231



†233



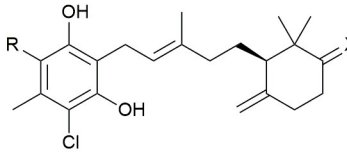
†240

115 Cyanobacteria *Lyngbya* sp // Sanya, Hainan province, China // Absolute structure determination and Kv1.5 ion channel inhibition activities of new debromoaplysiatoxin analogues
230 // N // oscillatoxin J // weak activ. *vs* potassium channel Kv1.5; IA *vs* brine shrimp.
231 // N // oscillatoxin K // IA *vs* potassium channel Kv1.5; IA *vs* brine shrimp.
232 // N // oscillatoxin L // weak activ. *vs* potassium channel Kv1.5; IA *vs* brine shrimp.
233 // N // oscillatoxin M // weak activ. *vs* potassium channel Kv1.5; IA *vs* brine shrimp.

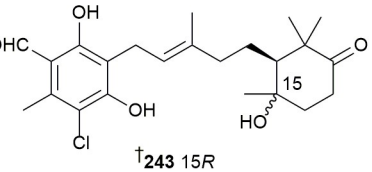
116 Cyanobacteria *Nodularia* sp // * // Discovery of cyanobacterial natural products containing fatty acid residues
234 // N // nocuolactylate A // IA to weak cytotox. *vs* 1 nMCL and 3 HTCLs; IA to weak *vs* 5 microbial strains.
235 // N // nocuolactylate B // IA to weak cytotox. *vs* 1 nMCL and 3 HTCLs; IA *vs* 5 microbial strains.

117 Cyanobacteria *Salileptolyngbya* sp // Ie Island, Okinawa, Japan // Isolation and total synthesis of bromoiesol sulfates, antitrypanosomal arylethers from a *Salileptolyngbya* sp. marine cyanobacterium
236 // N // bromoiesol A sulfate // weak activ. *vs T. brucei rhodesiense*; IA *vs* 1 HTCL; total syn. achieved.
237 // N // bromoiesol B sulfate // weak activ. *vs T. brucei rhodesiense*; IA *vs* 1 HTCL.
238 // N // bromoiesol A // weak activ. *vs T. brucei rhodesiense*; IA *vs* 1 HTCL; total syn. achieved.
239 // N // bromoiesol B // mod. activ. *vs T. brucei. rhodesiense*; IA *vs* 1 HTCL.

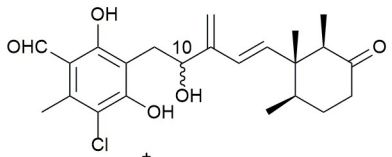
118 Cyanobacteria // * // Total synthesis and structural reassignment of laingolide A
240 // R // laingolide A // NT; revised by total synth.



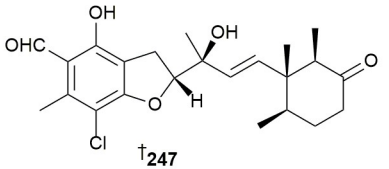
†**241** R = CHO, X = H, ⁻OH
†**242** R = COOH, X = O



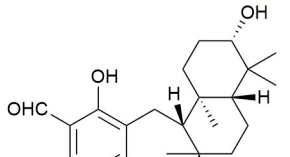
†**243** 15*R*
244 15*S**



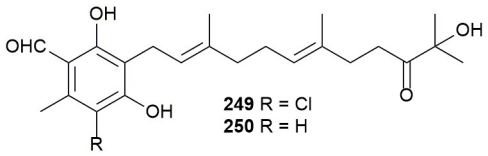
†**245** 10*R*
†**246** 10*S*



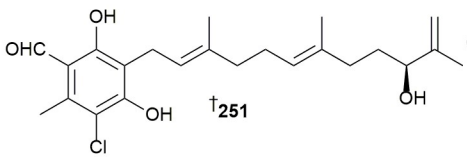
†**247**



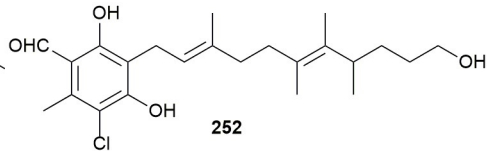
†**248**



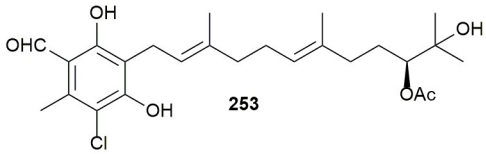
249 R = Cl
250 R = H



†**251**



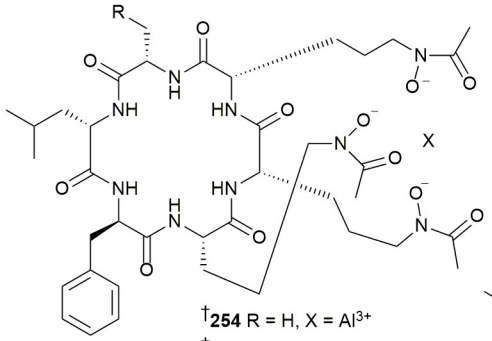
252

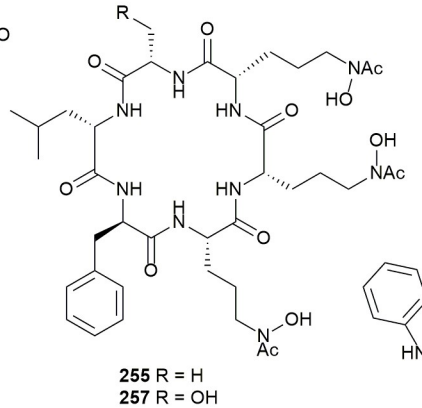


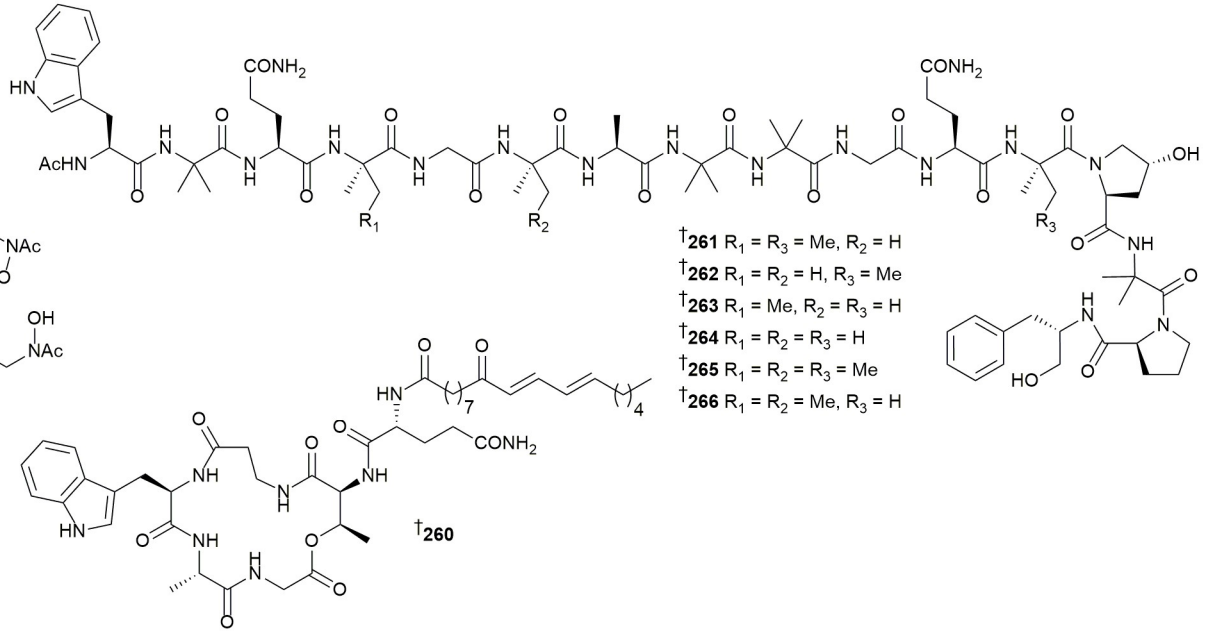
253

131 Ascomycota *Acremonium sclerotigenum* // (coral, *Pocillopora damicornis*) Weizhou Islands, Guangxi Zhuang, China // Exploring marine-derived ascochlorins as novel human dihydroorotate dehydrogenase inhibitors for treatment of triple-negative breast cancer

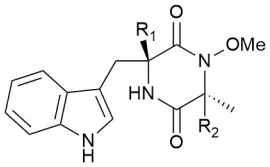
241 // N // acremochlorin A // pot. inhib. *vs* *h*DHODH; Tumour growth suppression *in vivo* (TNBC xenograft model); mod. cytotox. *vs* 2 HTCLs; IA *vs* 2 nHCLs.
242 // N // acremochlorin B // IA *vs* inhib. *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
243 // N // acremochlorin C // IA *vs* inhib. *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
244 // N // acremochlorin D // IA *vs* inhib. *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
245 // N // acremochlorin E // weak inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
246 // N // acremochlorin F // weak inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
247 // N // acremochlorin G // IA *vs* inhib. *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
248 // N // acremochlorin H // IA *vs* inhib. *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
249 // N // acremochlorin I // weak inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
250 // N // acremochlorin J // weak inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); IA *vs* 2 HTCLs and *vs* 2 nHCLs.
251 // N // acremochlorin K // mod. inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); weak inhib. *vs* 2 HTCLs; IA *vs* 2 nHCLs.
252 // N // acremochlorin L // mod. inhib. *vs* *h*DHODH; NT *in vivo* (TNBC xenograft model); weak cytotox. *vs* 2 HTCLs; IA *vs* 2 nHCLs.
253 // N // acremochlorin M // mod. inhib. *vs* *h*DHODH; Tumour growth suppression *in vivo* (TNBC xenograft model); IA to weak cytotox. *vs* 2 HTCLs; IA *vs* 2 nHCLs.



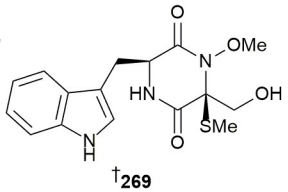




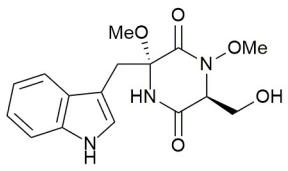
132 Ascomycota *Acremonium persicinum* // Yongxin Island // Cyclopeptide derivatives from the sponge-derived fungus *Acremonium persicinum* F10
254 // N // Al(III)-acremonpeptide E // mod. to pot. inhib. *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
255 // N // acremonpeptide E // IA to weak inhib. *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
256 // N // Fe(III)-acremonpeptide E // IA *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
257 // N // acremonpeptide F // IA to weak inhib. *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
258 // N // Al(III)-acremonpeptide F // mod. to pot. inhib. *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
259 // N // Fe(III)-acremonpeptide F // IA *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
260 // N // aselacin D // NT *vs* 2 fungi; IA *vs* 2 HTCLs and 1 nHCL.
133 Ascomycota *Acremonium* sp // (sponge, *Haliclona* sp.) Weizhou Island, Guangxi Province, China // Acremopeptaibols A-F, 16-residue peptaibols from the sponge-derived Acremonium sp. IMB18-086 cultivated with heat-killed *Pseudomonas aeruginosa*
261 // N // acremopeptaibol A // IA to weak inhib. *vs* 8 microb. strains; weak inhib. *vs* 1 fungus; IA *vs* 2 HTCLs.
262 // N // acremopeptaibol B // IA to weak inhib. *vs* 8 microb. strains; IA *vs* 1 fungus; IA *vs* 2 HTCLs.
263 // N // acremopeptaibol C // IA *vs* 8 microb. strains; IA *vs* 1 fungus; IA *vs* 2 HTCLs.
264 // N // acremopeptaibol D // IA *vs* 8 microb. strains; IA *vs* 1 fungus; IA *vs* 2 HTCLs.
265 // N // acremopeptaibol E // IA to weak inhib. *vs* 8 microb. strains; weak inhib. *vs* 1 fungus; IA *vs* 2 HTCLs.
266 // N // acremopeptaibol F // IA *vs* 8 microb. strains; IA *vs* 1 fungus; IA *vs* 2 HTCLs.



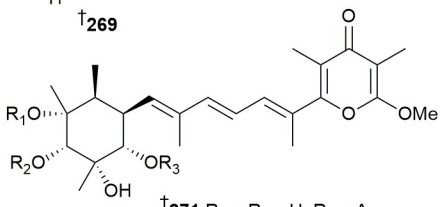
†**267** R_1 = OMe, R_2 = H
†**270** R_1 = R_2 = SMe



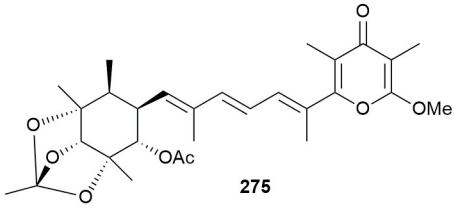
†**269**



†**268**



†**271** R_1 = R_3 = H, R_2 = Ac
272 R_1 = H, R_2 = R_3 = Ac
273 R_1 = R_3 = Ac, R_2 = H
274 R_1 = R_2 = R_3 = Ac



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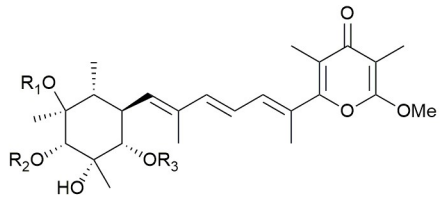
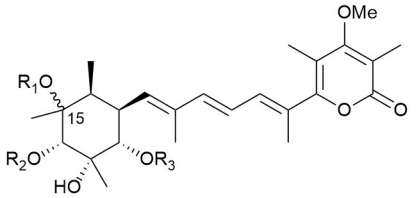
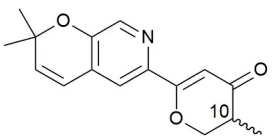


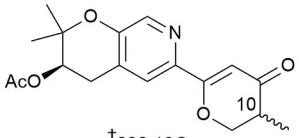
276 R_1 = R_2 = Ac, R_3 = H
277 R_1 = R_2 = R_3 = Ac



278 R_1 = H, R_2 = R_3 = Ac, 15α
279 R_1 = R_2 = R_3 = Ac, 15β

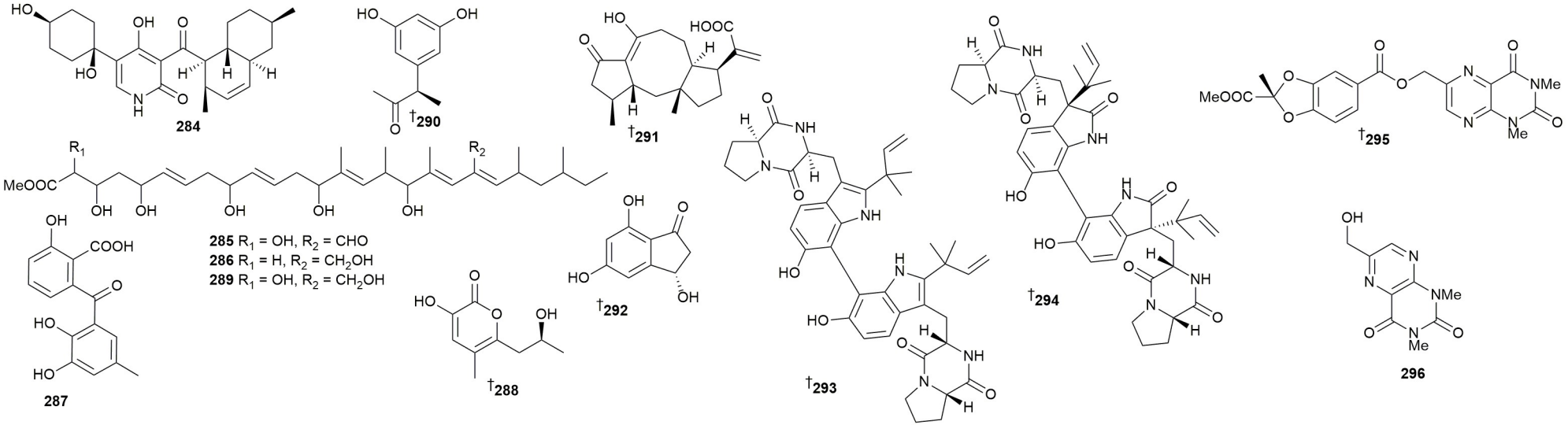


†**280** 10*S*
†**281** 10*R*



†**282** 10*S*
†**283** 10*R*

134 Ascomycota *Acrostalagmus luteoalbus* // (green alga, *Codium fragile*) Sinop, Turkey // Uncommon N-methoxyindolediketopiperazines from *Acrostalagmus luteoalbus*, a marine algal isolate of endophytic fungus
267 // N // acrozine D // IA *vs* 11 microb. strains; IA *vs* 15 fungi; IA *vs* AChE.
268 // N // acrozine E // IA *vs* 11 microb. strains; IA *vs* 15 fungi; IA *vs* AChE.
269 // N // acrozine F // IA *vs* 11 microb. strains; IA *vs* 15 fungi; weak inhib. *vs* AChE.
270 // N // acrozine G // IA *vs* 11 microb. strains; IA *vs* 15 fungi; IA *vs* AChE.
135 Ascomycota *Amauroascus* sp // (fish, *Mugil* mullet) fish market, Brisbane, Australia // Amaurones A–K: polyketides from the fish gut-derived fungus *Amauroascus* sp. CMB-F713
271 // N // amaurone A // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
272 // N // amaurone B // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
273 // N // amaurone C // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
274 // N // amaurone D // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
275 // N // amaurone E // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
276 // N // amaurone F // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
277 // N // amaurone G // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
278 // N // amaurone H // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
279 // N // amaurone I // IA *vs* 2 HTCLs; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
136 Ascomycota *Amphichorda felina*, Ascomycota *Beauveria felina* // (ascidian, *Styela plicata*) North Atoll, Xisha Islands // Amphichoterpenoids A-C, unprecedented picoline-derived meroterpenoids from the ascidian-derived fungus *Amphichorda felina* SYSU-MS7908
280 // N // (+)-(10*S*)-amphichoterpenoid A // IA *vs* AChE; IA *vs* BChE.
281 // N // (–)-(10*R*)-amphichoterpenoid A // IA *vs* AChE; IA *vs* BChE.
282 // N // amphichoterpenoid B // IA *vs* AChE; IA *vs* BChE.
283 // N // amphichoterpenoid C // IA *vs* AChE; IA *vs* BChE.



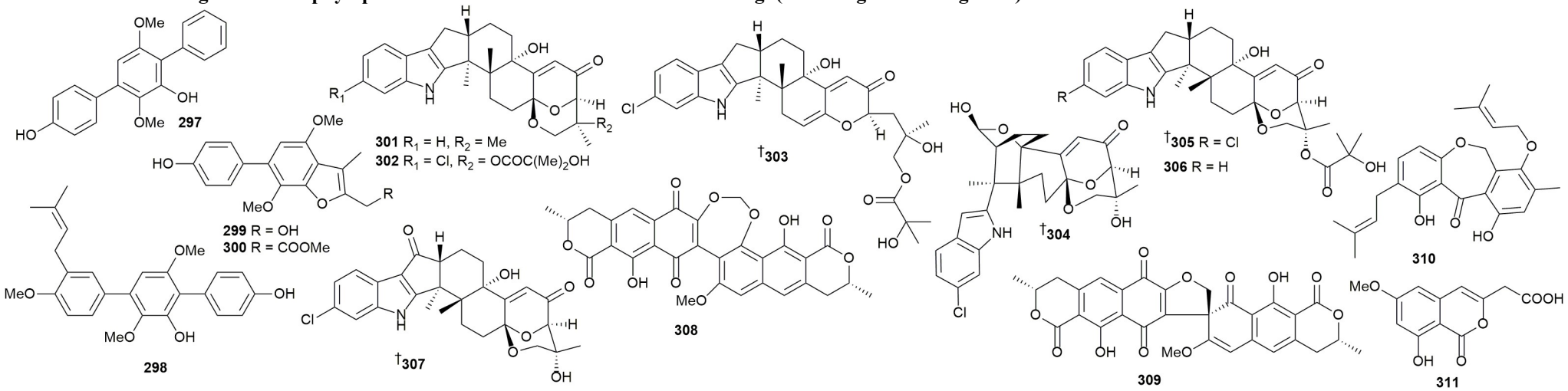
137 Ascomycota *Arthrinium* sp // (sediment) South China Sea // Arthpyrone L, a new pyridone alkaloid from a deep-sea *Arthrinium* sp., inhibits proliferation of MG63 osteosarcoma cells by inducing G0/G1 arrest and apoptosis
284 // N // arthpyrone L // IA to weak cytotox. *vs* 5 HTCLs.

138 Ascomycota *Arthrinium* sp // (unspecified clam worm) ZhaiRuoShan island, Zhoushan, Zhejiang Province of China // Five polyketides isolated from the marine-derived fungus *Arthrinium* sp.
285 // N // 30-oxoarthrinic methyl ester // NT.
286 // N // 2-deoxyarthrinic methyl ester // NT.
287 // N // 2-(2,3-dihydroxy-5-methyl benzoyl)-6-hydroxybenzoic acid // NT.
288 // N // (*S*)-3-hydroxy-5-methyl-6-(2-hydroxypropyl)-2*H*-pyran-2-one // NT.
289 // M // arthrinic acid methyl ester // NT.

139 Ascomycota // (unidentified sponge) Quang Nam sea, Vietnam // Cytotoxic and immunomodulatory phenol derivatives from a marine sponge-derived fungus *Ascomycota* sp. VK12
290 // N // (3*R*)-(3',5'-dihydroxyphenyl)butan-2-one // IA *vs* 3 HTCLs; IA *vs* NO prod.

140 Ascomycota *Aspergillus aculeatinus* // (seawater) South China Sea // A new fusicoccane-type norditerpene and a new indone from the marine-derived fungus *Aspergillus aculeatinus* WHUF0198
291 // N // aculeaterpene A // IA *vs* 3 HTCLs; IA *vs* 5 microb. strains.
292 // N // aculeaindone A // IA *vs* 3 HTCLs; IA *vs* 5 microb. strains.

141 Ascomycota *Aspergillus austroafricanus* // (seawater) Indian Ocean // New prenylated indole homodimeric and pteridine alkaloids from the marine-derived fungus *Aspergillus austroafricanus* Y32-2
293 // N // di-6-hydroxydeoxybrevianamide E // IA *vs* 1 HTCL.
294 // N // dinotoamide J // IA *vs* 1 HTCL; weak proangiogenic activ. (zebrafish).
295 // N // asperpteridinate A // IA *vs* 1 HTCL.
296 // M // 6-(hydroxymethyl)-1,3-dimethyl-2,4(1*H*,3*H*)-pteridinedione // IA *vs* 1 HTCL; weak proangiogenic activ. (zebrafish).



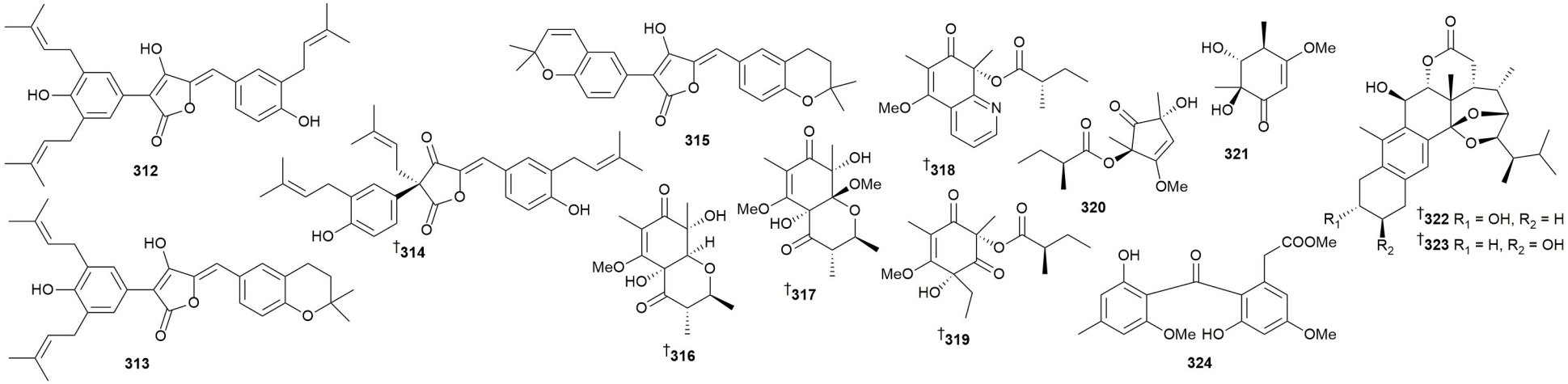
142 Ascomycota *Aspergillus candidus* // (seawater) Atlantic Ocean // Cytotoxic p-terphenyls from the deep-sea-derived *Aspergillus candidus*
297 // N // 4-deoxyterphenyllin // IA *vs* 5 HTCLs.

143 Ascomycota *Aspergillus candidus* // (gorgonian, *Junceela fragilis*) Xisha area, South China Sea // Neuronal modulators from the coral-associated fungi *Aspergillus candidus*
298 // N // 4″-O-methyl-prenylterphenyllin B // No neuromodulatory effect.
299 // N // phenylcandilide A // weak neuromodulatory effect.
300 // N // phenylcandilide B // weak neuromodulatory effect.
301 // N // asperindole E // no neuromodulatory effect.
302 // N // asperindole F // no neuromodulatory effect.
303 // N // asperindole G // weak neuromodulatory effect.

144 Ascomycota *Aspergillus candidus* // (unidentified sponge) Pulitzer bay, Antarctica // Ascandinines A–D, indole diterpenoids, from the sponge-derived fungus A*spergillus candidus* HDN15-152
304 // N // ascandinine A // IA *vs* 5 HTCLs; IA *vs* 1 virus.
305 // N // ascandinine B // IA *vs* 5 HTCLs; IA *vs* 1 virus.
306 // N // ascandinine C // IA *vs* 5 HTCLs; IA *vs* 1 virus.
307 // N // ascandinine D // IA to weak cytotox. *vs* 5 HTCLs; IA *vs* 1 virus.

145 Ascomycota *Aspergillus elegans* // (sponge, *Monanchora unguiculata*) Kram Island, Gulf of Thailand, Chonburi Province, Thailand // 1,3-Dioxepine and spiropyran derivatives of viomellein and other dimeric naphthopyranones from cultures of *Aspergillus elegans* KUFA0015 and their antibacterial activity
308 // N // xanthoelegansin // IA *vs* 6 microb. strains.
309 // N // spiroxanthoelegansin // IA *vs* 6 microb. strains.

146 Ascomycota *Aspergillus falconensis* // (sediment) Dahab, Red Sea, Egypt // Polyketides from the marine-derived fungus *Aspergillus falconensis*: in silico and in vitro cytotoxicity studies
310 // N // arugosin O // NT.
311 // N // 2-(8-hydroxy-6-methoxyisochromen-3′-yl) acetic acid // NT.



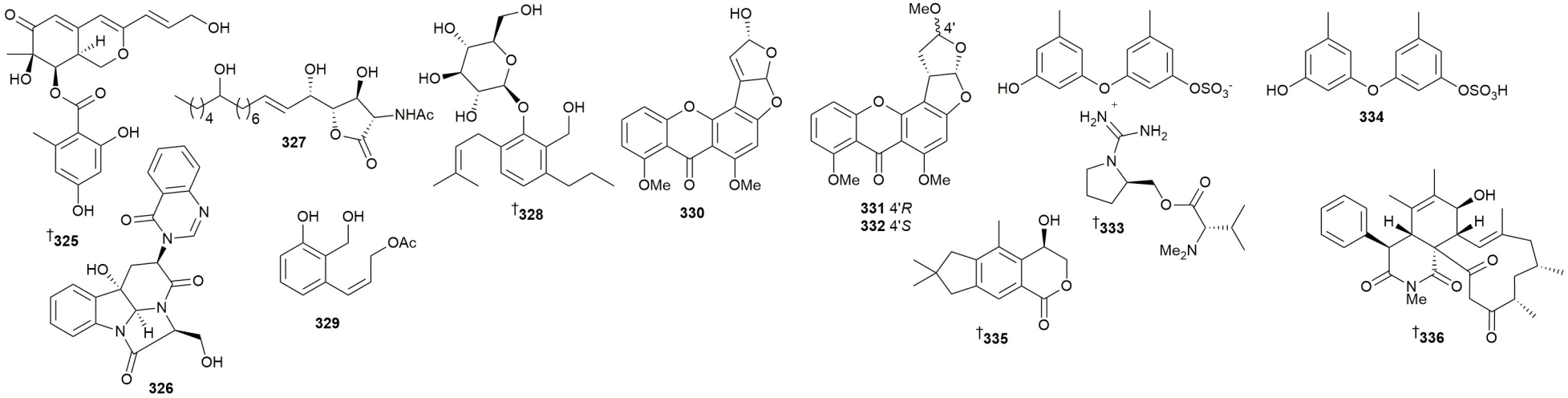
147 Ascomycota *Aspergillus flavipes* // (sponge, *Mycale* sp.) Samaesan Island, Chonburi province, Thailand // Prenylated phenylbutyrolactones from cultures of a marine sponge-associated fungus A*spergillus flavipes* KUFA1152
312 // N // aspulvinone R // weak inhib. *vs* 4 microb. strains.
313 // N // aspulvinone S // weak to mod. inhib. *vs* 4 microb. strains.
314 // N // aspulvinone T // IA *vs* 4 microb. strains.
315 // N // aspulvinone U // IA to weak inhib. *vs* 4 microb. strains. (In mixture with aspulvinone A)

148 Ascomycota *Aspergillus flavus* // (bivalve mollusc, *Meretrix meretrix*) Hailing Island, Yangjiang, China // Phomaligols F-I, polyoxygenated cyclohexenone derivatives from marine-derived fungus A*spergillus flavus* BB1
316 // N // phomaligol F // IA *vs* 4 HTCLs.
317 // N // phomaligol G // IA *vs* 4 HTCLs.
318 // N // phomaligol H // IA *vs* 4 HTCLs.
319 // N // phomaligol I // IA *vs* 4 HTCLs.

149 Ascomycota *Aspergillus flocculosus* // (brown alga, *Padina* sp.) Da Nang, Vietnam // Two new phomaligols from the marine-derived fungus *Aspergillus flocculosus* and their anti-neuroinflammatory activity in BV-2 microglial cells
320 // N // deketo-phomaligol A // IA *vs* NO prod.
321 // N // phomaligol E // NT.

150 Ascomycota *Aspergillus flocculosus* // (sponge, *Phakellia fusca*) Yongxing Island, China // Asperfloketals A and B, the first two ergostanes with rearranged A and D rings: from the sponge-associated *Aspergillus flocculosus* 16D-1
322 // N // asperfloketal A // weak inhib. *vs* antioxid. *in vivo* in zebrafish model; IA *vs* 3 HTCLs.
323 // N // asperfloketal B // weak inhib. *vs* antioxid. *in vivo* in zebrafish model; IA *vs* 3 HTCLs.

151 Ascomycota *Aspergillus fumigatus* // (sediment) Shenzen, Guangdong province, China // A new benzophenone with biological activities purified from *Aspergillus fumigatus* SWZ01
324 // N // 2,6'-dihydroxy-2,4'-dimethoxy-8'-methyl-6-methoxy-acyl-ethyl-diphenylmethanone // IA *vs* antioxid. (DPPH).



152 Ascomycota *Aspergillus fumigatus* // (gorgonian, *Carijoa* sp.) South China Sea // A new epimer of azaphilone derivative pinophilin B from the gorgonian-derived fungus *Aspergillus fumigatus* 14–27
325 // N // *epi*-pinophilin B // IA *vs* 4 HTCLs; IA *vs* 5 microb. strains.

153 Ascomycota *Aspergillus fumigatus* // (sponge, *Hymeniacidon perleve*) Bohai Sea, China // Antitubercular metabolites from the marine-derived fungus strain *Aspergillus fumigatus* MF029
326 // N // chaetominine A // IA *vs* 5 microb. strains.
327 // N // sphingofungin I // IA *vs* 5 microb. strains.

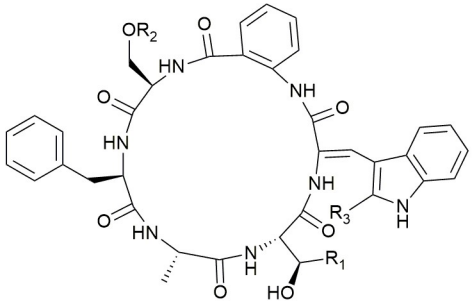
154 Ascomycota *Aspergillus insuetus* // (sediment) South China Sea // Two new phenol derivatives from the cold seep-derived fungus *Aspergillus insuetus* SD-512
328 // N // insphenol A // IA *vs* 3 microb. strains.
329 // N // acetylpeniciphenol // weak to mod. inhib. *vs* 3 microb. strains.

155 Ascomycota *Aspergillus nomius* // (sponge, *Neopetrosia chaliniformis*) Mandeh Island, West Sumatra, Indonesia // Apoptotic activity of new oxisterigmatocystin derivatives from the marine-derived fungus *Aspergillus nomius* NC06
330 // N // oxisterigmatocystin J // weak cytotox. *vs* 1 HTCL; IA *vs* 3 microb. strains.
331 // N // oxisterigmatocystin K // IA *vs* 1 HTCL; IA *vs* 3 microb. strains.
332 // N // oxisterigmatocystin L // weak cytotox. *vs* 1 HTCL; IA *vs* 3 microb. strains.

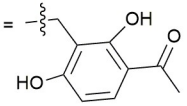
156 Ascomycota *Aspergillus ochraceopetaliformis* // (sediment) Jeju-do, Korea // Ochraceopetalin, a mixed-biogenetic salt of polyketide and amino acid origins from a marine-derived *Aspergillus ochraceopetaliformis* fungus
333 // N // ochraceopetalin // IA *vs* 2 HTCLs; IA *vs* 6 microb. strains and *vs* 4 fungi; IA *vs* Srt A and *vs* ICL.
334 // N // 1-(sulfooxy)-diorcinol // weak cytotox. *vs* 2 HTCLs; IA *vs* 6 microb. strains and *vs* 4 fungi; IA *vs* Srt A and *vs* ICL.

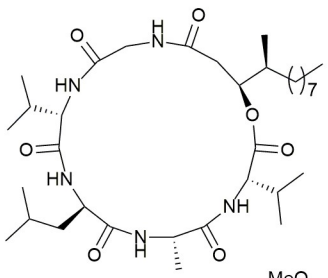
157 Ascomycota *Aspergillus oryzae* // (sediment) Jeddah, Saudi Arabia // Antiproliferative illudalane sesquiterpenes from the marine sediment ascomycete *Aspergillus oryzae*
335 // N // asperorlactone // IA *vs* 3 HTCLS; no cytotox. *vs* zebrafish model.

158 Ascomycota *Aspergillus oryzae*, Ascomycota *Aspergillus flavus* // (sediment) Red Sea, Jeddah, Saudi Arabia // Asporychalasin, a bioactive cytochalasan with an unprecedented 6/6/11 skeleton from the Red Sea sediment A*spergillus oryzae*
336 // N // asporychalasin // weak cytotox. *vs* 3 HTCLs; no toxicity *vs* zebrafish embryos.

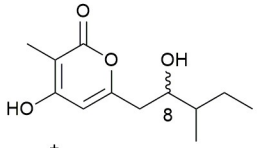


†**337** R_1 = Me, R_2 = $COCH_2CH_2COOH$, R_3 = H
338 R_1 = R_2 = R_3 = H
†**339** R_1 = H, R_2 = Me, R_3 =

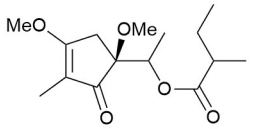




†**340**



†**341** 8*R*
†**342** 8*S*



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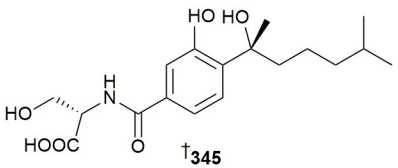
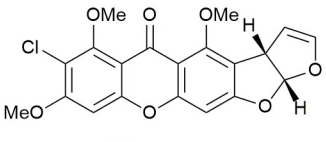


†**345**



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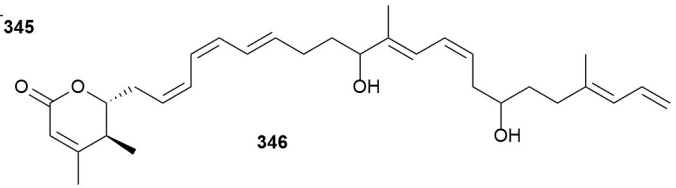
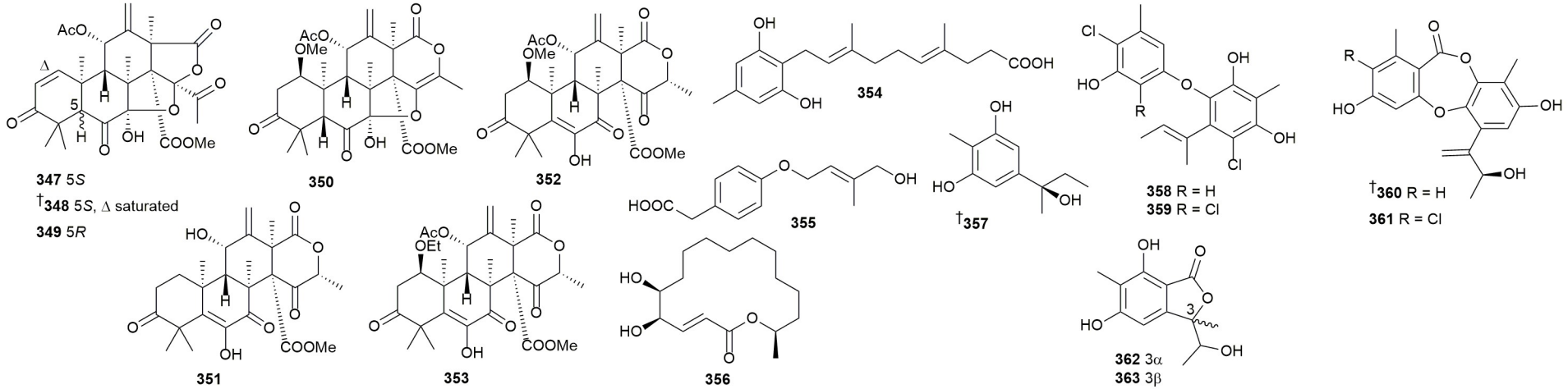


346

159 Ascomycota *Aspergillus sclerotiorum* // (unspecified/unidentified soft coral) Beihai, Guangxi Province, China // Cyclic peptides from the soft coral-derived fungus *Aspergillus sclerotiorum* SCSIO 41031
337 // N // sclerotide C // IA *vs* 9 HTCLs; IA *vs* 6 microb. strains and 5 fungi; IA *vs* AChE; IA *vs* NO prod.
338 // N // sclerotide D // IA *vs* 9 HTCLs; IA *vs* 6 microb. strains and 5 fungi; IA *vs* AChE; IA *vs* NO prod.
339 // N // sclerotide E // IA *vs* 9 HTCLs; IA *vs* 6 microb. strains and 5 fungi; IA *vs* AChE; IA *vs* NO prod.
340 // N // scopularide I // IA to weak cytotox. *vs* 9 HTCLs; IA *vs* 6 microb. strains and 5 fungi; IA *vs* AChE; IA *vs* NO prod.

160 Ascomycota *Aspergillus sydowii* // (gorgonian, *Verrucella umbraculum*) Sanya, Hainan Province, PR China // New pyrone and cyclopentenone derivatives from marine-derived fungus *Aspergillus sydowii* SCSIO 00305
341 // N // sydowione A // IA *vs* 3 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* brine shrimp.
342 // N // sydowione B // IA *vs* 3 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* brine shrimp.
343 // N // sydowione C // IA *vs* 3 microb. strains; IA *vs* antioxid. (DPPH); weak cytotox. *vs* brine shrimp.
344 // N // 6-methoxyl austocystin A // IA *vs* 3 microb. strains; IA *vs* antioxid. (DPPH); weak cytotox. *vs* brine shrimp.

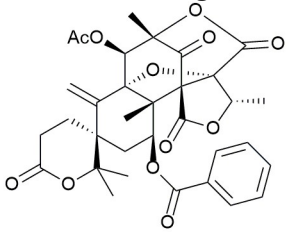
161 Ascomycota *Aspergillus sydowii* // (sediment) Dalian, China // Inducing secondary metabolite production of *Aspergillus sydowii* through microbial co-culture with *Bacillus subtilis*
345 // N // serine sydonate // IA *vs* 3 PTPs; IA *vs* nematodes.
346 // N // macrolactin U′ // IA *vs* 3 PTPs; IA *vs* nematodes.



162 Ascomycota *Aspergillus terreus* // (gastropod mollusc, *Onchidium struma*) Zhanjiang, Xuwen, China // Furanaspermeroterpenes A and B, two unusual meroterpenoids with a unique 6/6/6/5/5 pentacyclic skeleton from the marine-derived fungus *Aspergillus terreus* GZU-31-1
347 // N // furanaspermeroterpene A // IA *vs* NO prod.
348 // N // furanaspermeroterpene B // IA *vs* NO prod.
349 // N // aspermeroterpene D // weak inhib. *vs* NO prod.
350 // N // aspermeroterpene E // IA *vs* NO prod.
351 // N // aspermeroterpene F // IA *vs* NO prod.
352 // N // aspermeroterpene G // IA *vs* NO prod.
353 // N // aspermeroterpene H // IA *vs* NO prod.

163 Ascomycota *Aspergillus unguis*, Ascomycota *Aspergillus flocculosus* // (seawater and sponge, *Stylissa* sp.) Socheongcho Ocean Research Station, Korea // Polyketides and meroterpenes from the marine-derived fungi *Aspergillus unguis* 158SC-067 and *A. flocculosus* 01NT-1.1.5 and their cytotoxic and antioxidant activities
354 // N // grifolin B // IA *vs* 6 HTCLs; IA *vs* antioxid. (DPPH).
355 // N // 12-hydroxyhomovalencic acid // IA *vs* 6 HTCLs; IA *vs* antioxid. (DPPH).
356 // M // (5*R*,6*S*,16*R*,3*E*)-5,6-dihydroxy-16-methyloxacyclohexadec-3-en-2-one // mod cytotox. *vs* 6 HTCLs; NT *vs* antioxid. (DPPH).

164 Ascomycota *Aspergillus unguis* // (sponge, *Dysidea* sp.) Koh Bulon Mai Pai, Satun Province, Thailand // Antibacterial and antifungal polyketides from the fungus *Aspergillus unguis* PSU-MF16
357 // N // aspergillusphenol C // NT
358 // N // aspergillusether E // IA *vs* 1 nMCL; weak inhib. *vs* 2 microb. strains and *vs* 3 fungi.
359 // N // aspergillusether F // NT
360 // N // asperunguissidone A // IA *vs* 2 microb. strains and *vs* 3 fungi; NT *vs* 1 nMCL.
361 // N // asperunguissidone B // NT
362 // N // asperunguislide A // IA *vs* 2 microb. strains and *vs* 3 fungi; NT *vs* 1 nMCL.
363 // N // asperunguislide B // IA *vs* 2 microb. strains and *vs* 3 fungi; NT *vs* 1 nMCL.



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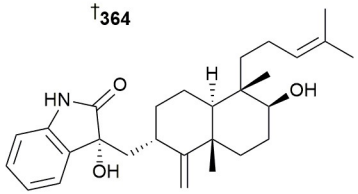

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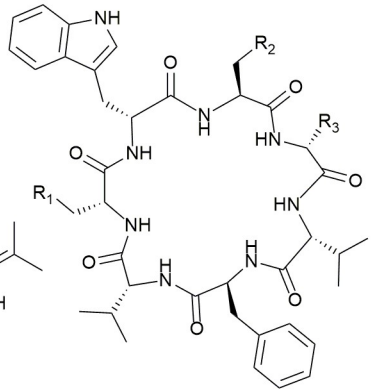
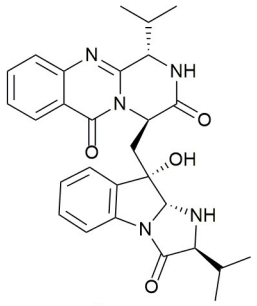


366 $R_1 = R_2 = OH, R_3 = H$
367 $R_1 = R_2 = H, R_3 = Me$



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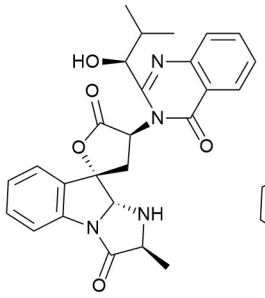
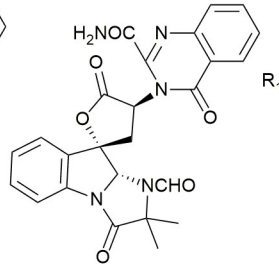
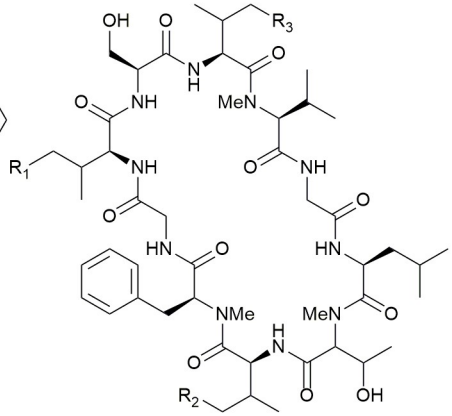


†369



†370



†**371** $R_1 = Me, R_2 = R_3 = H$
372 $R_1 = R_2 = R_3 = H$

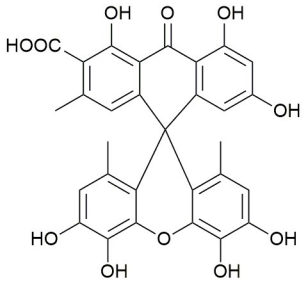
165 Ascomycota *Aspergillus ustus* // (ascidian, *Pyura momus*) Kermer, Turkey // Ustusaustin A: a new neuraminidase inhibitory meroterpene from the ascidian-derived endophytic fungus *Aspergillus ustus* TK-5
364 // N // ustusaustin A // weak inhib. *vs* neuraminidase.

166 Ascomycota *Aspergillus versicolor* // (sediment) Shengsi Island, Zhoushan, China // A new antimicrobial indoloditerpene from a marine-sourced fungus *Aspergillus versicolor* ZZ761
365 // N // (3*R*,9*S*,12*R*,13*S*,17*S*,18*S*)-2-carbonyl-3-hydroxylemeniveol // weak inhib. *vs* 1 microb. strain and *vs* 1 fungus.

167 Ascomycota *Aspergillus versicolor* // (gorgonian, *Rumphella aggregata*) Nansha Islands, South China Sea // Targeted isolation of asperheptatides from a coral-derived fungus using LC-MS/MS-based molecular networking and antitubercular activities of modified cinnamate derivatives
366 // N // asperheptatide A // IA *vs* Mtb.
367 // N // asperheptatide B // IA *vs* Mtb.

168 Ascomycota *Aspergillus* sp // (bivalve mollusc, *Sanguinolaria chinensis*) Haikou Bay, China // Three new quinazoline-containing indole alkaloids from the marine-derived fungus *Aspergillus* sp. HNMF114
368 // N // aspertoryadin H // IA *vs* α-glucosidase; IA *vs* activation insect ryanodine receptor.
369 // N // aspertoryadin I // IA *vs* α-glucosidase; IA *vs* activation insect ryanodine receptor.
370 // N // aspertoryadin J // IA *vs* α-glucosidase; IA *vs* activation insect ryanodine receptor.

169 Ascomycota *Aspergillus* sp // (sediment) South China Sea // Bioactive secondary metabolites from the deep-sea derived fungus *Aspergillus* sp. SCSIO 41029
371 // N // penilumamide K // IA *vs* 2 microb. strains; IA *vs* α-glucosidase.
372 // N // (2*Z*,6*E*)-10,11,12-trihydroxy-3,7,11 -trimethyldodeca-2,6-dienoic acid // IA *vs* 2 microb. strains; IA *vs* α-glucosidase.



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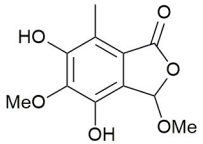

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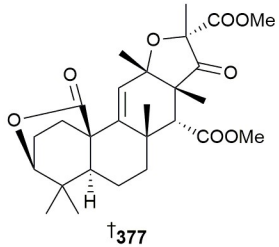

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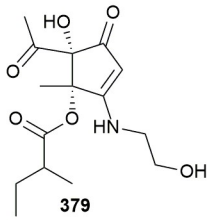

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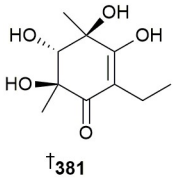
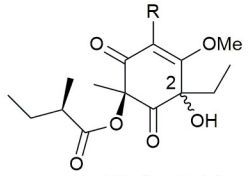
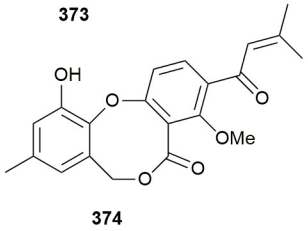


†381



382 R = H, 2*S*
383 R = H, 2*R*
†384 R = Me, 2*R*



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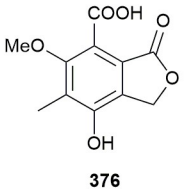

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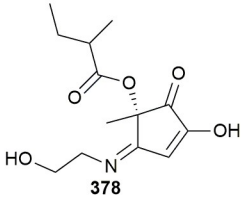

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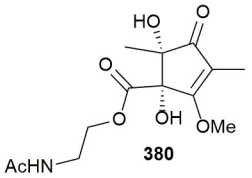

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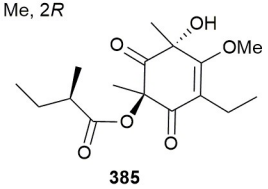
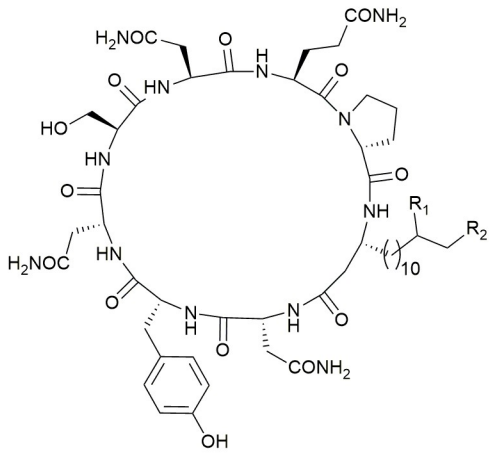


385

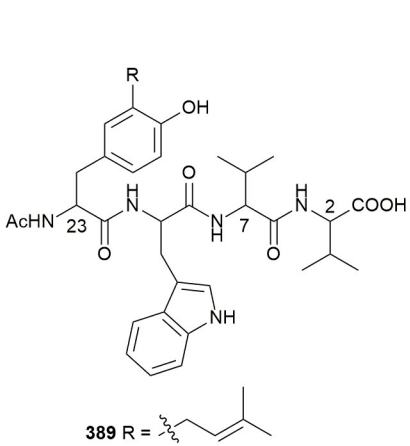
170 Ascomycota *Aspergillus* sp // (sediment) Qingdao, China // Antibacterial secondary metabolites from marine-derived fungus *Aspergillus* sp. IMCASMF180035
373 // N // aspergiloxathene A // IA *vs* 6 microb. strains.
374 // N // Δ2′-1′-dehydropenicillide // IA *vs* 6 microb. strains.
375 // N // 5-methyl-3-methoxyepicoccone // IA *vs* 6 microb. strains.
376 // N // 7-carboxy-4-hydroxy-6-methoxy-5-methylphthalide // IA *vs* 6 microb. strains.

171 Ascomycota *Aspergillus* sp // (sediment) Zhoushan Island, East China Sea // A new antibacterial 3,5-dimethylorsellinic acid-based meroterpene from the marine fungus *Aspergillus* sp. CSYZ-1
377 // N // aspergillactone // weak to pot. inhib. *vs* 8 microb. strains; IA *vs* 9 microb. strains.

172 Ascomycota *Aspergillus* sp // (gorgonian, *Melitodes squamata*) Sanya, Hainan Province, China // Eight new cyclopentenone and cyclohexenone derivatives from the marine-derived fungus *Aspergillus* sp. SCSIO 41501 by OSMAC strategy
378 // N // aspergispone A // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
379 // N // aspergispone B // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
380 // N // aspergispone C // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
381 // N // aspergispone D // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
382 // N // aspergispone E // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
383 // N // aspergispone F // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
384 // N // aspergispone G // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.
385 // N // aspergispone H // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* brine shrimp.

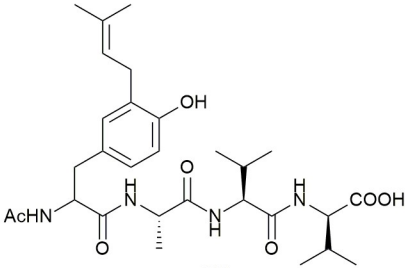


386 R_1 = Me, R_2 = H
387 R_1 = H, R_2 = Me
388 R_1 = R_2 = Me



389 R =

390 R = H, 2*R**, 7*S**, 23*S**



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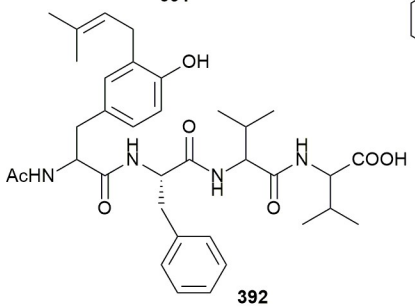

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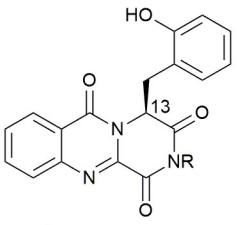
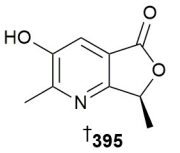
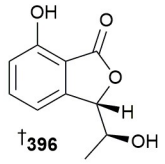


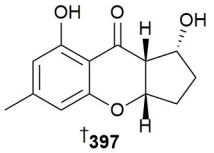
†**393** R = H
†**394** R = Me



†**395**



†**396**



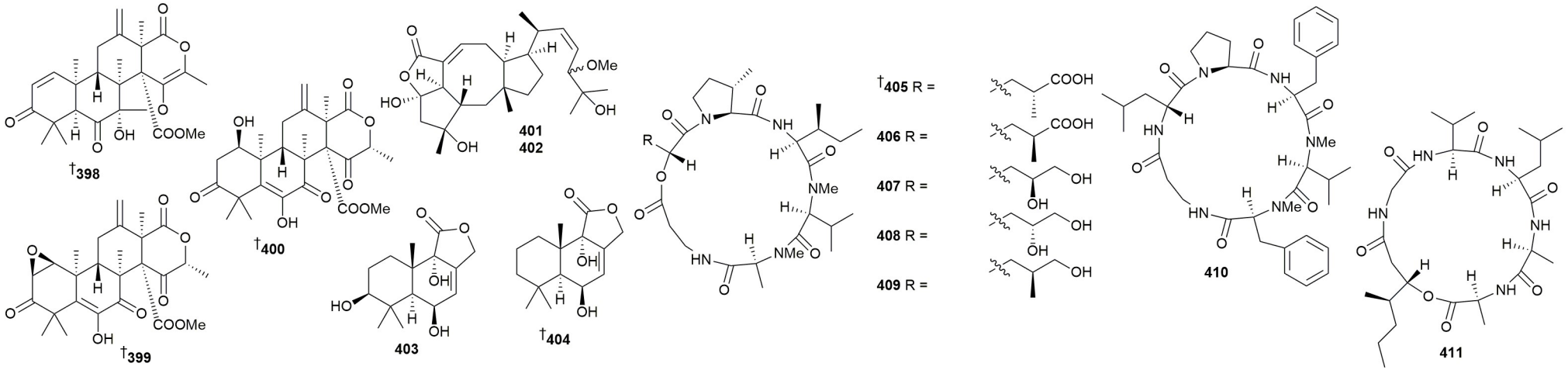
†**397**

173 Ascomycota *Aspergillus* sp // (gorgonian, *Melitodes squamata*) Sanya, Hainan Province, China // Antifungal peptides from the marine gorgonian-associated fungus *Aspergillus* sp. SCSIO41501
386 // N // maribasin C // IA to weak inhib. *vs* 5 fungi.
387 // N // maribasin D // IA to weak inhib. *vs* 5 fungi.
388 // N // maribasin E // IA to weak inhib. *vs* 5 fungi.
389 // N // aspergillipeptide H // IA *vs* 4 fungi.
390 // N // aspergillipeptide I // IA *vs* 4 fungi.
391 // N // aspergillipeptide J // IA *vs* 4 fungi.
392 // N // aspergillipeptide K // IA *vs* 4 fungi.

174 Ascomycota *Aspergillus* sp // (soft coral, *Sinularia* sp.) South China Sea // 17-Hydroxybrevianamide N and its N1-methyl derivative, quinazolinones from a soft-coral-derived *Aspergillus* sp. fungus: 13*S* enantiomers as the true natural products
393 // N // (+)-17-hydroxybrevianamide N // IA *vs* 3 microb. strains; IA *vs* 1 fungus; IA *vs* 1 virus.
394 // N // (+)-N1-methyl-17-hydroxybrevianamide N // IA *vs* 3 microb. strains; IA *vs* 1 fungus; IA *vs* 1 virus.

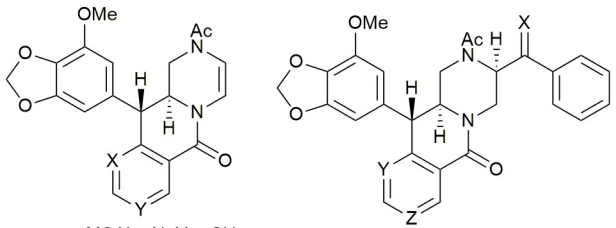
175 Ascomycota *Aspergillus* sp // (unspecified/unidentified coral) Sanya Bay, South China Sea // New azaphthalide and phthalide derivatives from the marine coral-derived fungus *Aspergillus* sp. SCSIO41405
395 // N // (*S*)-3-hydroxy-2,7-dimethylfuro[3,4-b]pyridin-5(7H)-one // IA *vs* 7 mirob, strains; IA *vs* AChE; IA *vs* pancreatic lipase.
396 // N // (*S*)-7-hydroxy-3-((*S*)-1-hydroxyethyl)isobenzofuran-1(3*H*)-one // IA *vs* 7 mirob, strains; IA *vs* AChE; IA *vs* pancreatic lipase.

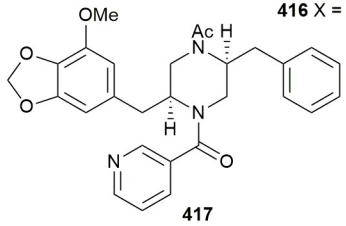
176 Ascomycota *Aspergillus* sp // (sponge, *Haliclona* sp.) Lingshui, Hainan Province, China // A new antibacterial chromone from a marine sponge-associated fungus *Aspergillus* sp. LS57
397 // N // aspergilluone A // IA to weak inhib. *vs* 5 microb. strains.

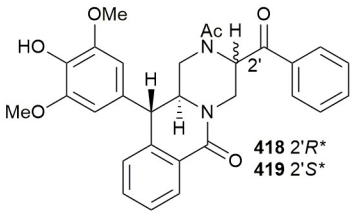


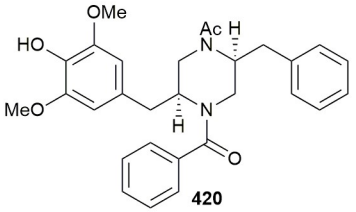
177 Ascomycota *Aspergillus* sp // (red alga, *Rhodomela confervoides*) Yantai, Shandong Province of China // Terpenoids from the marine-derived fungus *Aspergillus* sp. RR-YLW-12, associated with the red alga *Rhodomela confervoides*
398 // N // aspermeroterpene D // IA *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
399 // N // aspermeroterpene E // IA *vs* 4 microb. strains; IA to weak inhib. *vs* 3 phytoplankton.
400 // R // terretonin E // IA *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
401 // N // (+)-18,19-dihydro-18-methoxy-19-hydroxyophiobolin P // IA *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
402 // N // (–)-18,19-dihydro-18-methoxy-19-hydroxyophiobolin P // IA *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
403 // N // 3*S*-hydroxystrobilactone A // IA *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
404 // N // 6-*epi*-strobilactone A // IA *vs* 4 microb. strains; IA to weak inhib. *vs* 3 phytoplankton.

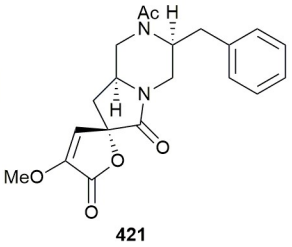
178 Ascomycota Beauveria felina // (sponge, *Xestospongia testudinaria*) South China Sea // Discovery of cyclohexadepsipeptides with anti-Zika virus activities and biosynthesis of the nonproteinogenic building block (3*S*)-methyl-L-proline.
405 // N // felinotoxin A // IA *vs* 1 virus.
406 // N // felinotoxin B // IA *vs* 1 virus.
407 // N // felinotoxin C // IA *vs* 1 virus.
408 // N // felinotoxin D // IA *vs* 1 virus.
409 // N // felinotoxin E // IA *vs* 1 virus.
410 // N // felinotoxin F // IA *vs* 1 virus.
411 // N // felinotoxin G // IA *vs* 1 virus.

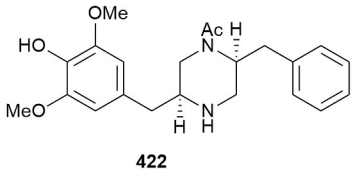


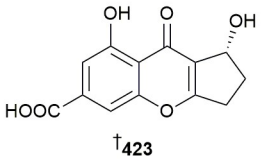


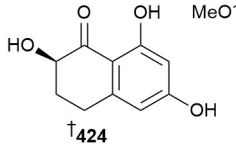


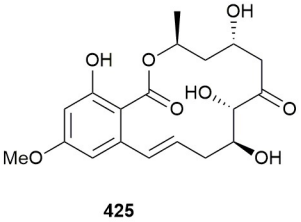










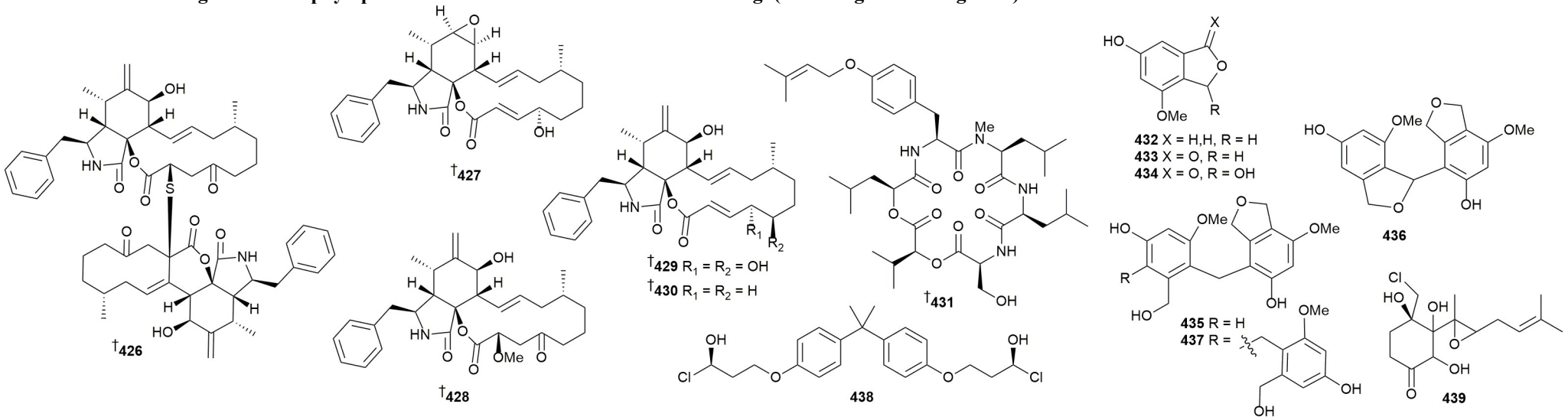


179 Ascomycota *Chrysosporium lobatum* // (fish, *Mugil* mullet) fish market, Brisbane, Australia // Precursor-directed biosynthesis mediated amplification of minor aza phenylpropanoid piperazines in an Australian marine fish-gut-derived fungus, *Chrysosporium* sp. CMB-F214
412 // N // azachrysposorazine A1 // mod. inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
413 // N // azachrysposorazine A2 // mod. inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
414 // N // azachrysposorazine B1 // mod. inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
415 // N // azachrysposorazine C1 // mod. inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
416 // N // azachrysposorazine C2 // mod. inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
417 // N // azachrysposorazine D1 // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
418 // N // chrysosporazine N // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
419 // N // chrysosporazine O // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
420 // N // chrysosporazine P // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
421 // N // spirochrysosporazine A // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.
422 // N // chrysosporazine Q // weak inhib. P-glycoprotein; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* 1 HTCL.

180 Ascomycota *Cladosporium halotolerans* // (coral, *Porites lutea*) Weizhou Islands, Guangxi Zhuang autonomous region, China // Cytotoxic benzopyranone and xanthone derivatives from a coral symbiotic fungus *Cladosporium halotolerans* GXIMD 02502
423 // N // coniochaetone K // IA to weak cytotox. *vs* 2 HTCLs; IA *vs* 1 nHCL.

181 Ascomycota *Cladosporium* sp // (sediment) Western Pacific // Tetralone derivatives from a deep-sea-derived fungus *Cladosporium* sp. HDN17-58
424 // N // aladothalen // IA to weak inhib. *vs* 8 microb strains.

182 Ascomycota *Cochliobolus lunatus*, Ascomycota *Curvularia lunata* // (zoanthid, *Palythoa haddoni*) Weizhou coral reef, South China Sea // Cochliomycin G, a 14-membered resorcylic acid lactone from a marine-derived fungus *Cochliobolus lunatu*s
425 // N // cochliomycin G // IA to pot. inhib. *vs* 5 phytoplankton; IA *vs* 5 microb. strains.



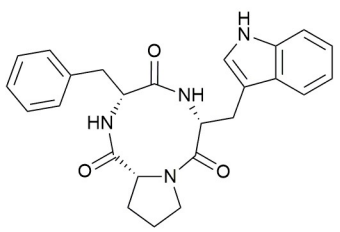
183 Ascomycota *Curvularia verruculosa* // (squat lobster, *Shinkaia crosnieri*) South China Sea // Cytochalasin derivatives from the endozoic *Curvularia verruculosa* CS-129, a fungus isolated from the deep-sea squat lobster *Shinkaia crosnieri* living in the cold seep environment
426 // N // verruculoid A // mod. inhib. *vs* 1 microb. strain, IA *vs* 8 microb. strains; NT *vs* 3 HTCLs.
427 // N // 12-nor-cytochalasin F // IA *vs* 9 microb. strains; NT *vs* 3 HTCLs.
428 // N // 22-methoxycytochalasin B6 // IA *vs* 9 microb. strains; NT *vs* 3 HTCLs.
429 // N // 19-hydroxycytochalasin B // IA *vs* 9 microb. strains; weak cytotox. *vs* 3 HTCLs.
430 // N // 20-deoxy-cytochalasin B // IA *vs* 9 microb. strains; IA *vs* 3 HTCLs.

184 Ascomycota *Cymostachys* sp // (sponge, *Aaptos* sp.) Apo Island, Philippines // Targeted isolation of a cytotoxic cyclic hexadepsipeptide from the mesophotic zone sponge-associated fungus *Cymostachys* sp. NBUF082
431 // N // cymodepsipeptide // IA to weak cytotox. *vs* 2 HTCLs.

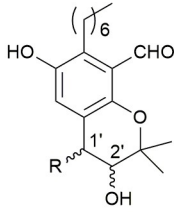
185 Ascomycota *Cymostachys* sp // (sponge, *Aaptos* sp.) Apo Island, Negros Oriental, Philippines // Discovery of cymopolyphenols A–F from a marine mesophotic zone *Aaptos* sponge-associated fungus *Cymostachys* sp. NBUF082
432 // N // cymopolyphenol A // IA *vs* 2 HTCLs; IA *vs* 8 microb. strains; IA *vs* iron chelation (ferrozine); IA *vs* PR1 activation.
433 // N // cymopolyphenol B // NT
434 // N // cymopolyphenol C // IA *vs* 2 HTCLs; IA to weak inhib. *vs* 8 microb. strains; IA *vs* iron chelation (ferrozine); IA *vs* PR1 activation.
435 // N // cymopolyphenol D // IA *vs* 2 HTCLs; IA to weak inhib. *vs* 8 microb. strains; IA *vs* iron chelation (ferrozine); IA *vs* PR1 activation.
436 // N // cymopolyphenol E // IA *vs* 2 HTCLs; IA to weak inhib. *vs* 8 microb. strains.weak iron chelation (ferrozine); IA *vs* PR1 activation.
437 // N // cymopolyphenol F // IA *vs* 2 HTCLs; IA to weak inhib. *vs* 8 microb. strains; IA *vs* iron chelation (ferrozine); IA *vs* PR1 activation.

186 Ascomycota *Dichotomomyces cejpii*, Ascomycota *Aspergillus cejpii* // soft coral, *Lobophyton crassum*) Hainan Sanya National Coral Reef Reserve, P. R. China // Reactive oxygen species altering the metabolite profile of the marine-derived fungus *Dichotomomyces cejpii* F31-1
438 // N // dichocetide D // IA *vs* 3 HTCLs.

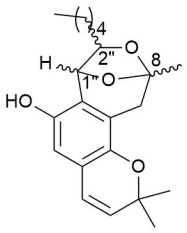
187 Basidiomycota *Digitatispora marina* // (driftwood, *Betula* sp.) Vannøya, Norway // Chlovalicin B, a chlorinated sesquiterpene isolated from the marine mushroom *Digitatispora marina*
439 // N // chlovalicin B // IA *vs* 1 HTCL, 1 nHCL and 1 fungus.



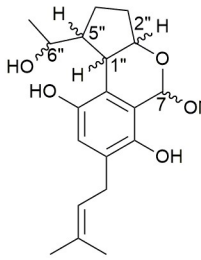
†**440**



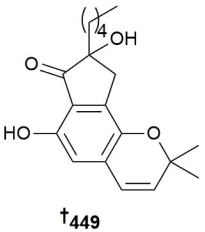
†**441** R = OH, 1′*S*,2′*R*
†**442** R = OH, 1′*R*,2′*S*
†**443** R = H, 2′*R*
†**444** R = H, 2′*S*



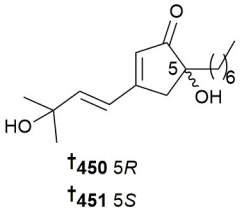
†**445** 1″*R*,2″*R*,8*S*
†**446** 1″*S*,2″*S*,8*R*



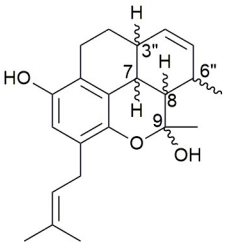
†**447** 1″*R*,2″*R*,5″*R*,6″*S*,7*S*
†**448** 1″*S*,2″*S*,5″*S*,6″*R*,7*R*



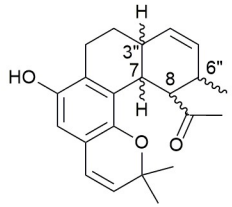
†**449**



†**450** 5*R*
†**451** 5*S*



†**452** 3″*R*,6″*S*,7*S*,8*S*,9*R*
†**453** 3″*S*,6″*R*,7*R*,8*R*,9*S*



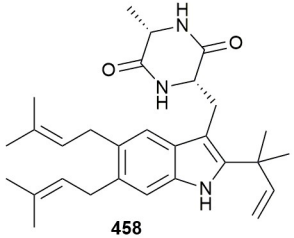
†**454** 3″*S*,6″*R*,7*R*,8*R*
†**455** 3″*R*,6″*S*,7*S*,8*S*
†**456** 3″*R*,6″*S*,7*R*,8*R*
†**457** 3″*S*,6″*R*,7*S*,8*S*

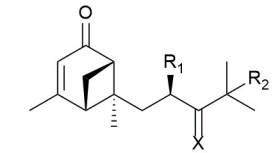
188 Ascomycota *Epicoccum nigrum* // (seagrass, T*halassia hemprichii*) Makady bay, South Hurghada, Egypt // Antimicrobial and antibiofilm activities of the fungal metabolites isolated from the marine endophytes *Epicoccum nigrum* M13 and *Alternaria alternata* 13A
440 // N // epicotripeptin // IA to mod. inhib. *vs* 6 microb. strains; IA *vs* 1 fungus

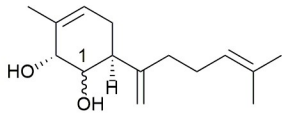
189 Ascomycota *Eurotium* sp // (sediment) South China Sea // Salicylaldehyde derivatives from a marine-derived fungus *Eurotium* sp. SCSIO F452
441 // N // (+)-salicylaldehydium A // IA *vs* 2 HTCLs; IA *vs* antioxid. (DPPH).
442 // N // (–)-salicylaldehydium A // IA *vs* 2 HTCLs; IA *vs* antioxid. (DPPH).
443 // N // (+)-salicylaldehydium B // IA *vs* 2 HTCLs; IA *vs* antioxid. (DPPH).
444 // N // (–)-salicylaldehydium B // IA *vs* 2 HTCLs; IA *vs* antioxid. (DPPH).

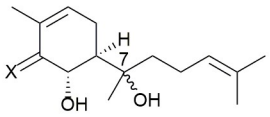
190 Ascomycota *Eurotium* sp // (sediment) South China Sea // Structurally diverse polycyclic salicylaldehyde derivative enantiomers from a marine-derived fungus *Eurotium* sp. SCSIO F452
445 // N // (+)-euroticin F // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
446 // N // (–)-euroticin F // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
447 // N // (+)-euroticin G // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
448 // N // (–)-euroticin G // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
449 // N // (±)-euroticin H // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
450 // N // (+)-euroticin I // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.
451 // N // (–)-euroticin I // IA *vs* 4 HTCLs; IA *vs* 2 microb. strains; IA *vs* antioxid. (DPPH); IA *vs* α-glucosidase.

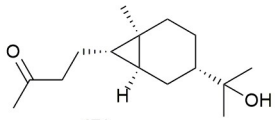
191 Ascomycota *Eurotium* sp // (sediment) South China Sea // Euroticins C–E, three pairs of polycyclic salicylaldehyde derivative enantiomers from a marine-derived fungus *Eurotium* sp. SCSIO F452
452 // N // (+)-euroticin C // IA *vs* 4 HTCLs; IA *vs* α-glucosidase; IA *vs* tyrosinase; IA *vs* antioxid. (DPPH).
453 // N // (–)-euroticin C // IA *vs* 4 HTCLs; IA *vs* α-glucosidase; IA *vs* tyrosinase; IA *vs* antioxid. (DPPH).
454 // N // (+)-euroticin D // NT.
455 // N // (–)-euroticin D // NT.
456 // N // (+)-euroticin E // IA *vs* 4 HTCLs; IA *vs* α-glucosidase; IA *vs* tyrosinase; IA *vs* antioxid. (DPPH).
457 // N // (–)-euroticin E // IA *vs* 4 HTCLs; IA *vs* α-glucosidase; IA *vs* tyrosinase; IA *vs* antioxid. (DPPH).


458


460 R_1 = R_2 = OH, X = H, ◄OH
461 R_1 = R_2 = OH, X = O
462 R_1 = OH, R_2 = H, X = O
463 R_1 = H, R_2 = OH, X = O


465 1*S**
466 1*R**


468 X = H, ····OH, 7*S**
†469 X = O, 7*S*
470 X = O, 7*R**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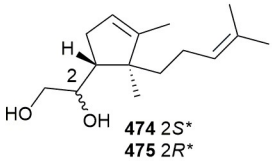
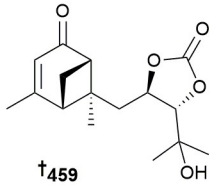

474 2*S**
475 2*R**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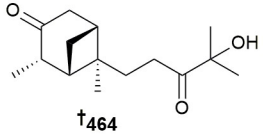
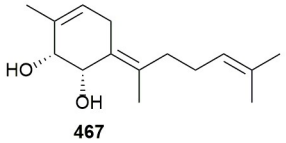

†464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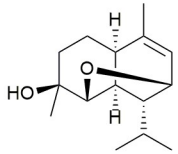
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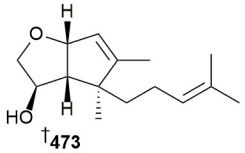
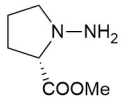

†473

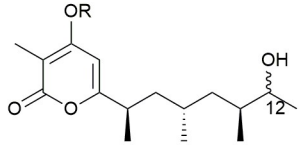

476

192 Ascomycota *Eurotium* sp // (sponge, *Ircinia variabilis*) // Fintiamin: a diketopiperazine from the marine sponge-derived fungus *Eurotium* sp.
458 // N // fintiamin // weak binding affinity for cannabinoid CB1 receptor; IA *vs* binding at CB2 receptor.

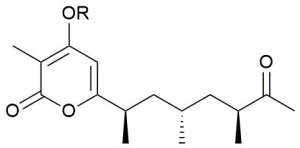
193 Ascomycota *Eutypella* sp // (sediment) South Atlantic Ocean // Chemical epigenetic manipulation triggers the production of sesquiterpenes from the deep-sea derived *Eutypella* fungus
459 // N // eutypeterpene A // IA *vs* NO prod.
460 // N // eutypeterpene B // IA *vs* NO prod.
461 // N // eutypeterpene C // IA *vs* NO prod.
462 // N // eutypeterpene D // IA *vs* NO prod.
463 // N // eutypeterpene E // IA *vs* NO prod.
464 // N // eutypeterpene F // IA *vs* NO prod.
465 // N // eutypeterpene G // IA *vs* NO prod.
466 // N // eutypeterpene H // IA *vs* NO prod.
467 // N // eutypeterpene I // IA *vs* NO prod.
468 // N // eutypeterpene J // IA *vs* NO prod.
469 // N // eutypeterpene K // IA *vs* NO prod.
470 // N // eutypeterpene L // IA *vs* NO prod.
471 // N // eutypeterpene M // IA *vs* NO prod.
472 // N // eutypeterpene N // weak inhib. NO prod.
473 // N // eutypeterpene O // IA *vs* NO prod.
474 // N // eutypeterpene P // IA *vs* NO prod.
475 // N // eutypeterpene Q // IA *vs* NO prod.

194 Ascomycota *Evlachovaea* sp // (fish, *Mugil* mullet) fish market, Brisbane, Australia // *N*-Amino-L-proline methyl ester from an Australian fish gut-derived fungus: challenging the distinction between natural product and artifact
476 // N // *N*-amino-L-proline methyl ester // NT.

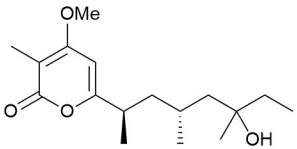
2 Marine microorganisms and phytoplankton:



477 R = H, 12*S**
478 R = H, 12*R**
481 R = Me, 12*S**
482 R = Me, 12*R**

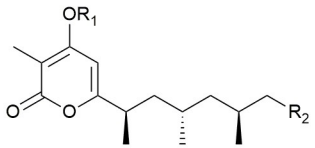


479 R = H
480 R = Me

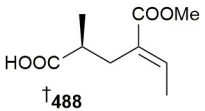


483

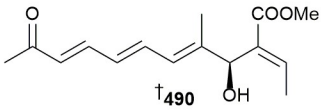
2.3 Marine-sourced fungi (excluding from mangroves)



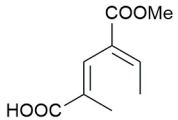
484 R_1 = Me, R_2 = COOH
485 R_1 = Me, R_2 = CH_2OH
486 R_1 = H, R_2 = CH_2OH



†**488**



†**490**



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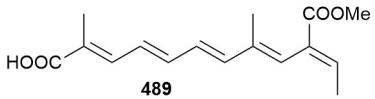

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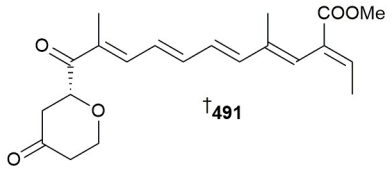
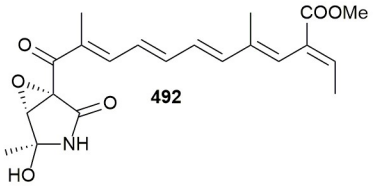


†**491**



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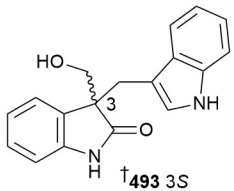
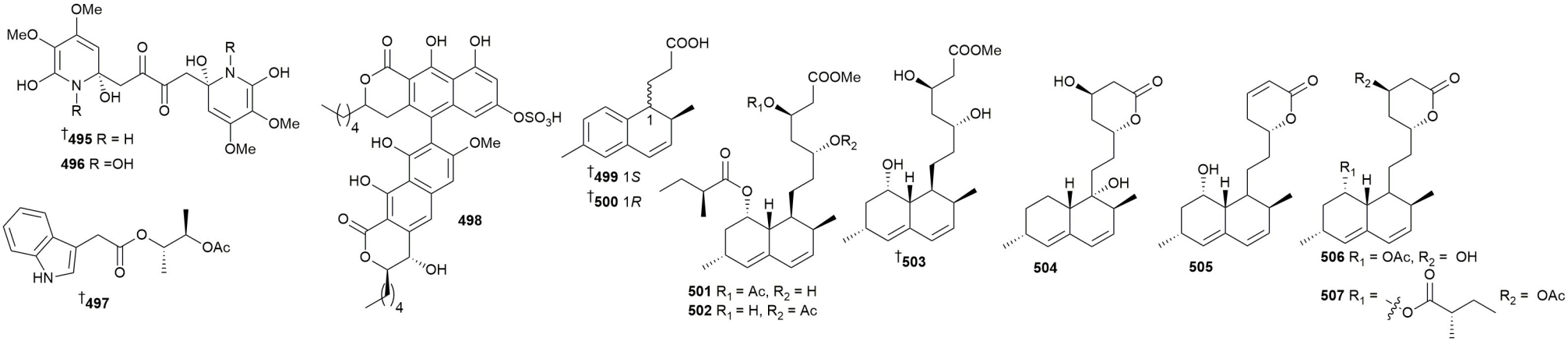


†**493** 3*S*
†**494** 3*R*

195 Ascomycota *Fusarium decemcellulare*, Ascomycota *Albonectria rigidiuscula* // (seawater) Lingshui Xincungang and Li'angang Seagrass Special Protected Area, Hainan Province, China // Absolute configuration of polypropionate derivatives: decempyrones A-J and their MptpA inhibition and anti-inflammatory activities
477 // N // decempyrone A // IA *vs* MptpA and MptpB; IA *vs* NO prod.
478 // N // decempyrone B // IA *vs* MptpA and MptpB; IA *vs* NO prod.
479 // N // decempyrone C // IA *vs* MptpA and MptpB; IA *vs* NO prod.
480 // N // decempyrone D // IA *vs* MptpA and MptpB; IA *vs* NO prod.
481 // N // decempyrone E // IA *vs* MptpA and MptpB; IA *vs* NO prod.
482 // N // decempyrone F // IA *vs* MptpA and MptpB; IA *vs* NO prod.
483 // N // decempyrone G // IA *vs* MptpA and MptpB; IA *vs* NO prod.
484 // N // decempyrone H // IA *vs* MptpA and MptpB; IA *vs* NO prod.
485 // N // decempyrone I // IA *vs* MptpA and MptpB; IA *vs* NO prod.
486 // N // decempyrone J // IA *vs* MptpA and MptpB; IA *vs* NO prod.

196 Ascomycota *Fusarium solani*, Ascomycota *Neocosmospora solani* // (seawater) South China Sea // Fusarins G–L with inhibition of NO in RAW264.7 from marine-derived fungus *Fusarium solani* 7227
487 // N // fusarin G // IA *vs* NO prod.
488 // N // fusarin H // IA *vs* NO prod.
489 // N // fusarin I // IA *vs* NO prod.
490 // N // fusarin J // IA *vs* NO prod.
491 // N // fusarin K // IA *vs* NO prod.
492 // N // fusarin L // IA *vs* NO prod.

197 Ascomycota *Fusarium* sp // (unspecified source) Hainan Sanya National Coral Reef Reserve, P. R. China // A pair of novel bisindole alkaloid enantiomers from marine fungus *Fusarium* sp. XBB-9
493 // N // (+)-fusaspoid A // IA *vs* 2 HTCLs.
494 // N // (–)-fusaspoid A // IA *vs* 2 HTCLs.

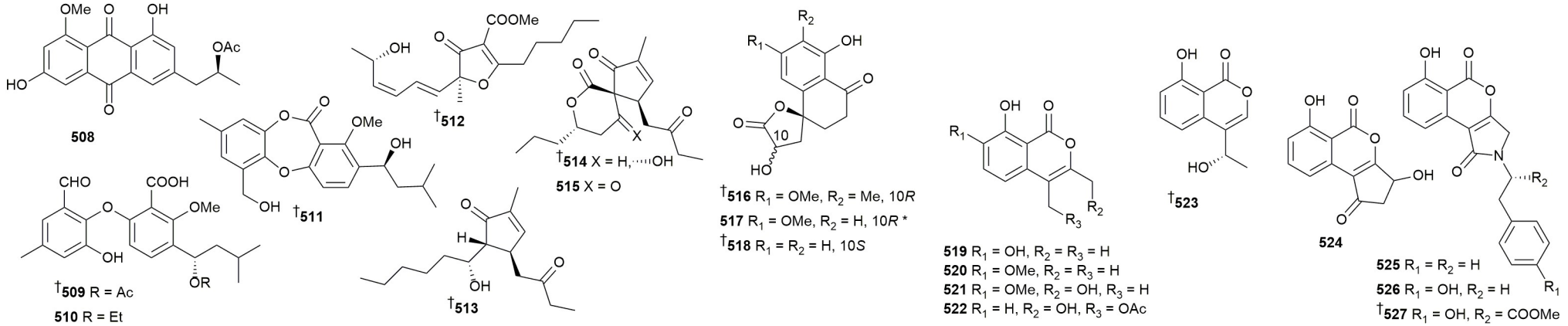


198 Ascomycota *Fusarium* sp // (sponge, *Suberea mollis*) Yanbu, Saudi Red Sea, Saudi Arabia // Fusaripyridines A and B; highly oxygenated antimicrobial alkaloid dimers featuring an unprecedented 1,4-bis(2-hydroxy-1,2-dihydropyridin-2-yl)butane-2,3-dione core from the marine fungus *Fusarium* sp. LY019
495 // N // fusaripyridine A // IA *vs* 1 HTCL; IA *vs* 2 microb. strains and *vs* 1 fungus.
496 // N // fusaripyridine B // IA *vs* 1 HTCL; IA *vs* 2 microb. strains and *vs* 1 fungus.

199 Ascomycota *Lecanicillium fusisporum* // (unspecified/unidentified sea cucumber) Xisha Islands // Alkaloids from the marine fungus *Lecanicillium fusisporum* using an amino acid-directed strategy
497 // N // lecasporinoid // IA *vs* 1 virus.

200 Ascomycota // (driftwood) Kongsfjord, Berlevåg Norway // Lulworthinone, a new dimeric naphthopyrone from a marine fungus in the family Lulworthiaceae with antibacterial activity against clinical methicillin-resistant *Staphylococcus aureus* isolates
498 // N // lulworthinone // mod inhib. to IA *vs* 21 microb. strains; weak cytotox. *vs* 2 HTCLs and 1 nHCL.

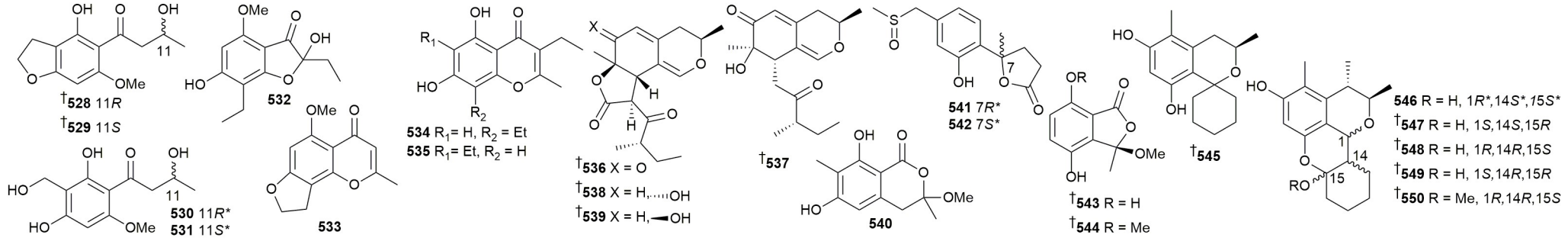
201 Ascomycota *Monascus albidulus* // (bivalve mollusc, *Meretrix lusoria*) Hailing Island, Yangjiang, China // Monalbidins A–E, decalins with potential cytotoxic activities from marine derived fungus *Monascus albidus* BB3
499 // N // monalbidin A // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
500 // N // monalbidin B // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
501 // N // monalbidin C // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
502 // N // monalbidin D // IA *vs* 8 HTCLs; IA to mod. cytotox. *vs* 2 nHCLs.
503 // N // monalbidin E // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
504 // N // 1-hydroxymonacolin L // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
505 // N // dehydromonacolin J // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
506 // N // 8-*O*-acetylmonacolin J // IA *vs* 8 HTCLs and *vs* 2 nHCLs.
507 // N // *O*-acetylmonacolin K // IA *vs* 8 HTCLs; IA to weak cytotox. *vs* 2 nHCLs.



202 Ascomycota *Neosartorya spinosa*, Ascomycota *Aspergillus fischeri* // (sponge, *Mycale* sp.) Samae San Island, Chonburi province, Thailand // Anthraquinones, diphenyl ethers, and their derivatives from the culture of the marine sponge-associated fungus *Neosartorya spinosa* KUFA 1047
508 // N // acetylpenipurdin A // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* tyrosinase.
509 // R // tenellic acid C // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* tyrosinase.
510 // N // neospinosic acid // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* tyrosinase.
511 // N // spinolactone // IA *vs* 4 microb. strains; IA *vs* AChE; IA *vs* tyrosinase.

203 Ascomycota *Paraconiothyrium hawaiiense*, Ascomycota *Paracamarosporium hawaiiense* // (sediment) Indian Ocean // Hawatides A-G, new polyketides from the deep-sea-derived fungus *Paraconiothyrium hawaiiense* FS482
512 // N // hawatide A // IA *vs* NO prod.; IA *vs* 4 HTCLs.
513 // N // hawatide B // IA *vs* NO prod.; IA *vs* 4 HTCLs.
514 // N // hawatide C // IA *vs* NO prod.; IA *vs* 4 HTCLs.
515 // N // hawatide D // IA *vs* NO prod.; IA *vs* 4 HTCLs.
516 // N // hawatide E // IA *vs* NO prod.; IA *vs* 4 HTCLs.
517 // N // hawatide F // IA *vs* NO prod.; IA *vs* 4 HTCLs.
518 // N // hawatide G // IA *vs* NO prod.; IA *vs* 4 HTCLs.

204 Ascomycota *Paraphoma* sp // (sediment) Shenzhen, China // New isocoumarin analogues from the marine-derived fungus *Paraphoma* sp. CUGBMF180003
519 // N // 7-hydroxyoospolactone // weak inhib. *vs* 1 microb. strain; IA *vs* 1 fungus.
520 // N // 7-methoxyoospolactone // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
521 // N // 7-methoxy-9-hydroxyoospolactone // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
522 // N // 10-acetoxy-9-hydroxyoospolactone // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
523 // N // 6-dehydroxysescandelin // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
524 // N // parapholactone // weak inhib. *vs* 1 microb. strain; IA *vs* 1 fungus.
525 // N // paraphamide A // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
526 // N // paraphamide B // IA *vs* 1 microb. strain; IA *vs* 1 fungus.
527 // N // paraphamide C // IA *vs* 1 microb. strain; IA *vs* 1 fungus.

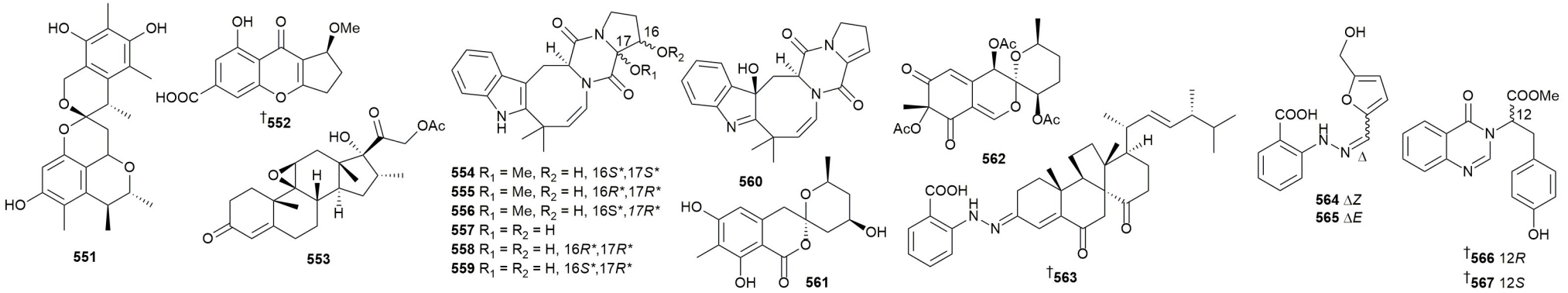


205 Ascomycota *Parengyodontium album* // (coral, *Montipora foliosa)* South China Sea // Structures and absolute configurations of phomalones from the coral-associated fungus *Parengyodontium album* sp. SCSIO 40430
528 // N // (–)-phomalichenone H // IA *vs* 6 microb. strains.
529 // N // (+)-phomalichenone H // IA *vs* 6 microb. strains.
530 // N // (–)-phomalichenone I // IA *vs* 6 microb. strains.
531 // N // (+)-phomalichenone I // IA *vs* 6 microb. strains.
532 // N // phomalichenone J // IA *vs* 6 microb. strains.
533 // N // phomalichenone K // IA *vs* 6 microb. strains.
534 // N // phomalichenone L // IA *vs* 6 microb. strains.
535 // N // phomalichenone M // IA *vs* 6 microb. strains.

206 Ascomycota *Penicillum chermesinum* // (sediment) South China Sea // Azaphilones and isocoumarin derivatives from *Penicillum chermesinum* FS625 isolated from the South China Sea
536 // N // chermesinon D // IA *vs* 4 HTCLs.
537 // N // chermesinon E // IA *vs* 4 HTCLs.
538 // N // chermesinon F // IA *vs* 4 HTCLs.
539 // N // chermesinon G // IA *vs* 4 HTCLs.
540 // N // 6,8-dihydroxy-3-methoxy-3,7-dimethylisochroman-1-one // IA *vs* 4 HTCLs.

207 Ascomycota *Penicillium chrysogenum* // (red alga, *Grateloupia turuturu*) Qingdao coastal zone, China // New enantiomers of a nor-bisabolane derivative and two new phthalides produced by the marine-derived fungus *Penicillium chrysogenum* LD-201810
541 // N // (+)-methylsulfinyl-1-hydroxyboivinianin A // IA *vs* 4 fungi; IA *vs* 6 HTCLs.
542 // N // (–)-methylsulfinyl-1-hydroxyboivinianin A // IA *vs* 4 fungi; IA *vs* 6 HTCLs.
543 // N // chrysoalide A // IA *vs* 4 fungi; IA *vs* 6 HTCLs.
544 // N // chrysoalide B // IA to weak inhib. *vs* 4 fungi; IA *vs* 6 HTCLs.

208 Ascomycota *Penicillium citrinum* // (soft coral, *Sinularia* cf. *molesta*) Yongxing Island, Paracel Islands // Penitol A and penicitols E–I: citrinin derivatives from *Penicillium citrinum* and the structure revision of previously proposed analogues
545 // N // penitol A // IA to weak cytotox. *vs* 8 HTCLs; IA to weak inhib. *vs* 6 microb. strains.
546 // N // penicitol E // IA *vs* 8 HTCLs; IA *vs* 6 microb. strains.
547 // N // penicitol F // IA *vs* 8 HTCLs; IA *vs* 6 microb. strains.
548 // N // penicitol G // IA *vs* 8 HTCLs; IA *vs* 6 microb. strains.
549 // N // penicitol H // IA *vs* 8 HTCLs, NT *vs* 5; IA to weak inhib. *vs* 6 microb. strains.
550 // R // penicitol A // IA *vs* 8 HTCLs; IA *vs* 6 microb. strains.

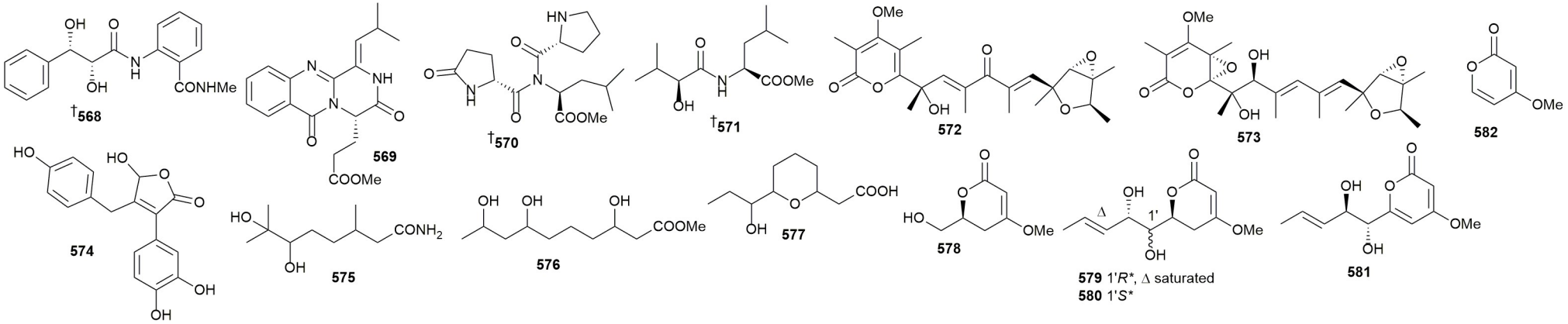


209 Ascomycota *Penicillium citrinum* // (sponge, *Callyspongia* sp.) Xuwen County, Guangdong Province, China // Cytotoxicity of polyketides and steroids isolated from the sponge-associated fungus *Penicillium citrinum* SCSIO 41017
551 // N // xerucitrinin A // IA *vs* 4 HTCLs.
552 // N // coniochaetone M // IA *vs* 4 HTCLs.
553 // N // 16α-methylpregna-17α,19-dihydroxy-(9,11)-epoxy-4-ene-3,18-dione-20-acetoxy // IA *vs* 4 HTCLs.

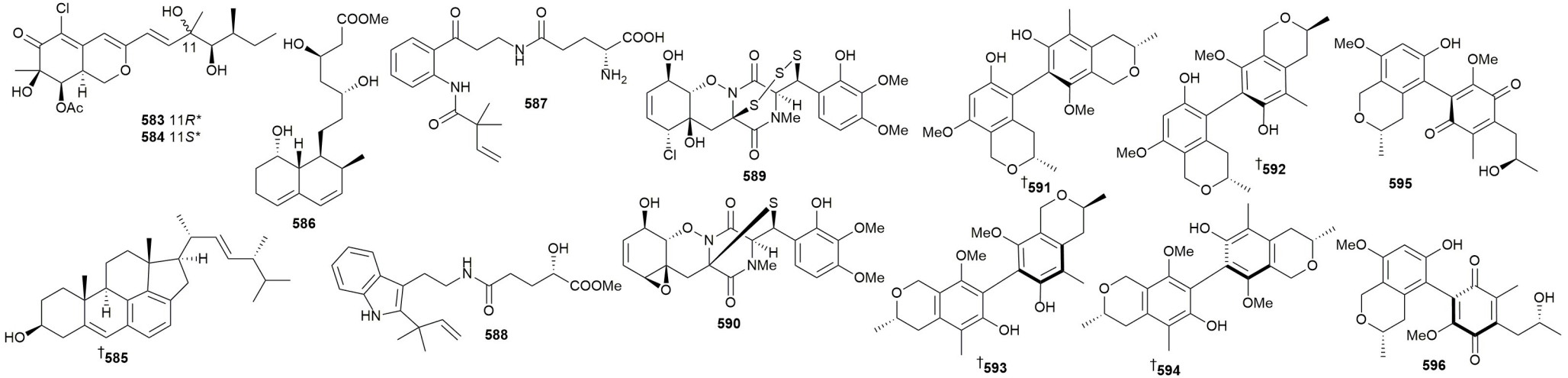
210 Ascomycota *Penicillium dimorphosporum* // (unspecified/unidentified soft coral) South China Sea // New deoxyisoaustamide derivatives from the coral-derived fungus *Penicillium dimorphosporum* KMM 4689
554 // N // 16α-hydroxy-17β-methoxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; no neuroprotective activ. (paraquat in Neuro-2a cells).
555 // N // 16β-hydroxy-17α-methoxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; no neuroprotective activ. (paraquat in Neuro-2a cells).
556 // N // 16α-hydroxy-17α-methoxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; no neuroprotective activ. (paraquat in Neuro-2a cells).
557 // N // 16,17-dihydroxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; weak neuroprotective activ. (paraquat in Neuro-2a cells).
558 // N // 16β,17α-dihydroxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; weak neuroprotective activ. (paraquat in Neuro-2a cells).
559 // N // 16α,17α-dihydroxy-deoxydihydroisoaustamide // IA *vs* 2 nHCLs; weak neuroprotective activ. (paraquat in Neuro-2a cells).
560 // N // 3β-hydroxy-deoxyisoaustamide // IA *vs* 2 nHCLs; no neuroprotective activ. (paraquat in Neuro-2a cells).

211 Ascomycota *Penicillium glabrum* // (soft coral, *Scleronephthya* sp.) Xieyang Island, Beibu Gulf, China // Azaphilones and meroterpenoids from the soft coral-derived fungus *Penicillium glabrum* glmu003
561 // N // daldinin G // IA *vs* 4 microb, strains; IA *vs* AChE; IA *vs* pancreatic lipase.
562 // N // daldinin H // IA *vs* 4 microb, strains; IA *vs* AChE; IA *vs* pancreatic lipase.

212 Ascomycota *Penicllium oxalicum* // (sediment) unspecified location // Phenylhydrazone and quinazoline derivatives from the cold-seep-derived fungus *Penicillium oxalicum*
563 // N // penoxahydrazone A // mod. to pot. inhib. *vs* 3 phytoplankton; IA to weak inhib. *vs* 4 microb. strains; IA *vs* brine shrimp.
564 // N // penoxahydrazone B // Tested as mixture with **565** IA to mod. inhib. *vs* 3 phytoplankton; IA to weak inhib. *vs* 4 microb. strains; IA *vs* brine shrimp.
565 // N // penoxahydrazone C // Tested as mixture with **564** IA to mod. inhib. *vs* 3 phytoplankton; IA to weak inhib. *vs* 4 microb. strains; IA *vs* brine shrimp.
566 // N // penoxazolone A // weak to pot. inhib. *vs* 3 phytoplankton; weak inhib. *vs* 4 microb. strains; IA *vs* brine shrimp.
567 // N // penoxazolone B // weak to mod. inhib. *vs* 3 phytoplankton; IA to weak inhib. *vs* 4 microb. strains; IA *vs* brine shrimp.



213 Ascomycota *Penicillium griseofulvum* // (sediment) Indian Ocean // Anti-food allergic compounds from P*enicillium griseofulvum* MCCC 3A00225, a deep-sea-derived fungus
568 // N // penigrisamide // IA *vs* antiallergy effect (RBL-2H3 cells).
569 // N // aurantiomoate C // IA *vs* antiallergy effect (RBL-2H3 cells).
570 // N // *N*,*N*-pyroglutamylleucinmethylester // IA *vs* antiallergy effect (RBL-2H3 cells).
571 // N // methyl-2-hydroxy-3-methylbutanoyl-L-leucinate // IA *vs* antiallergy effect (RBL-2H3 cells).
572 // N // verrucosidinol A // IA *vs* antiallergy effect (RBL-2H3 cells).
573 // N // verrucosidinol B // IA *vs* antiallergy effect (RBL-2H3 cells).
574 // N // 8-hydroxyhelvafuranone // IA *vs* antiallergy effect (RBL-2H3 cells).
575 // N // 6,7-dihydroxy-3,7-dimethyloctanamide // IA *vs* antiallergy effect (RBL-2H3 cells).
576 // N // methyl-3,7,9-trihydroxydecanate // IA *vs* antiallergy effect (RBL-2H3 cells).
577 // N // 9-hydroxy-3,7-epoxydecanoic acid //
214 Ascomycota *Penicillium restrictum* // (mussel, *Mytilus edulis*) Port Giraud, Loire estuary, France // Untargeted metabolomics approach for the discovery of environment-related pyran-2-ones chemodiversity in a marine-sourced *Penicillium restrictum*
578 // N // 5,6-dihydro-6*S*-hydroxymethyl-4-methoxy-2*H*-pyran-2-one // NT.
579 // N // (6*S*,1'*R*,2'*S*)-LL-P880β // IA *vs* 4 microb. strains.
580 // N // 5,6-dihydro-4-methoxy-6*S*-(1'*S*,2'*S*-dihydroxy pent-3'(*E*)-enyl)-2*H*-pyran-2-one // NT.
581 // N // 4-methoxy-6-(1'*R*, 2'*R*-dihydroxy pent-3'(*E*)-enyl)-2*H*-pyran-2-one // NT.
582 // M // 4-methoxy-2*H*-pyran-2-one // IA *vs* 4 microb. strains.



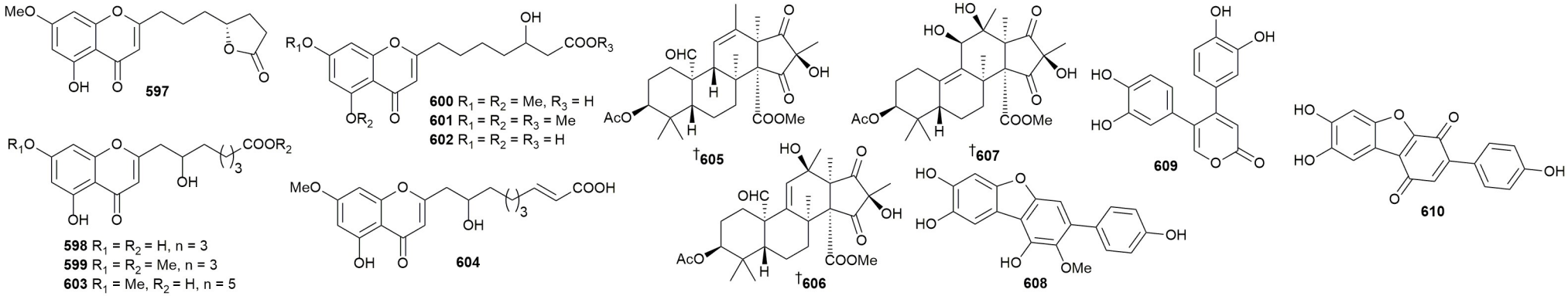
215 Ascomycota *Penicillium sclerotiorum* // (red alga, *Grateloupia* sp.) Yilan County, Taiwan // Anti-inflammatory azaphilones from the edible alga-derived fungus *Penicillium sclerotiorum*
583 // N // 8a-*epi*-hypocrellone A // IA *vs* 7 HTCLs and 1 nHCL; IA *vs* AI (NFκB); weak promotion of TGF-b.
584 // N // 8a-*epi*-eupenicilazaphilone C // IA *vs* 7 HTCLs and 1 nHCL; IA *vs* AI (NFκB); IA *vs* TGF-b.

216 Ascomycota *Penicillium solitum* // (sediment), Northwest Atlantic Ocean) // Solitumergosterol A, a unique 6/6/6/6/5 steroid from the deep-sea-derived *Penicillium solitum* MCCC 3A00215
585 // N // solitumergosterol A // IA *vs* 17 HTCLs.

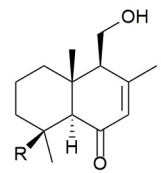
217 Ascomycota *Penicillium solitum* // (sediment) Northwest Atlantic Ocean // Chemical constituents of the deep-sea-derived *Penicillium solitum*
586 // N // 15-*O*-methyl ML-236A // IA *vs* 17 HTCLs; IA *vs* antiallergy effect (RBL-2H3 cells).
587 // N // (+)-solitumidine D // IA *vs* 17 HTCLs; IA *vs* antiallergy effect (RBL-2H3 cells).
588 // N // (±)-solitumidine E // IA *vs* 17 HTCLs; IA *vs* antiallergy effect (RBL-2H3 cells).

218 Ascomycota *Penicillium steckii*, Ascomycota *Penicillium citrinum* // (black band-diseased coral, *Pseudodiploria strigosa*) Looe Key reef, Florida, USA // Fungal epithiodiketopiperazines carrying α,β-polysulfide bridges from *Penicillium steckii* YE, and their chemical interconversion
589 // N // penigainamide A // NT due to instability.
590 // N // penigainamide B // NT due to instability.

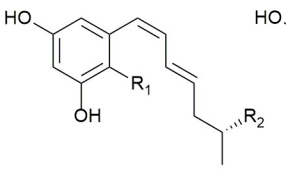
219 Ascomycota *Penicillium steckii*, Ascomycota *Penicillium citrinum* // (sediment) Xiamen Sea, Fujian, China // Penicisteckins A-F, isochroman-derived atropisomeric dimers from *Penicillium steckii* HNNU-5B18
591 // N // penicisteckin A // IA *vs* 6 microb. strains; IA *vs* 3 HTCLs.
592 // N // penicisteckin B // IA *vs* 6 microb. strains; IA *vs* 3 HTCLs.
593 // N // penicisteckin C // IA *vs* 6 microb. strains; IA *vs* 3 HTCLs.
594 // N // penicisteckin D // IA *vs* 6 microb. strains; IA *vs* 3 HTCLs.
595 // N // penicisteckin E // IA to weak inhib. *vs* 6 microb. strains; IA *vs* 3 HTCLs.
596 // N // penicisteckin F // IA to weak inhib. *vs* 6 microb. strains; IA *vs* 3 HTCLs.



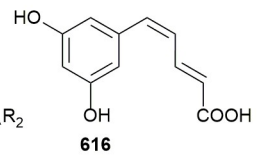
220 Ascomycota *Penicillium thomii* // (sediment) Yap Trench // Chromone derivatives with α-glucosidase inhibitory activity from the marine fungus *Penicillium thomii* Maire
597 // N // penithochromone M // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
598 // N // penithochromone N // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
599 // N // penithochromone O // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
600 // N // penithochromone P // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
601 // N // penithochromone Q // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
602 // N // penithochromone R // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
603 // N // penithochromone S // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
604 // N // penithochromone T // IA *vs* α-glucosidase; IA *vs* antioxid. (DPPH).
221 Ascomycota *Penicillium* sp // (sediment) East Pacific Ocean // New andrastin-type meroterpenoids from the marine-derived fungus *Penicillium* sp.
605 // N // penimeroterpenoid A // IA *vs* 6 HTCLs.
606 // N // penimeroterpenoid B // IA *vs* 6 HTCLs.
607 // N // penimeroterpenoid C // IA *vs* 6 HTCLs.
222 Ascomycota *Penicillium* sp // (sediment) South China Sea // p-Terphenyls as anti-HSV-1/2 agents from a deep-sea-derived *Penicillium* sp.
608 // N // peniterphenyl A // weak inhib. *vs* 2 viruses.
609 // N // peniterphenyl B // weak inhib. *vs* 2 viruses.
610 // N // peniterphenyl C // IA *vs* 2 viruses.



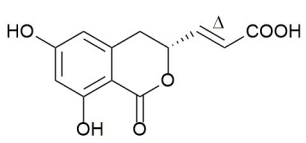
†**611** R = CH_2OH
612 R = COOH



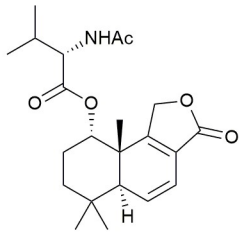
613 R_1 = H, R_2 = OH
614 R_1 = COOH, R_2 = OH
615 R_1 = COOH, R_2 = H



616



617
†**618** Δ saturated



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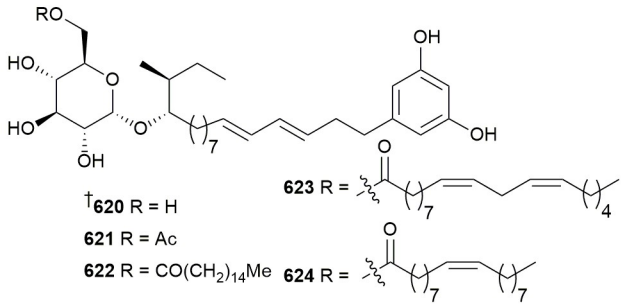
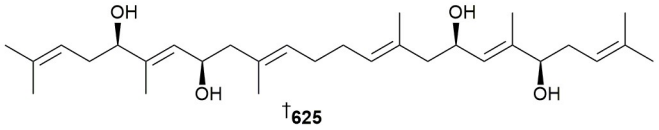
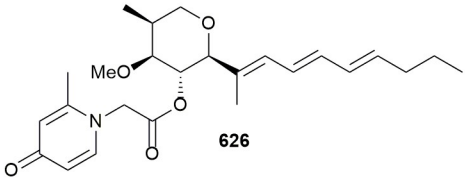


†**620** R = H
621 R = Ac
622 R = $CO(CH_2)_{14}Me$
623 R =
624 R =



†**625**

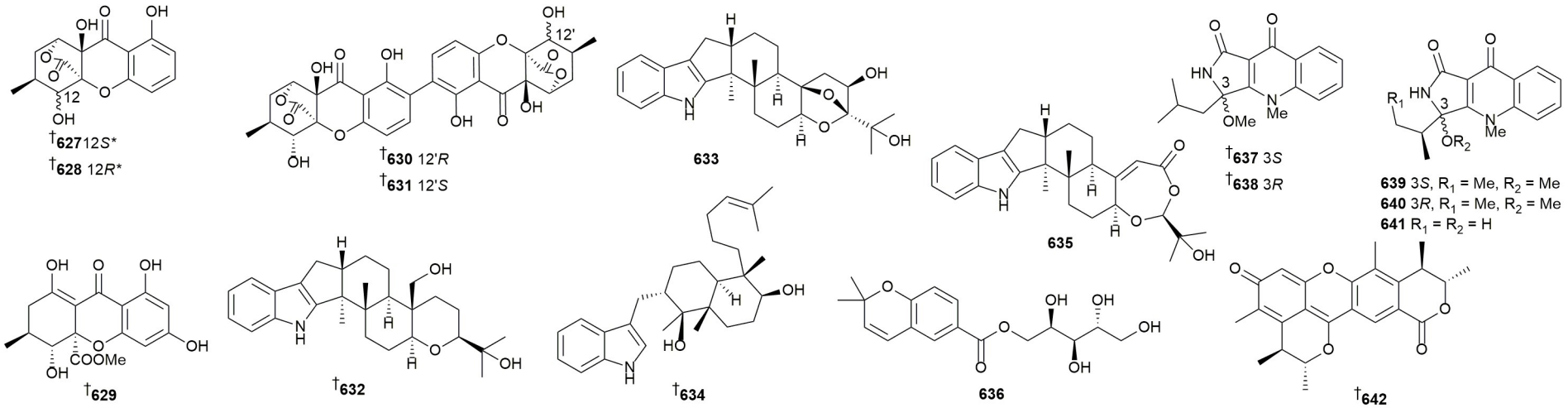


626

223 Ascomycota *Penicillium* sp // (hydrothermal vent sediment) Kueishantao, Taiwan // New drimane sesquiterpenes and polyketides from marine-derived fungus *Penicillium* sp. TW58-16 and their anti-inflammatory and α-glucosidase inhibitory effects
611 // N // (4*S*,5*R*,9*S*,10*R*)-11,13-dihydroxy-drim-7-en-6-one // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
612 // N // (4*S*,5*R*,9*S*,10*R*)-11-hydroxy-13-carboxy-drim-7-en-6-one // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
613 // N // 5-((*R*,1*Z*,3*E*)-6-hydroxy-1,3-heptadien-1-yl)-1,3-benzenediol // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
614 // N // 4-carboxy-5-((*R*,1*Z*,3*E*)-6-hydroxy-1,3-heptadien-1-yl)-1,3-benzenediol // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
615 // N // 4-carboxy-5-((1*Z*,3*E*)-1,3-heptadien-1-yl)-1,3-benzenediol // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
616 // N // 5-((1*Z*,3*E*)-4-carboxy-1,3-butadienyl-1-yl)-1,3-benzenediol // weak inhib. *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
617 // N // (2*E*)-3-[(3*R*)-3,4-dihydro-6,8-dihydroxy-1-oxo-1*H*-2-benzopyran-3-yl]-2-propenoic acid // IA *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.
618 // N // 3-[(3*S*)-3,4-dihydro-6,8-dihydroxy-1-oxo-1*H*-2-benzopyran-3-yl]-propanoic acid // weak inhib. *vs* α-glucosidase; IA *vs* NO prod; IA *vs* COX-2.

224 Ascomycota *Penicillium* sp // (sediment) Sindh, Karachi, Pakistan // Isolation, structural elucidation, and antimicrobial evaluation of the metabolites from a marine-derived fungus *Penicillium* sp. ZZ1283
619 // N // purpuride D // mod. inhib. *vs* 2 microb. strains; weak inhib. *vs* 1 fungus.

225 Ascomycota *Penicillium* sp // (sediment) Arabian Sea, Karachi, Sindh, Pakistan // New antiproliferative compounds against glioma cells from the marine-sourced fungus *Penicillium* sp. ZZ1750
620 // N // peniresorcinoside A // IA to weak cytotox. *vs* 2 HTCLs.
621 // N // peniresorcinoside B // weak cytotox. *vs* 2 HTCLs.
622 // N // peniresorcinoside C // IA *vs* 2 HTCLs.
623 // N // peniresorcinoside D // IA *vs* 2 HTCLs.
624 // N // peniresorcinoside E // IA *vs* 2 HTCLs.
625 // N // penidifarnesylin A // IA to weak cytotox. *vs* 2 HTCLs.
626 // N // penipyridinone A // IA *vs* 2 HTCLs.

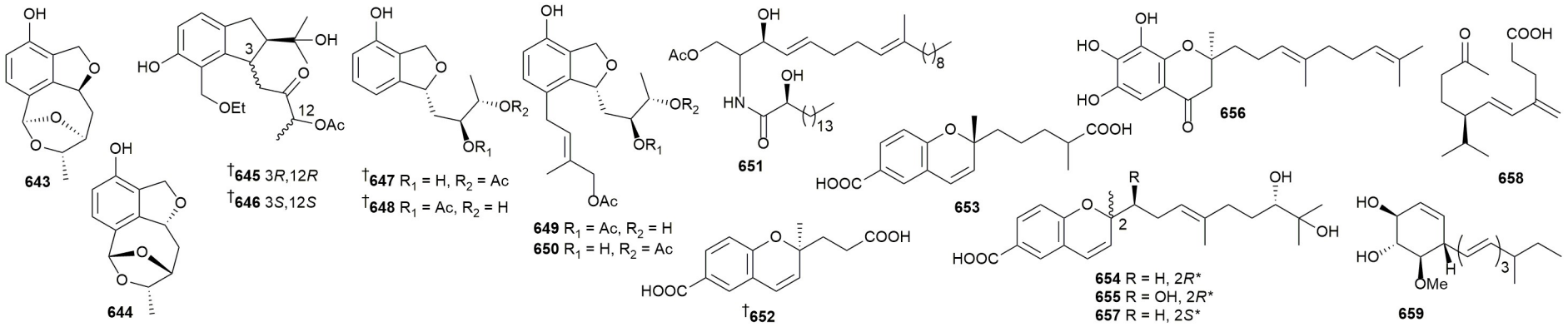


226 Ascomycota *Penicillium* sp // (sediment) Karachi, Pakistan // New polyhydroxanthones from the marine-associated fungus *Penicillium* sp. ZZ1750
627 // N // ergochrome C // weak activ. *vs* 2 microb. strains; weak activ. *vs* 1 fungus; IA *vs* 2 HTCLs.
628 // N // ergochrome D // weak activ. *vs* 2 microb. strains; weak activ. *vs* 1 fungus; IA *vs* 2 HTCLs.
629 // N // ergochrome E // IA to weak activ. *vs* 2 microb. strains; weak activ. *vs* 1 fungus; IA *vs* 2 HTCLs.
630 // N // ergochrome F // IA to weak activ. *vs* 2 microb. strains; weak activ. *vs* 1 fungus; IA *vs* 2 HTCLs.
631 // N // ergochrome G // IA *vs* 2 microb. strains; IA *vs* 1 fungus; IA *vs* 2 HTCLs.

227 Ascomycota *Penicillium* sp // (bivalve mollusc, *Meretrix lusoria*) Haikou Bay, Hainan province, China // Cytotoxic indole-diterpenoids from the marine-derived fungus *Penicillium* sp. KFD28
632 // N // penerpene K // IA *vs* 3 HTCLs; IA *vs* 4 microb. strains.
633 // N // penerpene L // IA *vs* 3 HTCLs; IA *vs* 4 microb. strains.
634 // N // penerpene M // IA *vs* 3 HTCLs; IA *vs* 4 microb. strains.
635 // N // penerpene N // IA *vs* 3 HTCLs; IA *vs* 4 microb. strains.

228 Ascomycota *Penicillium* sp // (seawater) West Pacific Ocean // Chemical constituents of the marine fungus *Penicillium* sp. MCCC 3A00228
636 // N // D-arabinitol-anofinicate // IA *vs* 11 HTCLs; IA *vs* inhib. transcription factors Nur77 and Retinoid X Receptor Alpha

229 Ascomycota *Penicillium* sp // (unspecified/unidentified sponge) Beibu Gulf, Beihai, Guangxi Province, China. // New *N*-methyl-4-quinolone alkaloid and citrinin dimer derivatives from the sponge-derived fungus *Penicillium* sp. SCSIO 41303
637 // N // quinolactacin E1 // IA *vs* 6 microb. strains; IA *vs* AChE; IA *vs* pancreatic lipase; NT *vs* 2 HTCLs; NT *vs* 2 viruses.
638 // N // quinolactacin E2 // IA *vs* 6 microb. strains; IA *vs* AChE; IA *vs* pancreatic lipase; NT *vs* 2 HTCLs; NT *vs* 2 viruses.
639 // N // quinolactacin F1 // IA *vs* 6 microb. strains; IA *vs* AChE; weak inhib. pancreatic lipase; IA *vs* 2 HTCLs; IA *vs* 2 viruses.
640 // N // quinolactacin F2 // IA *vs* 6 microb. strains; IA *vs* AChE; IA *vs* pancreatic lipase; IA *vs* 2 HTCLs; IA *vs* 2 viruses.
641 // N // quinolactacin G // IA *vs* 6 microb. strains; NT *vs* AChE; NT *vs* pancreatic lipase; IA *vs* 2 HTCLs; IA *vs* 2 viruses.
642 // N // dicitrinol D // IA *vs* 6 microb. strains; IA *vs* AChE; IA *vs* pancreatic lipase; IA *vs* 2 HTCLs; IA *vs* 2 viruses.



230 Ascomycota *Pestalotiopsis heterocornis* // (sponge, *Phakellia fusca*) Xisha Islands, China // Heterocornols from the sponge-derived fungus *Pestalotiopsis heterocornis* with anti-inflammatory activity

643 // N // heterocornol Q // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

644 // N // heterocornol R // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

645 // N // heterocornol S // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

646 // N // heterocornol T // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

647 // N // heterocornol U // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

648 // N // heterocornol V // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

649 // N // heterocornol W // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

650 // N // heterocornol X // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

651 // N // (2*S*, 2'*R*, 3*R*, 4*E*, 8*E*)-*N*-2'-hydroxyhexadecanoyl-2-amino-9-methyl-4, 8-octadecadiene-yl acetate // IA *vs* 4 HTCLS; IA *vs* 3 microb. strains and *vs* 1 fungus; IA *vs* NO prod.

231 Ascomycota *Pestalotiopsis neglecta* // (red alga, *Coelarthrum* sp.) Yongxing Island, South China Sea // Chromene and chromone derivatives as liver X receptors modulators from a marine-derived *Pestalotiopsis neglecta* fungus

652 // N // pestalotiochromenoic acid A // no up or downregulation of LXRa, LXRb or ABCA1 genes; IA *vs* 7 HTCLs.

653 // N // pestalotiochromenoic acid B // no up or downregulation of LXRa, LXRb; mod. upregulation of ABCA1; IA *vs* 7 HTCLs.

654 // N // pestalotiochromenoic acid C // no up or downregulation of LXRa, LXRb or ABCA1; IA *vs* 7 HTCLs.

655 // N // pestalotiochromenoic acid D // no up or downregulation of LXRa, LXRb; mod. upregulation of ABCA1; IA *vs* 7 HTCLs.

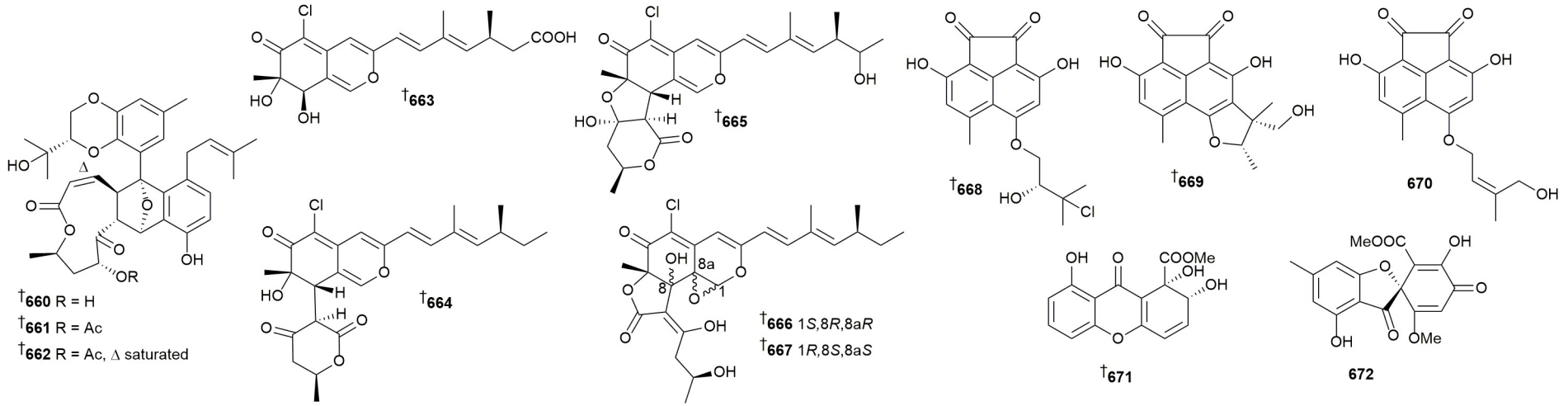
656 // N // pestalotiochromone A // Some affinity with LXRa; no upregulation of LXRb; mod. upregulation of ABCA1; IA *vs* 7 HTCLs.

657 // N // pestalotiochromone B // IA *vs* 7 HTCLs; NT for LXR activity.

232 Ascomycota *Phaeosphaeria spartinae* // (red alga, *Ceramium* sp.) unspecified location // Secondary metabolites from the marine-derived fungus *Phaeosphaeria spartinae*

658 // N // (–)-tricinonoic acid // NT.

659 // N // spartinol E // NT.

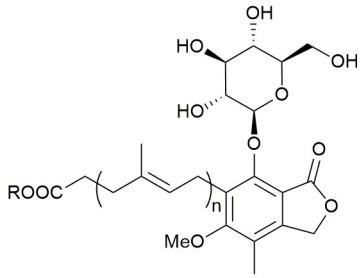


233 Ascomycota *Phomopsis* sp // (sediment) Indian Ocean // Lithocarpins E—G, potent anti-tumor tenellone-macrolides from the deep-sea fungus *Phomopsis lithocarpus* FS508
660 // N // lithocarpin E // IA to weak cytotox. *vs* 4 HTCLs.
661 // N // lithocarpin F // IA *vs* 4 HTCLs.
662 // N // lithocarpin G // IA *vs* 4 HTCLs.

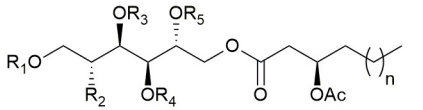
234 Ascomycota *Phomopsis tersa*, Ascomycota *Diaporthe tersa* // (sediment) Indian Ocean // Tersaphilones A-E, cytotoxic chlorinated azaphilones from the deep-sea-derived fungus *Phomopsis tersa* FS441
663 // N // tersaphilone A // IA *vs* 4 HTCLs.
664 // N // tersaphilone B // IA *vs* 4 HTCLs.
665 // N // tersaphilone C // IA *vs* 4 HTCLs.
666 // N // tersaphilone D // IA to weak activ. *vs* 4 HTCLs.
667 // N // tersaphilone E // weak activ. *vs* 4 HTCLs.

235 Ascomycota // (sediment) Fildes Peninsula // Antibacterial phenalenone derivatives from marine-derived fungus Pleosporales sp. HDN1811400
668 // N // peniciphenalenin G // IA *vs* 8 microb. strains; IA *vs* 5 HTCLs.
669 // N // peniciphenalenin H // IA to weak activ. *vs* 8 microb. strains; IA *vs* 5 HTCLs.
670 // N // peniciphenalenin I // IA to weak activ. *vs* 8 microb. strains; IA *vs* 5 HTCLs.

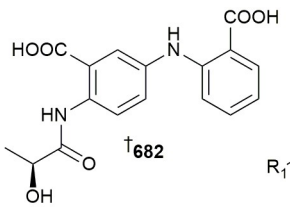
236 Ascomycota // (sponge, "Chalinidae family") Apo Island, Negros Oriental, Philippines // Cytotoxic polyketide metabolites from a marine mesophotic zone Chalinidae sponge-associated fungus Pleosporales sp. NBUF144
671 // N // globosuxanthone F // mod. cytotox. *vs* 1 HTCL.
672 // N // 2′-hydroxy bisdechlorogeodin // IA *vs* 1 HTCL.



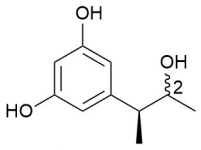
673 R = H, n = 1
674 R = H, n = 2
675 R = Me, n = 1



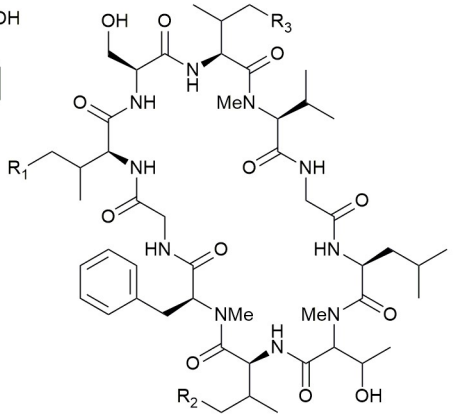
676 $R_1 = R_4 = R_5 = Ac$, $R_2 = OH$, $R_3 = H$, n = 11
677 $R_1 = R_4 = R_5 = H$, $R_2 = OH$, $R_3 = Ac$, n = 11
678 $R_1 = R_3 = R_4 = Ac$, $R_2 = OAc$, $R_5 = H$, n = 13
679 $R_1 = R_3 = R_4 = R_5 = Ac$, $R_2 = H$, n = 13



†**682**



†**680** 2*S*
†**681** 2*R*



683 $R_1 = Me$, $R_2 = R_3 = H$
684 $R_1 = R_2 = R_3 = H$
685 $R_1 = R_2 = Me$, $R_3 = H$
686 $R_1 = R_2 = R_3 = Me$

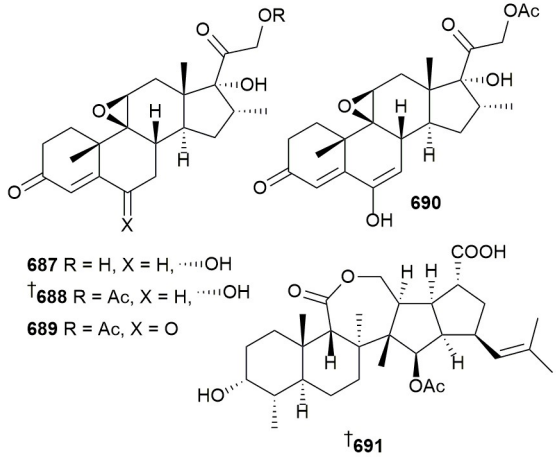
237 Zygomycota *Rhizopus oryzae*, Zygomycota *Rhizopus arrhizus* // (sponge, *Dendrectilla tremitersis*) Kömür Limani coastline, Turkey // Penicacids H–J, three new mycophenolic acid derivatives from the marine-derived fungus *Rhizopus oryzae*
673 // M // penicacid H // IA *vs* 4 microb. strains.
674 // N // penicacid I // IA *vs* 4 microb. strains.
675 // N // penicacid J // IA *vs* 4 microb. strains.

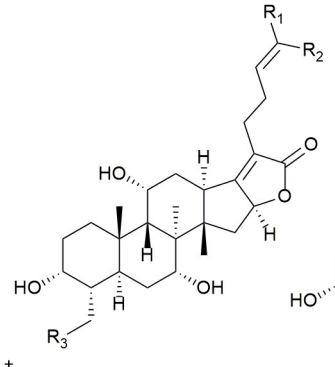
238 Basidiomycota *Rhodotorula mucilaginosa* // (sediment) Mid-Atlantic Ridge // Genomics- and metabolomics-based investigation of the deep-sea sediment-derived yeast, *Rhodotorula mucilaginosa* 50-3-19/20B
676 // N // D-mannitol-2,3,6-triacetyloxy-(*R*)-3′-acetyloxyhexadecanoate // IA *vs* 1 HTCL and *vs* 1 nHCL.
677 // N // D-mannitol-4-monoacetyloxy-(*R*)-3′-acetyloxyhexadecanoate // IA *vs* 1 HTCL and *vs* 1 nHCL.
678 // N // D-mannitol-tetraacetyloxy-(*R*)-3′-acetyloxyoctadecanoate // IA *vs* 1 HTCL and *vs* 1 nHCL.
679 // N // D-arabitol-2,3,4,5-tetraacetyloxy-(*R*)-3′-acetyloxyoctadecanoate // IA *vs* 1 HTCL and *vs* 1 nHCL.

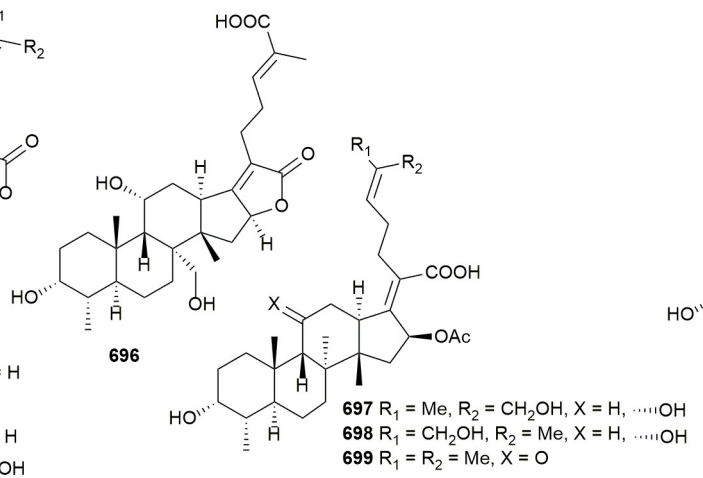
239 Ascomycota *Roussoella siamensis* // Mirs Bay, Shenzhen, Guangdong Province, China // Roussoelins A and B: two phenols with antioxidant capacity from ascidian-derived fungus *Roussoella siamensis* SYSU-MS4723
680 // N // roussoelin A // IA *vs* 3 HTCLs; IA *vs* NO prod.
681 // N // roussoelin B // IA *vs* 3 HTCLs; IA *vs* NO prod.

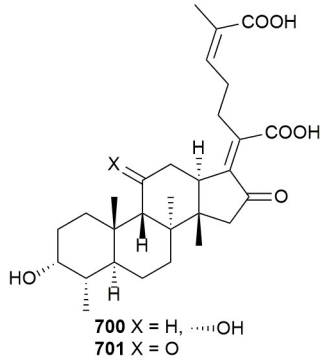
240 Ascomycota *Scedosporium apiospermum* // (soft coral, *Lobophyton crassum*) Hainan Sanya National Coral Reef Reserve, China // Biotransformations of anthranilic acid and phthalimide to potent antihyperlipidemic alkaloids by the marine-derived fungus *Scedosporium apiospermum* F41-1
682 // N // scediphenylamine A // IA *vs* 1 nHCL.

241 Ascomycota *Sesquicillium microsporum*, Ascomycota *Tolypocladium microsporum* // (sediment) Frobisher Bay, Nunavut, Canada // Auyuittuqamides A–D, cyclic decapeptides from *Sesquicillium microsporum* RKAG 186 isolated from Frobisher Bay sediment
683 // N // auyuittuqamide A // IA *vs* 2 HTCLs and *vs* 1 nHCL; IA *vs* 4 microb. strains; IA *vs* 1 fungus.
684 // N // auyuittuqamide B // IA *vs* 2 HTCLs and *vs* 1 nHCL; IA *vs* 4 microb. strains; IA *vs* 1 fungus.
685 // N // auyuittuqamide C // IA *vs* 2 HTCLs and *vs* 1 nHCL; IA *vs* 4 microb. strains; IA *vs* 1 fungus.
686 // N // auyuittuqamide D // IA *vs* 2 HTCLs and *vs* 1 nHCL; IA *vs* 4 microb. strains; IA *vs* 1 fungus.







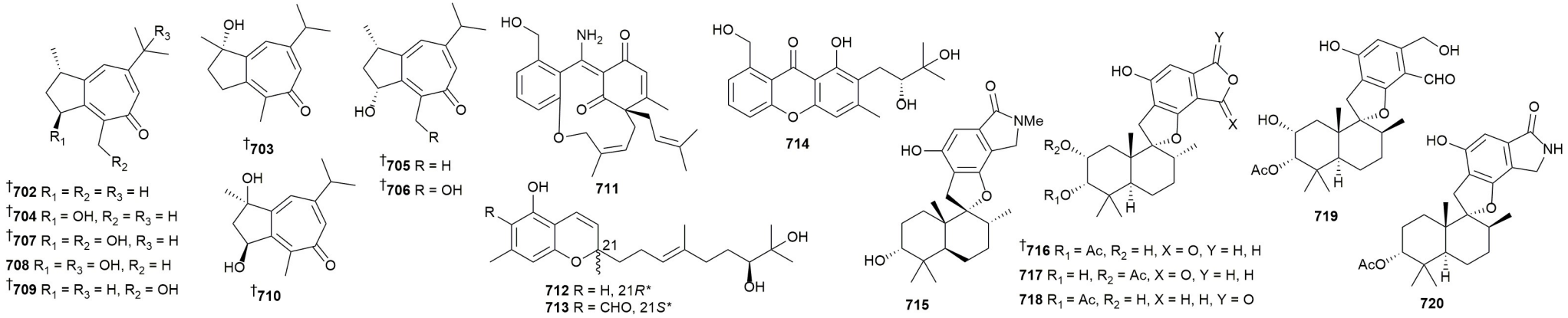


242 Ascomycota *Simplicillium lanosoniveum* // (soft coral, *Sinularia* sp.) Yongxing Island, South China Sea // Arthriniumsteroids A-D, four new steroids from the soft coral-derived fungus *Simplicillium lanosoniveum* SCSIO41212

687 // N // arthriniumsteroid A // IA *vs* NO prod; IA *vs* 4 microb. strains; IA *vs* AChE.
688 // N // arthriniumsteroid B // IA *vs* NO prod; IA *vs* 4 microb. strains; IA *vs* AChE.
689 // N // arthriniumsteroid C // IA *vs* NO prod; IA *vs* 4 microb. strains; IA *vs* AChE.
690 // N // arthriniumsteroid D // IA *vs* NO prod; IA *vs* 4 microb. strains; IA *vs* AChE.

243 Ascomycota *Simplicillium* sp // (unspecified/unidentified soft coral) Spratly Islands, South China Sea // Fusidane-type antibiotics from the marine-derived fungus *Simplicillium* sp. SCSIO 41513

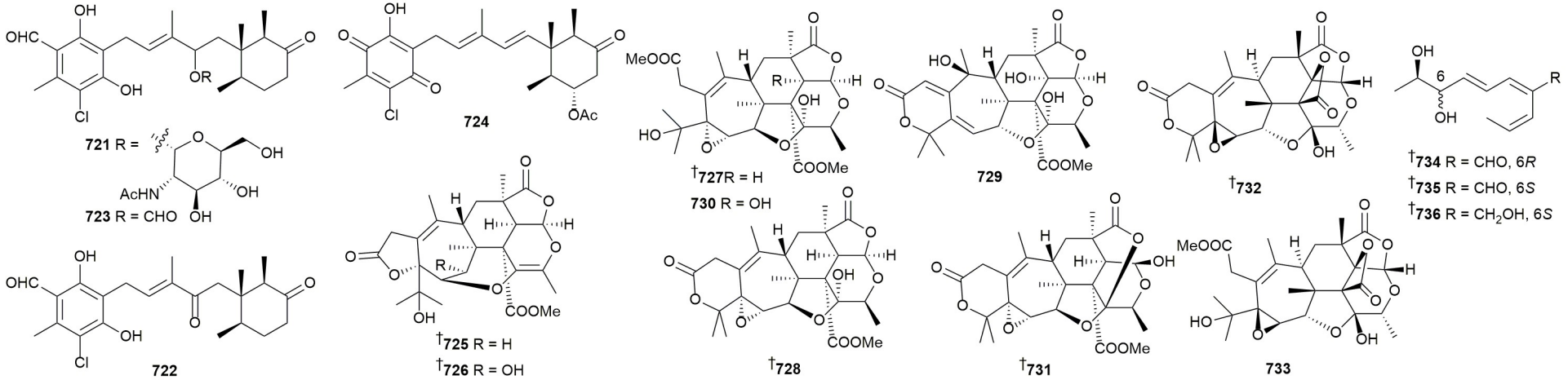
691 // N // simplifusidic acid A // NT.
692 // N // simplifusidic acid B // IA *vs* 1 microb. strain.
693 // N // simplifusidic acid C // NT.
694 // N // simplifusidic acid D // IA *vs* 1 microb. strain.
695 // N // simplifusidic acid E // IA *vs* 1 microb. strain.
696 // N // simplifusidic acid F // IA *vs* 1 microb. strain.
697 // N // simplifusidic acid G // NT.
698 // N // simplifusidic acid H // mod. inhib. *vs* 1 microb. strain.
699 // N // simplifusidic acid I // pot. inhib. *vs* 1 microb. strain.
700 // N // simplifusidic acid J // NT.
701 // N // simplifusidic acid K // NT.



244 Ascomycota *Spiromastix* sp // (sediment) South Atlantic Ocean // Epigenetic manipulation to trigger production of guaiane-type sesquiterpenes from a marine-derived *Spiromastix* sp. fungus with antineuroinflammatory effects
702 // N // spiromaterpene A // IA *vs* NO prod.
703 // N // spiromaterpene B // IA *vs* NO prod.
704 // N // spiromaterpene C // IA *vs* NO prod.
705 // N // spiromaterpene D // IA *vs* NO prod.
706 // N // spiromaterpene E // weak inhib. *vs* NO prod.
707 // N // spiromaterpene F // IA *vs* NO prod.
708 // N // spiromaterpene G // IA *vs* NO prod.
709 // N // spiromaterpene H // IA *vs* NO prod.
710 // N // spiromaterpene I // IA *vs* NO prod.

245 Ascomycota *Stachybotrys chartarum* // Yongxing Island, South China Sea // Structurally diverse polyketides and phenylspirodrimanes from the soft coral-associated fungus *Stachybotrys chartarum* SCSIO41201
711 // N // arthproliferin A // NT.
712 // N // arthproliferin B // NT.
713 // N // arthproliferin C // NT.
714 // N // arthproliferin D // NT.
715 // N // arthproliferin E // NT.

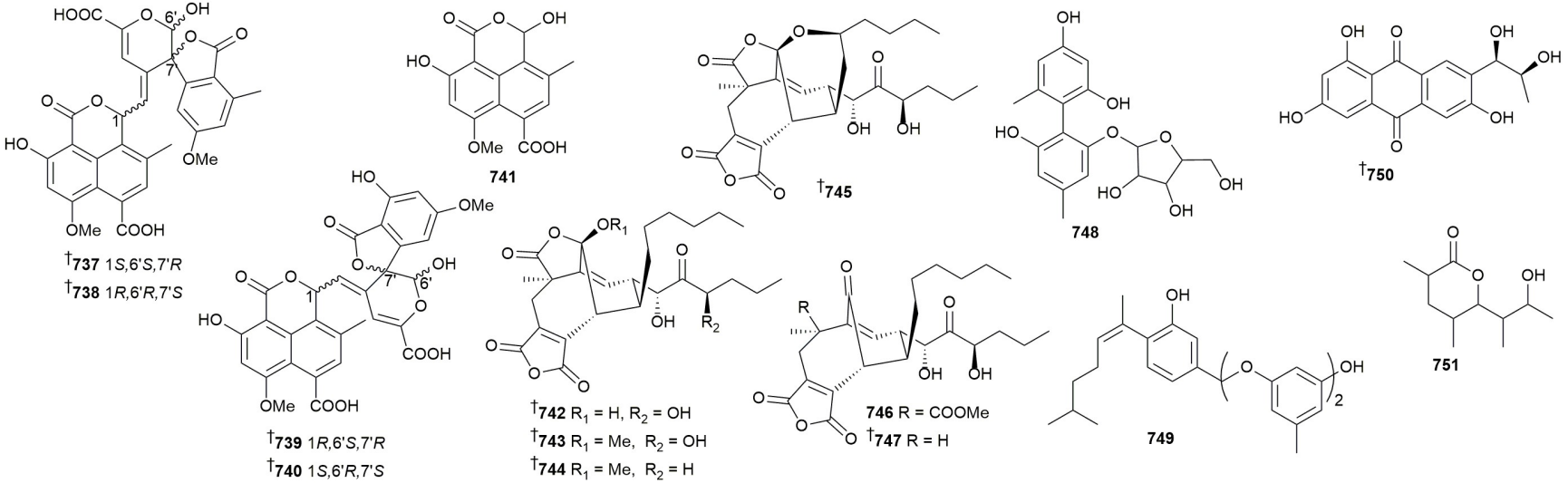
246 Ascomycota *Stachybotrys* sp // (gastropod mollusc, *Turbo chrysostomas*) South China Sea // Antibacterial phenylspirodrimanes from the marine-derived fungus *Stachybotrys* sp. SCSIO 40434
716 // N // stachybomycin A // IA *vs* 6 microb. strains.
717 // N // stachybomycin B // IA *vs* 6 microb. strains.
718 // N // stachybomycin C // IA *vs* 6 microb. strains.
719 // N // stachybomycin D // IA *vs* 6 microb. strains.
720 // N // stachybomycin E // IA to weak inhib. *vs* 6 microb. strains.



247 Ascomycota *Stilbella fimetaria* // IBT culture collection // Bioactive ascochlorin analogues from the marine-derived fungus *Stilbella fimetaria*
721 // N // ascochlorin N-acetylglucosamine // IA *vs* 3 microb. strains; IA *vs* 1 fungus.
722 // N // 4′-ketoascochlorin // IA *vs* 3 microb. strains; IA *vs* 1 fungus.
723 // N // 4′,5′-dihydro-4′-formylascochlorin // IA *vs* 3 microb. strains; IA *vs* 1 fungus.
724 // N // fimetarin A // IA to weak inhib. *vs* 3 microb. strains; IA *vs* 1 fungus.

248 Ascomycota *Talaromyces purpureogenus* // (unspecified/unidentified soft coral) Nansha Islands // Talaromynoids A–I, highly oxygenated meroterpenoids from the marine-derived fungus *Talaromyces purpureogenus* SCSIO 41517 and their lipid accumulation inhibitory activities
725 // N // talaromynoid A // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
726 // N // talaromynoid B // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
727 // N // talaromynoid C // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
728 // N // talaromynoid D // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
729 // N // talaromynoid E // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
730 // N // talaromynoid F // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
731 // N // talaromynoid G // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
732 // N // talaromynoid H // IA *vs* 7 PTPs; no lipid lowering effects in 3T3-L1 adipocytes.
733 // N // talaromynoid I // IA *vs* 7 PTPs; No lipid lowering effects in 3T3-L1 adipocytes.

249 Ascomycota *Talaromyces cyanescens* // (green alga, *Caulerpa* sp.) Son Tra peninsular, Da Nang, Vietnam // New polyenes from the marine-derived fungus *Talaromyces cyanescens* with anti-neuroinflammatory and cytotoxic activities
734 // N // talacyanol A // IA *vs* 6 HTCLs; IA *vs* NO prod.
735 // N // talacyanol B // IA *vs* 6 HTCLs; IA *vs* NO prod.
736 // N // talacyanol C // IA *vs* 6 HTCLs; IA *vs* NO prod.

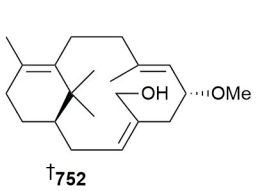


250 Ascomycota *Talaromyces purpureogenus* // (unspecified/unidentified soft coral) South China Sea // Talaromyoxaones A and B: unusual oxaphenalenone spirolactones as phosphatase inhibitors from the marine-derived fungus *Talaromyces purpureogenus* SCSIO 41517
737 // N // (+)-talaromyoxaone A // IA to mod. inhib. *vs* 7 PTPs; tested as a mixture with **738**.
738 // N // (–)-talaromyoxaone A // IA to mod. inhib. *vs* 7 PTPs; tested as a mixture with **737**.
739 // N // (+)-talaromyoxaone B // IA to mod. inhib. *vs* 7 PTPs; tested as a mixture with **741**.
740 // N // (–)-talaromyoxaone B // IA to mod. inhib. *vs* 7 PTPs; tested as a mixture with **740**.
741 // N // 11-apopyrenulin // IA *vs* 7 PTPs.

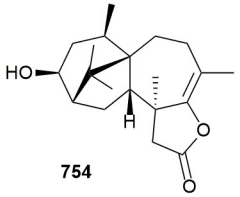
251 Ascomycota *Talaromyces* sp // (unspecified/unidentified sponge) Weddell Sea, Antarctic // Talarodrides A-F, nonadrides from the Antarctic sponge-derived fungus *Talaromyces* sp. HDN1820200
742 // N // talarodride A // IA to weak inhib. *vs* 10 microb. strains; IA *vs* 16 HTCLs.
743 // N // talarodride B // IA to mod. inhib. *vs* 10 microb. strains; IA *vs* 16 HTCLs.
744 // N // talarodride C // IA *vs* 10 microb. strains; IA *vs* 16 HTCLs.
745 // N // talarodride D // IA *vs* 10 microb. strains; IA *vs* 16 HTCLs.
746 // N // talarodride E // IA *vs* 10 microb. strains; IA *vs* 16 HTCLs.
747 // N // talarodride F // IA *vs* 10 microb. strains; IA *vs* 16 HTCLs.

252 Ascomycota *Talaromyces* sp // (soft coral, *Sinularia* sp.) Yongxing Island, South China Sea // Two new bioactive polyphenols from the soft coral-derived fungus *Talaromyces* sp. SCSIO 041201
748 // N // talaversatili A // IA *vs* 4 microb. strains; no inhib. *vs* barnacle larvae settlement.
749 // N // talaversatili B // IA *vs* 4 microb. strains; no inhib. *vs* barnacle larvae settlement.

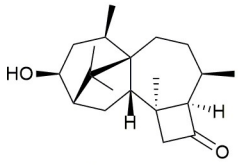
253 Ascomycota *Thermomyces lanuginosus* // (sediment) Co To archipelago, Vietnam // Polyketides from the marine sediment-derived fungus *Thermomyces lanuginosus* Tsikl. KMM 4681
750 // N // 1,3,6-trihydroxy-7-(1',2'-dihydroxypropan-2-yl)-anthraquinone // IA *vs* 2 HTCLs.
751 // N // 6-(3'-hydroxybutan-2'-yl)-3,5-dimethyltetrahydro-2H-pyran-2-one // IA *vs* 2 HTCLs.



†752



754



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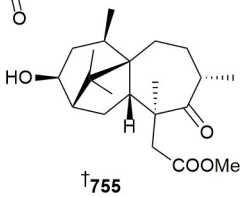

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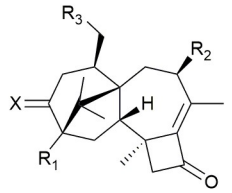
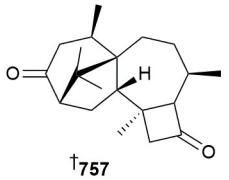
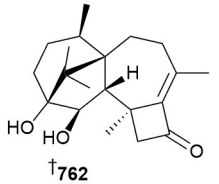


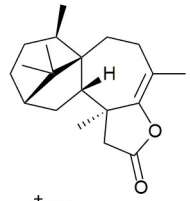
†**756** R_1 = R_3 = H, R_2 = OH, X = O
†**758** R_1 = OH, R_2 = R_3 = H, X = H, H
†**759** R_1 = R_3 = OH, R_2 = H, X = H, H
†**760** R_1 = R_2 = R_3 = OH, X = H, H
†**761** R_1 = H, R_2 = R_3 = OH, X = H, H



†757



†762

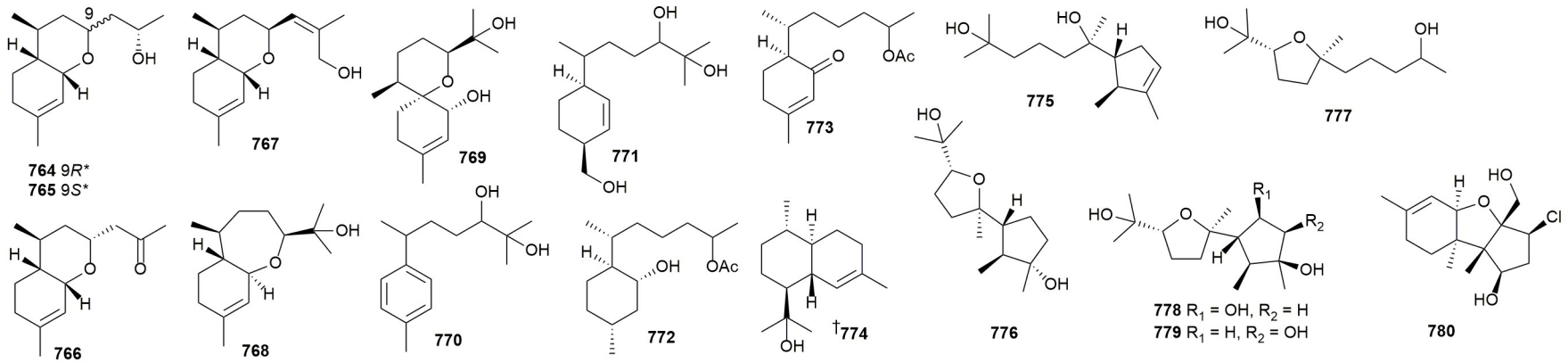


†763

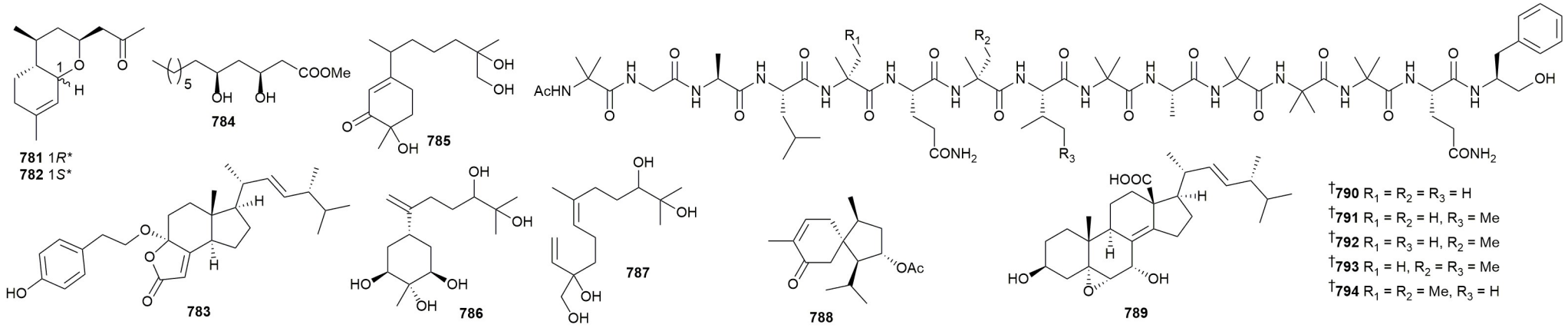
254 Ascomycota *Trichoderma asperelloides* // (red alga, *Rhodomela confervoides*) Dalian, China // Proharziane and harziane derivatives from the marine algicolous fungus *Trichoderma asperelloides* RR-dl-6-11
752 // N // 11*R*-methoxy-5,9,13-proharzitrien-19-ol // weak inhib. *vs* 4 phytoplankton.
753 // N // 3*S*-hydroxy-9*R*,10*R*-dihydroharzianone // weak inhib. *vs* 4 phytoplankton.
754 // N // 3*S*-hydroxytrichodermaerin // weak inhib. *vs* 4 phytoplankton.
755 // N // methyl 3*S*-hydroxy-10,11-*seco*-harzianate // IA to weak inhib. *vs* 4 phytoplankton.

255 Ascomycota *Trichoderma* sp // (sediment) South China Sea // Novel harziane diterpenes from deep-sea sediment fungus *Trichoderma* sp. SCSIOW21 and their potential anti-inflammatory effects
756 // N // harzianol K // IA *vs* 5 fungi; IA *vs* NO prod.
757 // M // harzianol J // IA *vs* 5 fungi; IA *vs* NO prod.
758 // M // harzianol A // IA *vs* 5 fungi; IA *vs* NO prod.
759 // N // harzianol L // IA *vs* 5 fungi; IA *vs* NO prod.
760 // N // harzianol M // IA *vs* 5 fungi; IA *vs* NO prod.
761 // N // harzianol N // IA *vs* 5 fungi; IA *vs* NO prod.
762 // N // harzianol O // IA *vs* 5 fungi; IA *vs* NO prod.

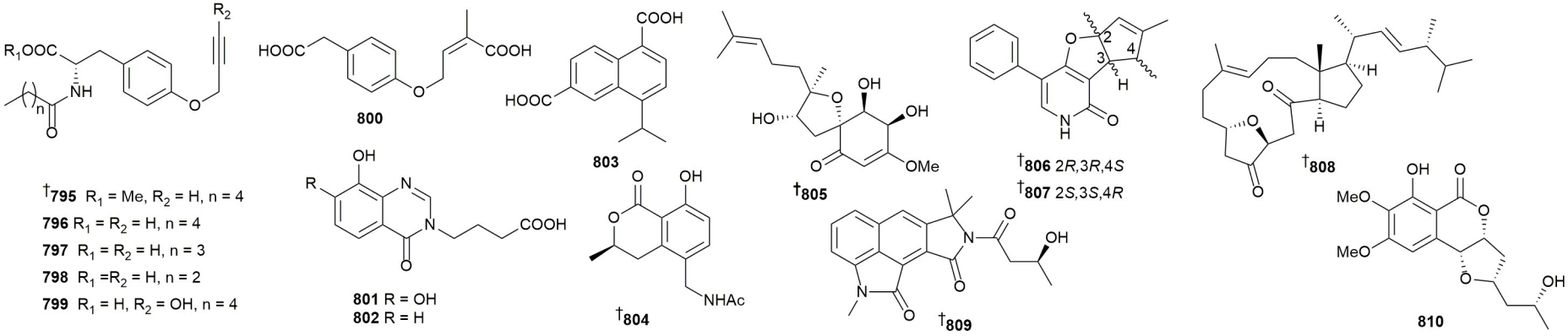
256 Ascomycota *Trichoderma longibrachiatum* // (red alga, *Laurencia okamurai*) Weihai, China // Deoxytrichodermaerin, a harziane lactone from the marine algicolous fungus *Trichoderma longibrachiatum* A-WH-20-2
763 // N // deoxytrichodermaerin // mod. to pot. inhib. *vs* 4 phytoplankton; IA *vs* 5 microb. strains; IA *vs* brine shrimp.



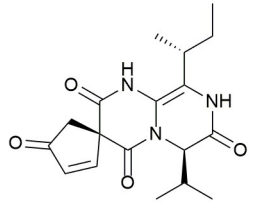
257 Ascomycota *Trichoderma asperelloides* // (red alga, *Rhodomela confervoides*) Dalian, China // Bisabolane, cadinane, and cyclonerane sesquiterpenes from an algicolous strain of *Trichoderma asperelloides*
764 // N // trichobisabolin Q // weak to pot. inhib. *vs* 4 phytoplankton.
765 // N // trichobisabolin R // weak to pot. inhib. *vs* 4 phytoplankton.
766 // N // trichobisabolin S // weak inhib. *vs* 4 phytoplankton.
767 // N // trichobisabolin T // weak to mod. inhib. *vs* 4 phytoplankton.
768 // N // trichobisabolin U // weak to mod. inhib. *vs* 4 phytoplankton.
769 // N // trichobisabolin V // weak inhib. *vs* 4 phytoplankton.
770 // N // trichobisabolin W // weak to mod. inhib. *vs* 4 phytoplankton.
771 // N // trichobisabolin X // weak inhib. *vs* 4 phytoplankton.
772 // N // trichobisabolin Y // weak to mod. inhib. *vs* 4 phytoplankton.
773 // N // trichobisabolin Z // weak to mod. inhib. *vs* 4 phytoplankton.
774 // N // cadin-4-en-11-ol // weak to pot. inhib. *vs* 4 phytoplankton.
775 // N // cycloner-3-en-7,11-diol // weak to mod. inhib. *vs* 4 phytoplankton.
776 // N // isoepicyclonerodiol oxide // weak to mod. inhib. *vs* 4 phytoplankton.
777 // N // norepicyclonerodiol oxide // weak to mod. inhib. *vs* 4 phytoplankton.
258 Ascomycota *Trichoderma hamatum* // (red alga, *Grateloupia* sp.) Zhoushan Islands // Three sesquiterpenes from the marine-alga-epiphytic fungus *Trichoderma hamatum* Z36-7
778 // N // 5-hydroxyepicyclonerodiol oxide // weak inhib. *vs* 4 microb. strains; IA *vs* 3 phytoplankton.
779 // N // 4-hydroxyepicyclonerodiol oxide // weak inhib. *vs* 4 microb. strains; IA to weak inhib. *vs* 3 phytoplankton.
780 // N // trichodermol chlorohydrin // IA to weak inhib. *vs* 4 microb. strains; IA to weak inhib. *vs* 3 phytoplankton.



259 Ascomycota *Trichoderma atroviride* // (red alga, *Rhodomela confervoides*) Dalian, China // Sesquiterpenes and lipids from the algicolous fungus *Trichoderma atroviride* RR-dl-3-9
781 // N // trichobisabolin M // IA to weak inhib. *vs* 5 microb. strains; weak inhib. *vs* 4 phytoplankton.
782 // N // trichobisabolin N // IA *vs* 5 microb. strains; IA to weak inhib. *vs* 4 phytoplankton.
783 // N // 4-(*p*-hydroxyphenethoxy)demethylincisterol A3 // IA *vs* 5 microb. strains; IA to weak inhib. *vs* 4 phytoplankton.
784 // N // methyl 3,5-dihydroxydodecanoate // IA to weak inhib. *vs* 5 microb. strains; IA to weak inhib. *vs* 4 phytoplankton.
260 Ascomycota *Trichoderma brevicompactum* // (red alga, *Chondra tenuissima*) Dalian, China // Sesquiterpenoids and a steroid from the algicolous *Trichoderma brevicompactum*
785 // N // trichobisabolin O1/O2 // IA to weak inhib. *vs* 3 phytoplankton; IA *vs* 5 microb. strains.
786 // N // trichobisabolin P // weak to mod. inhib. *vs* 3 phytoplankton; IA *vs* 5 microb. strains.
787 // N // trichonerolin A/B // pot. inhib. *vs* 1 phytoplankton, IA *vs* 2 phytoplankton; IA *vs* 5 microb. strains.
788 // N // trichoacorin A // IA to weak inhib. *vs* 3 phytoplankton; IA *vs* 5 microb. strains.
789 // N // isoergokonin B // IA to weak inhib. *vs* 3 phytoplankton; IA *vs* 5 microb. strains.
261 Ascomycota Trichoderma sp // (sediment) Port-du-Bec, France // Pentadecaibins I–V: 15-residue peptaibols produced by a marine-derived Trichoderma sp. of the Harzianum clade
790 // N // pentadecaibin I // weak cytotox. *vs* 1 HTCL; IA to weak inhib. *vs* 2 microb. strains; IA *vs* 1 fungus.
791 // N // pentadecaibin II // weak cytotox. *vs* 1 HTCL; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
792 // N // pentadecaibin III // mod. cytotox. *vs* 1 HTCL; IA to weak inhib. *vs* 2 microb. strains; IA *vs* 1 fungus.
793 // N // pentadecaibin IV // mod. cytotox. *vs* 1 HTCL; IA *vs* 2 microb. strains; IA *vs* 1 fungus.
794 // N // pentadecaibin V // mod. cytotox. *vs* 1 HTCL; IA to weak inhib. *vs* 2 microb. strains; IA *vs* 1 fungus.



262 Ascomycota *Xylaria* sp // (soft coral, *Sinularia densa*) Puhi Bay, Hawaii Big Island, USA // Secondary metabolites from the leather coral-derived fungal strain *Xylaria* sp. FM1005 and their glycoprotein IIb/IIIa inhibitory activity
795 // N // sinuxylamide A // mod. inhib. platelet aggregation; IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains.
796 // N // sinuxylamide B // mod. inhib. platelet aggregation; IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains.
797 // N // sinuxylamide C // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
798 // N // sinuxylamide D // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
799 // N // sinuxylamide E // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
800 // N // (*Z*)-4-(4-(carboxymethyl)phenoxy)-2-methylbut-2-enoic acid // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
801 // N // 4-(7,8-dihydroxy-4-oxoquinazolin-3(4*H*)-yl)butanoic acid // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
802 // N // 4-(8-hydroxy-4-oxoquinazolin-3(4*H*)-yl)butanoic acid // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
803 // N // 4-isopropylnaphthalene-1,6-dicarboxylic acid // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
804 // N // 1′-N-acetyl-5-methylmellein // IA *vs* 1 HTCLs, IA *vs* 1 nHCL; IA *vs* 4 microb. strains; NT *vs* platelet aggregation.
263 Ascomycota *Aspergillus flocculosus* // (sponge, *Stylissa* sp.) // Reisolation and structure revision of asperspiropene A
805 // R/M // asperspiropene A // NT.
264 Ascomycota *Penicillium sumatrense* // (unspecified source) Bohai Sea // Structure revision and protein tyrosine phosphatase inhibitory activity of drazepinone
806 // M // (+)-drazepinone // IA *vs* 4 protein tyrosine phosphatases.
807 // M // (–)-drazepinone // mod. inhib. *vs* PTP1B, weak inhib. *vs* TCPTP, IA *vs* 2 other PTPs.
265 Ascomycota *Sporormiella irregularis* // * // Biogenesis-guided synthesis and structural revision of sarocladione enabled by ruthenium-catalyzed endoperoxide fragmentation
808 // R // sarocladione // NT.
266 Ascomycota *Aspergillus* sp. // (sediment) South China Sea // Antioxidant CPA-type indole alkaloids produced from the deep-sea derived fungus *Aspergillus* sp. SCSIO 41024
809 // M/R // asperorydine G // IA *vs* 3 HTCLs; IA *vs* 4 microb. strains; IA *vs* 1 fungus; IA *vs* antioxid. (DPPH).
267 Ascomycota Exserohilum sp // (zoanthid, *Palythoa haddoni*) Weizhou, China // Semisynthesis, antiplasmodial activity, and mechanism of action studies of isocoumarin derivatives
810 // M // (12*S*)-12-hydroxymonocerin // mod. antiplasmodial activ; IA *vs* 2 parasites; IA *vs* 1 HTCL.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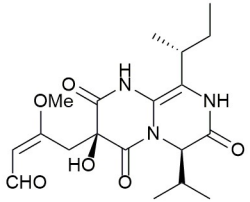
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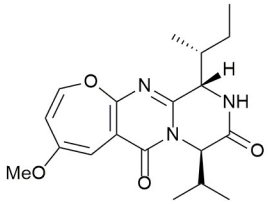
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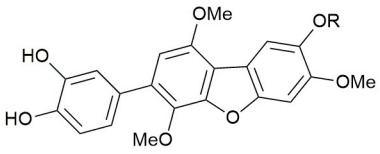
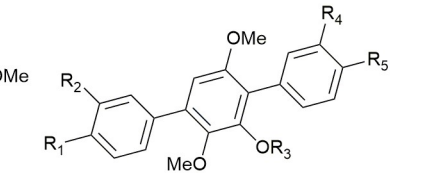
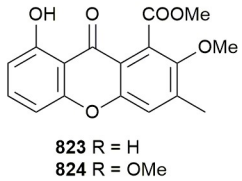
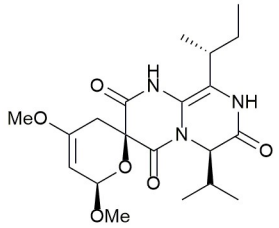

817 R = Me
818 R = H


819 R_1 = OH, R_2 = H, R_3 = Me, R_4 = OH, R_5 = OH
820 R_1 = H, R_2 = H, R_3 = H, R_4 = OMe, R_5 = OH
821 R_1 = OH, R_2 = OH, R_3 = H, R_4 = H, R_5 = H
822 R_1 = OH, R_2 = H, R_3 = H, R_4 = OH, R_5 = –≋O


823 R = H
824 R = OMe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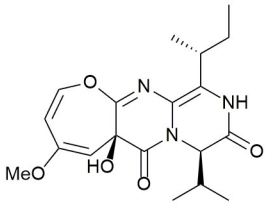
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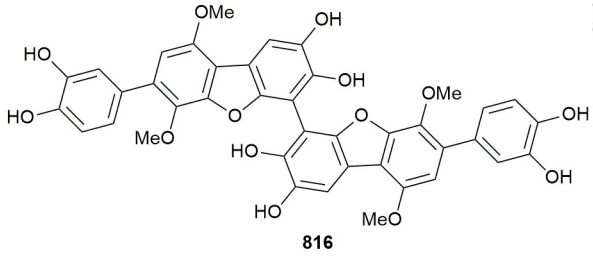
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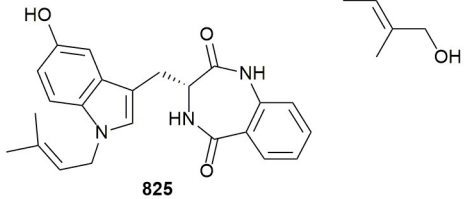
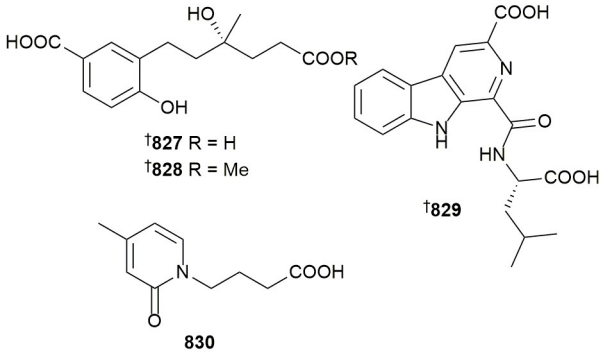
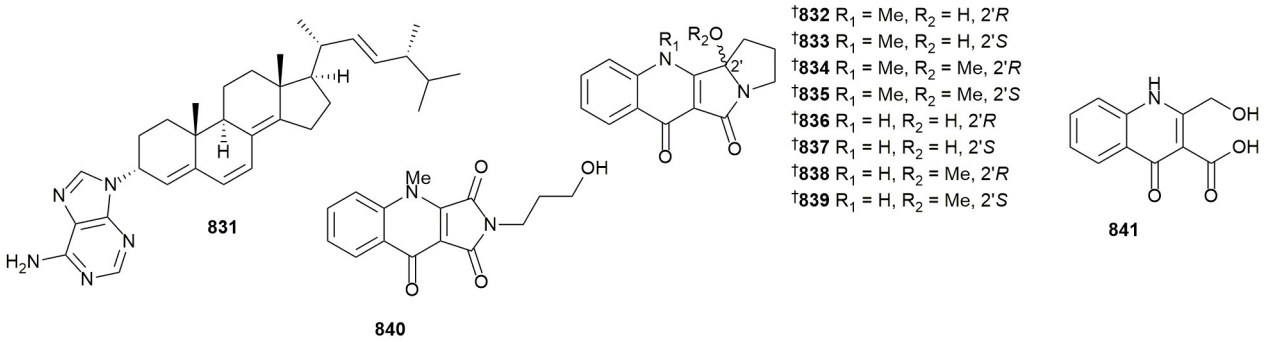

825

313 Ascomycota *Aspergillus versicolor* // (rhizospere soil, *Thespesia populnea*) Guangxi Province, China // Pyrazinopyrimidine alkaloids from a mangrove-derived fungus *Aspergillus versicolor* HDN11-84
811 // N // pyrasplorine A // IA *vs* 4 HTCLs.
812 // N // pyrasplorine B // IA *vs* 4 HTCLs.
813 // N // pyrasplorine C // IA *vs* 4 HTCLs.
814 // N // deg-pyrasplorine B // IA *vs* 4 HTCLs; IA *vs* 1 virus strain.
815 // R // versicoloid A // IA *vs* 4 HTCLs.

316 Ascomycota *Aspegillus candidus* // (root, *Rhizophora apiculata*) Sanya Bailu Park, Hainan Province, China // Polyhydroxy *p*-terphenyls from a mangrove endophytic fungus *Aspergillus candidus* LDJ-5
816 // N // asperterphenyllin A // IA *vs* 12 HTCLs; IA *vs* 5 bact. strains; IA *vs* 1 virus strain; IA *vs* PTP1B.
817 // N // asperterphenyllin B // IA *vs* 12 HTCLs; IA *vs* 5 bact. strains.
818 // N // asperterphenyllin C // IA *vs* 12 HTCLs; IA to weak *vs* 5 bact. strains.
819 // N // asperterphenyllin D // IA *vs* 12 HTCLs; IA *vs* 5 bact. strains.
820 // N // asperterphenyllin E // IA *vs* 12 HTCLs; IA *vs* 5 bact. strains.
821 // N // asperterphenyllin F // IA *vs* 12 HTCLs; IA *vs* 5 bact. strains.
822 // N // asperterphenyllin G // weak to mod. cytotox. *vs* 12 HTCLs; IA *vs* 5 bact. strains.

317 Ascomycota *Aspergillus* sp // (mangrove sediment) Yalong Bay, Sanya, Hainan, China // Three new metabolites from the marine-derived fungus *Aspergillus* sp. WHUF03110
823 // N // spinosusone A // IA *vs* 18 bact. strain; IA *vs* 2 fungal strains.
824 // N // spinosusone B // IA *vs* 18 bact. strain; IA *vs* 2 fungal strains.
825 // N // asperdiazapinone G // IA *vs* 18 bact. strain; IA *vs* 2 fungal strains.



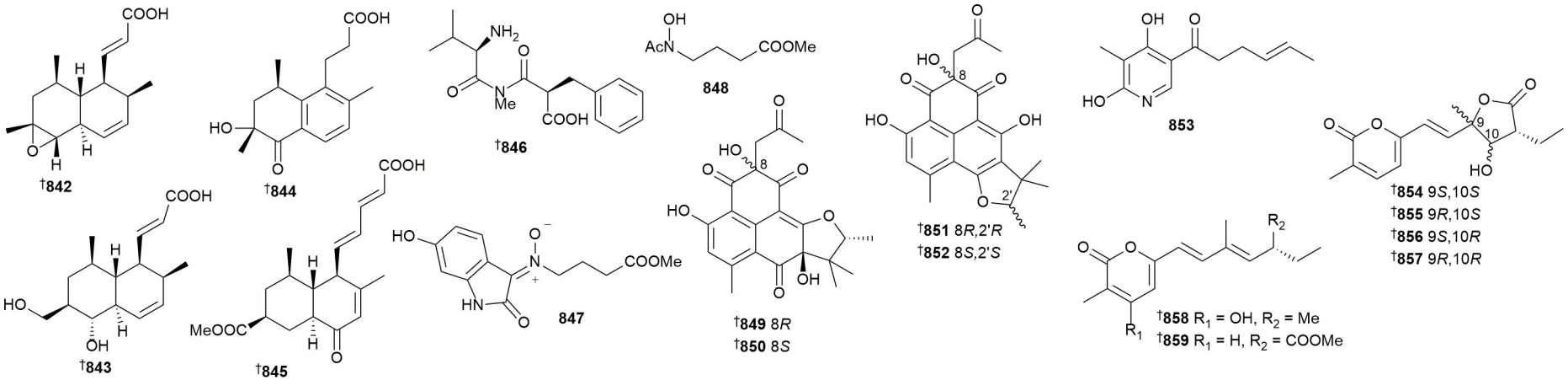


318 Ascomycota *Penicillium polonicum* // (mangrove sediment) Zhangjiangkou, Fujian province, China // Bioactive compounds derived from the marine-derived fungus MCCC3A00951 and their influenza neuraminidase inhibition activity *in vitro* and *in silico*
826 // N // 7-hydroxy-3,10-dehydrocyclopeptine // IA *vs* 1 virus strain.

319 Ascomycota *Cladosporium* sp // (root, *Ceriops tagal*) Dong Zhai Gang Mangrove Reserve. Hainan Province, China // Metabolites from the mangrove-derived fungus *Cladosporium* sp. HNWSW-1
827 // N // cladoslide A // IA *vs* 4 HTCLs; IA *vs* α-glucosidase.
828 // N // cladoslide B // IA *vs* 4 HTCLs.
829 // N // cladospomine // IA *vs* 4 HTCLs.
830 // N // cladoslide C // IA *vs* 4 HTCLs.

320 Ascomycota *Penicillium brefeldianum*, Ascomycota Penicillium dodgei // (mangrove sediment) Dongzhaigang Mangrove Nature Reserve, Hainan province, China // New purinyl-steroid and other constituents from the marine fungus *Penicillium brefeldianum* ABC190807: larvicidal activities against *Aedes aegypti*
831 // N // (3α 22*E*)-ergosta-4,6,8(14),22-tetraen-3-(6-amino-9*H*-purin-9-yl // IA *vs Aedes aeggypti* larvae.

321 Ascomycota *Penicillium steckii*, Ascomycota *Penicillium citrinum* // (root, *Avicennia marina*) Zhanjiang, Guangdong province, China // Pyrrolyl 4-quinolone alkaloids from the mangrove endophytic fungus *Penicillium steckii* SCSIO 41025: chiral resolution, configurational assignment, and enzyme inhibitory activities
832 // N // (+)-oxypenicinoline A // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
833 // N // (–)-oxypenicinoline A // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
834 // N // (+)-oxypenicinoline B // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
835 // N // (–)-oxypenicinoline B // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
836 // N // (+)-oxypenicinoline C // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
837 // N // (–)-oxypenicinoline C // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
838 // N // (+)-oxypenicinoline D // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
839 // N // (–)-oxypenicinoline D // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
840 // N // penicinoline F // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.
841 // N // penicinoline G // IA *vs* 2 HTCLs; IA *vs* 2 bact. strains; IA *vs* 5 fungal strains; IA *vs* AChE; IA *vs*. α-glucosidase.



322 Ascomycota *Penicillium steckii* // (roots, *Avicennia marina*) // Diversified polyketides and nitrogenous compounds from the mangrove endophytic fungus *Penicillium steckii* SCSIO 41025

842 // N // penicisteck acid A // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.
843 // N // penicisteck acid B // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.
844 // N // penicisteck acid C // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.
845 // N // penicisteck acid D // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.
846 // N // penicmariae-crucis C acid // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.
847 // N // *N*-(6-hydroxy-2-oxoindolin-3-ylidene)-5'-methoxy-5'-oxobutyl-amine oxide // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; n IA *vs* α-glucosidase.
848 // N // methyl-1'-(*N*-hydroxyacetamido)-butanoate // IA *vs* 1 bact. strain; IA *vs* 5 fungal strains; IA *vs* α-glucosidase.

323 Ascomycota *Penicillium herquei* // (rhizospere, *Rhizophora mucronata*) Hainan Island, P. R. China // Separation and configurational assignment of stereoisomeric phenalenones from the marine mangrove-derived fungus *Penicillium herquei* MA-370

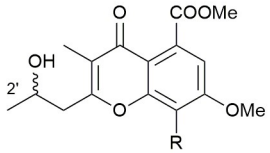
849 // N // aceneoherqueinone A // weak inhib. AChE.
850 // N // aceneoherqueinone B // IA *vs* AChE.
851 // N // (+)-aceatrovenetinone A // IA *vs* AChE.
852 // N // (+)-aceatrovenetinone B // IA *vs* AChE.

324 Ascomycota *Penicillium* sp // (rhizosphere soil, *Hibiscus tiliaceus*) Qinglan, Wenchang, Hainan Province, China // Isolation and characterization of anti-inflammatory sorbicillinoids from the mangrove-derived fungus *Penicillium* sp. DM815

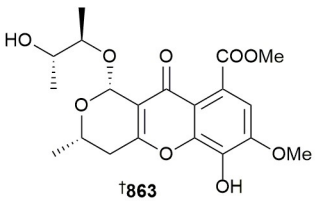
853 // N // (4*E*)-1-(4,6-dihydroxy-5-methylpyridin-3-yl)hex-4-en-1-one // IA *vs* anti-inflam.

325 Ascomycota *Penicillium* sp // (rhizosphere soil, *Rhizophora stylosa*) Yingluo Bay, Guangxi Province, People's Republic of China // Penipyrols C-G and methyl-penipyrol A, α-pyrone polyketides from the mangrove derived fungus *Penicillium* sp. HDN-11-131

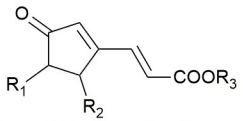
854 // N // penipyrol C // IA *vs* 1 HTCL; weak β-cell regeneration in zebra fish.
855 // N // penipyrol D // IA *vs* 1 HTCL.
856 // N // penipyrol E // IA *vs* 1 HTCL.
857 // N // penipyrol F // IA *vs* 1 HTCL.
858 // N // penipyrol G // IA *vs* 1 HTCL.
859 // N // methyl-penipyrol A // IA *vs* 1 HTCL.



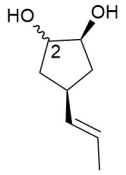
†**860** R = H, 2'*S*
†**861** R = OH, 2'*S*
†**862** R = OH, 2'*R*



†**863**



864 R_1 = OMe, R_2 = R_3 = H
865 R_1 = H, R_2 = OH, R_3 = Me
866 R_1 = OMe, R_2 = H, R_3 = Me

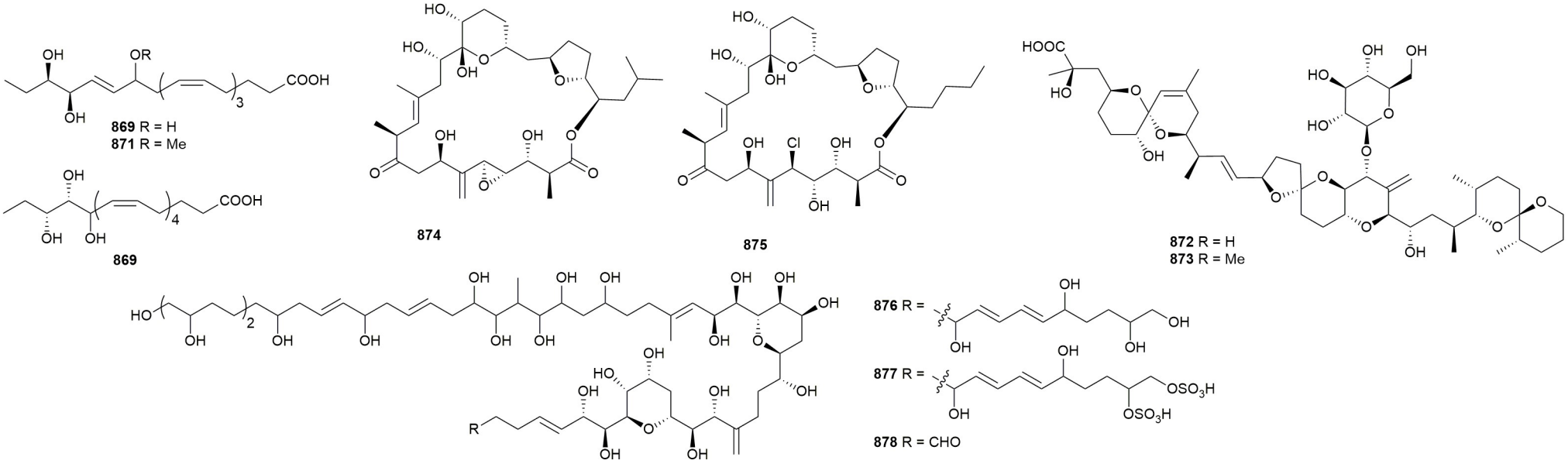


867 2*R**
868 2*S**

326 Ascomycota *Phomopsis asparagi* // (roots, *Rhizophora mangle*) Dong Zhai Gang-Mangrove Garden, Hainan Island, China // Four new chromones from the endophytic fungus *Phomopsis asparagi* DHS-48 isolated from the Chinese mangrove plant *Rhizophora mangle*
860 // N // phomochromenone D // IA *vs* ConA and LPS induced cell proliferation.
861 // N // phomochromenone E // IA *vs* ConA and LPS induced cell proliferation.
862 // N // phomochromenone F // IA *vs* ConA and LPS induced cell proliferation.
863 // N // phomochromenone G // IA *vs* ConA and LPS induced cell proliferation.

327 Ascomycota *Trichoderma atroviride* // (mangrove sediment) Zhangjiangkou Mangrove National Nature Reserve, Fujian province, China // New cyclopentenoneacrylic acid derivatives from a marine-derived fungus *Trichoderma atroviride* H548
864 // N // trichodermacid A // IA *vs* 1 fungal strain.
865 // N // trichodermester A // IA *vs* 1 fungal strain.
866 // N // trichodermester B // IA *vs* 1 fungal strain.

328 Ascomycota *Aspergillus flavipes* // (pneumatophores of *Acanthus ilicifolius*, Mandovi River, Banastarim, Goa, India // Chemical investigation of marine-derived fungus *Aspergillus flavipes* for potential anti-inflammatory agents
867 // N // 4β-[(1*E*)-propen-1-yl]cyclopentane-1β,2β-diol // IA *vs* TNF-α and IL6 secretion in LPS stimulated THP-1 cells.
868 // N // 4β-[(1*E*)-propen-1-yl]cyclopentane-1β,2α-diol // IA *vs* TNF-α and IL6 secretion in LPS stimulated THP-1 cells.

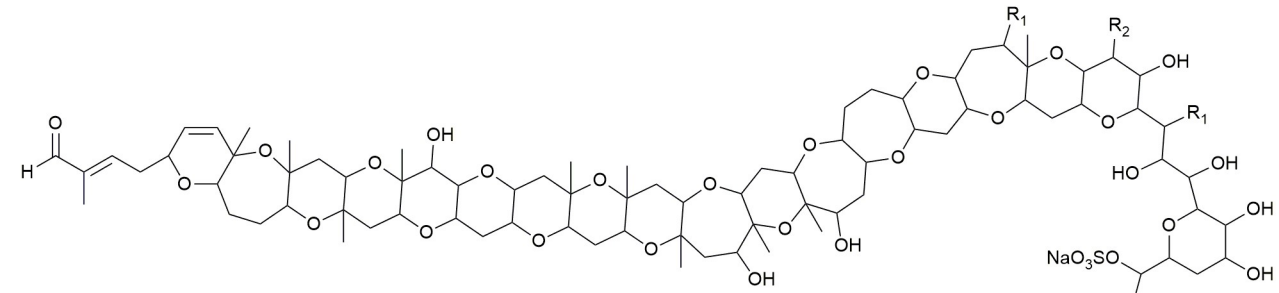


334 Bacillariophyta *Cylindrotheca closterium* // BCCM diatom collection // 14,17,18-Trihydroxy-eicosatetraenoic acid: a novel pro-resolving lipid mediator from marine microalgae
869 // N // 14*S*/*R*,17*R*,18*R*-trihydroxy-eicosatetraenoic acid // pot. anti-inflam.
870 // N // 16*R*/*S*,17*S*,18*R*-trihydroxy-eicosatetraenoic acid // NT.
871 // N // 17*R*,18*R*-dihydroxy-14*R*/*S*-methoxy-eicosatetraenoic acid // NT.

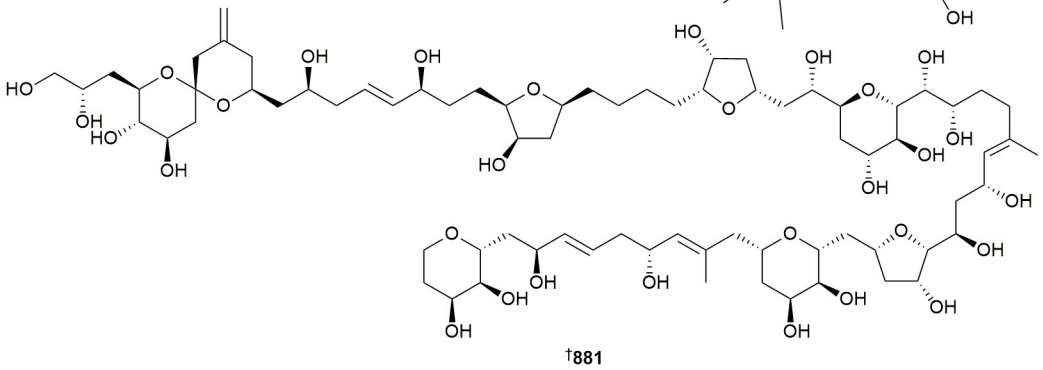
335 Miozoa *Dinophysis* sp // Bueu, Ría de Pontevedra, Spain // Identification of 24-O-β-D-glycosides and 7-deoxy-analogues of okadaic acid and dinophysistoxin-1 and -2 in extracts from Dinophysis blooms, *Dinophysis* and *Prorocentrum* cultures, and shellfish in Europe, North America and Australasia
872 // N // okadaic acid 24-*O*-β-D-glucoside // NT; det.in cultures and mussels.
873 // N // dinophysistoxin 2 24-*O*-β-D-glucoside // NT; det.in cultures and mussels.

336 Miozoa *Amphidinium* sp // Iriomote Island, Japan // Structure and stereochemistry of amphidinolide N congeners from marine dinoflagellate *Amphidinium* species
874 // N // isocaribenolide-I // pot. cytotox. *vs* 1 HTCL.
875 // N // $C_{33}H_{53}ClO_{11}$ // pot. cytotox. *vs* 1 HTCL.

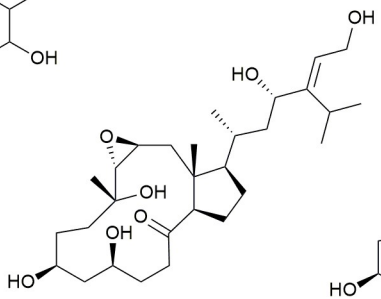
337 Miozoa *Amphidinium carterae* // Culture collection, Vigo, Spain // Isolation and structural elucidation of new amphidinol analogues from *Amphidinium carterae* cultivated in a pilot-scale photobioreactor
876 // N // amphidinol 24 // IA as haemolytic.
877 // N // amphidinol 25 // IA as haemolytic.
878 // N // amphidinol 26 // IA as haemolytic.



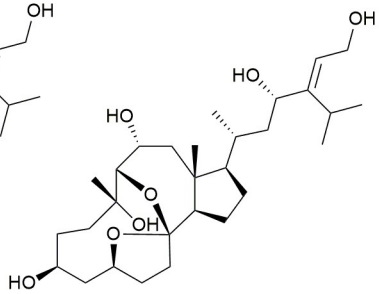
879 R_1 = H, R_2 = OH
880 R_1 = OH, R_2 = H



†**881**



†**882**

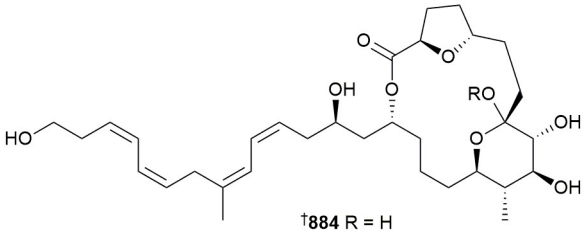


†**883**

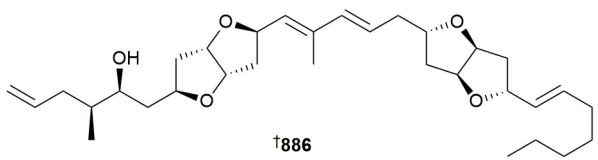
338 Miozoa *Karenia brevisulcata* // Wellington Harbor, New Zealand // Brevisulcenals-A1 and A2, sulfate esters of brevisulcenals, isolated from the red tide dinoflagellate *Karenia brevisulcata*
879 // N // brevisulcenal-A1 // pot. cytotox.*vs* 1 HTCL; presence of sulfate ester reduces activity.
880 // N // brevisulcenal-A2 // pot. cytotox.*vs* 1 HTCL; presence of sulfate ester reduces activity.

339 Miozoa // Lingshui Bay, Hainan Province, PR China // Discovery of benthol A and its challenging stereochemical assignment: opening up a new window for skeletal diversity of super-carbon-chain compounds
881 // N // benthol A // pot. inhib.*vs P. falciparum*; abs. config. of 35 stereochem. centres determ.

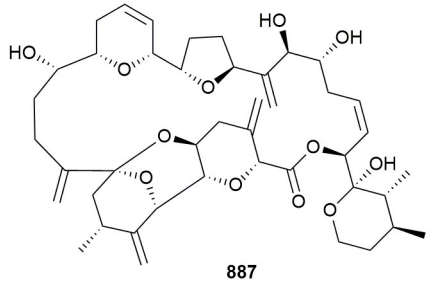
340 Miozoa *Amphidinium gibbosum* // Lingshui Bay, Hainan Province, PR China // A water-soluble 5/14-carbobicyclic steroid with a trans-9,11-epoxy ring from the marine dinoflagellate *Amphidinium gibbosum*: insights into late-stage diversification of steroids
882 // N // gibbosterol A // weak to mod. agonist of human Pregnane X Receptor; water soluble steroid.
883 // N // $C_{29}H_{50}O_7$ // IA *vs* human Pregnane X Receptor; acid cat. prod. of rearrangent of **882**.



†884 R = H
†885 R = Me

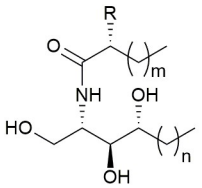


†886

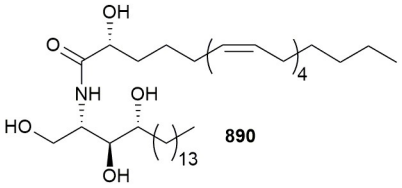


887

345 Miozoa *Prorocentrum* sp. // * // The formosalides: structure determination by total synthesis
884 // R // formosalide A // rel. and abs. stereochem. est. by total synth.
885 // R // formosalide B // rel. and abs. stereochem. est. by total synth.
346 Miozoa // * // Total synthesis and complete configurational assignment of amphirionin-2
886 // R // amphirionin-2 // Rev. by total synth.
356 Miozoa A*lexandrium* sp // * // Alkali metal- and acid-catalyzed interconversion of goniodomin A with congeners B and C
887 // R // goniodomin B // rev. by NMR anal., new isomer discovered in solution.



888 R = H, m = 15, n = 11
889 R = OH, m = 12, n = 17



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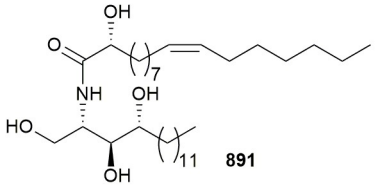

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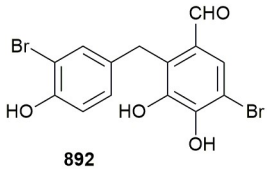

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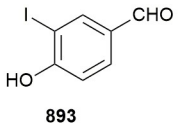
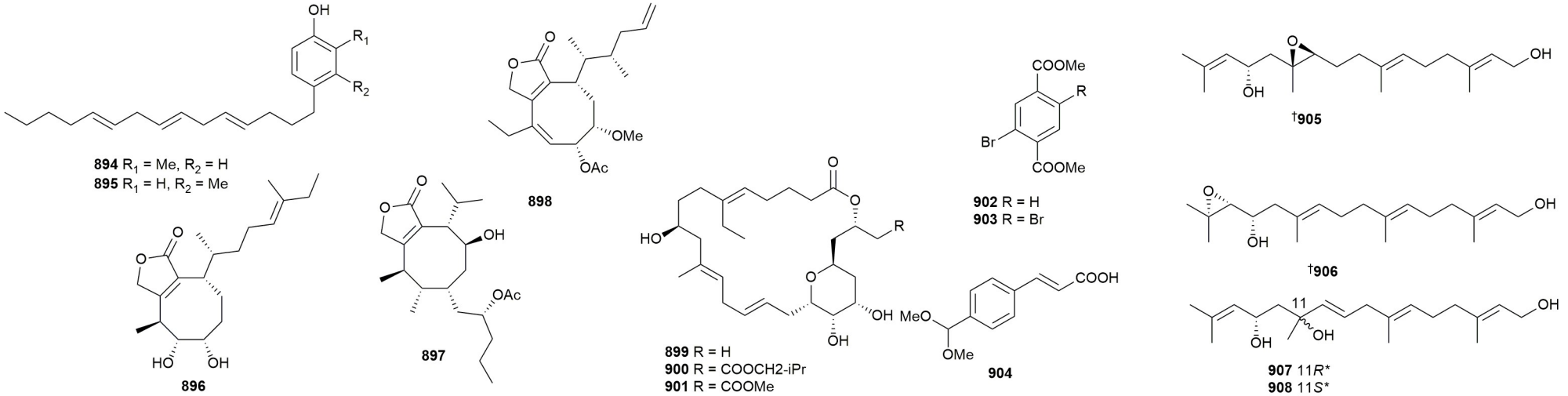


893

364 Chlorophyta *Ulva lactuca* // Safaga, Egypt // Chemical composition of the Red Sea green algae *Ulva lactuca*: isolation and in silico studies of new anti-COVID-19 ceramides
888 // N // *N*-[(2*S*,3*R*,4*R*)-1,3,4-trihydroxy-hexadecan-2-yl] octadecanamide // *in silico* predicted activ.
889 // N // 2-hydroxy-*N*-[(2*S*,3*R*,4*R*)-1,3,4-trihydroxy-docosan-2-yl] pentadecanamide // *in silico* predicted activ.
890 // N // 2-hydroxy-*N*-[(2*S*,3*R*,4*R*)-1,3,4-trihydroxy-octadecan-2-yl] henicosa-6,9,12,15-tetraene-amide // *in silico* predicted activ.
891 // N // 2-hydroxy-*N*-[(2*S*,3*R*,4*R*)-1,3,4-trihydroxy-hexadecan-2-yl]-10-heptadecenamide // *on silico* predicted activ.

365 Chlorophyta *Avrainvillea amadelpha* // Al-Kharrar Lagoon, Saudi Red Sea coast // Halo-phenolic metabolites and their in vitro antioxidant and cytotoxic activities from the Red Sea alga *Avrainvillea amadelpha*
892 // N // avrainvilleal // weak anti-inflam. activ.; weak cytotox. *vs* 1 of 3 HTCLs.
893 // N // 3-iodo-4-hydroxybenzaldehyde // IA *vs* anti-inflam. activ.; IA *vs* 3 HTCLs.



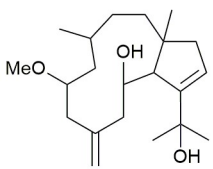
372 Ochrophyta *Sargassum cinereum* // Hurghada, Egypt // Potential anticancer lipoxygenase inhibitors from the Red Sea-derived brown algae *Sargassum cinereum*: an in-silico-supported in-vitro study
894 // N // 4-(1-(4,7,11-pentadecenyl)-*o*-cresol // IA *vs* 3 HTCLs; weak inib. of 1 of 2 Lectin-like oxidized low-density lipoprotein (LDL) receptor (LOX) isoforms.
895 // N // 4-(1-(4,7,11-pentadecenyl)-*m*-cresol // IA *vs* 3 HTCLs; weak inib. of 1 of 2 LOX isoforms.

373 Ochrophyta *Turbinaria ornata* // Mannar region, Mandapam, India // Turbinafuranone A-C, new 2-furanone analogues from marine macroalga *Turbinaria ornata* as prospective anti-hyperglycemic agents attenuate tyrosine phosphatase-1B
896 // N // turbinafuranone A // IA *vs* PTP1B.
897 // N // turbinafuranone B // IA *vs* PTP1B.
898 // N // turbinafuranone C // IA *vs* PTP1B.

374 Ochrophyta *Turbinaria conoides* // Mandapam region, Gulf of Mannar, India // Conoidecyclics A-C from marine macroalga *Turbinaria conoides*: newly described natural macrolides with prospective bioactive properties
899 // N // conoidecyclic A // IA *vs* antioxid.; IA *vs* anti-inflam..
900 // N // conoidecyclic B // IA *vs* antioxid.; IA *vs* anti-inflam.
901 // N // conoidecyclic C // IA *vs* antioxid.; IA *vs* anti-inflam.

375 Ochrophyta *Dictyopteris hoytii* // Raysut, Dhofar, Oman // New carbonic anhydrase-II inhibitors from marine macro brown alga *Dictyopteris hoytii* supported by in silico studies
902 // M // dimethyl 2-bromoterepthalate // IA *vs* carbonic anhydrase.
903 // M // dimethyl 2,6-dibromoterepthalate // IA *vs* carbonic anhydrase.
904 // M // (*E*)-3-(4-(dimethoxymethyl)phenyl)acrylic acid // IA *vs* carbonic anhydrase.

376 Ochrophyta *Bifurcaria bifurcata* // Kilkee, County Clare, Ireland // Density functional theory (DFT)-aided structure elucidation of linear diterpenes from the Irish brown seaweed *Bifurcaria bifurcata*
905 // N // 10*S*,11*S*-epoxyeleganediol // IA *vs* 1 HTCL.
906 // N // 14*R*,15-epoxyeleganediol // IA *vs* 1 HTCL.
907 // N // 11*R*-hydroxyeleganediol // IA *vs* 1 HTCL.
908 // N // 11*S*-hydroxyeleganediol // IA *vs* 1 HTCL.



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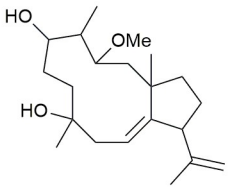

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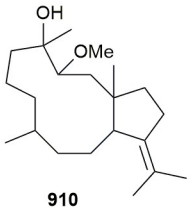

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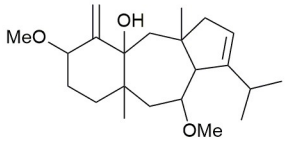

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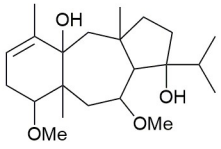

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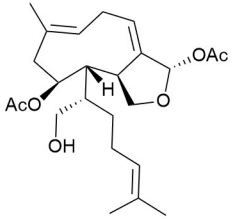
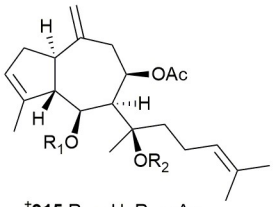
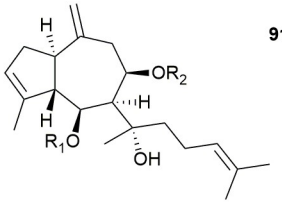


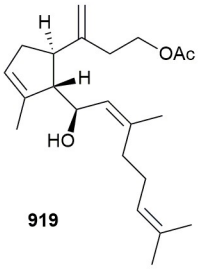
914



†**915** R_1 = H, R_2 = Ac
916 R_1 = Ac, R_2 = H



917 R1 = H, R2 = Ac
918 R1 = Ac, R2 = H



919

377 Ochrophyta *Padina tetrastromatica* // Mandapam, India // Antioxidative dolabellanes and dolastanes from brown seaweed *Padina tetrastromatica* as dual inhibitors of starch digestive enzymes

909 // N // 6-methoxy-dolabella-8(17),12-diene-10β,18-diol // IA *vs* antioxid.; IA *vs* amylase inhib.

910 // N // 3-methoxy-dolabella-12(18)-ene-4β-ol // IA *vs* antioxid.; IA *vs* amylase inhib.

911 // N // 3-methoxy-dolabella-10,18(19)-diene-5α,8β-diol // IA *vs* antioxid.; IA *vs* amylase inhib.

912 // N // 2,7-dimethoxy-14α-hydroxy-dolasta-1(15),9-diene // IA *vs* antioxid.; IA *vs* amylase inhib.

913 // N // 4,7-dimethoxy-9β,14α-dihydroxy-dolasta-1-ene // IA *vs* antioxid.; IA *vs* amylase inhib.

378 Ochrophyta *Sargassum ilicifolium* // Gulf of Mannar, India // Anti-inflammatory xenicane-type diterpenoid from the intertidal brown seaweed *Sargassum ilicifolium*

914 // N // sargilicixenicane // IA *vs* antioxid.; IA *vs* anti-inflam.

379 Ochrophyta *Dictyota* sp // Lingtou Bay, Sanya, Hainan Province, China // Hydroazulene diterpenes from a *Dictyota* brown alga and their antioxidant and neuroprotective effects against cerebral ischemia-reperfusion injury

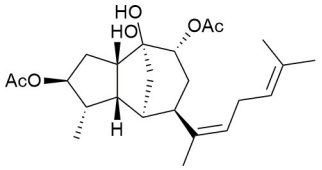
915 // N // (8*R*,11*R*)-8,11-diacetoxypachydictyol A // weak to mod. cytoprotective against H_2O_2 induced damage.

916 // N // (8*R**,11*R**)-6-*O*-acetyl-8-acetoxy-11-hydroxypachydictyol A // weak to mod. cytoprotective against H_2O_2 induced damage.

917 // N // (8*R**,11*S**)-8-acetoxy-11-hydroxypachydictyol A // weak to mod. cytoprotective against H_2O_2 induced damage.

918 // N // (8*R**,11*S**)-6-*O*-acetyl-8,11-dihydroxypachydictyol A // weak to mod. cytoprotective against H_2O_2 induced damage.

919 // N // 7Z-7,8-seco-7,11-didehydro-8-acetoxypachydictyol A // weak to mod. cytoprotective against H_2O_2 induced damage.



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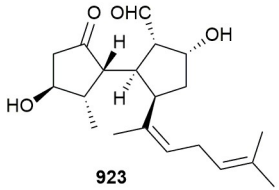

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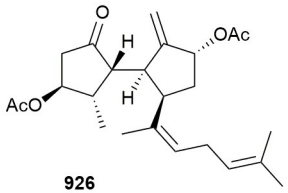
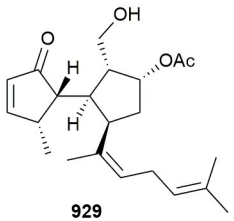
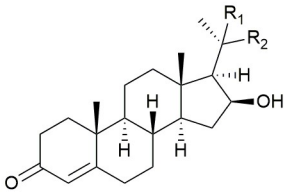
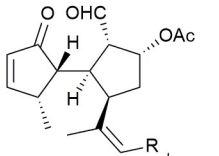


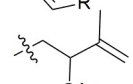
926

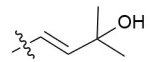


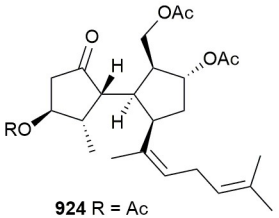
929



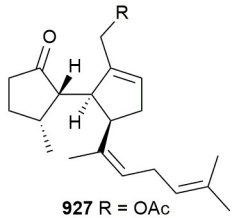


921 R = 

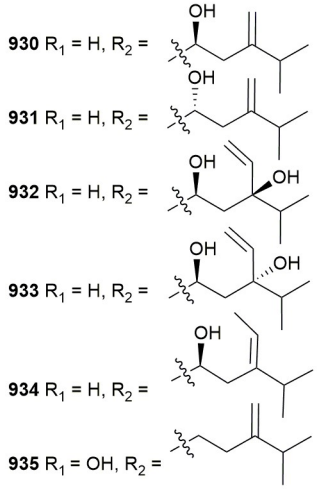
922 R = 



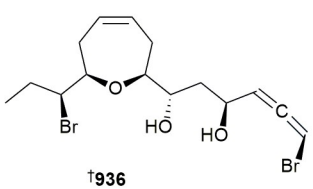
924 R = Ac
925 R = H



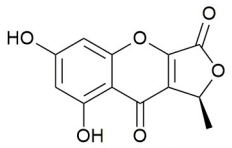
927 R = OAc
928 R = H



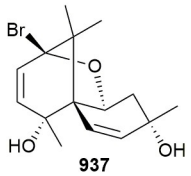
380 Ochrophyta *Rugulopteryx okamurae* // Punta Carnero, Cádiz, Spain // Diterpenoids from the brown alga *Rugulopteryx okamurae* and their anti-inflammatory activity
920 // N // rugukadiol A // IA *vs* RAW264.7; mod. inhib. NO prod.
921 // N // rugukamural A // NT.
922 // N // rugukamural B // NT.
923 // N // rugukamural C // IA *vs* RAW264.7; mod. inhib. NO prod.
924 // N // ruguloptone A // IA *vs* RAW264.7; mod. inhib. NO prod.
925 // N // ruguloptone B // IA *vs* RAW264.7; mod. inhib. NO prod.
926 // N // ruguloptone C // IA *vs* RAW264.7; mod. inhib. NO prod.
927 // N // ruguloptone D // NT.
928 // N // ruguloptone E // NT.
929 // N // ruguloptone F // IA *vs* RAW264.7; mod. inhib. NO prod.
381 Ochrophyta *Cystophora xiphocarpa* // Spikey Beach, Tasmania, Australia // Bioactive α,β-conjugated 3-keto-steroids from the Australian brown alga *Cystophora xiphocarpa*
930 // N // (16*S*,22*S*)-16,22-dihydroxyergosta-4,24(28)-dien-3-one // IA *vs* 12 HTCLs.
931 // N // (16*S*,22*R*)-16,22-dihydroxyergosta-4,24(28)-dien-3-one // IA *vs* 12 HTCLs.
932 // N // (16*S*,22*S*,24*R*)-16,22,24-trihydroxyporifera-4,28-dien-3-one // IA *vs* 12 HTCLs.
933 // N // (16*S*,22*S*,24*S*)-16,22,24-trihydroxystigma-4,28-diene-3-one // IA *vs* 12 HTCLs.
934 // N // (16*S*,22*S*,24*E*)-16,22-dihydroxystigma-4,24(28)-dien-3-one // IA *vs* 12 HTCLs.
935 // N // (16*S*,20*S*)-16,20-dihydroxyergost-4,24(28)-dien-3-one // IA *vs* 12 HTCLs.



†**936**



†**938**



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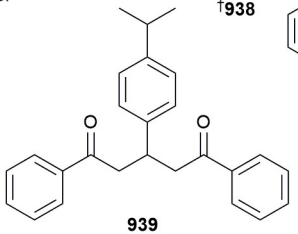

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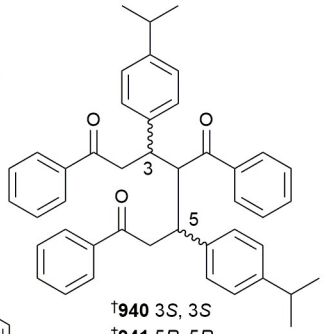
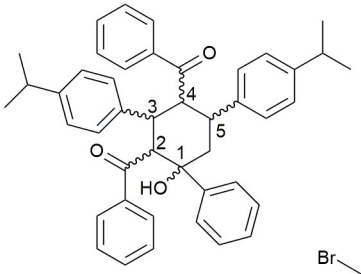
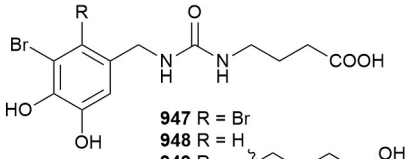


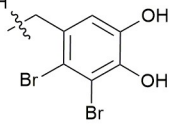
†**940** 3*S*, 3*S*
†**941** 5*R*, 5*R*

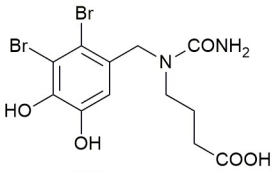


†**942** 1*R*, 2*S*, 3*R*, 4*R*, 5*R*
†**943** 1*S*, 2*R*, 3*S*, 4*S*, 5*S*
†**944** 1*R*, 2*S*, 3*R*, 4*S*, 5*R*
†**945** 1*S*, 2*R*, 3*S*, 4*R*, 5*S*



947 R = Br
948 R = H
949 R =





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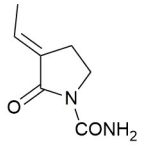

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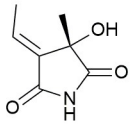


†**951**

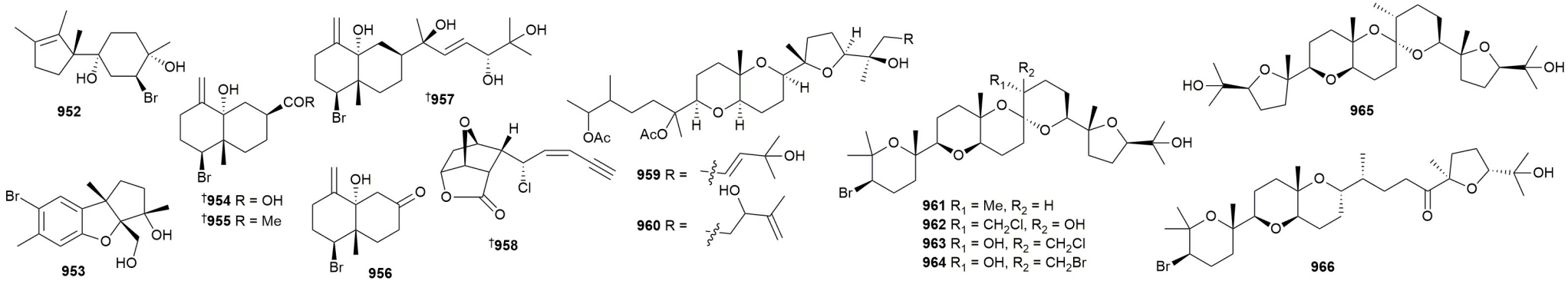
391 Rhodophyta *Laurencia nipponica* // Kunashiri Island, Hokkaido, Japan // Two new halogenated compounds from the marine red alga *Laurencia nipponica* Yamada from the Kunashiri and Etorofu Islands
936 // N // deacetylneonipponallene // IA *vs* nemotode.
937 // N // neopacifenol // IA *vs* nemotode.

392 Rhodophyta *Solieria* sp // Xuwen County, Zhanjiang City, Guangdong Province, China // Solieritide A, a new polyketide from the red alga *Solieria* sp
938 // N // solieritide A // IA *vs* 6 bact. strains.

393 Rhodophyta *Laurencia tristicha* // Pingyu Island, South China Sea // Condensation derivatives of 4-isopropylbenzaldehyde with acetophenone from the red alga *Laurencia tristicha*
939 // N // 1,5-diphenyl-3-(4-isopropylphenyl)-pentane-1,5-dione // NT.
940 // N // 4-benzoyl-3*S*,5*S*-di(4-isopropylphenyl)-1,7-diphenylheptane-1,7-dione // NT; isol. as rac., sep. by chiral HPLC.
941 // N // 4-benzoyl-3*R*,5*R*-di(4-isopropylphenyl)-1,7-diphenylheptane-1,7-dione // NT; isol. as rac., sep. by chiral HPLC.
942 // N // 2*S*,4*R*-dibenzoyl-3*R*,5*R*-di(4-isopropylphenyl)-1*R*-phenyl-cyclohexanol // NT; isol. as rac., sep. by chiral HPLC.
943 // N // 2*R*,4*S*-dibenzoyl-3*S*,5*S*-di(4-isopropylphenyl)-1*S*-phenyl-cyclohexanol // NT; isol. as rac., sep. by chiral HPLC.
944 // N // 2*S*,4*S*-dibenzoyl-3*R*,5*R*-di(4-isopropylphenyl)-1*R*-phenyl-cyclohexanol // NT; isol. as rac., sep. by chiral HPLC.
945 // N // 2*R*,4*R*-dibenzoyl-3*S*,5*S*-di(4-isopropylphenyl)-1*S*-phenyl-cyclohexanol // NT; isol. as rac., sep. by chiral HPLC.

394 Rhodophyta *Rhodomela confervoides* // Fujiazhuang beach, Dalian, China // Naturally occurring ureidobromophenols with potent antioxidant activities from the marine red alga *Rhodomela confervoides*
946 // N // *N*-(2,3-dibromo-4,5-dihydroxybenzyl)-γ-ureidobutyric acid // weak antioxid. activ.
947 // N // *N'*-(2,3-dibromo-4,5-dihydroxybenzyl)-γ-ureidobutyric acid // weak antioxid. activ.
948 // N // *N'*-(3-bromo-4,5-dihydroxybenzyl)-γ-ureidobutyric acid // weak antioxid. activ.
949 // N // *N'*-[3-bromo-2-(2,3-dibromo-4,5-dihydroxybenzyl)-4,5-dihydroxybenzyl]-γ-ureidobutyric acid // weak antioxid. activ.

395 Rhodophyta *Acanthophora spicifera* // Xuwen County, Zhanjiang City, Guangdong Province, China // Two new pyrrolidine alkaloids from the red alga *Acanthophora spicifera*
950 // N // acanthophoraine B // IA *vs* 6 bact. strains.
951 // N // acanthophoraine C // IA *vs* 6 bact. strains.



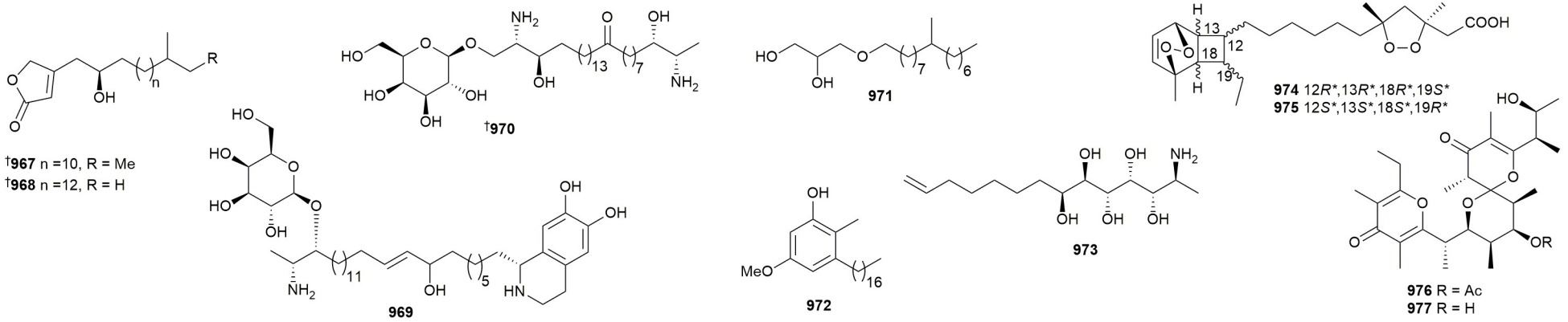
396 Rhodophyta *Laurencia heteroclada* // Tangalle, Sri Lanka // Allelopathic activity of some Sri Lankan seaweed extracts and the isolation of a new brominated nonaromatic isolaurene type sesquiterpene from red alga *Laurencia heteroclada* Harvey
952 // N // 2-bromo-3,5,6-trihydro-1,4-dihydroxy isolaurene // IA as germination inhib.

397 Rhodophyta *Laurencia tristicha* // Pingyu Island, South China Sea // Antioxidant terpenoids from the red alga *Laurencia tristicha*
953 // N // 10-hydroxyepiaplysinol // weak antioxid. activ.

398 Rhodophyta *Laurencia papillosa* // Ras Abu-Bakr, Red Sea, Egypt // New haloterpenes from the marine red alga *Laurencia papillosa*: structure elucidation and biological activity
954 // N // aplysiolic acid // weak activ. *vs* 1 of 10 bact. strains.
955 // N // 7-acetyl-aplysiol // IA *vs* 10 bact. strains.
956 // N // aplysiol-7-one // weak activ. *vs* 1 of 10 bact. strains.
957 // N // 11,14-dihydroaplysia-5,11,14,15-tetrol // IA *vs* 10 bact. strains.
958 // N // 5-epi-maneolactone // IA *vs* 10 bact. strains.

399 Rhodophyta *Chondria armata* // Bandokorobana, Minami-kyushu City, Kagoshima, Japan // Two new pyrrolidine alkaloids from the red alga *Acanthophora spicifera*
959 // N // bandokorol A // weak activ. *vs* 1 HTCL.
960 // N // bandokorol B // weak activ. *vs* 1 HTCL.

400 Rhodophyta *Laurencia viridis* // Paraiso Floral, Tenerife, Canary Islands // Structure and computational basis for backbone rearrangement in marine oxasqualenoids
961 // N // laurokanol A // NT.
962 // N // laurokanol B // NT.
963 // N // laurokanol C // NT.
964 // N // laurokanol D // NT.
965 // N // laurokanol E // NT.
966 // N // yucatecone // NT; first example of biosynthetically unusual thysiferol epimer.



411 Porifera *Hippospongia lachne* // Xisha Islands , South China Sea // Hippobutenolides A and B, two new long-chain fatty acid esters from the marine sponge *Hippospongia lachne*
967 // N // hippobutenolide A // IA *vs* 6 HTCLs.
968 // N // hippobutenolide B // IA *vs* 6 HTCLs.

412 Porifera *Oceanapia* sp // Dredge (48 m), Scott Reef, 192 km NNW of Broome, Western Australia // Oceanalin B, a hybrid α,ω-bifunctionalized sphingoid tetrahydroisoquinoline β-glycoside from the marine sponge *Oceanapia* sp.
969 // N // oceanalin B // weak activ. *vs Candida glabrata*.

413 Porifera *Cladocroce* sp // Dredge (245 m), seamount Gonsone, Japan // Structure elucidation of calyxoside B, a bipolar sphingolipid from a marine sponge *Cladocroce* sp. through the use of Beckmann rearrangement
970 // N // calyxoside B // IA *vs* 1 HTCL; Beckmann rearrangement used to ID position of ketone.

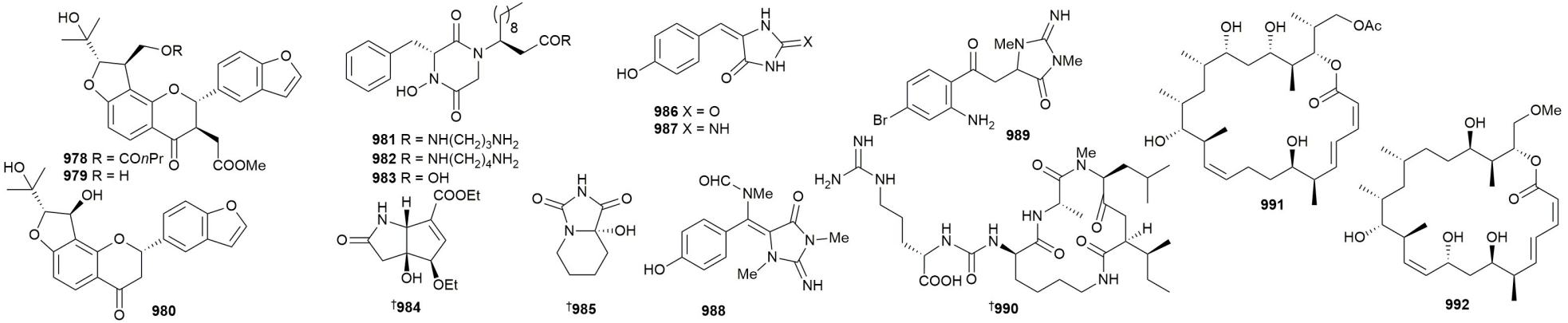
414 Porifera *Aaptos aaptos* // Vanphong Bay, Nha Trang, Vietnam // Chemical constituents of the marine sponge *Aaptos aaptos* (Schmidt, 1864) and their cytotoxic activity
971 // M // 3-([9-methylhexadecyl]oxy)propane-1,2-diol // IA *vs* 4 HTCLs; known synth. cpd.

415 Porifera *Luffariella variabilis* // Yongle Islands, Xisha Islands, South China Sea // One cytotoxic steroid and other two new metabolites from the South China Sea sponge *Luffariella variabilis*
972 // N // 1-methyloxy-3-hydroxy-4-methyl-5-heptadecylphenol // IA *vs* 4 HTCLs.

416 Porifera *Hippospongia fistulosa* // Van Phong, Nha Trang, Vietnam // A new meroterpene lactone and a new alkyl amino alcohol from the Vietnamese marine sponge *Hippospongia fistulosa* Lendenfeld, 1889
973 // N // 2-aminotetradec-13-ene-3,4,5,6,7-pentaol // IA *vs* 4 HTCLs.

417 Porifera *Plakortis symbiotica*, Porifera *Xestospongia deweerdtae* // Mona Island, Puerto Rico, USA // Plakortinic acids C and D: a pair of peroxide-polyketides possessing a rare 7,8-dioxatricyclo[4.2.2.02,5]dec-9-ene core from a two-sponge association of *Plakortis symbiotica-Xestospongia deweerdtae*
974 // N // plakortinic acid C // IA *vs* NCI 60 CL.
975 // N // plakortinic acid D // IA *vs* NCI 60 CL.

418 Porifera *Callyspongia diffusa* // Kadiapattanam coast, India // Callypyrones from marine Callyspongiidae sponge *Callyspongia diffusa*: antihypertensive bis-γ -pyrone polypropionates attenuate angiotensin-converting enzyme
976 // N // callypyrone A // IA as ACE inhib.
977 // N // callypyrone B // IA as ACE inhib.



419 Porifera *Hyrtios erectus* // Kadiapattanam coast, India // Apoptotic effect of chromanone derivative, hyrtiosone A from marine demosponge *Hyrtios erectus* in hepatocellular carcinoma HepG2 cells
978 // N // hyrtiosone A // IA *vs* antioxid.; IA *vs* anti-inflam.
979 // N // hyrtiosone B // IA *vs* antioxid.; IA *vs* anti-inflam.
980 // N // hyrtiosone C // IA *vs* antioxid.; IA *vs* anti-inflam.

420 Porifera *Cliona celata* // Hormuz Island, Iran // Molecular networking-guided isolation of new etzionin-type diketopiperazine hydroxamates from the Persian Gulf sponge *Cliona celata*
981 // R // etzionin // IA *vs* 3 bact. 2 fungi, 3 HTCLs, orig. tunicate comp..
982 // N // clioetzionin A // IA *vs* 3 bact. strains; IA *vs* 2 fungi; IA *vs* 3 HTCLs.
983 // N // clioetzionin B // IA *vs* 3 bact. strains; IA *vs* 2 fungi; IA *vs* 3 HTCLs.

421 Porifera *Aplysina aerophoba*, Porifera *Spongia* sp. // Heraklion, Crete, Greece // Cytotoxic compounds of two demosponges (*Aplysina aerophoba* and *Spongia sp.*) from the Aegean Sea
984 // N // iso-subereatensin // IA *vs* 2 HTCLs.

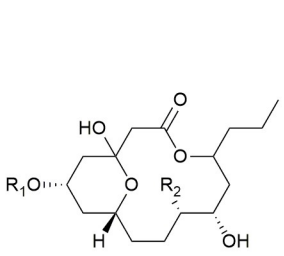
414 Porifera *Aaptos aaptos* // Vanphong Bay, Nha Trang, Vietnam // Chemical constituents of the marine sponge *Aaptos aaptos* (Schmidt, 1864) and their cytotoxic activity
985 // N // 5*H*,7*H*,9*H*-9*S*-hydroxy-imidazo[1,5-α]pyridine-1,3-dione // IA *vs* 4 HTCLs.

422 Porifera *Hemimycale* sp // Al-lith, Saudi Arabia // Hemimycalins C-E; cytotoxic and antimicrobial alkaloids with hydantoin and 2-iminoimidazolidin-4-one backbones from the Red Sea marine sponge *Hemimycale* sp.
986 // N // hemimycalin C // weak inhib. *vs* 2 of 3 microb. strains.
987 // N // hemimycalin D // weak inhib. *vs* 2 of 3 microb. strains.
988 // N // hemimycalin E // weak inhib. *vs* 2 of 3 microb. strains.

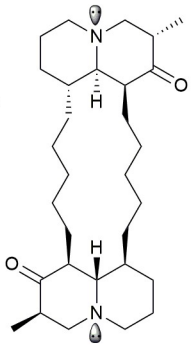
423 Porifera *Thorectandra choanoides* // Great Australian Bight // New from old: thorectandrin alkaloids in a Southern Australian Marine sponge, *Thorectandra choanoides* (CMB-01889)
989 // N // thorectandrin A // IA *vs* 2 bact. 1 fungus, 1 HTCL; potential pharmacophore link to IDO.

424 Porifera *Homophymia* sp // Dredge (200 m), Sango-Sone, Japan // Homophymamide A, heterodetic cyclic tetrapeptide from a *Homophymia* sp. marine sponge: a cautionary note on configurational assignment of peptides that contain a ureido linkage
990 // N // homophymamide A // mod. inhib. *vs* carboxypeptidase B; total synth. also achieved.

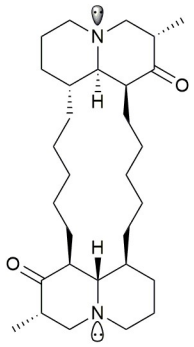
425 Porifera *Clathria vulpina* // Kadiapattanam coast, India // Clathrolides A–B: previously undescribed macrocylic lactones from marine demosponge *Clathria (Thalysias) vulpina* (Lamarck, 1814) as potential antihypertensive leads attenuating angiotensin converting enzyme
991 // N // clathrolide A // IA *vs* antioxid.; IA *vs* anti-inflam.; IA *vs* anti-hypertension.
992 // N // clathrolide B // IA *vs* antioxid.; IA *vs* anti-inflam.; IA *vs* anti-hypertension.



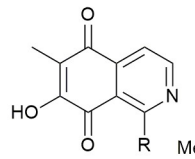
993 R_1 = Ac, R_2 = H
994 R_1 = Me, R_2 = OH



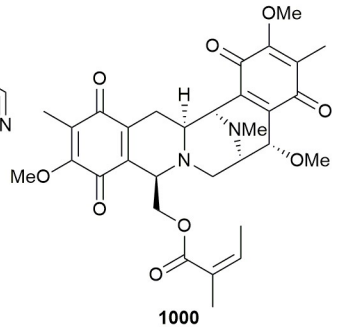
†**995**



†**996**



997 R = COOMe
998 R = CH_2OH
999 R = Me



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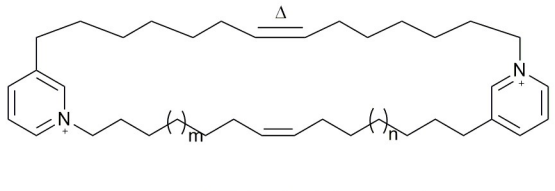
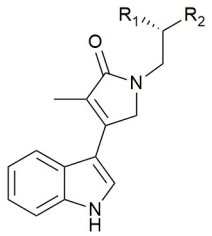


1001 Δ saturated, m = n = 1
1002 m = n = 1
1003 m = 1, n = 3
1004 m = 3, n = 1



†**1005** R_1 = Me, R_2 = Et
1006 R_1 = H, R_2 = *i*Pr
1007 R_1 = H, R_2 = Bn

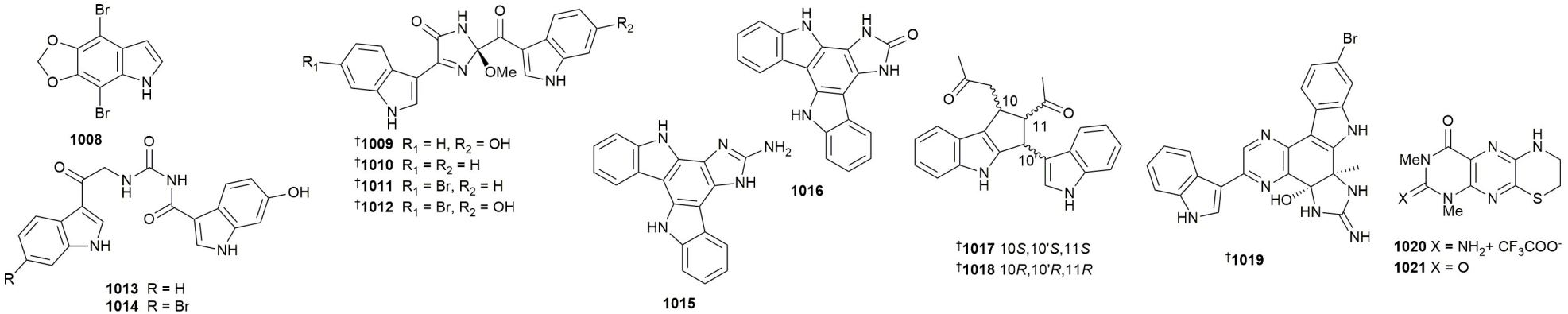
426 Porifera *Clathria procera* // Kadiapattanam coast, India // Procerolides A-B from Microcionidae marine sponge *Clathria procera*: anti-inflammatory macrocylic lactones with selective cyclooxygenase-2 attenuation properties
993 // N // procerolide A // name already used; IA *vs* anti-inflam.
994 // N // procerolide B // name already used; IA *vs* anti-inflam.

427 Porifera *Neopetrosia chaliniformis* // Xidao, Hainan Province, China // Uncommon bis-quinolizidine alkaloids from the Hainan sponge *Neopetrosia chaliniformis*
995 // N // neopetrosiasin A // IA *vs* 3 HTCLs.
996 // N // neopetrosiasin B // IA *vs* 3 HTCLs.

428 Porifera *Haliclona* sp // Vietnam // Isoquinolinequinone derivatives from a marine sponge (*Haliclona* sp.) regulate inflammation in *in vitro* system of intestine
997 // N // methyl *O*-demethylrenierate // IA *vs* NO, PGE_2, iNOS, COX-2 and MAPK.
998 // N // *O*-demethylrenierol // weak inhib. *vs* NO, PGE_2, iNOS, COX-2 and MAPK.
999 // N // 1,6-dimethyl-7-hydroxy-5,8-dihydroisoquinoline-5,8-dione // weak inhib. *vs* NO, PGE2, iNOS, COX-2 and MAPK.
1000 // N // 21-dehydroxyrenieramycin F // IA *vs* NO, PGE2, iNOS, COX-2 and MAPK.

429 Porifera *Neopetrosia chaliniformis* // Mantehage Island, Bunaken National Park, Indonesia // Neopetrosidines A-D, pyridine alkaloids isolated from the marine sponge *Neopetrosia chaliniformis* and their cell cycle elongation activity
1001 // N // neopetrosidine A // weak cytotox. *vs* 1 HTCL; inhib. mitochondrial function and extends cell cycl duration.
1002 // N // neopetrosidine B // weak cytotox. *vs* 1 HTCL.
1003 // N // neopetrosidine C // weak cytotox. *vs* 1 HTCL; insep. mix.
1004 // N // neopetrosidine D // weak cytotox. *vs* 1 HTCL; insep. mix.

430 Porifera *Psammocinia* sp // Chuja-do, Jeju Island, South Korea // Psammocindoles A–C: isolation, synthesis, and bioactivity of indole-γ-lactams from the sponge *Psammocinia vermis*
1005 // N // psammocindole A // weak activ. of adiponectin secretion; total synth. also achieved.
1006 // N // psammocindole B // weak activ. of adiponectin secretion; total synth. also achieved.
1007 // N // psammocindole C // IA *vs* adiponectin secretion; total synth. also achieved.



431 Porifera *Psammocinia* sp // Amakusa, Kumamoto Prefecture, Japan // Amakusamine from a *Psammocinia* sp. sponge: isolation, synthesis, and SAR study on the inhibition of RANKL-induced formation of multinuclear osteoclasts
1008 // N // amakusamine // weak inhib. of osteoclast formation, total synth. also achieved.

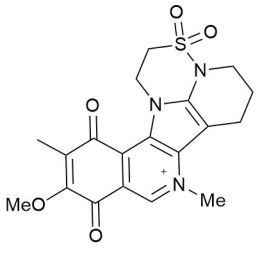
432 Porifera *Spongosorites* sp // Seogwipo, Jeju Island, Korea // Bioactive bis(indole) alkaloids from a *Spongosorites* sp. sponge
1009 // N // spongosoritin A // IA *vs* 6 bact. strains; IA *vs* 3 HTCLs.
1010 // N // spongosoritin B // IA *vs* 6 bact. strains; IA *vs* 3 HTCLs.
1011 // N // spongosoritin C // weak activ. *vs* 1 of 6 bact. strains; IA *vs* 3 HTCLs.
1012 // N // spongosoritin D // weak activ. *vs* 1 of 6 bact. strains; IA *vs* 3 HTCLs.
1013 // N // spongocarbamide A // IA *vs* 6 bact. strains; IA *vs* 3 HTCLs.
1014 // N // spongocarbamide B // IA *vs* 6 bact. strains; IA *vs* 3 HTCLs.

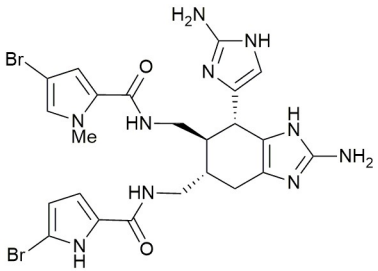
433 Porifera *Damiria* sp // Phuket Island, Thailand // NMR characterization of rearranged staurosporine aglycone analogues from the marine sponge *Damiria* sp.
1015 // N // damirine A // weak activ. *vs* 6 HTCLs.
1016 // N // damirine B // NT.

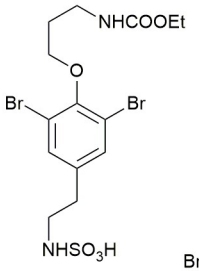
434 Porifera *Tedania anhelans* // Cultured, Danzhou, Hainan, China // Racemic bisindole alkaloids: structure, bioactivity, and computational study
1017 // N // (+)-spondomine // weak activ. *vs* 1 of 4 HTCLs; mod. inhib.NF-κB Wnt and HIF1 signalling; IA *vs* anti-angiogenesis; mod. pro-angiogenesis activ.; total synth. also achieved.
1018 // N // (–)-spondomine // weak activ. *vs 2* of 4 HTCLs; IA *vs* NF-κB; weak inhib. Wnt and HIF1 signalling; IA *vs* anti-angiogenesis; mod. pro-angiogenesis activ.; total synth. also achieved.

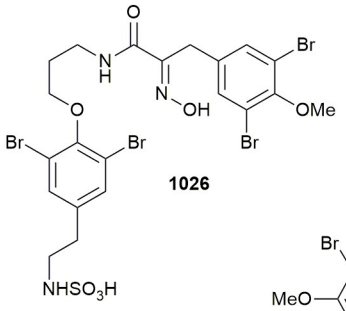
435 Porifera *Myrmekioderma* sp // Dredge, Sangosone, Japan // Myrindole A, an antimicrobial bis-indole from a marine sponge *Myrmekioderma* sp.
1019 // N // myrindole A // IA *vs* 2 bact. strains.

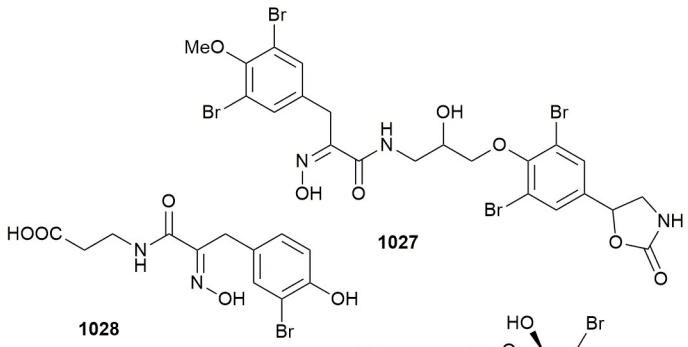
436 Porifera *Tedaniophorbas ceratosis* // Wommin Reef, Northern NSW, Australia // Tedaniophorbasins A and B—novel fluorescent pteridine alkaloids incorporating a thiomorpholine from the sponge *Tedaniophorbas ceratosis*
1020 // N // tedaniophorbasin A // strongly fluorescent with large Stokes shift; IA *vs P. falciparum, T. brucei brucei,* 6 HTCLs.
1021 // N // tedaniophorbasin B // strongly fluorescent with large Stokes shift; IA *vs P. falciparum*, *T. brucei brucei*, 6 HTCLs.

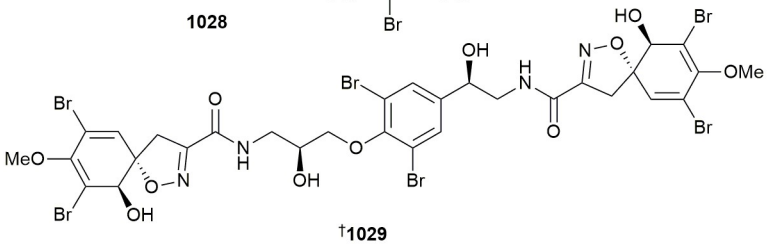


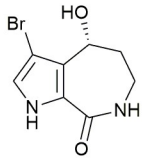












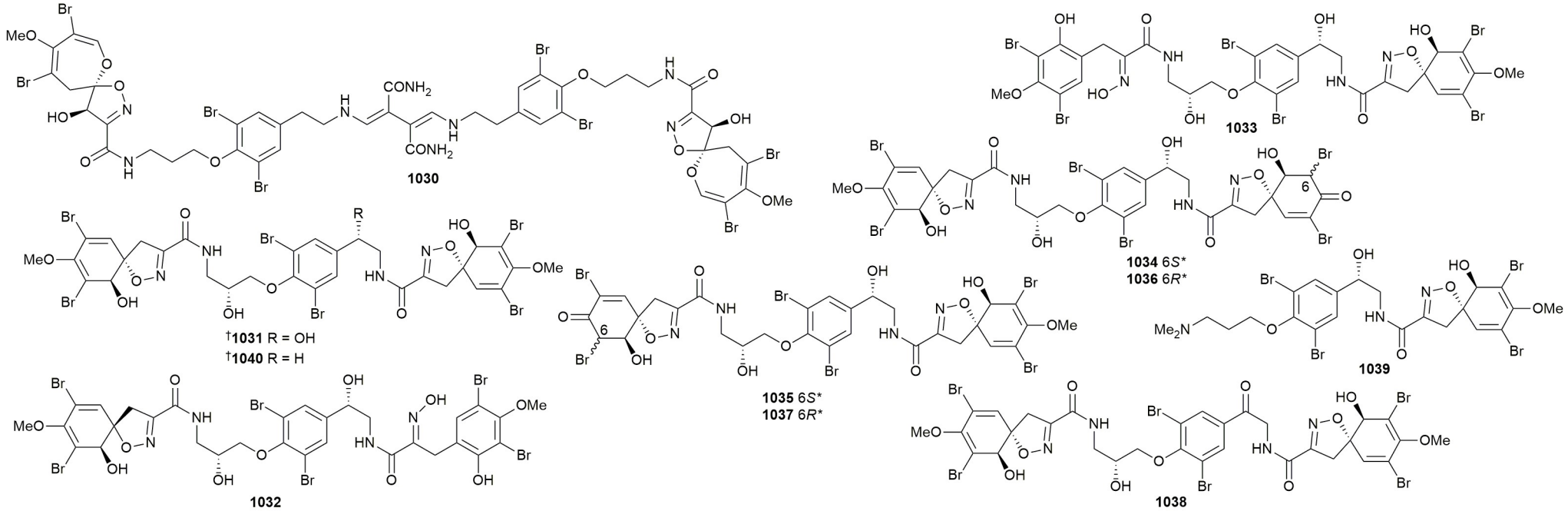
437 Porifera *Neopetrosia* sp // Helen Reef, Southwest Islands, Palau // Neopetrothiazide: an intriguing pentacyclic thiazide alkaloid from the sponge *Neopetrosia* sp.
1022 // N // neopetrothiazide // first thiazide NP; weak to mod. inhib. *vs* PAX3-FOXO1-luciferase expression; weak cytotox.

438 Porifera *Stylissa massa* // Than-kyune-nge Island, Kawthaung, Tanintharyi Region, Myanmar // Pyrrolactams from marine sponge *Stylissa massa* collected from Myanmar and their anti-Vpr activities
1023 // N // stylissaol A // IA *vs* 1 virus.

439 Porifera *Astrosclera willeyana* // Tonga // Agelasine diterpenoids and Cbl-b inhibitory ageliferins from the coralline demosponge *Astrosclera willeyana*
1024 // N // *N*(1)-methylisoageliferin // IA *vs* Cbl-b ubiquitin ligase.

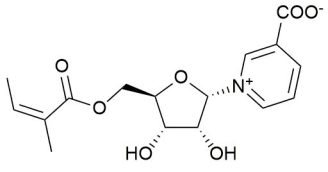
421 Porifera *Aplysina aerophoba*, Porifera *Spongia* sp. // Heraklion, Crete, Greece // Cytotoxic compounds of two demosponges (*Aplysina aerophoba* and *Spongia* sp.) from the Aegean Sea
1025 // N // aeroplysinin-3 // NT.
1026 // N // aeroplysinin-4 // NT.
1027 // N // aeroplysinin-5 // NT.
1028 // N // nor-psammaplin M // NT.

440 Porifera *Ecionemia acervus* // Vietnam // Stereochemical determination of fistularins isolated from the marine sponge *Ecionemia acervus* and their regulatory effect on intestinal inflammation
1029 // N // SR-fistularin-3 // weak inhib. of NO, PGE_2, iNOS, COX-2.



441 Porifera *Pseudoceratina arabica* // Anas Reef, Obhur, Saudi Arabia // Psammaceratin A: a cytotoxic psammaplysin dimer featuring an unprecedented (2Z,3Z)-2,3-bis(aminomethylene)succinamide backbone from the Red Sea sponge *Pseudoceratina arabica*
1030 // N // psammaceratin A // weak activ. *vs* 3 HTCLs.

442 Porifera *Suberea clavata* // Russell Group, Solomon Islands // Bioactive bromotyrosine derivatives from the Pacific marine sponge *Suberea clavata* (Pulitzer-Finali, 1982)
1031 // R // 11-*epi*-fistularin 3 // IA *vs* 6 bact. strains; IA *vs* AChE.
1032 // N // suberein-1 // pot. activ. *vs* 1 of 6 bact. strains; IA *vs* AChE.
1033 // N // suberein-2 // pot. activ. *vs* 2 of 6 bact. strains; IA *vs* AChE.
1034 // N // suberein-3 // insep. with **1035**; NT.
1035 // N // suberein-4 // insep. with **1034**; NT.
1036 // N // suberein-5 // insep. with **1037**; NT.
1037 // N // suberein-6 // insep. with **1036**; NT.
1038 // N // suberein-7 // pot. activ. *vs* 1 of 6 bact. strains; IA *vs* AChE.
1039 // N // suberein-8 // NT.
1040 // R // 17-deoxy-11-*epi*-fistularin // pot. activ. *vs* 1 of 6 bact. strains; IA *vs* AChE.



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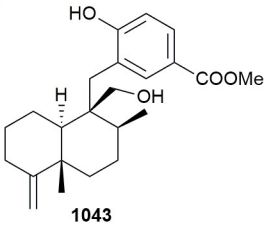

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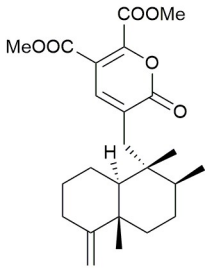

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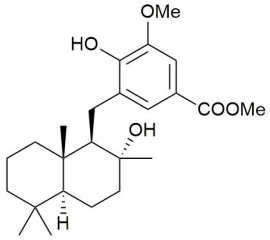

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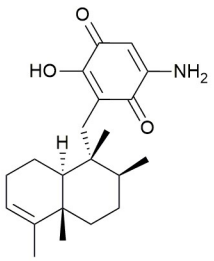
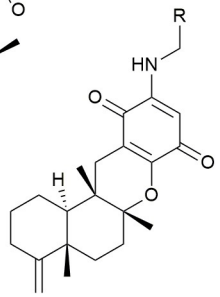
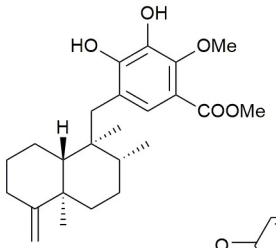


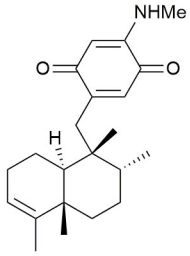
†1045



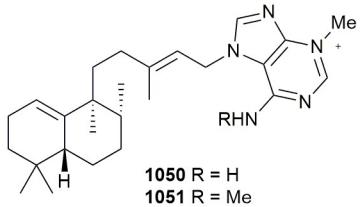
†1046 R = *i*Bu
1047 R = *i*Pr



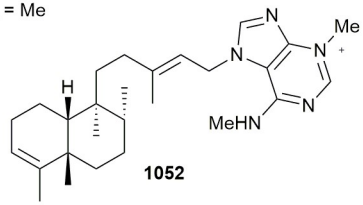
1048



†1049



1050 R = H
1051 R = Me



1052

443 Porifera *Xestospongia* sp // Xidao Island, Hainan Province, China // Marine alkaloids as the chemical marker for the prey–predator relationship of the sponge *Xestospongia* sp. and the nudibranch *Jorunna funebris*
1041 // N // neopetroside C // NT.

416 Porifera *Hippospongia fistulosa* // Van Phong, Nha Trang, Vietnam // A new meroterpene lactone and a new alkyl amino alcohol from the Vietnamese marine sponge *Hippospongia fistulosa* Lendenfeld, 1889
1042 // N // hippolactone A // IA *vs* 4 HTCLs.

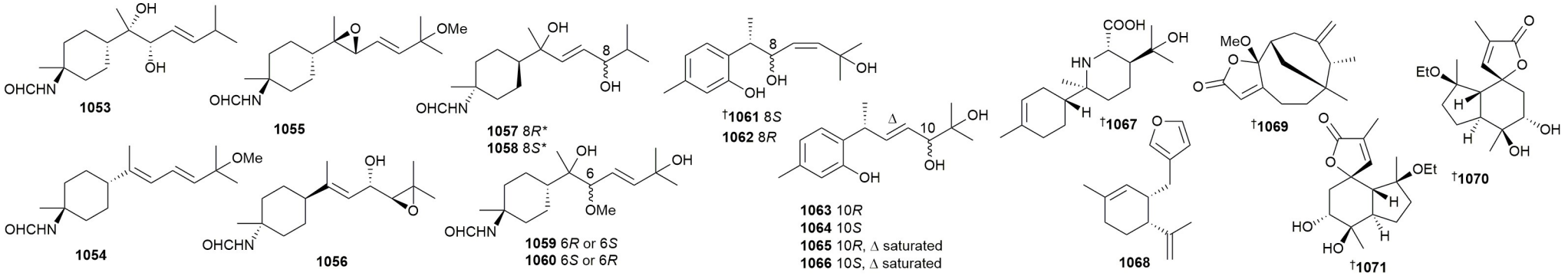
444 Porifera *Hippospongia fistulosa* // Vanphong Bay, Nha Trang, Vietnam // New merosesquiterpenes from the Vietnamese sponge *Hippospongia fistulosa* and their cytotoxic activity
1043 // N // hippomeroterpene A // IA *vs* 4 HTCLs.
1044 // N // hippomeroterpene B // IA *vs* 4 HTCLs.

445 Porifera *Dactylospongia metachromia* // Bajotalawaan, North Sulawesi, Indonesia // Fluorescent image-based high-content screening of extracts of natural resources for cell cycle inhibitors and identification of a new sesquiterpene quinone from the sponge, *Dactylospongia metachromia*
1045 // N // neoisosmenospongine // weak cell cycle inhib. detected by high content imaging.

446 Porifera *Dactylospongia elegans* // Yongxing Island, South China Sea // Cytotoxic meroterpenoids from the marine sponge *Dactylospongia elegans*
1046 // N // 20-demethoxy-20-isopentylaminodactyloquinone D // IA *vs* 4 HTCLs.
1047 // N // 20-demethoxy-20-isobutylaminodactyloquinone D // IA *vs* 4 HTCLs.
1048 // N // 19-methoxy-dictyoceratin-A // IA *vs* 4 HTCLs.

447 Porifera *Dysidea* sp // Xisha Islands, South China Sea // Cytotoxic sesquiterpenoid quinones from South China Sea sponge *Dysidea* sp
1049 // N // (+)-19-methylaminoavarone // weak activ. *vs* 1 of 6 HTCLs.

439 Porifera *Astrosclera willeyana* // Tonga // Agelasine diterpenoids and Cbl-b inhibitory ageliferins from the coralline demosponge *Astrosclera willeyana*
1050 // N // agelasine W // IA *vs* Cbl-b ubiquitin ligase.
1051 // N // agelasine X // IA *vs* Cbl-b ubiquitin ligase.
1052 // N // agelasine Y // IA *vs* Cbl-b ubiquitin ligase.



448 Porifera *Halichondria* sp // Ximao Island, Hainan Province, China // New formamidobisabolene-type sesquiterpenoids from a Hainan sponge *Halichondria* sp.
1053 // N // halichine A // IA *vs* NO prod.
1054 // N // halichine B // IA *vs* NO prod.
1055 // N // halichine C // weak inhib. NO prod.; IA *vs* 1 hum. CL.
1056 // N // ent-axinyssine G // IA *vs* NO prod.
1057 // N // ent-axinyssine J // IA *vs* NO prod.
1058 // N // ent-axinyssine K // IA *vs* NO prod.
1059 // N // halichine D // weak inhib. NO prod.; IA *vs* 1 hum. CL.
1060 // N // halichine E // IA *vs* NO prod.

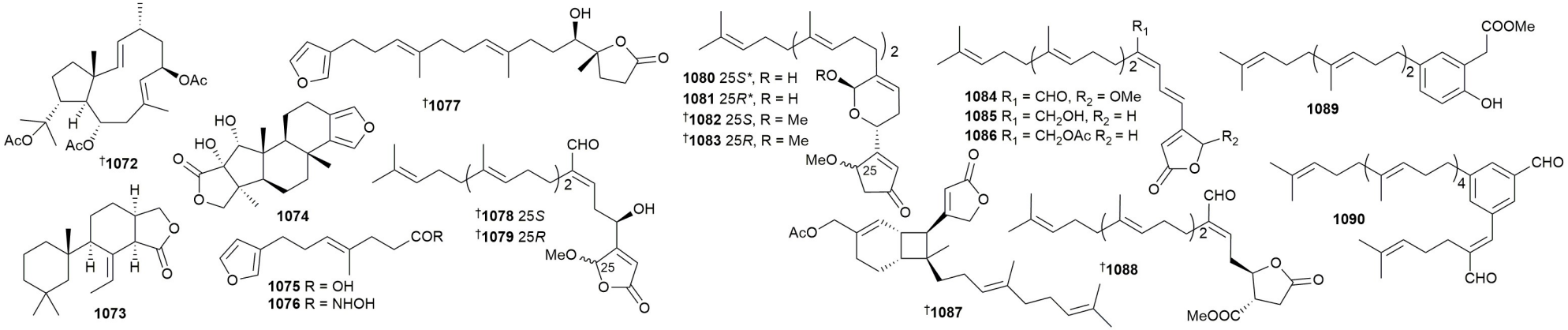
449 Porifera *Plakortis simplex* // Yongxing Islands, South China Sea // New bisabolane-type phenolic sesquiterpenoids from the marine sponge *Plakortis simplex*
1061 // N // plakordiol A // IA *vs* 2 HTCLs; IA *vs* 5 microb. strains.
1062 // N // plakordiol B // IA *vs* 2 HTCLs; IA *vs* 5 microb.strains.
1063 // N // plakordiol C // IA *vs* 2 HTCLs; IA *vs* 5 microb. strains.
1064 // N // plakordiol D // IA *vs* 2 HTCLs; IA *vs* 5 microb. strains.
1065 // N // (7*R*,10*R*)-hydroxycurcudiol // IA *vs* 2 HTCLs; weak activ. *vs* 1 of 5 microb. strains.
1066 // N // (7*R*,10*S*)-hydroxycurcudiol // IA *vs* 2 HTCLs; weak activ. *vs* 1 of 5 microb. strains.

450 Porifera *Axinyssa* sp // North Sulawesi, Indonesia // Halichonic acid B, a rearranged nitrogenous bisabolene-type sesquiterpene from a marine sponge *Axinyssa* sp.
1067 // N // halichonic acid B // IA *vs* 1 bact. strain.

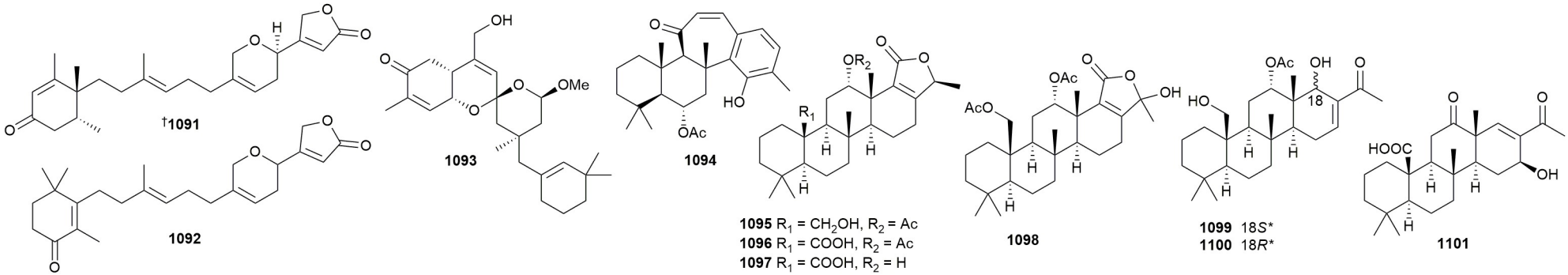
451 Porifera *Ircinia mutans* // Larak Island // Cytotoxic furanosesquiterpenoids and steroids from *Ircinia mutans* sponges
1068 // M // furoircin // IA *vs* 3 HTCLs; known synth.

452 Porifera *Lamellodysidea* sp // Manado, Indonesia // Inhibitory effects of sesquiterpene lactones from the Indonesian marine sponge *Lamellodysidea cf. herbacea* on bone morphogenetic protein-induced osteoblastic differentiation
1069 // N // bicyclolamellolactone A // IA *vs* BMP phosphatase.

453 Porifera *Spongia* sp // Zhanjiang, Guangdong Province, P. R. China // (+)- and (−)-Spongiterpene, a pair of new valerenane sesquiterpene enantiomers from the marine sponge *Spongia* sp.
1070 // N // (+)-spongiterpene // IA *vs* 8 HTCLs; likely artefact; isol. as rac.
1071 // N // (–)-spongiterpene // IA *vs* 8 HTCLs; likely artefact; isol. as rac.



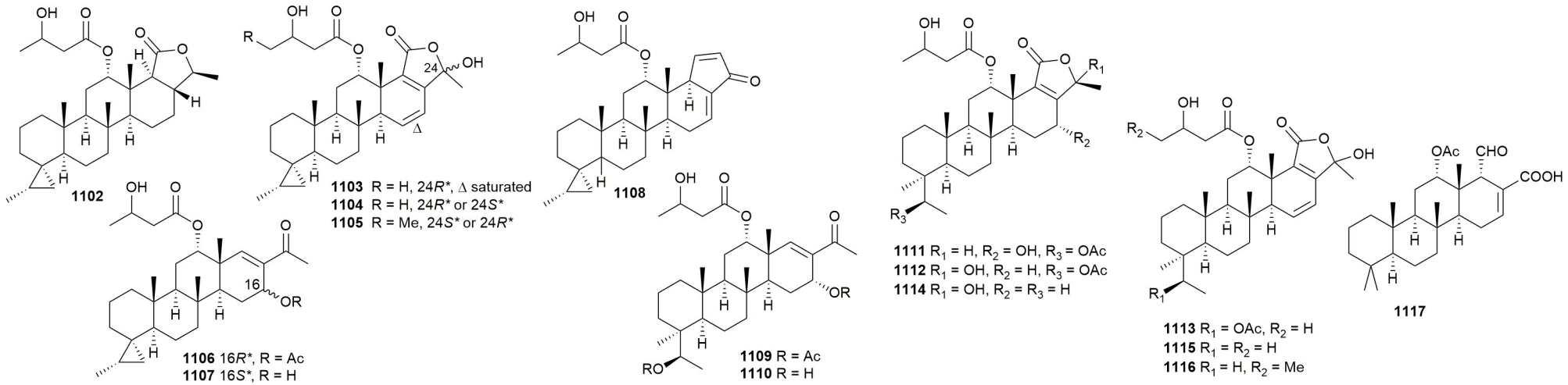
415 Porifera *Luffariella variabilis* // Yongle Islands, Xisha Islands, South China Sea // One cytotoxic steroid and other two new metabolites from the South China Sea sponge *Luffariella variabilis*
1072 // N // 6,10,18-triacetoxy-2*E*,7*E*-dolabelladien // IA *vs* 4 HTCLs.
454 Porifera *Dendrilla antarctica* // Tierra del Fuego, Antarctica // Antifouling diterpenoids from the sponge *Dendrilla antarctica*
1073 // N // 9,11-dihydrogracillinone A // activ. in antifoul. paint assay.
455 Porifera *Spongia* sp // Jeddah, Saudi Arabia // An anti-inflammatory 2,4-cyclized-3,4-secospongian diterpenoid and furanoterpene-related metabolites of a marine sponge *Spongia* sp. from the Red Sea
1074 // N // 17-dehydroxysponalactone // weak inhib. of superoxide and elastase.
1075 // M // spongiafuranic acid A // IA *vs* superoxide and elastase.
1076 // N // spongiafuranohydroxamic acid A // IA *vs* superoxide and elastase.
1077 // N // 16-*epi*-irciformonin G // IA *vs* superoxide and elastase.
456 Porifera *Luffariella variabilis* // Yongle Islands, Xisha Islands, South China Sea // Cytotoxic manoalide-type sesterterpenes from the sponge *Luffariella variabilis* collected in the South China Sea
1078 // N // $C_{26}H_{38}O_5$ // isol. artefact; weak cytotox. *vs* 2 of 5 HTCLs.
1079 // N // $C_{26}H_{38}O_5$ // isol. artefact; weak cytotox. *vs* 3 of 5 HTCLs.
1080 // N // $C_{27}H_{40}O_4$ // isol. artefact; weak cytotox. *vs* 3 of 5 HTCLs.
1081 // N // $C_{27}H_{40}O_4$ // isol. artefact; weak cytotox. *vs* 3 of 5 HTCLs.
1082 // N // $C_{28}H_{42}O_4$ // isol. artefact; weak cytotox. *vs* 1 of 5 HTCLs.
1083 // N // $C_{28}H_{42}O_4$ // isol. artefact; weak cytotox. *vs* 2 of 5 HTCLs.
1084 // N // $C_{26}H_{36}O_4$ // isol. artefact; isol. as rac; weak cytotox. *vs* 1 of 5 HTCLs.
1085 // N // $C_{25}H_{36}O_3$ // NT.
1086 // N // $C_{27}H_{38}O_4$ // NT.
1087 // N // $C_{27}H_{38}O_4$ // weak cytotox. *vs* 1 of 5 HTCLs.
1088 // N // $C_{26}H_{38}O_5$ // NT.
1089 // N // $C_{25}H_{36}O_3$ // IA *vs* 5 HTCLs.
1090 // N // $C_{42}H_{60}O_2$ // weak cytotox. *vs* 2 of 5 HTCLs.



457 Porifera *Luffariella* sp // Dredge (180 m), Oshima-shinsone, Japan // Oshimalides A and B, sesterterpenes of the manoalide class from a *Luffariella* sp. deep-sea marine sponge: application of asymmetric dihydroxylation in structure elucidation
1091 // N // oshimalide A // IA *vs S. aureus*; rxn with AD-mix used to determ. rel. config.
1092 // N // oshimalide B // NT.

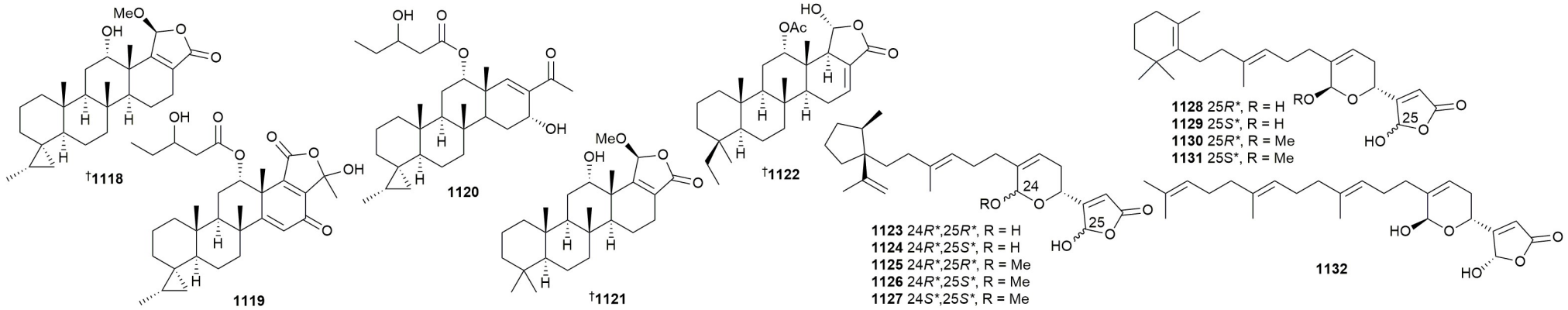
458 Porifera *Haliclona* sp // Gageo Island, Korea // Structure determination of two new compounds isolated from a marine sponge *Haliclona* (*Gellius*) sp.
1093 // N // 13(*R*),16(*R*)-gombaspiroketal // NT.
1094 // N // $C_{26}H_{34}O_4$ // NT.

459 Porifera *Lendenfeldia* sp // Southern Taiwan // Scalarane-type sesterterpenoids from the marine sponge *Lendenfeldia* sp. alleviate inflammation in human neutrophils
1095 // N // lendenfeldarane K // mod. inhib. superoxide generation; mod. inhib. elastase.
1096 // N // lendenfeldarane L // mod. inhib. superoxide generation; mod. inhib. elastase.
1097 // N // lendenfeldarane M // weak inhib. superoxide generation; IA *vs* elastase.
1098 // N // lendenfeldarane N // IA *vs* superoxide generation; IA *vs* elastase.
1099 // N // lendenfeldarane O // NT.
1100 // N // lendenfeldarane P // mod. inhib. superoxide generation; mod. inhib. *vs* elastase.
1101 // N // lendenfeldarane Q // weak inhib. superoxide generation; IA *vs* elastase.



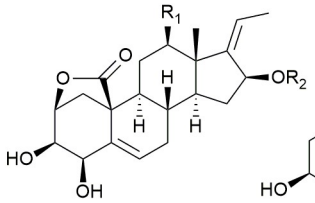
460 Porifera *Dysidea* sp // Bohol province, Philippines // Isolation of scalarane-type sesterterpenoids from the marine sponge *Dysidea* sp. and stereochemical reassignment of 12-epi-phyllactone D/E

1102 // N // $C_{31}H_{48}O_5$ // IA *vs* 1 HTCL.
1103 // N // $C_{31}H_{46}O_6$ // IA *vs* 1 HTCL.
1104 // N // $C_{31}H_{44}O_6$ // IA *vs* 1 HTCL.
1105 // N // $C_{32}H_{46}O_6$ // IA *vs* 1 HTCL; isol. as mixture.
1106 // N // $C_{32}H_{48}O_6$ // IA *vs* 1 HTCL; isol. as mixture.
1107 // N // $C_{30}H_{46}O_5$ // IA *vs* 1 HTCL.
1108 // N // $C_{31}H_{44}O_4$ // weak activ. *vs* 1 HTCL.
1109 // N // $C_{34}H_{52}O_8$ // IA *vs* 1 HTCL.
1110 // N // $C_{30}H_{48}O_6$ // IA *vs* 1 HTCL.
1111 // N // 16α-hydroxyhonulactone C // IA *vs* 1 HTCL.
1112 // N // 24α-hydroxyhonulactone C // IA *vs* 1 HTCL.
1113 // N // $C_{33}H_{48}O_8$ // IA *vs* 1 HTCL, isol. as mixture.
1114 // N // 24α-hydroxyphyllofolactone H // IA *vs* 1 HTCL.
1115 // N // $C_{31}H_{46}O_6$ // IA *vs* 1 HTCL; isol. as mixture.
1116 // R // 12-*epi*-phyllactone D/E // IA *vs* 1 HTCL; isol. as mixture.
1117 // N // $C_{27}H_{40}O_5$ // IA *vs* 1 HTCL.

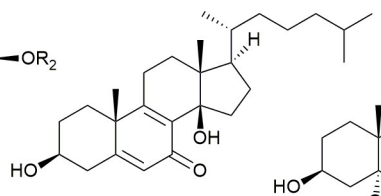


461 Porifera *Dysidea granulosa* // Xisha Islands, South China Sea // Dysiscalarones A-E, scalarane sesterterpenoids with nitric oxide production inhibitory activity from marine sponge *Dysidea granulosa*
1118 // N // dysiscalarone A // IA *vs* NO prod; IA *vs* 1 HTCL.
1119 // N // dysiscalarone B // IA *vs* NO prod; IA *vs* 1 HTCL.
1120 // N // dysiscalarone C // IA *vs* NO prod; IA *vs* 1 HTCL.
1121 // N // dysiscalarone D // IA *vs* NO prod; IA *vs* 1 HTCL.
1122 // N // dysiscalarone E // IA *vs* NO prod; IA *vs* 1 HTCL.

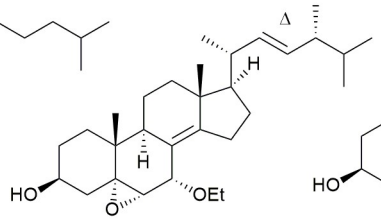
464 Porifera *Luffariella* sp // Houwan Bay, Pingtung, Taiwan // The configuration-dependent anti-leukemic effect of manoalide stereoisomers: reignite research interest in these sponge-derived sesterterpenoids
1123 // R // 24*R*,25*R*-luffariellin A // weak activ. *vs* 1 of 4 HTCLs.
1124 // R // 24*R*,25*S*-luffariellin A // weak to mod. activ. *vs* 4 HTCLs.
1125 // R // 24*R*-*O*-methyl-25*R*-luffariellin A // weak activ. *vs* 1 of 4 HTCLs.
1126 // R // 24*R*-*O*-methyl-25*S*-luffariellin A // weak to mod. activ. *vs* 4 HTCLs.
1127 // R // 24*S*-*O*-methyl-25*S*-luffariellin A // weak activ. *vs* 1 of 4 HTCLs.
1128 // R // 24*R*,25*R*-manoalide // weak activ. *vs 2* of 4 HTCLs.
1129 // R // 24*R*,25*S*-manoalide // weak to mod. activ. *vs* 4 HTCLs.
1130 // R // 24*R*-*O*-methyl-25*R*-manoalide // weak activ. *vs* 1 of 4 HTCLs.
1131 // R // 24*R*-*O*-methyl-25*S*-manoalide // weak to mod. activ. *vs* 4 HTCLs.
1132 // R // 24*R*,25*S*-thorectolide // IA *vs* 4 HTCLs.



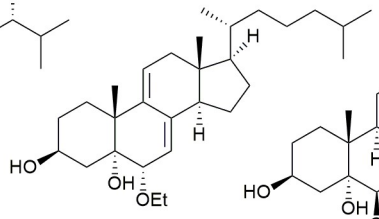
1133 $R_1 = R_2 = H$
1134 $R_1 = H$, $R_2 = Ac$
1135 $R_1 = OAc$, $R_2 = H$
1136 $R_1 = OAc$, $R_2 = Ac$



†**1137**



1138 R = Me
1139 Δ saturated, R = H



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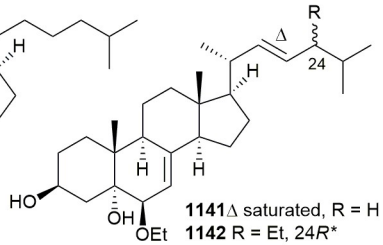
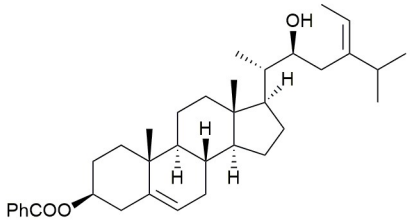
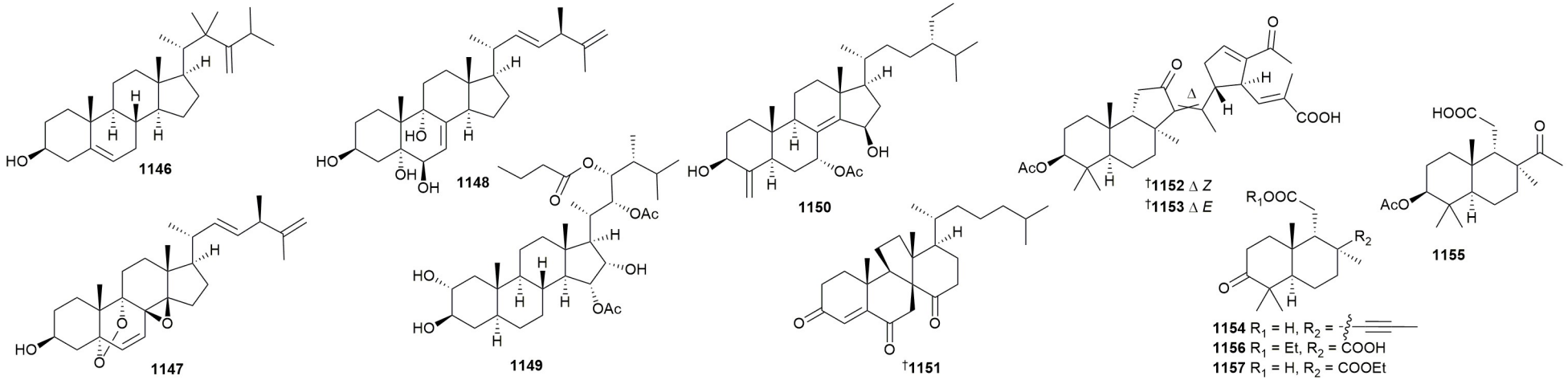


1141Δ saturated, R = H
1142 R = Et, 24*R**
1143 R = H
1144 Δ saturated, R = Et



1145

465 Porifera *Epipolasis* sp // Tobi Island, Republic of Palau // Four new pregnane-10,2-carbolactones from an *Epipolasis* sp. marine sponge
1133 // N // 3β,4β,16β-trihydroxypregna-5,17-diene-10,2-carbolactone // IA *vs* 2 HTCLs.
1134 // N // 16β-acetoxy-3β,4β-dihydroxypregna-5,17-diene-10,2-carbolactone // IA *vs* 2 HTCLs.
1135 // N // 12β-acetoxy-3β,4β,16β-trihydroxypregna-5,17-diene-10,2-carbolactone // IA *vs* 2 HTCLs.
1136 // N // 12β,16β-diacetoxy-3β,4β-dihydroxypregna-5,17-diene-10,2-carbolactone // IA *vs* 2 HTCLs.
466 Porifera *Dysidea avara* // Xisha Islands, South China Sea // New NF-κB inhibitory steroids from the marine sponge *Dysidea avara* collected from the South China Sea
1137 // N // (3*S*,14*R*)-3,14-dihydroxycholesta-5,8-dien-7-one // IA *vs* hum. CL.
1138 // N // (22*E*,22*R*)-7α-ethoxy-5α,6α-epoxyergosta-8(14),22-dien-3β-ol // IA *vs* hum. CL.
1139 // N // 3β-hydroxy-7α-ethoxy-5α,6α-epoxy-8(14)-cholestene // IA *vs* hum. CL.
1140 // N // 3β,5α-dihydroxy-6α-ethoxycholesta-7,9(11)-diene // IA *vs* hum. CL.
1141 // N // 3β,5α-dihydroxy-6β-ethoxycholest-7-ene // IA *vs* hum. CL.
1142 // N // (22*E*,24*R*)-24-ethoxy-3β,5α-dihydroxy-6β-ethoxyergosta-7,22-diene // IA *vs* hum. CL.
1143 // N // (22*E*)-3β,5α-dihydroxy-6β-ethoxycholesta-7,22-diene // IA *vs* hum. CL.
1144 // N // 24-ethoxy-3β,5α-dihydroxy-6β-ethoxycholest-7-ene // IA *vs* hum. CL.
467 Porifera *Xestospongia* sp // Kaimana, West Papua, Indonesia // A new antiplasmodial sterol from Indonesian marine sponge, *Xestospongia* sp
1145 // N // kaimanol // mod. activ. *vs P. falciparum*.



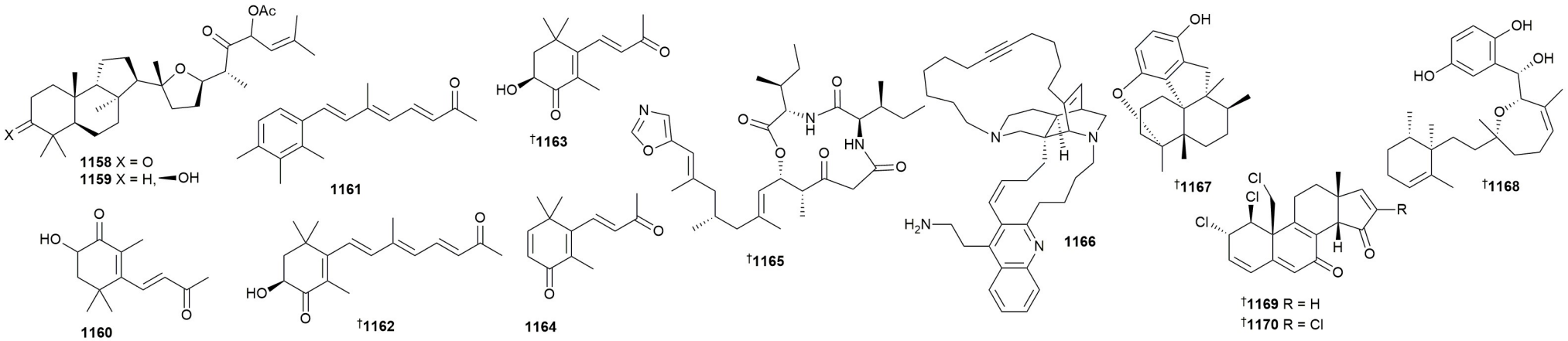
468 Porifera *Halichondria* sp // Ximao Island, Hainan Province, China // New sterols from the South China Sea sponges *Halichondria* sp.
1146 // N // halichsterol A // IA *vs* PTP1B; IA *vs* 3 HTCLs.
1147 // N // halichsterol B // weak inhib. NO prod; IA *vs* PTP1B; IA *vs* 3 HTCLs.
1148 // N // halichsterol C // IA *vs* PTP1B; IA *vs* 3 HTCLs.

469 Porifera *Echinoclathria* sp // Safaga, Egyptian Red Sea // New glucose-6-phosphate dehydrogenase inhibitor from the Red Sea sponge *Echinoclathria* sp
1149 // N // echinosterol // weak activ. *vs* 1 of 3 HTCLs.

470 Porifera *Theonella* sp // Kenting, Pingtung, Taiwan // Anti-proliferative potential of secondary metabolites from the marine sponge *Theonella* sp.: moving from correlation toward causation
1150 // N // theonellasterol L // IA *vs* 7 HTCLs.

415 Porifera *Luffariella variabilis* // Yongle Islands, Xisha Islands, South China Sea // One cytotoxic steroid and other two new metabolites from the South China Sea sponge *Luffariella variabilis*
1151 // N // 22,23-dihydro-24-nordankasterone A // weak activ. *vs* 2 of 4 HTCLs.

471 Porifera *Stelletta* sp // Cham Island, South China Sea // New isomalabaricane-derived metabolites from a S*telletta* sp. marine sponge
1152 // N // stellettin Q // NT.
1153 // N // stellettin R // NT.
1154 // N // stellettin S // NT.
1155 // N // stellettin T // NT.
1156 // N // stellettin U // NT.
1157 // N // stellettin V // NT.



472 Porifera *Rhabdastrella* sp // Kenting, Pingtung, Taiwan // Isomalabaricane triterpenes from the marine sponge *Rhabdastrella* sp.
1158 // N // rhabdastin H // IA *vs* 4 HTCLs.
1159 // N // rhabdastin I // IA *vs* 4 HTCLs.

473 Porifera *Negombata magnifica* // Red Sea // Magnificines A and B, antimicrobial marine alkaloids featuring a tetrahydrooxazolo[3,2-a]azepine-2,5(3H,6H)-dione backbone from the Red Sea sponge *Negombata magnifica*
1160 // M // (±)-negombaionone // weak activ. *vs* 1 of 3 bact. strains.

474 Porifera *Clathria reinwardti* // Vanphong Bay, Nha Trang, Vietnam // Conjugated polyene ketones from the marine sponge *Clathria (Thalysias) Reinwardti* (Vosmaer, 1880) and their cytotoxic activity
1161 // N // clathriarein A // IA *vs* 5 HTCLs.
1162 // M // 13-apoastaxanthinone // IA *vs* 5 HTCLs.
1163 // M // 9-apoastaxanthinone // IA *vs* 5 HTCLs.
1164 // M // 2,3-dehydro-4-oxo-β-ionone // IA *vs* 5 HTCLs.

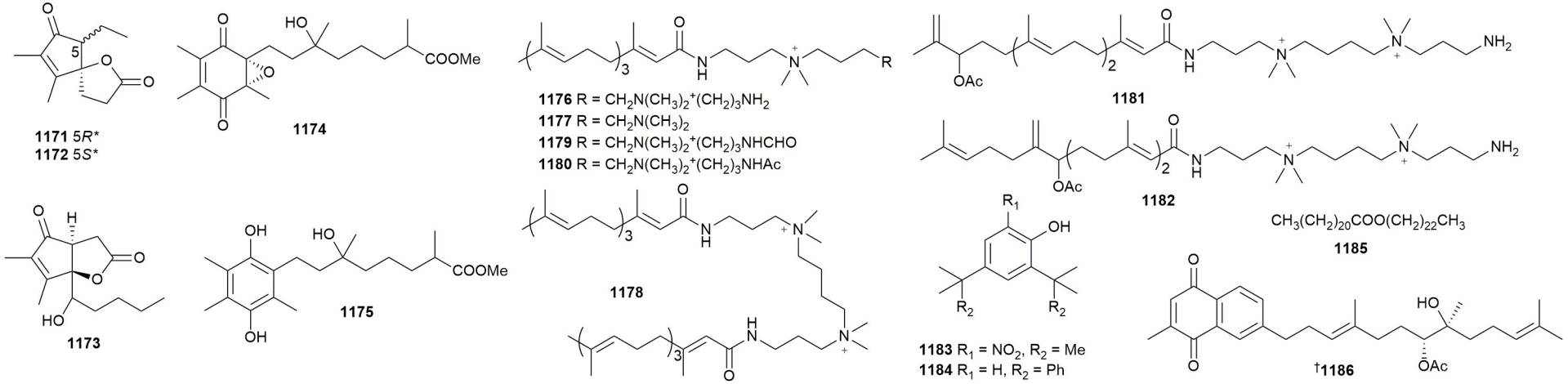
480 Porifera // * // Asymmetric total synthesis and revision of absolute stereochemistry for (+)-taumycin A: an approach that exploits orthogonally protected quasienantiomers
1165 // R // (+)-taumycin A // rev. by total synth.

484 Porifera // * // A unified approach to polycyclic alkaloids of the ingenamine estate: total syntheses of keramaphidin B, ingenamine, and nominal njaoamine I
1166 // R // njaoamine I // rev. by total synth.

491 Porifera // * // Enantioselective total synthesis and structural revision of dysiherbol A
1167 // R // dysiherbol A // rev. by total synth.

494 Porifera *Haliclona* sp // * // total synthesis and structure revision of halioxepine
1168 // R // (+)-halioxepine // rev. by total synth.

497 Porifera // * // Asymmetric total synthesis of clionastatins A and B
1169 // R // clionastatin A // rev. by total synth.
1170 // R // clionastatin B // rev. by total synth.



527 Cnidaria *Dendronephthya mucronata* // Phu Quoc Island, Kiengiang, Vietnam // Bicyclic lactones from the octocoral *Dendronephthya mucronata*
1171 // N // dendronephthyone A // IA *vs* 3 HTCLs.
1172 // N // dendronephthyone B // IA *vs* 3 HTCLs.
1173 // N // dendronephthyone C // IA *vs* 3 HTCLs.

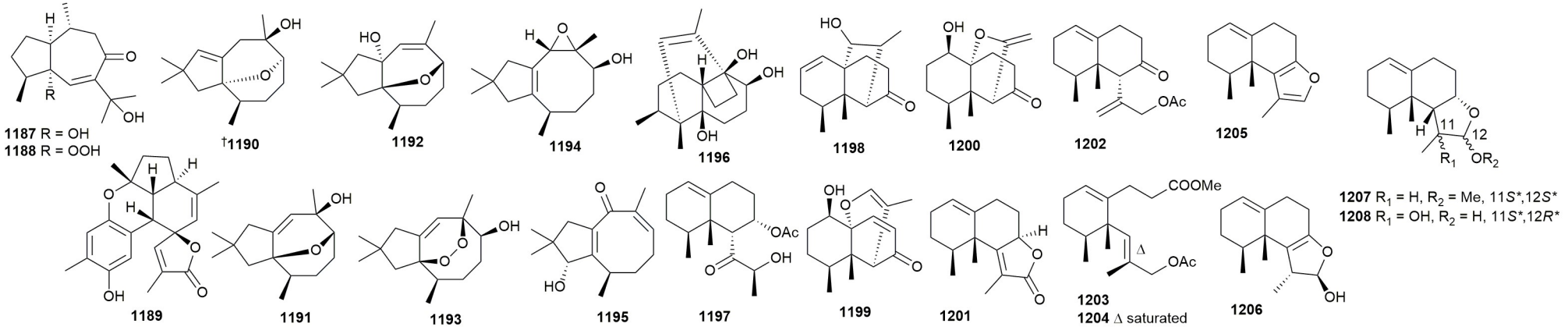
528 Cnidaria *Sinularia scabra* // Pingtung, southern Taiwan // Quinone derivatives from the soft coral *Sinularia scabra*
1174 // N // 1',2'-epoxyflexibilisquinone // IA *vs* 4 HTCLs.

529 Cnidaria *Sarcophyton tenuispiculatum* // Southern Taiwan // New hydroquinone monoterpenoid and cembranoid-related metabolites from the soft coral *Sarcophyton tenuispiculatum*
1175 // N // sarcotenuhydroquinone // IA *vs* 4 HTCLs; IA *vs* anti-inflam.

530 Cnidaria *Sinularia* sp // Palau // Sinularamides A–G, terpenoid-derived spermidine and spermine conjugates with casitas B-lineage lymphoma proto-oncogene B (Cbl-b) inhibitory activities from a *Sinularia* sp. soft coral
1176 // M // sinularamide A // unspecified activity towards Cbl-b.
1177 // N // sinularamide B // unspecified activity towards Cbl-b.
1178 // N // sinularamide C // weak inhib. Cbl-b.
1179 // N // sinularamide D // unspecified activity towards Cbl-b.
1180 // N // sinularamide E // unspecified activity towards Cbl-b.
1181 // N // sinularamide F // unspecified activity towards Cbl-b.
1182 // N // sinularamide G // unspecified activity towards Cbl-b.

531 Cnidaria *Sarcophyton trocheliophorum* // Red Sea, Hurghada, Egypt // New naturally occurring compounds from *Sarcophyton trocheliophorum*
1183 // M // 2,4-di-tert-butyl-6-nitro-phenol // IA *vs* 7 microb. strains.
1184 // M // 2,4-bis(1-methyl-1-phenylethyl)-phenol // IA *vs* 7 microb. strains.
1185 // M // tricosyldocosanoiate // IA *vs* 7 microb. strains.

532 Cnidaria *Nephthea chabrolii* // * // total synthesis of enantiopure chabrolonaphthoquinone B via a stereoselective Julia-Kocienski olefination
1186 // R // chabrolonaphthoquinone B // abs. config. by synth.



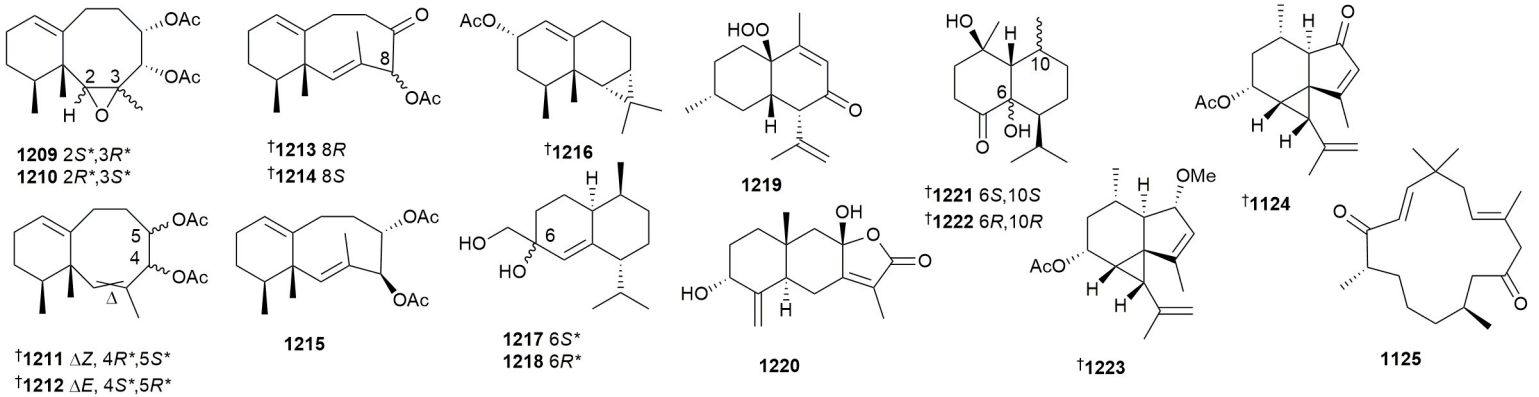
534 Cnidaria *Sarcophyton glaucum* // Red Sea // Calamusins J-K: new anti-angiogenic sesquiterpenes from *Sarcophyton glaucum*
1187 // N // calamusin J // pot. inhib. VEGFR2; IA *vs* 2 HTCLs.
1188 // N // calamusin K // pot. inhib. VEGFR2; IA *vs* 2 HTCLs.

535 Cnidaria *Sinularia humesi* // Ximao Island, South China Sea, China // Uncommon polycyclic merosesquiterpenoids and asteriscanoids from the Hainan soft coral *Sinularia humesi*
1189 // M // (±)-9-*epi*-verrubenzospirolactone // IA *vs* TCLs, antimicrob., anti-inflam.; Rac.; XRD.
1190 // N // sinuhumesin A // IA *vs* TCLs, antimicrob.; anti-inflam.; XRD.
1191 // N // sinuhumesin B // IA *vs* TCLs, antimicrob.; anti-inflam.
1192 // N // sinuhumesin C // IA *vs* TCLs, antimicrob.; anti-inflam.
1193 // N // sinuhumesin D // IA *vs* TCLs, antimicrob.; anti-inflam.
1194 // N // sinuhumesin E // IA *vs* TCLs, antimicrob.; anti-inflam.
1195 // N // sinuhumesin F // IA *vs* TCLs, antimicrob.; anti-inflam.

536 Cnidaria *Lemnalia* sp // Yongxing Island, South China Sea // Lemnardosinanes A-I: new bioactive sesquiterpenoids from soft coral *Lemnalia* sp.
1196 // N // lemnardosinane A // weak promotor angiogenesis; IA *vs* 1 virus strain.
1197 // N // lemnardosinane B // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1198 // N // lemnardosinane C // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1199 // N // lemnardosinane D // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1200 // N // lemnardosinane E // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1201 // N // lemnardosinane F // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1202 // N // lemnardosinane G // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1203 // N // lemnardosinane H // IA *vs* angiogenesis; IA *vs* 1 virus strain.
1204 // N // lemnardosinane I // IA *vs* angiogenesis; IA *vs* 1 virus strain.

537 Cnidaria *Litophyton nigrum* // Xisha Islands, Hainan Province, China // Further new nardosinane-type sesquiterpenoids from the Xisha soft coral *Litophyton nigrum*
1205 // N // linardosinene D // IA inhib. bromodomain-containing protein 4; IA towards various undisclosed assays.
1206 // N // linardosinene E // IA inhib. bromodomain-containing protein 4; IA towards various undisclosed assays.
1207 // N // linardosinene F // IA inhib. bromodomain-containing protein 4; IA towards various undisclosed assays.
1208 // N // linardosinene G // IA inhib. bromodomain-containing protein 4; IA towards various undisclosed assays.

7 Cnidaria



538 Cnidaria *Paralemnalia thyrsoides* // Hurghada, Egypt // Paralemnolins X and Y, new antimicrobial sesquiterpenoids from the soft coral Paralemnalia thyrsoide
1209 // N // paralemnolin X // mod. activ. *vs S. aureus.*
1210 // N // paralemnolin Y // mod. activ. *vs S. aureus.*

539 Cnidaria *Lemnalia* sp // Yongxing island, South China Sea // Sesquiterpenoids from the soft coral *Lemnalia* sp.
1211 // N // lemnolin A // IA *vs* 1 virus strain.
1212 // N // lemnolin B // IA *vs* 1 virus strain.

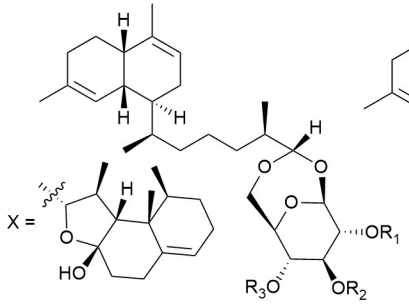
540 Cnidaria *Lemnalia* sp // Xisha Islands, South China Sea // Antimicrobial terpenoids from South China Sea soft coral *Lemnalia* sp.
1213 // N // lineolemnene E // IA *vs* 2 bact. strains; IA *vs* 2 virus strains.
1214 // N // lineolemnene F // IA to weak inhib. *vs* 2 virus strains.
1215 // N // lineolemnene G // IA *vs* 2 bact. strains; IA *vs* 2 virus strains.
1216 // N // 2-acetoxy-aristolane // IA *vs* 2 bact. strains; IA *vs* 2 virus strains.

541 Cnidaria *Cespitularia* sp // Green Island, Southeastern Taiwan // Bioactive diterpenes, norditerpenes, and sesquiterpenes from a Formosan soft coral *Cespitularia* sp.
1217 // N // cespilin A // IA *vs* anti-inflam.
1218 // N // cespilin B // IA *vs* anti-inflam.
1219 // N // cespilin C // IA *vs* anti-inflam.
1220 // N // cespitulolide // IA *vs* anti-inflam.

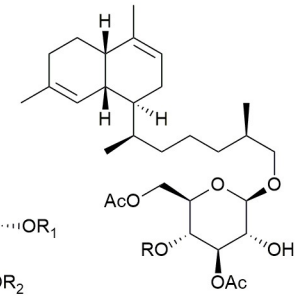
542 Cnidaria *Sinularia brassica* // Van Phong bay, Khanh Hoa province, Vietnam // Isolation of sesquiterpenoids and steroids from the soft coral *Sinularia brassica* and determination of their absolute configuration
1221 // N // sinulaketol A // IA *vs L. donovani*; IA *vs* 2 bact. and 1 fungal strain.
1222 // N // sinulaketol B // IA *vs L. donovani*; IA *vs* 2 bact. and 1 fungal strain.

543 undescribed soft coral // * // asymmetric total synthesis of shagenes A and B
1223 // R // shagene A // abs. config. by synth.
1224 // R // shagene B // abs. config. by synth.

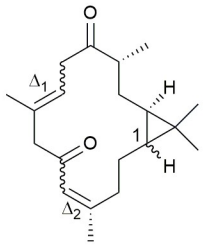
547 Cnidaria *Bebryce grandis* // Ocean Cay, Bahamas // Antiplasmodial compounds from deep-water marine invertebrates
1225 // N // bebrycin A // weak activ. *vs P. falciparum*.



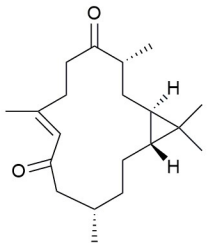
1126 R_1 = Ac, R_2 = R_3 = H
1129 R_1 = X, R_2 = R_3 = H
1130 R_1 = R_3 = H, R_2 = X
1131 R_1 = R_2 = H, R_3 = X



1127 R = H
1128 R = Ac



†**1232** 1*R*, Δ_1E, Δ_2 saturated
†**1233** 1*S*, Δ_1Z, Δ_2 saturated
1237 1*R**, Δ_1E, Δ_2Z



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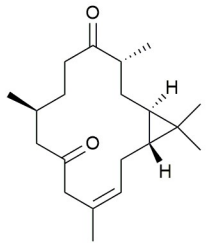

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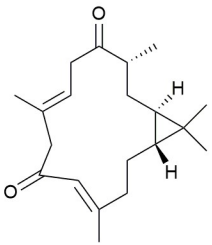

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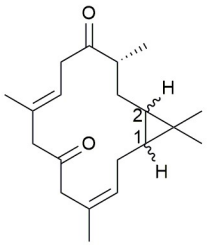
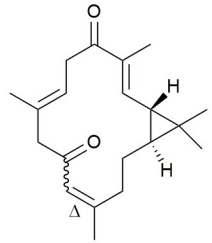
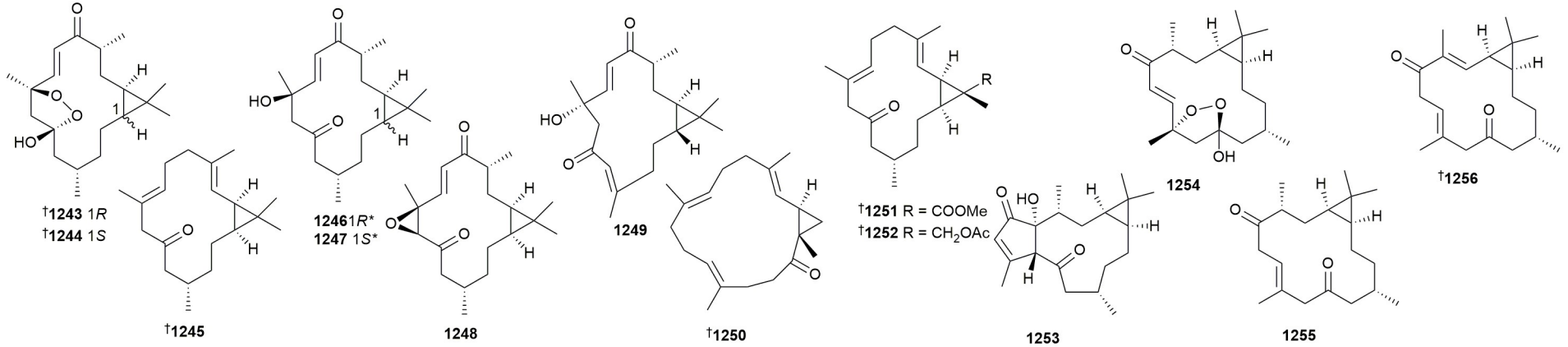


1238 1*R**,2*R**
†**1241** 1*S*,2*S*
†**1242** 1*S*,2*R*



†**1239** Δ*E*
†**1240** Δ*Z*

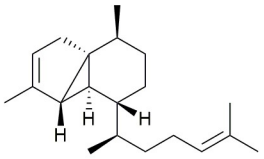
548 Cnidaria *Lemnalia bournei* // Xisha Island, South China Sea // Six new diterpene glycosides from the soft coral *Lemnalia bournei*
1226 // N // lemnabourside E // weak *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
1227 // N // lemnabourside F // weak *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
1228 // N // lemnabourside G // IA *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
1229 // N // lemnadiolbourside A // IA *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
1230 // N // lemnadiolbourside B // IA *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
1231 // N // lemnadiolbourside C // IA *vs* 2 bact. strains; IA *vs* 1 HTCL; IA *vs* NO prod.
549 Cnidaria *Sinularia crassa* // Ximao Island, Hainan Province, China // Sinucrassins A-K, casbane-type diterpenoids from the South China Sea soft coral *Sinularia crassa*
1232 // N // sinucrassin A // IA *vs* α-glucosidase and DPP-4; XRD.
1233 // N // sinucrassin B // IA *vs* α-glucosidase and DPP-4; XRD.
1234 // N // sinucrassin C // IA *vs* α-glucosidase and DPP-4.
1235 // N // sinucrassin D // IA *vs* α-glucosidase and DPP-4.
1236 // N // sinucrassin E // IA *vs* α-glucosidase and DPP-4.
1237 // N // sinucrassin F // IA *vs* α-glucosidase and DPP-4.
1238 // N // sinucrassin G // IA *vs* α-glucosidase and DPP-4.
1239 // N // sinucrassin H // IA *vs* α-glucosidase and DPP-4.
1240 // N // sinucrassin I // IA *vs* α-glucosidase and DPP-4.
1241 // N // sinucrassin J // IA *vs* α-glucosidase and DPP-4.
1242 // N // sinucrassin K // IA *vs* α-glucosidase and DPP-4.



550 Cnidaria *Sinularia erecta* // Ximao Island, Hainan Province, China // Unusual polyoxygenated casbane diterpenoids from the South China Sea soft coral *Sinularia erecta*
1243 // N // sinuereperoxide B // NT; XRD.
1244 // N // sinuereperoxide C // NT; XRD.
1245 // N // 5-deoxy-10-oxo-11,12-dihydrodepressin // NT; XRD.
1246 // N // sinueracasbanone A // NT.
1247 // N // sinueracasbanone B // NT.
1248 // N // sinueracasbanone C // NT.
1249 // N // sinueracasbanone D // weak activ. *vs* anti-inflam.

551 Cnidaria *Sinularia nanolobata* // West Island, South China Sea, China // Sinunanolobatone A, an anti-inflammatory diterpenoid with bicyclo[13.1.0]pentadecane carbon scaffold, and related casbanes from the Sanya soft coral *Sinularia nanolobata*
1250 // N // sinunanolobatone A // weak activ. *vs* anti-inflam.
1251 // N // $C_{21}H_{32}O_3$ // NT; XRD.
1252 // N // $C_{22}H_{34}O_3$ // IA *vs* anti-inflam.

552 Cnidaria *Sinularia erecta* // Ximao Island, Hainan province, China // Sinueretone A, a diterpenoid with unprecedented tricyclo[12.1.0.05,9]pentadecane carbon scaffold from the South China Sea soft coral *Sinularia erecta*
1253 // N // sinueretone A // IA *vs* anti-inflam.
1254 // N // sinuereperoxide A // IA *vs* anti-inflam.; XRD.
1255 // N // 10-*oxo*-3,4,11,12-tetrahydrodepressin // NT; XRD.
1256 // R // 10-*oxo*-11,12-dihydrodepressin // NT; XRD.



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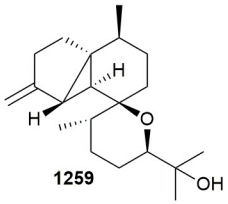
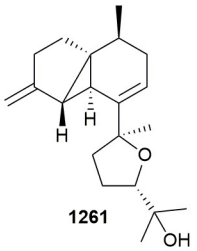


1259



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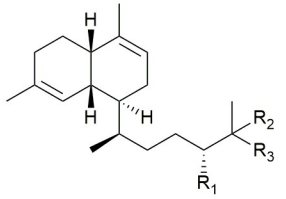
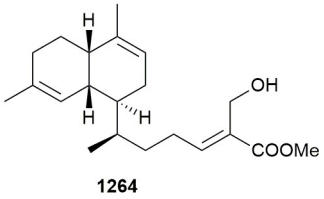


1262 R_1 = OH, R_2 = H, R_3 = COOMe
1263 R_1 = H, R_2 = OH, R_3 = COOMe
1265 R_1 = R_2 = H, R_3 = CH_2OH



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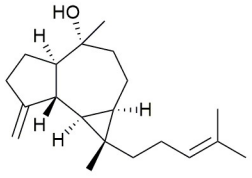
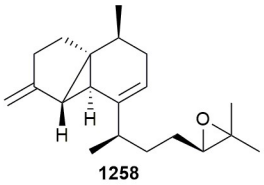


†**1267**



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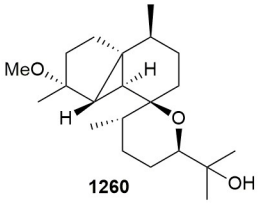

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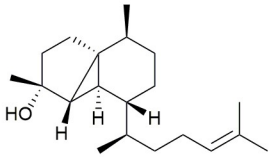
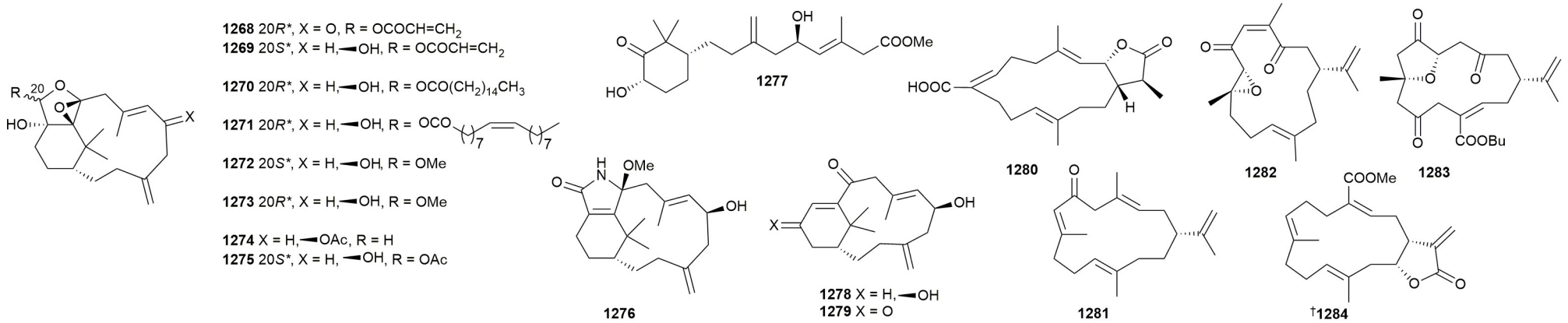


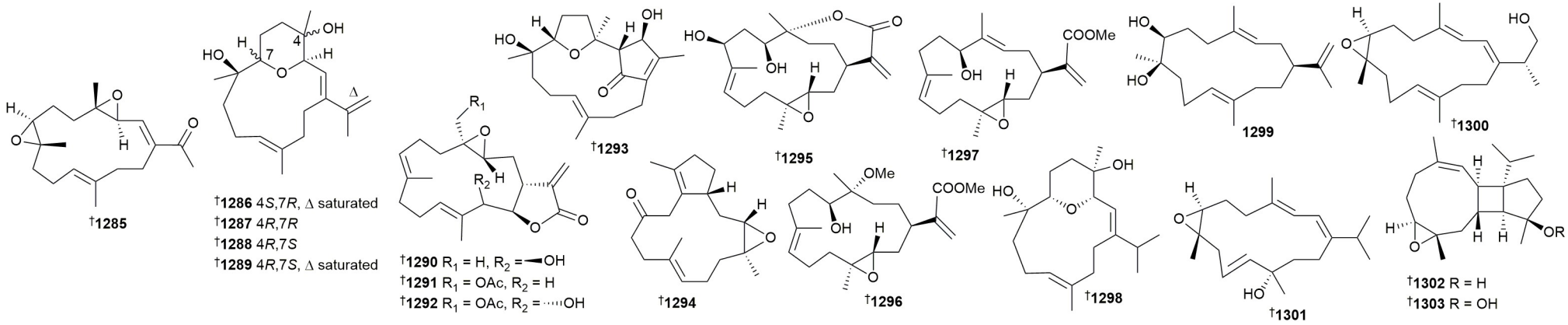
1266

553 Cnidaria *Litophyton setoensis* // Singaraja, Bali Island, Indonesia // Litosetoenins A–E, diterpenoids from the soft coral *Litophyton setoensis*, backbone-rearranged through divergent cyclization achieved by epoxide reactivity inversion
1257 // N // litosetoenin A // IA *vs* 4 HTCLs.
1258 // N // litosetoenin B // IA *vs* 4 HTCLs.
1259 // N // litosetoenin C // IA *vs* 4 HTCLs.
1260 // N // litosetoenin D // IA *vs* 4 HTCLs.
1261 // N // litosetoenin E // IA *vs* 4 HTCLs.

540 Cnidaria *Lemnalia* sp // Xisha Islands, South China Sea // Antimicrobial terpenoids from South China Sea soft coral *Lemnalia* sp.
1262 // N // biofloranate A // weak *vs* 2 bact. strains; IA *vs* 2 virus strains.
1263 // N // biofloranate B // IA to weak *vs* 2 bact. strains; IA *vs* 2 virus strains.
1264 // N // biofloranate C // IA to weak *vs* 2 bact. strains; IA *vs* 2 virus strains.
1265 // N // biofloranate D // IA to weak *vs* 2 bact. strains; IA *vs* 2 virus strains.
1266 // N // euplexaurene D // IA *vs* 2 bact. strains; IA *vs* 2 virus strains.
1267 // N // cneorubin K // IA to weak *vs* 2 bact. strains; IA *vs* 2 virus strains.



541 Cnidaria *Cespitularia* sp // Green Island, Southeastern Taiwan // Bioactive diterpenes, norditerpenes, and sesquiterpenes from a Formosan soft coral *Cespitularia* sp.
1268 // N // cespitulin H // IA *vs* anti-inflam.
1269 // N // cespitulin I // IA *vs* anti-inflam.
1270 // N // cespitulin J // IA *vs* anti-inflam.
1271 // N // cespitulin K // IA *vs* anti-inflam.
1272 // N // cespitulin L // IA *vs* anti-inflam.
1273 // N // cespitulin M // IA *vs* anti-inflam.
1274 // N // cespitulin N // IA *vs* anti-inflam.
1275 // N // cespitulin O // IA *vs* anti-inflam.
1276 // N // cespitulactam L // IA *vs* anti-inflam.
1277 // N // cespitulin P // IA *vs* anti-inflam.
1278 // N // cespitulin Q // IA *vs* anti-inflam.
1279 // N // cespitulin R // IA *vs* anti-inflam.
555 Cnidaria *Lobophytum crassum* // Southern Taiwan // Cembranoids from octocoral *Lobophytum crassum* (von Marenzeller, 1886)
1280 // N // lobocrassin I // IA *vs* anti-inflam.; XRD
556 Cnidaria *Lobophytum crassum* // Ximao Island, Hainan Province, China // Polyoxygenated cembranoids from soft coral *Lobophytum crassum* and their anti-tumoral activities
1281 // N // 6-*oxo*-cembrene-A // IA *vs* 4 HTCLs.
1282 // N // lobocrassin G // IA *vs* 4 HTCLs.
1283 // N // lobocrassin H // IA *vs* 4 HTCLs.
1284 // N // 14-*epi*-lobophytolide B // IA *vs* 4 HTCLs.



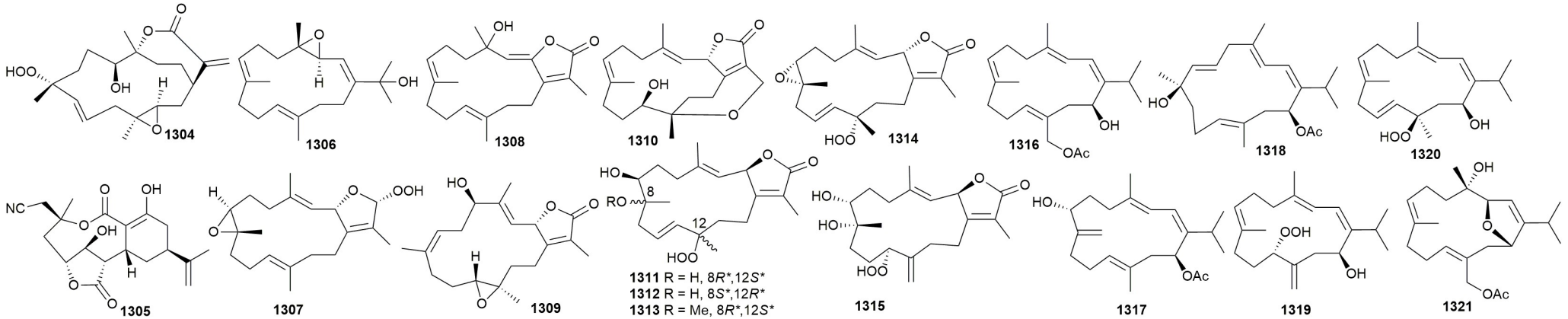
557 Cnidaria *Lobophytum crassum* // Ximao Island, Hainan Province, China // Polyoxygenated cembranoids from the Hainan soft coral *Lobophytum crassum*
1285 // N // lobophycrasin A // IA *vs* anti-inflam.; IA *vs* TCLs.
1286 // N // (–)-humilisin A // IA *vs* anti-inflam.; IA *vs* TCLs; enant. of known MNP.
1287 // N // lobophycrasin B // IA *vs* anti-inflam.; IA *vs* TCLs.
1288 // N // lobophycrasin C // IA *vs* anti-inflam.; IA *vs* TCLs.
1289 // N // lobophycrasin D // IA *vs* anti-inflam.; IA *vs* TCLs.

556 Cnidaria *Lobophytum crassum* // Ximao Island, Hainan Province, China // Polyoxygenated cembranoids from soft coral *Lobophytum crassum* and their anti-tumoral activities
1290 // R // durumolide J // weak cytotox. *vs* 4 HTCLs; abs. config. from XRD.
1291 // R // lobolide A // weak cytotox. *vs* 4 HTCLs; abs. config. from XRD.
1292 // R // 20-acetylsinularolide C // IA to weak cytotox. *vs* 4 HTCLs; abs config. assigned.

557 Cnidaria *Lobophytum crassum* // Ximao Island, Hainan Province, China // Polyoxygenated cembranoids from the Hainan soft coral *Lobophytum crassum*
1293 // R // lobocrasol // IA *vs* anti-inflam.; IA *vs* TCLs; XRD.

558 Cnidaria *Sinularia siaesensis* // Ximao Island, Hainan Province, China // Sinusiaetone A, an anti-inflammatory norditerpenoid with a bicyclo[11.3.0]hexadecane nucleus from the Hainan soft coral *Sinularia siaesensis*
1294 // N // sinusiaetone A // mod. activ. *vs* anti-inflam.; XRD.
1295 // N // sinusiaeolide A // mod. activ. *vs* anti-inflam.; XRD.
1296 // N // sinusiaeolide B // mod. activ. *vs* anti-inflam.
1297 // R // flexibilisin C // NT; abs. config. assigned.

559 Cnidaria *Sinularia humilis* // Ximao Island, Hainan province, People's Republic of China // Uncommon diterpenoids from the South China Sea soft coral *Sinularia humilis* and their stereochemistry
1298 // N // (+)-humilisin A // IA *vs* anti-inflam.
1299 // N // humilisin B // IA *vs* anti-inflam.
1300 // N // humilisin C // IA *vs* anti-inflam.
1301 // N // humilisin D // IA *vs* anti-inflam.
1302 // N // humilisin E // IA *vs* anti-inflam.
1303 // N // humilisin F // IA *vs* anti-inflam.



560 Cnidaria *Sinularia querciformis* // Southern Taiwan // Natural cembrane diterpenoids from the soft coral *Sinularia querciformis*
1304 // N // querciformolide F // IA *vs* anti-inflam.

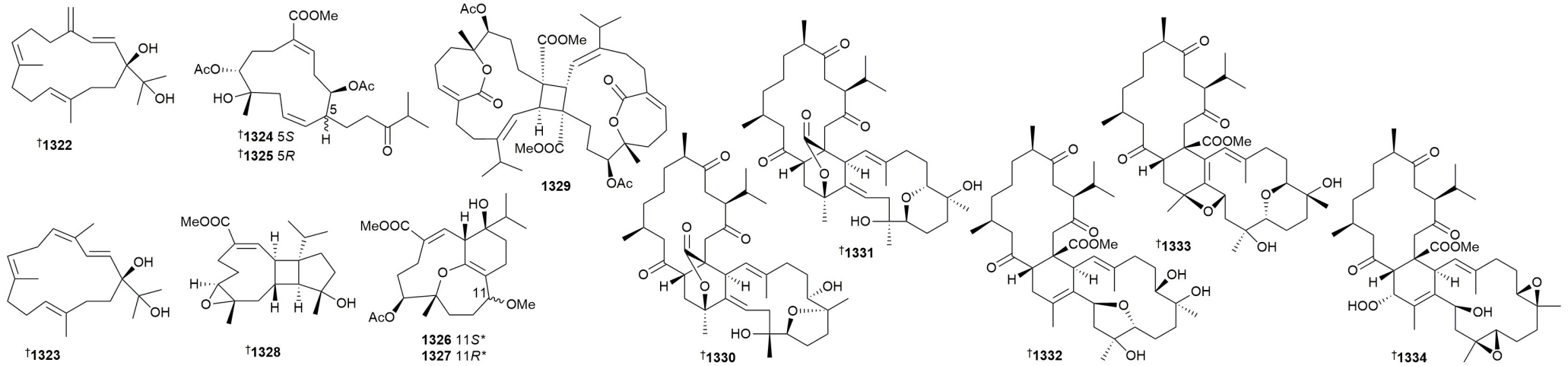
561 Cnidaria *Sinularia multiflora* // Xisha Islands, South China Sea // Terpenoids from the South China Sea soft coral *Sinularia multiflora*
1305 // N // sinulariadiolide B // IA *vs* 6 HTCLs and 1 nMCL.

529 Cnidaria *Sarcophyton tenuispiculatum* // Southern Taiwan // New hydroquinone monoterpenoid and cembranoid-related metabolites from the soft coral *Sarcophyton tenuispiculatum*
1306 // N // sarcotenusene A // IA *vs* 4 HTCLs; IA *vs* anti-inflam.
1307 // N // sarcotenusene B // IA *vs* 4 HTCLs; IA *vs* anti-inflam.
1308 // N // sarcotenusene C // IA *vs* 4 HTCLs; IA *vs* anti-inflam.

562 Cnidaria *Sarcophyton cherbonnieri* // Jihui Fish Port, Taiwan // Cherbonolides M and N from a formosan soft coral *Sarcophyton cherbonnieri*
1309 // N // cherbonolide M // IA *vs* 3 HTCLs; IA *vs* anti-inflam.
1310 // N // cherbonolide N // IA *vs* 3 HTCLs; IA *vs* anti-inflam.

563 Cnidaria *Sarcophyton convolutum* // Red Sea, Hurghada, Egypt // Oxygenated cembrene diterpenes from *Sarcophyton convolutum*: cytotoxic sarcoconvolutum A–E
1311 // N // sarcoconvolutum A // IA *vs* 3 HTCLs.
1312 // N // sarcoconvolutum B // IA *vs* 3 HTCLs.
1313 // N // sarcoconvolutum C // IA *vs* 3 HTCLs.
1314 // N // sarcoconvolutum D // IA *vs* 3 HTCLs.
1315 // N // sarcoconvolutum E // IA *vs* 3 HTCLs.

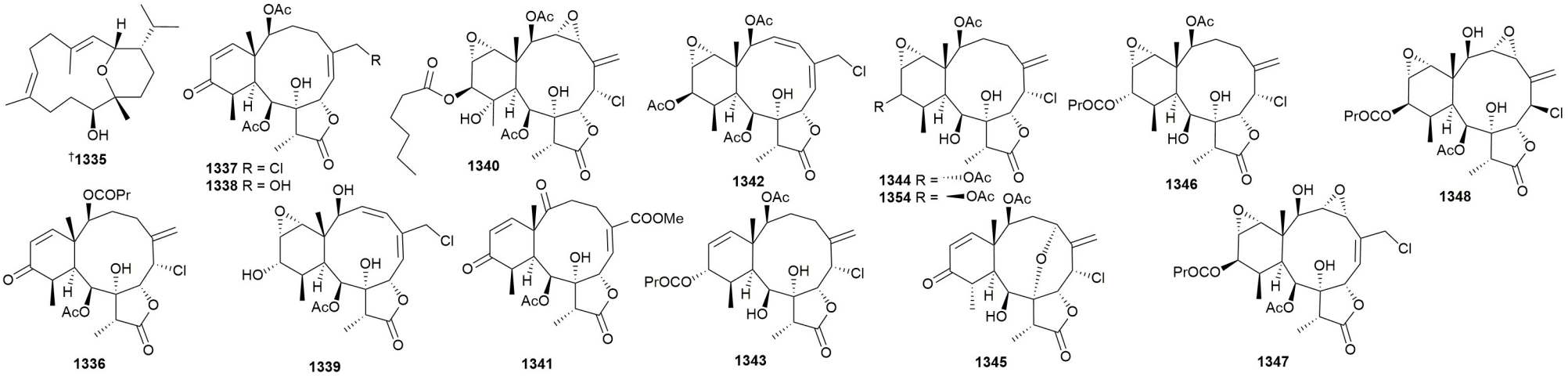
564 Cnidaria *Sarcophyton glaucum* // Ximao Island, Hainan Province, China // Ximaoglaucumins A - F, new cembranoids with anti-inflammatory activities from the South China Sea soft coral *Sarcophyton glaucum*
1316 // N // ximaoglaucumin A // IA inhib. NO prod.
1317 // N // ximaoglaucumin B // IA inhib. NO prod.
1318 // N // ximaoglaucumin C // IA inhib. NO prod.; 14-acetyl sarcophytol R.
1319 // N // ximaoglaucumin D // IA inhib. NO prod.; peroxy-sarcophytol E.
1320 // N // ximaoglaucumin E // IA inhib. NO prod.
1321 // N // ximaoglaucumin F // IA inhib. NO prod.; 20-acetoxy-(-)-marasol.



565 Cnidaria *Sarcophyton trocheliophorum* // Ximao Island, Hainan Province, China // Further new cembranoids from the South China Sea soft coral *Sarcophyton trocheliophorum*
1322 // N // ximaosarcophytol A // IA towards various undisclosed assays.
1323 // N // ximaosarcophytol B // IA towards various undisclosed assays.

566 Cnidaria *Sarcophyton tortuosum* // Lanyu Island, Taiwan // Cembranoid-related diterpenes, novel secoditerpenes, and an unusual bisditerpene from a Formosan soft coral *Sarcophyton tortuosum*
1324 // N // secotortuosene A // IA *vs* 3 TCLs; IA *vs* anti-inflam.
1325 // N // secotortuosene B // IA *vs* 3 TCLs; IA *vs* anti-inflam.
1326 // N // tortuosene C // IA *vs* 3 TCLs; IA *vs* anti-inflam.
1327 // N // tortuosene D // IA *vs* 3 TCLs; IA *vs* anti-inflam.
1328 // N // tortuosumol // IA *vs* 3 TCLs; IA *vs* anti-inflam.
1329 // N // bistortuolide cyclobutane A // IA to weak *vs* 3 TCLs; weak inhib. superoxide and elastase release.

567 Cnidaria *Sarcophyton tortuosum* // Yalong Bay, Hainan, China // Polyoxygenated anti-inflammatory biscembranoids from the soft coral *Sarcophyton tortuosum* and their stereochemistry
1330 // N // ximaolide H // IA *vs* anti-inflam.; IA cytotox.; IA *vs* bact.
1331 // N // ximaolide I // IA *vs* anti-inflam.; IA cytotox.; IA *vs* bact.
1332 // N // ximaolide J // IA *vs* anti-inflam.; IA cytotox.; IA *vs* bact.
1333 // N // ximaolide K // IA *vs* anti-inflam.; IA cytotox.; IA *vs* bact.
1334 // N // ximaolide L, 38-hydroperoxy ximaolide A // IA *vs* anti-inflam.; IA cytotox.; IA *vs* bact.



564 Cnidaria *Sarcophyton glaucum* // Ximao Island, Hainan Province, China // Ximaoglaucumins A - F, new cembranoids with anti-inflammatory activities from the South China Sea soft coral *Sarcophyton glaucum*
1335 // R // sarcophytolol // correction of known MNP; trivial name sarcotrocheliol is now redudant.

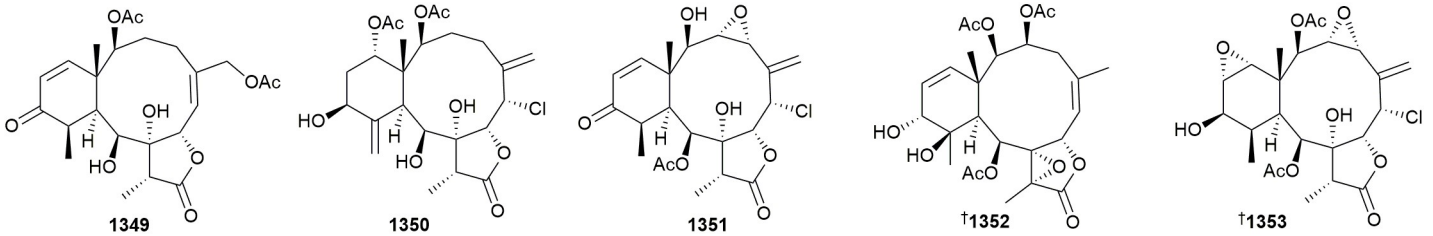
576 Cnidaria *Briareum asbestinum* // Yucatan Peninsula, Mexico // Absolute configuration by vibrational circular dichroism of anti-inflammatory macrolide briarane diterpenoids from the Gorgonian *Briareum asbestinum*
1336 // N // 2-butyryloxybriarane B-3 // NT.
1337 // N // 9-acetylbriarenolide S // NT.
1338 // N // briarenolide W // IA inhib. activation NF-κB by LPS.
1339 // N // 12-isobriarenolide P // NT.

578 Cnidaria *Briareum excavatum* // Lanyu Island, Taiwan // Briarenol L, a new chlorine-containing briarane from *Briareum excavatum* (Briareidae)
1340 // N // briarenol L // IA *vs* anti-inflam.

579 Cnidaria *Briareum excavatum*, Cnidaria *Briareum stechei* // Aquaculture specimens // Briarenols O and P: novel briaranes from a cultured octocoral *Briareum excavatum* (Briareidae)
1341 // N // briarenol O // mod. active pro-inflam.
1342 // N // briarenol P // IA *vs* anti-inflam.

580 Cnidaria *Briareum stechei* // Ie Island, Okinawa, Japan // Chlorinated briarane diterpenoids from octocoral *Briareum stechei* (Kükenthal, 1908)
1343 // N // briarenol U // mod. active pro-inflam.
1344 // N // briarenol V // IA *vs* anti-inflam.

581 Cnidaria *Briareum stechei* // Aquaculture specimens // Briarenols W–Z: chlorine-containing polyoxygenated briaranes from octocoral *Briareum stechei* (Kükenthal, 1908)
1345 // N // briarenol W // IA *vs* anti-inflam.
1346 // N // briarenol X // mod. active pro-inflam.
1347 // N // briarenol Y // IA *vs* anti-inflam.
1348 // N // briarenol Z // IA *vs* anti-inflam.



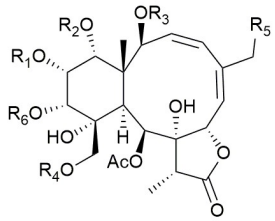
582 Cnidaria *Briareum stechei* // Ie Island, Okinawa, Japan // 8-Hydroxybriaranes from octocoral B*riareum stechei* (Briareidae) (Kükenthal, 1908)
1349 // N // briastecholide A // IA *vs* anti-inflam.

583 Cnidaria *Briareum stechei* // Ie Island, Okinawa, Japan // Briarane-related diterpenoids from octocoral *Briareum stechei*
1350 // N // briastecholide B // IA *vs* NO prod.
1351 // N // briastecholide C // IA *vs* NO prod.; 2-O-deacetyl briarenol R.

578 Cnidaria *Briareum excavatum* // Lanyu Island, Taiwan // Briarenol L, a new chlorine-containing briarane from *Briareum excavatum* (Briareidae)
1352 // R // briarenol G // IA *vs* anti-inflam.; XRD.

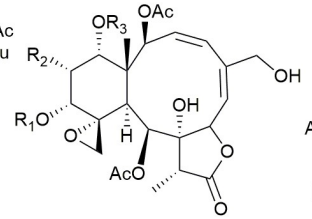
582 Cnidaria *Briareum stechei* // Ie Island, Okinawa, Japan // 8-Hydroxybriaranes from octocoral B*riareum stechei* (Briareidae) (Kükenthal, 1908)
1353 // R // solenolide C // IA *vs* anti-inflam.; XRD.

580 Cnidaria *Briareum stechei* // Ie Island, Okinawa, Japan // Chlorinated briarane diterpenoids from octocoral *Briareum stechei* (Kükenthal, 1908)
1354 // R // solenolide B // IA *vs* anti-inflam.; corrected to β-acetoxy orientation.

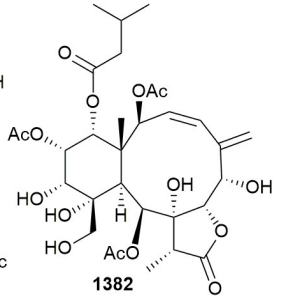


1355 R_1 = Ac, R_2 = CO*i*Bu, R_3 = Ac, R_4 = H, R_5 = OH, R_6 = H
1356 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OH, R_6 = H
1357 R_1 = H, R_2 = CO*i*Bu, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = H
1358 R_1 = Ac, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = H
1359 R_1 = Ac, R_2 = CO*i*Bu, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = Ac
1360 R_1 = Ac, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OEt, R_6 = CO*i*Bu
1361 R_1 = CO*i*Bu, R_2 = CO*i*Bu, R_3 = Ac, R_4 = H, R_5 = OAc, R_6 = Ac
1362 R_1 = Ac, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = CO*i*Bu
1363 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = H
1364 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OH, R_6 = CO*i*Bu
1365 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OEt, R_6 = CO*i*Bu
1366 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = OCO*i*Bu, R_6 = CO*i*Bu

1367 R_1 = CO*i*Bu, R_2 = Ac, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = OH, R_6 = H
1368 R_1 = Ac, R_2 = Ac, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = OCO*i*Bu, R_6 = Ac
1369 R_1 = Ac, R_2 = Ac, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = OEt, R_6 = CO*i*Bu
1370 R_1 = Ac, R_2 = CO*i*Bu, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = OH, R_6 = H
1371 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = Ac, R_5 = OCO*i*Bu, R_6 = H
1372 R_1 = CO*i*Bu, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = Cl, R_6 = CO*i*Bu
1373 R_1 = Ac, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = Cl, R_6 = H
1374 R_1 = Ac, R_2 = Ac, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = Cl, R_6 = H
1375 R_1 = Ac, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = Cl, R_6 = CO*i*Bu
1376 R_1 = Ac, R_2 = CO*i*Bu, R_3 = Ac, R_4 = Ac, R_5 = Cl, R_6 = H
1377 R_1 = H, R_2 = Ac, R_3 = Ac, R_4 = H, R_5 = Cl, R_6 = CO*i*Bu
1378 R_1 = CO*i*Bu, R_2 = Ac, R_3 = $COCH_2OCO$*i*Bu, R_4 = H, R_5 = Cl, R_6 = H

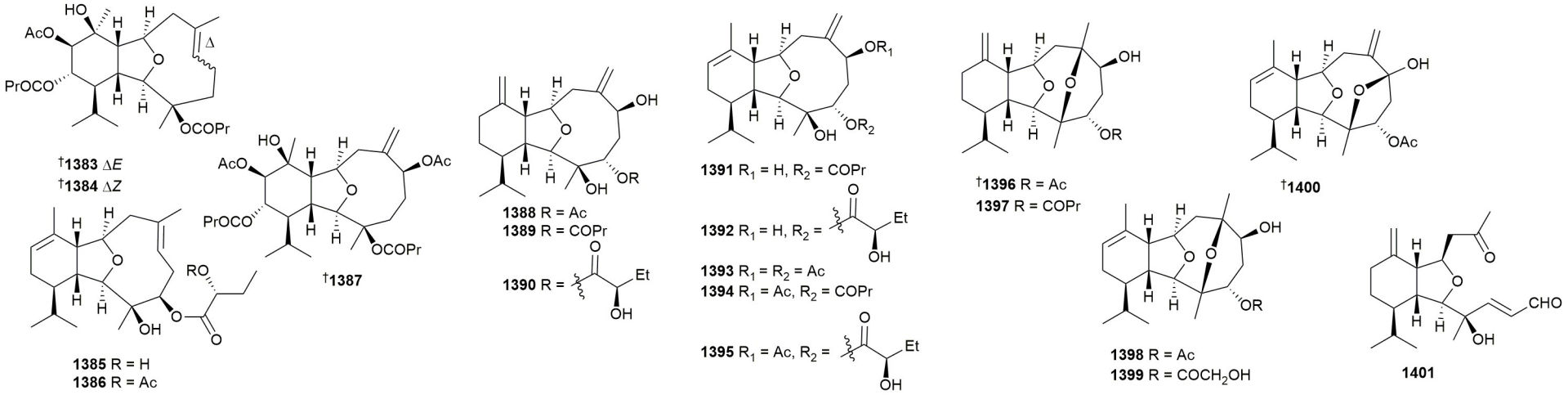


1379 R_1 = CO*i*Bu, R_2 = H, R_3 = Ac
1380 R_1 = H, R_2 = OCO*i*Bu, R_3 = Ac
1381 R_1 = Ac, R_2 = H, R_3 = CO*i*Bu



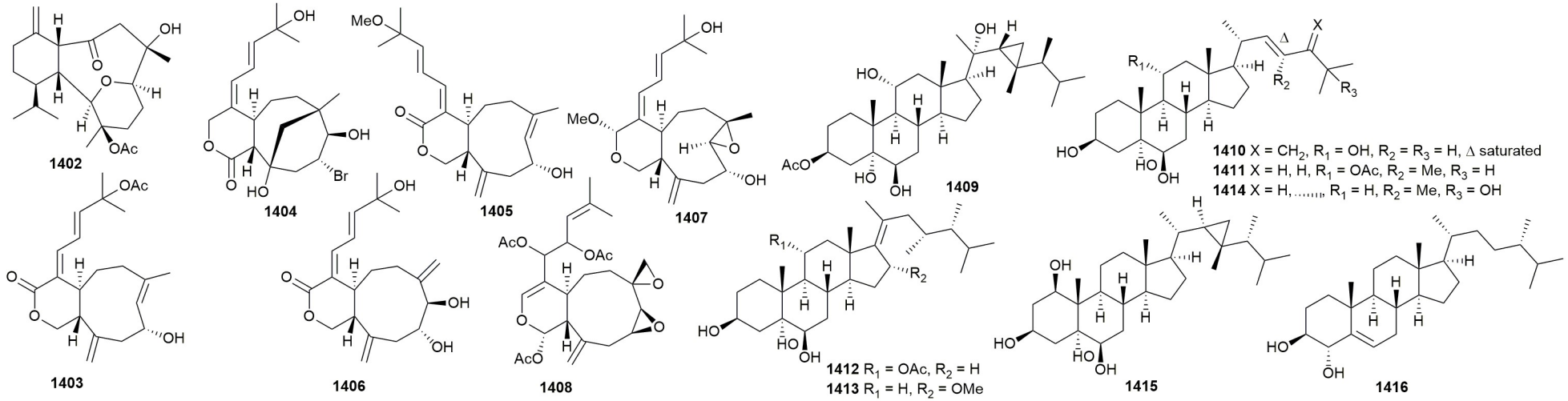
1382

584 Cnidaria *Dichotella gemmacea* // Weizhou island, China // Briarane-type diterpenoids suppress osteoclastogenisis by regulation of Nrf2 and MAPK/NF-kB signaling pathway
1355 // N // gemmolide A // weak inhib. osteoclastogenesis; XRD.
1356 // N // gemmolide B // weak inhib. osteoclastogenesis.
1357 // N // gemmolide C // weak inhib. osteoclastogenesis.
1358 // N // gemmolide D // weak inhib. osteoclastogenesis.
1359 // N // gemmolide E // IA *vs* osteoclastogenesis.
1360 // N // gemmolide F // weak inhib. osteoclastogenesis.
1361 // N // gemmolide G // weak inhib. osteoclastogenesis.
1362 // N // gemmolide H // IA *vs* osteoclastogenesis.
1363 // N // gemmolide I // weak inhib. osteoclastogenesis.
1364 // N // gemmolide J // IA *vs* osteoclastogenesis.
1365 // N // gemmolide K // cytotox. *vs* bone marrow macrophages.
1366 // N // gemmolide L // cytotox. *vs* bone marrow macrophages.
1367 // N // gemmolide M // IA *vs* osteoclastogenesis.
1368 // N // gemmolide N // weak inhib. osteoclastogenesis.
1369 // N // gemmolide O // IA *vs* osteoclastogenesis.
1370 // N // gemmolide P // IA *vs* osteoclastogenesis.
1371 // N // gemmolide Q // weak inhib. osteoclastogenesis.
1372 // N // gemmolide R // IA *vs* osteoclastogenesis.
1373 // N // gemmolide S // IA *vs* osteoclastogenesis.
1374 // N // gemmolide T // IA *vs* osteoclastogenesis.
1375 // N // gemmolide U // IA *vs* osteoclastogenesis.
1376 // N // gemmolide V // IA *vs* osteoclastogenesis.
1377 // N // gemmolide W // weak inhib. osteoclastogenesis.
1378 // N // gemmolide X // weak inhib. osteoclastogenesis.
1379 // N // gemmolide Y // IA *vs* osteoclastogenesis.
1380 // N // gemmolide Z // IA *vs* osteoclastogenesis.
1381 // N // gemmolide Z1 // weak inhib. osteoclastogenesis.
1382 // N // gemmolide Z2 // IA *vs* osteoclastogenesis.

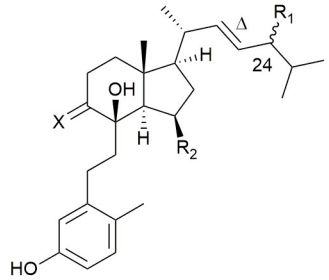


585 Cnidaria *Klyxum flaccidum* // Ximao Island, Hainan Province, China // Klyflaccilins B-T, polyoxgenated eunicellins from the soft coral *Klyxum flaccidum*

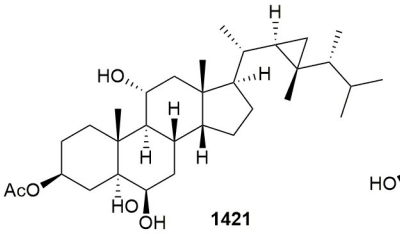
1383 // N // klyflaccilin B // NT; XRD.
1384 // N // klyflaccilin C // NT; XRD.
1385 // N // klyflaccilin D // NT.
1386 // N // klyflaccilin E // NT.
1387 // N // klyflaccilin F // NT; XRD.
1388 // N // klyflaccilin G // NT.
1389 // N // klyflaccilin H // NT.
1390 // N // klyflaccilin I // NT.
1391 // N // klyflaccilin J // NT.
1392 // N // klyflaccilin K // NT.
1393 // N // klyflaccilin L // NT.
1394 // N // klyflaccilin M // NT.
1395 // N // klyflaccilin N // NT.
1396 // N // klyflaccilin O // NT; XRD.
1397 // N // klyflaccilin P // NT.
1398 // N // klyflaccilin Q // NT.
1399 // N // klyflaccilin R // NT.
1400 // M // klyflaccilin S // NT; XRD.
1401 // N // klyflaccilin T // NT.



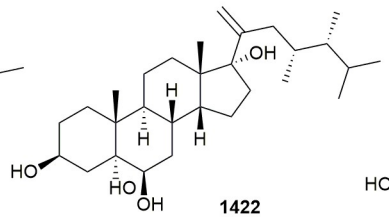
561 Cnidaria *Sinularia multiflora* // Xisha Islands, South China Sea // Terpenoids from the South China Sea soft coral *Sinularia multiflora*
1402 // N // multifloralin // IA *vs* 6 HTCLs and 1 nMCL; inhib. barnacle cyprid settlement.
586 Cnidaria *Asterospicularia laurae* // Southern Taiwan // New secondary metabolite with cytotoxicity from spawning soft coral *Asterospicularia laurae* in Taiwan
1403 // N // asterolaurin N // IA *vs* 4 HTCLs.
587 Cnidaria *Asterospicularia laurae* // Orchid Island, Taiwan // Targeted isolation of xenicane diterpenoids from Taiwanese soft coral *Asterospicularia* laurae
1404 // N // asterolaurin O // IA *vs* 3 HTCLs.
1405 // N // asterolaurin P // IA *vs* 3 HTCLs.
1406 // N // asterolaurin Q // IA *vs* 3 HTCLs.
1407 // N // asterolaurin R // IA *vs* 3 HTCLs.
588 Cnidaria *Xenia umbellata* // Jeddah, Red Sea coast, Saudi Arabia // Antiproliferative isoprenoid derivatives from the Red Sea Alcyonacean *Xenia umbellata*
1408 // N // xeniolide O // IA to weak cytotox. *vs* 3 HTCLs.
1409 // N // gorgst-3β,5α,6β,11α,20(*S*)-pentol-3-monoacetate // IA *vs* 3 HTCLs.
589 Cnidaria *Sarcophyton ehrenbergi* // Van Phong Bay, Khanh Hoa province, Vietnam // Polyhydroxylated steroids from the Vietnamese soft coral *Sarcophyton ehrenbergi*
1410 // N // ehrensteroid A // IA *vs* 5 HTCLs.
1411 // N // ehrensteroid B // IA *vs* 5 HTCLs.
1412 // N // ehrensteroid C // IA *vs* 5 HTCLs.
1413 // N // ehrensteroid D // IA *vs* 5 HTCLs.
1414 // N // ehrensteroid E // IA *vs* 5 HTCLs.
1415 // N // ehrensteroid F // IA *vs* 5 HTCLs.
590 Cnidaria *Sinularia sandensis* // Aquaculture specimens // Sterol constituents from a cultured octocoral *Sinularia sandensis* (Verseveldt 1977)
1416 // N // (24*S*)-24-methylcholest-5-en-3β,4α-diol // IA *vs* anti-inflam.



1417 24*S**, R_1 = Me, R_2 = H, X = H, ····OH
1418 24*R**, R_1 = Me, R_2 = H, X = H, ····OH Δ saturated
1419 R_1 = H, R_2 = H, X = O
1420 24*S**, R_1 = Me, R_2 = OH, X = O



1421



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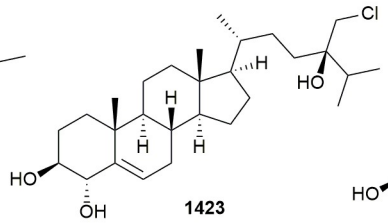
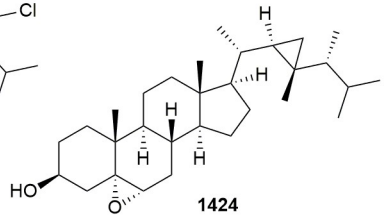


1423

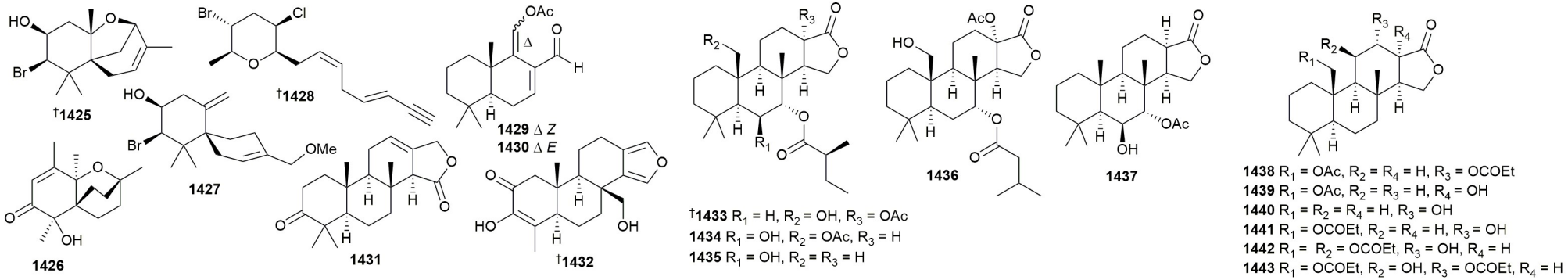


1424

591 Cnidaria *Verrucella umbraculum* // Yongxing Island, South China Sea // Immunosuppressive 9,10-secosteroids from the gorgonian *Verrucella umbraculum* collected in the South China Sea
1417 // N // verrucellol A // weak activ. *vs* immunomod.
1418 // N // verrucellol B // weak activ. *vs* immunomod.
1419 // N // verrucellol C // weak activ. *vs* immunomod.
1420 // N // verrucellol D // IA *vs* immunomod.

592 Cnidaria *Heteroxenia fuscescens* // National Institute of Oceanography and Fisheries, Hurghada, Egypt // Two new polyhydroxylated steroids from Egyptian soft coral *Heteroxenia fuscescens* (Fam.; Xeniidae)
1421 // N // 3β-acetoxy-gorgost-5α,6β,11α-triol // NT.
1422 // M // (23*R*)-methylergosta-20-ene-3β,5α,6β,17α-tetrol // IA *vs* 1 HTCL.

542 Cnidaria *Sinularia brassica* // Van Phong bay, Khanh Hoa province, Vietnam // Isolation of sesquiterpenoids and steroids from the soft coral *Sinularia brassica* and determination of their absolute configuration
1423 // N // (24*R*)-28-chloroergost-5-ene-3β,4α,24-triol // IA *vs Leishmania donovani*; IA *vs* 2 bact. and 1 fungal strain.
1424 // N // 5α,6α-epoxygorgosterol // IA *vs L. donovani*; IA *vs* 2 bact. and 1 fungal strain.



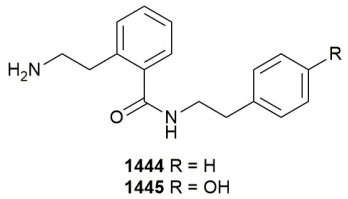
606 Mollusca *Aplysia dactylomela* // Thanh Hoa sea, Vietnam // Aplydactylonins A-C, three new sesquiterpenes from the Vietnamese sea hare *Aplysia dactylomela* and their cytotoxicity
1425 // N // aplydactylonin A // IA *vs* 3 HTCLs; XRD.
1426 // N // aplydactylonin B // IA to weak cytotox. *vs* 3 HTCLs; induces apoptosis and necrosis.
1427 // N // aplydactylonin C // IA *vs* 3 HTCLs.

607 Mollusca *Aplysia oculifera* // * // Asymmetric Total Synthesis and Determination of the Absolute Configuration of (+)-Srilankenyne via Sequence-Sensitive Halogenations Guided by Conformational Analysis
1428 // R // (+)-srilankenyne // asymmetric synth.

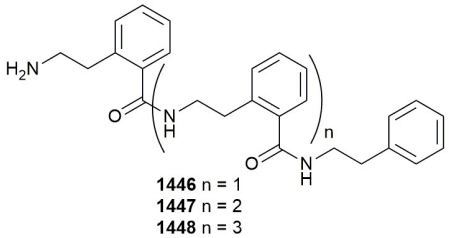
614 Mollusca *Ardeadoris rubroannulata* // Hancock Shoal, Coolum, S.E. Queensland, Australia // Oxygenated sesquiterpenes from the Indo-Pacific nudibranch *Ardeadoris rubroannulata*: structure revision of pu'ulenal
1429 // R // pu'ulenal // NT; XRD; *Z* olefin.
1430 // N // isopu'ulenal // NT; *E* olefin.

615 Mollusca *Glossodoris (Doriprismatica) atromarginata* // Weizhou Island, South China Sea // The chemical and chemo-ecological studies on Weizhou nudibranch *Glossodoris atromarginata*
1431 // N // $C_{20}H_{28}O_3$ // NT.
1432 // R // $C_{19}H_{23}O_4$ // NT; abs. config. determ.

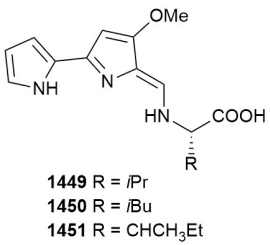
616 Mollusca *Goniobranchus aureopurpureus*, Mollusca *Goniobranchus* sp // Nelson Bay, New South Wales, Australia // Expanding the repertoire of spongian-16-one derivatives in Australian nudibranchs of the genus *Goniobranchus* and evaluation of their anatomical distribution
1433 // N // (–)-13-acetoxy-20-hydroxy-7α-oxyspongian-16-one-7α-(2-methyl)-butanoate // NT; XRD.
1434 // N // (–)-20-acetoxy-6β-hydroxy-7α-oxyspongian-16-one-7α-(2-methyl)-butanoate // NT.
1435 // N // (–)-6β-hydroxy-7α-oxyspongian-16-one-7α-(2-methyl)-butanoate // NT.
1436 // N // (–)-13-acetoxy-20-hydroxy-7α-oxyspongian-16-one-7α-(3-methyl)-butanoate // NT; XRD.
1437 // N // (–)-7α-acetoxy-6β-hydroxyspongian-16-one // NT.
1438 // N // (–)-20-acetoxy-12α-oxyspongian-16-one-12α-propionate // NT.
1439 // N // (–)-20-acetoxy-13-hydroxyspongian-16-one // NT.
1440 // N // (–)-12-hydroxyspongian-16-one // NT.
1441 // N // (–)-12-hydroxy-20-oxyspongian-16-one-20-propionate // NT.
1442 // N // (–)-12-hydroxy-11,20-dioxyspongian-16-one-11,20-dipropionate // NT.
1443 // N // (–)-11-hydroxy-12,20-dioxyspongian-16-one-12,20-dipropionate // NT.



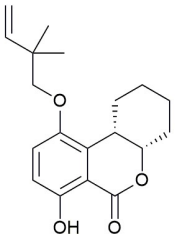
1444 R = H
1445 R = OH



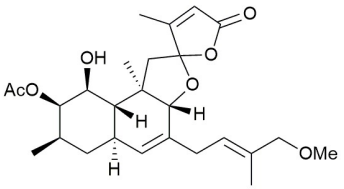
1446 n = 1
1447 n = 2
1448 n = 3



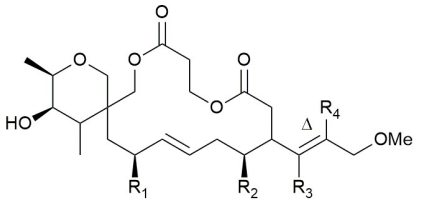
1449 R = *i*Pr
1450 R = *i*Bu
1451 R = $CHCH_3Et$



1452



1453



1454 R_1 = H, R_2 = OH, R_3 = H, R_4 = Et Δ saturated
1455 R_1 = Et, R_2 = H, R_3 = Me, R_4 = H

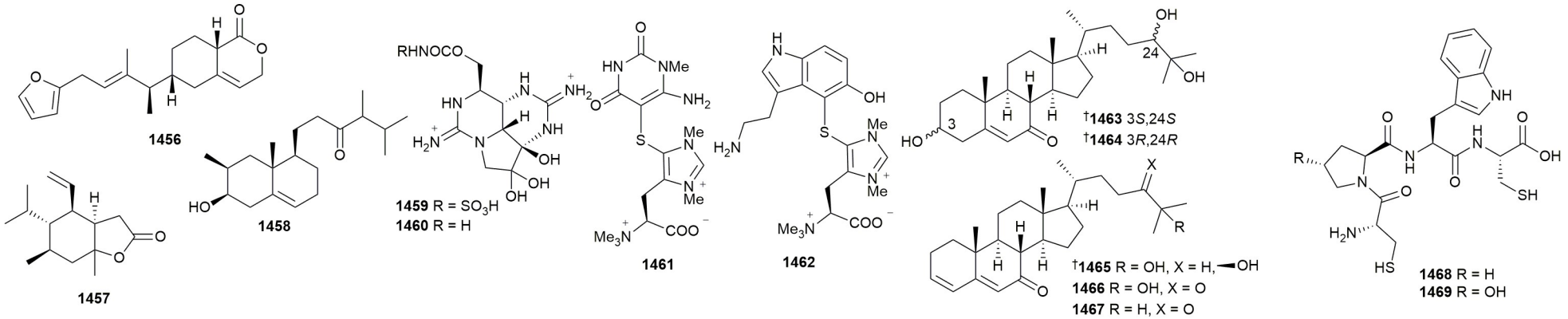
617 Mollusca *Pleurobranchus forskalii*, Chordata *Didemnum molle* // Lomousa Reef, Solomon Islands // Nicotinic acetylcholine receptor partial antagonist polyamides from tunicates and their predatory sea slugs
1444 // N // molleamine A // IA *vs* DRG neuron depolaris.; total synth.
1445 // N // molleamine B // IA *vs* DRG neuron depolaris.
1446 // N // molleamine C // mod. activ. *vs* DRG neuron depolaris.; antagonist of nAChR; mod. activ. *in vivo vs* pain; total synth.
1447 // N // molleamine D // mod. activ. *vs* DRG neuron depolaris.
1448 // N // molleamine E // mod. activ. *vs* DRG neuron depolaris.

618 Mollusca *Roboastra ernsti*, Mollusca *Tyrannodoris ernsti* // Ilha dos Pargos, Cabo Frio, Brazil // Metabolomics reveals minor tambjamines in a marine invertebrate food chain
1449 // N // tambjamine M // NT; total synth.
1450 // N // tambjamine N // NT; total synth.
1451 // N // tambjamine O // NT; total synth.

621 Mollusca *Chicoreus ramosus* // Tuticorin, India // First report of antioxidant 1H-benzochromenone from muricid gastropod *Chicoreus ramosus* as dual inhibitors of pro-inflammatory 5-lipoxygenase and carbolytic enzymes
1452 // N // 6-(2′,2′-dimethyl)-3′-en-1′-yl-1′-oxy)-3-hydroxy-1H-benzo[c]chromene-2(10aH)-one // IA *vs* anti-inflam.

622 Mollusca *Sepia pharaonis* // Cochin, India // Antioxidant spiropharanone, an undescribed variant of trans-decalin spiro-γ -lactone, from pharaoh cuttlefish *Sepia pharaonis*: twin inhibitors of inflammatory 5-lipoxygenase and serine protease dipeptidyl peptidase-4
1453 // N // spiropharanone // IA *vs* anti-inflam.

623 Mollusca *Cistopus indicus* // Cochin, India // Cistobislactones A-B, two sixteen-membered spiro-linked macrocylic bislactones from marine octopus *Cistopus indicus*: new anti-inflammatory agents attenuate arachidonate 5-lipoxygenase
1454 // N // cistobislactone A // IA *vs* anti-inflam.
1455 // N // cistobislactone B // IA *vs* anti-inflam.



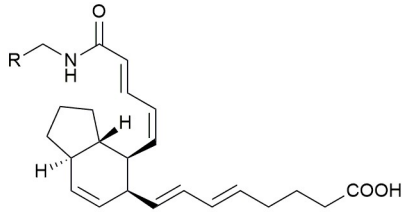
624 Mollusca *Uroteuthis duvaucelii* // Southwest Kerala State, India // Antioxidative oxygenated terpenoids with bioactivities against pro-inflammatory inducible enzymes from Indian squid, *Uroteuthis* (*Photololigo*) *duvaucelii*
1456 // N // 6-((*E*)-12-(furan-13-yl)-10-methylpent-10-en-9-yl)-6,7,8,8a-tetrahydro-3*H*-isochromen-1-(5*H*)-one // IA *vs* anti-inflam.
1457 // N // hexahydro-5-isopropyl-6,7a-dimethyl-4-vinylbenzofuran-2(3*H*)-one // IA *vs* anti-inflam.
1458 // N // 11-(1,2,3,4,7,8,9,10-octahydro-3-hydroxy-2,10-dimethylnaphthalen-9-yl)-14,15-dimethyl hexan-13-one // IA *vs* anti-inflam.

625 Mollusca *Patinopecten yessoensis*, Mollusca *Mizuhopecten yessoensis* // Sanriku, North-eastern Japan // Two new skeletal analogues of saxitoxin found in the scallop, P*atinopecten yessoensis*, as possible metabolites of paralytic shellfish toxins
1459 // N // M5-hemiaminal // NT.
1460 // N // M6-hemiaminal // IA *vs* Na_v blocking activity.

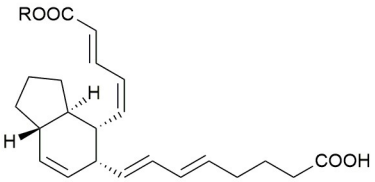
647 Mollusca *Conus imperialis* // * // Small-molecule mimicry hunting strategy in the imperial cone snail, *Conus imperialis*
1461 // N // conazolium A // nAChR antagonist; mimics native worm pheromones.
1462 // N // conazolium B // NT.

648 Mollusca *Conus geographus* // Sogod, Cebu, Philippines // Neuroactive type-A γ-aminobutyric acid receptor allosteric modulator steroids from the hypobranchial gland of marine mollusk, *Conus geographus*
1463 // N // conosteroid A // mod. activ. as negative allosteric modulator of GABA(A)-R
1464 // N // conosteroid B // mod. activ. as negative allosteric modulator of GABA(A)-R
1465 // N // conosteroid C // mod. activ. as negative allosteric modulator of GABA(A)-R
1466 // N // conosteroid D // mod. activ. as negative allosteric modulator of GABA(A)-R
1467 // N // conosteroid E // mod. activ. as negative allosteric modulator of GABA(A)-R

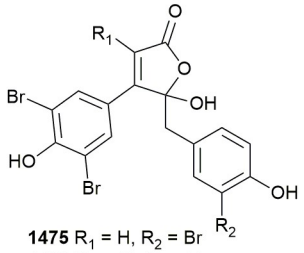
649 Mollusca *Conus lividus* // * // The Redox-Active Conopeptide Derived from the Venom Duct Transcriptome of *Conus lividus* Assists in the Oxidative Folding of Conotoxin
1468 // N // Li504 // NT.
1469 // N // Li520 // disulfide isomerase activity.



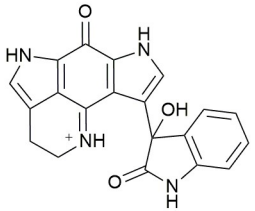
†**1470** R = *i*Pr
†**1471** R = CH_2Ph
†**1472** R = CH(Me)Et



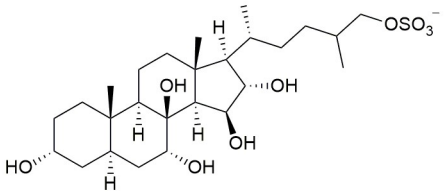
†**1473** R = Me
†**1474** R = H



1475 R_1 = H, R_2 = Br
1476 R_1 = Cl, R_2 = H



1477



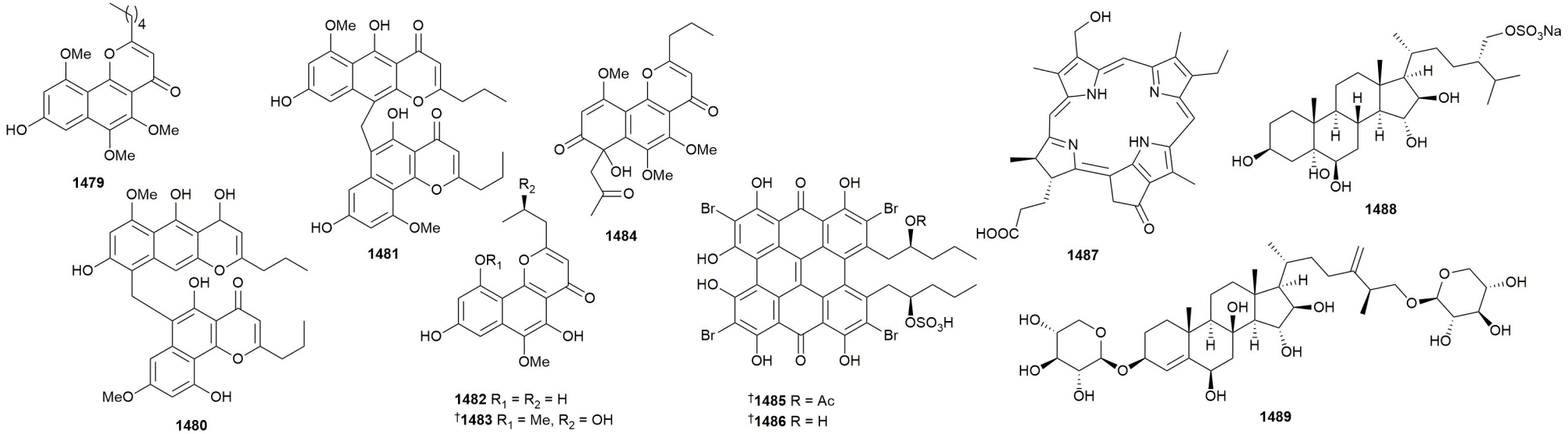
1478

668 Chordata *Didemnum* sp // South Sea of Korea // Antibacterial bicyclic fatty acids from a Korean colonial tunicate *Didemnum* sp.
1470 // N // $C_{26}H_{37}NO_3$ // IA *vs S. aureus.*
1471 // N // $C_{30}H_{37}NO_3$ // weak activ. *vs S. aureus*.
1472 // N // $C_{27}H_{39}NO_3$ // IA *vs S. aureus.*
1473 // N // $C_{23}H_{30}O_4$ // IA *vs S. aureus.*
1474 // N // $C_{22}H_{28}O_4$ // NT.

669 Chordata *Synoicum kuranui* // Spirits Bay, Great Barrier Island, New Zealand // Hydrated rubrolides from the New Zealand tunicate *Synoicum kuranui*
1475 // N // rubrolide V // IA *vs* 3 bact. strains; IA *vs* HCT-116.
1476 // N // rubrolide W // IA *vs* 3 bact. strains; IA *vs* HCT-116.

670 Chordata *Clavelina* sp // Ko Domani, Thailand // A new bispyrroloiminoquinone alkaloid from a Thai collection of *Clavelina* sp.
1477 // N // 16-hydroxy-17-oxindole wakayin // weak activ. *vs* NCI 60 CL.

671 Chordata *Sycozoa cerebriformis* // Solitary Islands, Australia // Sycosterol A, an α-synuclein inhibitory sterol from the Australian ascidian *Sycozoa cerebriformis*
1478 // N // sycosterol A // mod. inhib. α-synuclein aggregation.



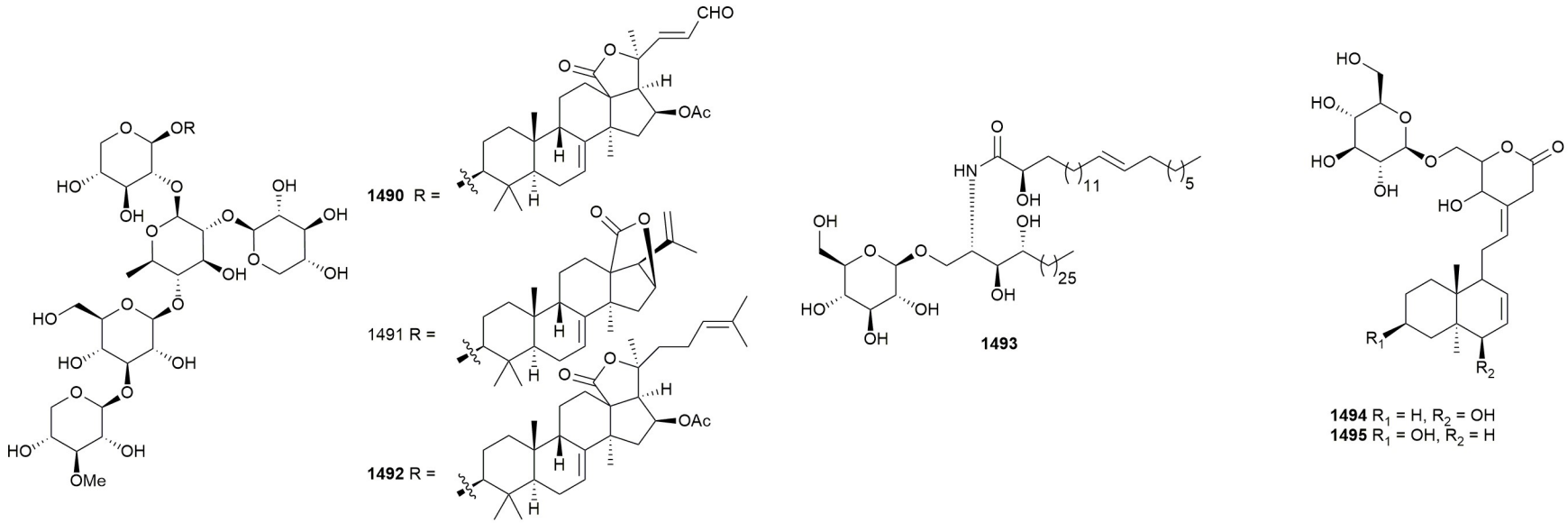
693 Echinodermata *Colobometra perspinosa* // Hengchun Peninsula, South China Sea // A new angular naphthopyrone from crinoid *Colobometra perspinosa*
1479 // N // 8-hydroxy-5,6,10-trimethoxy-2-pentyl-4H-naphtho[1,2-b]pyran-4-one // IA *vs* AI.

694 Echinodermata *Comanthus delicata* // Van Phong, Khanhhoa, Vietnam // Naphthopyrone and anthraquinone derivatives from *Comanthus delicata*
1480 // N // delicapyron A // IA *vs* 5 HTCLs.
1481 // N // delicapyron B // IA *vs* 5 HTCLs.
1482 // N // delicapyron C // IA *vs* 5 HTCLs.
1483 // N // delicapyron D // IA to weak cytotox. *vs* 5 HTCLs.
1484 // N // delicapyron E // IA *vs* 5 HTCLs; rac.

695 Echinodermata *Hypalocrinus naresianus* // Shima Spur, Kumano-nada Sea, Japan // Structure and absolute configuration of phenanthro-perylene quinone pigments from the deep-sea crinoid *Hypalocrinus naresianus*
1485 // N // gymnochrome H // NT.
1486 // N // monosulfated gymnochrome A // NT.

696 Echinodermata *Ophiura sarsii* // Bogdanovich Bay, Russky Island // A cytotoxic porphyrin from North Pacific brittle star *Ophiura sarsii*
1487 // M // (3*S*,4*S*)-14-ethyl-9-(hydroxymethyl)-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoic acid // IA *vs* 6 HTCLs and 1 nMCL.

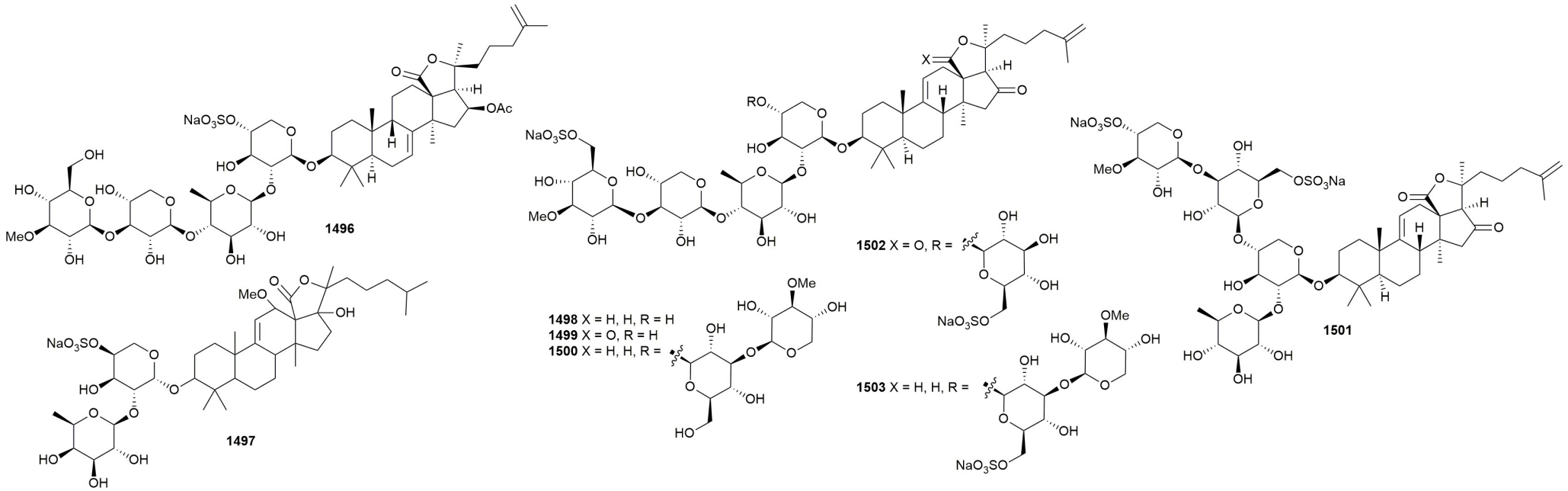
699 Echinodermata *Asterias microdiscus* // Chukchi Sea // Polar steroid compounds from the Arctic starfish *Asterias microdiscus* and their cytotoxic properties against normal and tumor cells *in vitro*
1488 // N // microdiscusol G // NT.
1489 // N // microdiscusoside A // NT.



700 Echinodermata *Solaster pacificus* // Iturup Island, Sea of Okhotsk // New triterpene glycosides from the Far Eastern starfish Solaster pacificus and their biological activity
1490 // N // pacificusoside A // IA *vs* 4 HTCLs.
1491 // N // pacificusoside B // IA *vs* 4 HTCLs.
1492 // N // pacificusoside C // IA to weak cytotox. *vs* 4 HTCLs.

701 Echinodermata *Holothuria spinifera* // Sharm El Sheikh, Egyptian Red Sea // Holospiniferoside: a new antitumor cerebroside from the Red Sea cucumber *Holothuria spinifera*: *in vitro* and *in silico* studies
1493 // N // holospiniferoside // IA *vs* 1 HTCL and 1 nMCL.

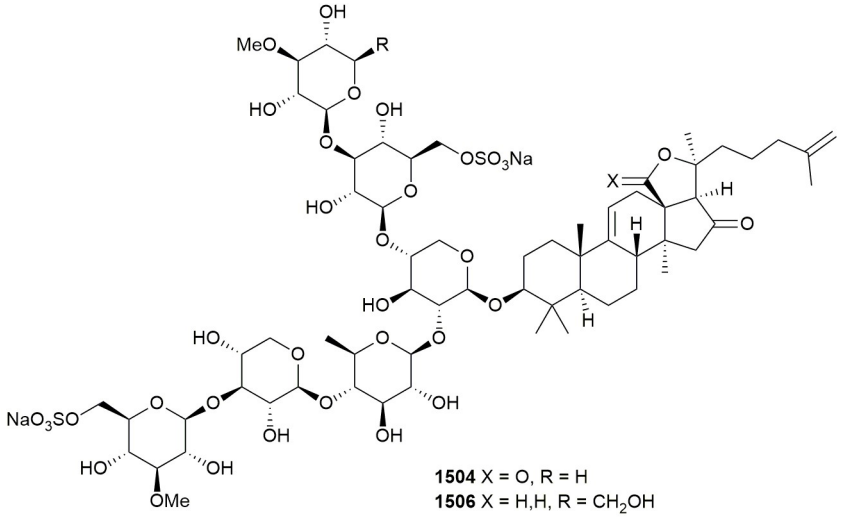
702 Echinodermata *Holothuria scabra* // Prachuap Khiri Khan province, Thailand // Diterpene glycosides from *Holothuria scabra* exert the α-synuclein degradation and neuroprotection against α-synuclein-mediated neurodegeneration in *C. elegans* model
1494 // N // HSEA-P1 // weak inhib. α-synuclein aggregation.
1495 // N // HSEA-P2 // weak inhib. α-synuclein aggregation.

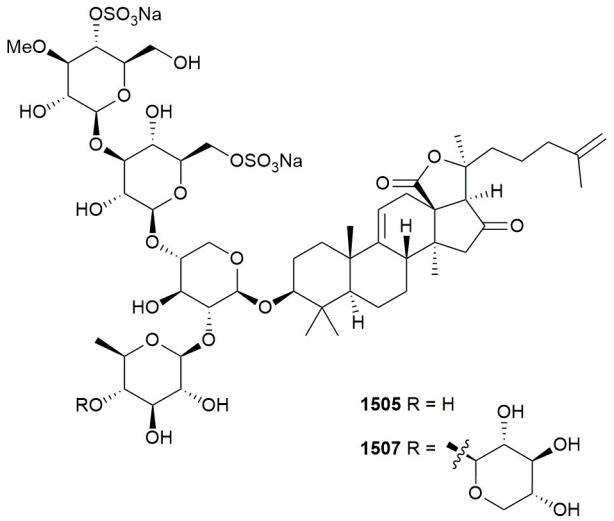


703 Echinodermata *Colochirus quadrangularis* // Guangdong province, China // A new sulfated triterpene glycoside from the sea cucumber *Colochirus quadrangularis*, and evaluation of its antifungal, antitumor and immunomodulatory activities
1496 // N // coloquadranoside A // IA to weak activ. *vs* 4 fungal strains; weak to mod. activ. *vs* 8 HTCLs; *in vivo* activ. 2 HTCLs.

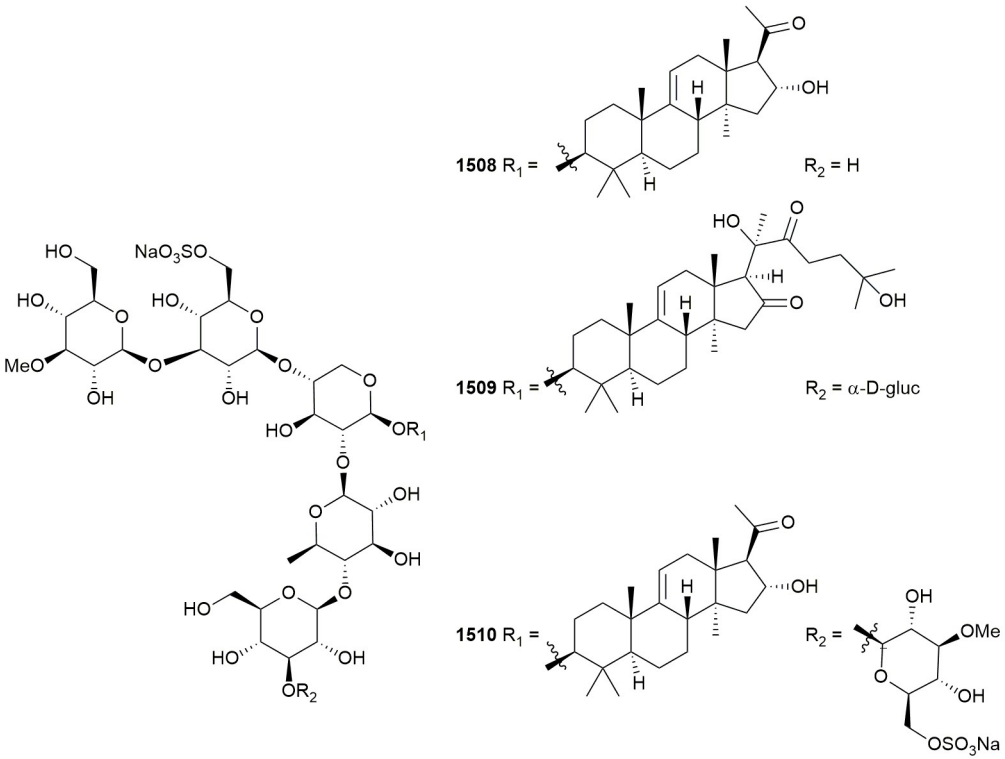
704 Echinodermata *Holothuria atra* // Jeddah, Saudi Arabia // Sulfated triterpene glycosides from the Saudi Red Sea cucumber *Holothuria atra* with antioxidant and cytotoxic activities
1497 // N // echinoside B 12-*O*-methyl ether // IA *vs* antioxid.; IA *vs* 1 murine CL.

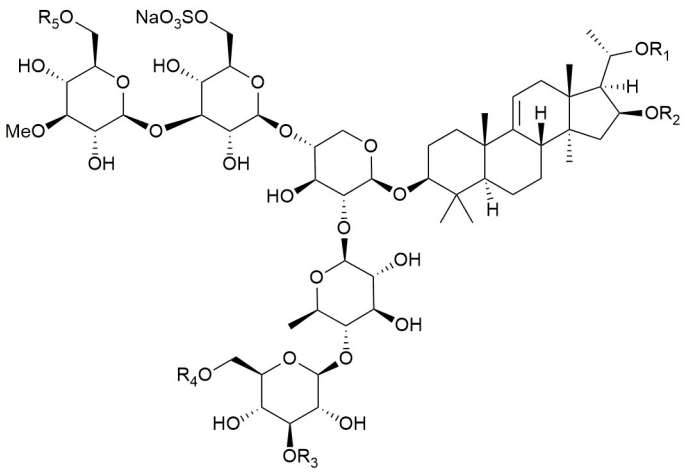
705 Echinodermata *Psolus chitonoides* // North of Bering Island, Bering Sea // Unusual structures and cytotoxicities of chitonoidosides A, A1, B, C, D, and E, six triterpene glycosides from the Far Eastern sea cucumber *Psolus chitonoides*
1498 // N // chitonoidoside A // IA to weak cytotox. *vs* 3 HTCLs; weak hemolytic.
1499 // N // chitonoidoside A1 // IA to weak cytotox. *vs* 3 HTCLs; weak hemolytic.
1500 // N // chitonoidoside B // IA *vs* 3 HTCLs; weak hemolytic.
1501 // N // chitonoidoside C // IA *vs* 3 HTCLs; weak hemolytic.
1502 // N // chitonoidoside D // IA to weak cytotox. *vs* 3 HTCLs; weak hemolytic.
1503 // N // chitonoidoside E // NT.





706 Echinodermata *Psolus chitonoides* // North of Bering Island, Bering Sea // Triterpene glycosides from the Far Eastern sea cucumber *Psolus chitonoides*: chemical structures and cytotoxicities of chitonoidosides E1, F, G, and H
1504 // N // chitonoidoside E1 // IA to mod. cytotox. *vs* 4 HTCLs; mod. hemolytic.
1505 // N // chitonoidoside F // IA to weak cytotox. *vs* 4 HTCLs; weak hemolytic.
1506 // N // chitonoidoside G // IA to weak cytotox. *vs* 4 HTCLs; mod. hemolytic.
1507 // N // chitonoidoside H // IA to weak cytotox. *vs* 4 HTCLs; mod. hemolytic.

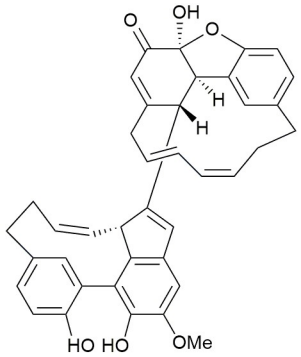




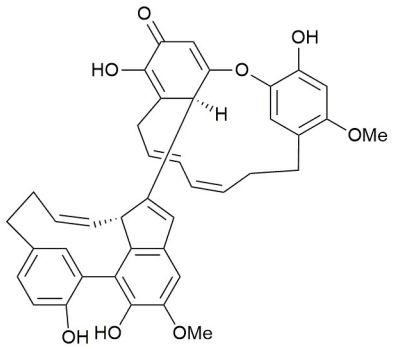
1511 $R_1 = R_2 = Ac$, $R_3 = \alpha$-D-gluc, $R_4 = SO_3Na$, $R_5 = SO_3Na$
1512 $R_1 = R_2 = R_3 = H$, $R_4 = SO_3Na$, $R_5 = SO_3Na$
1513 $R_1 = R_2 = Ac$, $R_3 = H$, $R_4 = SO_3Na$, $R_5 = SO_3Na$
1514 $R_1 = R_3 = H$, $R_2 = Ac$, $R_4 = H$, $R_5 = SO_3Na$
1515 $R_1 = R_2 = R_3 = R_5 = H$, $R_4 = SO_3Na$
1516 $R_1 = R_3 = R_5 = H$, $R_2 = Ac$, $R_4 = SO_3Na$

707 Echinodermata *Thyonidium kurilensis* // Onekotan Island, Kurile Islands // Triterpene glycosides from the Far Eastern sea cucumber *Thyonidium* (=*Duasmodactyla*) *kurilensis* (Levin): the structures, cytotoxicities, and biogenesis of kurilosides A3, D1, G, H, I, I1, J, K, and K1
1508 // N // kuriloside A3 // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1509 // N // kuriloside D1 // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1510 // N // kuriloside G // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1511 // N // kuriloside H // IA *vs* 1 murine TCL, weak cytotox. *vs* 1 nMCL; weak hemolytic.
1512 // N // kuriloside I // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1513 // N // kuriloside I1 // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1514 // N // kuriloside J // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1515 // N // kuriloside K // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.
1516 // N // kuriloside K1 // IA *vs* 1 murine TCL, 1 nMCL; non-hemolytic.

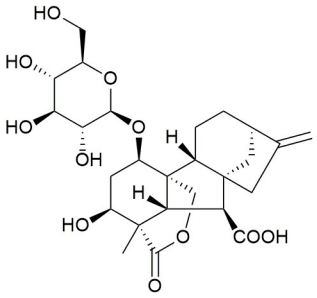
12 Miscellaneous



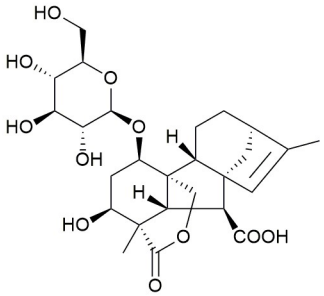
†1517



†1518



1519



1520

725 Tracheophyta *Zostera marina* // Olympiazentrum Schilksee, Kiel, Schleswig-Holstein, Germany // Stable catechol keto tautomers in cytotoxic heterodimeric cyclic diarylheptanoids from the seagrass *Zostera marina*
1517 // N // zosterabisphenone A // IA to weak cytotox. *vs* 2 HTCLs.
1518 // N // zosterabisphenone B // IA *vs* 2 HTCLs.

726 Tracheophyta *Enhalus acoroides* // Xincun Bay, Hainan Province, China // Two novel diterpenes from the stems and leaves of tropical seagrass *Enhalus acoroides* in the South China sea
1519 // N // enhoidin A // IA *vs* 4 HTCLs.
1520 // N // enhoidin B // IA *vs* 4 HTCLs.