Marine natural products (2017) C8NP00092A

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 †. 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 // (* 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 your 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. **Compound numbers** are hyperlinked to a Chemspider entry where available.

1.1 Abbreviations

In the **Biological activity** section the following abbreviations have been used:

Abs. config.	Absolute configuration
AchE	acetylcholine esterease
activ.	Activity
anal.	analysis
AB	antibacterial
antifoul.	antifouling
AF	antifungal
AI	anti-inflammatory
AM	antimicrobial
AO	antioxidant
AV	antiviral
A. niger	*Aspergillus niger*
bact.	bacteria
B. subtilis	*Bacillus subtilis*
BACE 1	beta-site amyloid precursor protein cleaving enzyme 1
calc.	calculation
C. albicans	*Candida albicans*
compar.	Comparison
connect.	connectivity
cytotox.	cytotoxicity/cytotoxic
DFT	density functional theory
degrad.	degradation
deriv.	derivative
determ.	Determined
diffrac.	diffraction
DPPH	2,2-diphenyl-1-picrylhydrazyl
ECD	electronic circular dichroism
E. coli	*Escherichia coli*
estab.	established
expt.	experimental
GSK 3β	glycogen synthase kinase 3β
HSV T1	herpes simplex virus type 1
hum.	human
HTCL	Human Tumour Cell Line
IDO	indoleamine 2,3-dioxygenase
IA	inactive
inhib.	inhibitor/inhibition/inhibitory
insep.	Inseparable
immunomod.	immunomodulatory
isol.	isolated
K. pneumoniae	*Klebsiella pneumoniae*
MIC	minimum inhibitory concentration
M. tuberculosis	*Mycobacterium tuberculosis*
M. smegmatis	*Mycobacterium smegmatis*
mod.	moderate
microb.	microbial, microbe
mixt.	mixture
MRSA	Methicillin Resistant *Staphlococcus aureus*
NRPS	nonribosomal peptide synthase
NO	nitrous oxide
Norm.	normal
NT	not tested
PD	Parkinson's Disease
P. notatum	*Penicillium notatum*
P. falciparum	*Plasmodium falciparum*
prod.	production
PKS	polyketide synthase
prop.	proposed
PTP1B	Protein-Tyrosine Phosphatase 1B
P. aeruginosa	*Pseudomonas aeruginosa*
recept.	receptor
SAR	Structure Activity Relationship(s)
S. cerevisiae	*Saccharomyces cerevisiae*
spec. rot.	specific rotation
S. aureus	*Staphlococcus aureus*
stereochem.	stereochemistry
struct.	structure
synth.	synthesis/synthetic
TRAIL	tumor necrosis factor-related apoptosis-inducing ligand
TRP	Transient Receptor Potential
T. mentagrophytes	*Trichophyton mentagrophytes*
T. brucei	*Trypanosoma brucei*

2 Additional reviews

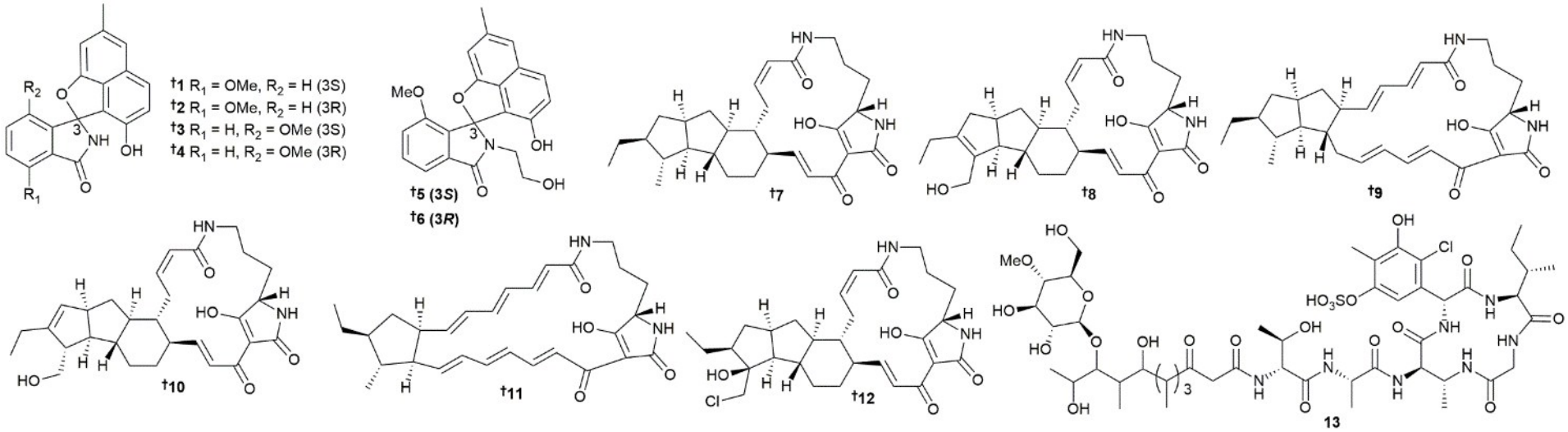
This listing is of reviews not included in the Review highlights section of the MNP review. Their placement here does not necessarily imply a lesser importance of the work described, but more likely that they may be of interest to only a smaller group of readers or have a more limited scope of coverage

s1	general review	Toward the dark matter of natural products
s2	bioactive MNP 2012-2013	Marine pharmacology in 2012-2013: marine compounds with antibacterial, antidiabetic, antifungal, anti-inflammatory, antiprotozoal, antituberculosis, and antiviral activities; affecting the immune and nervous systems, and other miscellaneous mechanisms of action
s3	antibody drug conjugates	Marine antibody-drug conjugates: design strategies and research progress
s4	general review	The impending renaissance in discovery & development of natural products
s5	general review	The natural productome
s6	general review	New modalities for challenging targets in drug discovery
s7	general review	Data resources for the computer-guided discovery of bioactive natural products
s8	analytical methods	Analytical challenges for regulated marine toxins. Detection methods
s9	cold water MNP	Cold-water marine natural products, 2006 to 2016
s10	asian NPs	Survey of natural products reported by Asian research groups in 2016
s11	indonesian mollusc NPs	The potential of Indonesian heterobranchs found around Bunaken Island for the production of bioactive compounds
s12	brazil NPs	The influence of Brazilian biodiversity on searching for human use pharmaceuticals
s13	polar organism NPs	Secondary metabolites from polar organisms
s14	brazil NPs	Organic chemistry in Brazil: its contribution in the total synthesis of natural products since the Brazilian chemical society foundation
s15	μ-Conotoxins	μ-Conotoxins modulating sodium currents in pain perception and transmission: a therapeutic potential
s16	agelastatin alkaloids	Compounds, compositions, and methods of agelastatin alkaloids: patent evaluation of WO2015042239 (A1)
s17	bengamides	The bengamides: a mini-review of natural sources, analogues, biological properties, biosynthetic origins, and future prospects
s18	bicyclic peptdies	Bicyclic peptides as next-generation therapeutics
s19	briarain diterpenes	Briarane diterpenoids isolated from Octocorals between 2014 and 2016
s20	canthaxanthin	Canthaxanthin: from molecule to function
s21	carotenoids	Marine carotenoids: bioactivities and potential benefits to human health
s22	conotoxin classification	Recent advances in conotoxin classification by using machine learning methods
s23	cyclic imines nicotinic Ach R	Cyclic imine toxins from dinoflagellates: a growing family of potent antagonists of the nicotinic acetylcholine receptors
s24	docosahexaenoic acid	Bioactive metabolites of docosahexaenoic acid
s25	fungal cyclic peptides	Structural diversity and biological activities of fungal cyclic peptides, excluding cyclodipeptides
s26	fungi derived cyclodipeptides	Structural diversity and biological activities of the cyclodipeptides from fungi
s27	guanidine NPs	Recent advances in the isolation, synthesis and biological activity of marine guanidine alkaloids
s28	guanidine NPs	Structure, synthesis and biological properties of the pentacyclic guanidinium alkaloids
s29	indoles	Indole diterpenoid natural products as the inspiration for new synthetic methods and strategies
s30	marine venoms	From marine venoms to drugs: efficiently supported by a combination of transcriptomics and proteomics
s31	merotriterpenes	Biogenetic relationships of bioactive sponge merotriterpenoids
s32	mycosporines	Mycosporine-like amino acids: potential health and beauty ingredients

s33	NR peptides	Nonribosomal peptides from marine microbes and their antimicrobial and anticancer potential
s34	oxepane	The oxepane motif in marine drugs
s35	peptdies	Bioactive peptide of marine origin for the prevention and treatment of non-communicable diseases
s36	peptides	Small bioactive peptides for biomaterials design and therapeutics
s37	peptides	Peptides, peptidomimetics, and polypeptides from marine sources: a wealth of natural sources for pharmaceutical applications
s38	peptides	Marine bioactive peptides: types, structures, and physiological functions
s39	peptides	Advances in application of marine bioactive peptides in drug development
s40	peptides	Marine peptides as potential agents for the management of Type 2 diabetes mellitus-A prospect
s41	peptides	Marine-derived bioactive peptides for biomedical sectors: a review
s42	peptides	Emerging biopharmaceuticals from bioactive peptides derived from marine organisms
s43	peptides	Marine peptides as anticancer agents: a remedy to mankind by nature
s44	peptides	Structural diversity of marine cyclic peptides and their molecular mechanisms for anticancer, antibacterial, antifungal, and other clinical applications
s45	peptides	Antitumour bioactive peptides isolated from marine organisms
s46	phakellistatins	Phakellistatins: an underwater unsolved puzzle
s47	phenazines	Recent developments in the isolation, biological function, biosynthesis, and synthesis of phenazine natural products
s48	polyphenols	Polyphenols and their role in obesity management: a systematic review of randomized clinical trials
s49	scaffolds	Scaffold diversity from N-acyliminium ions
s50	sesterterpenoids	The biological activities of sesterterpenoid-type ophiobolins
s51	tetrodotoxin sources	Tetrodotoxin-producing bacteria: detection, distribution and migration of the toxin in aquatic systems
s52	tolyporphin	Tolyporphin-an unusual green chlorin-like dioxobacteriochlorin
s53	biopharmaceutical actinobacteria	Emerging biopharmaceuticals from marine actinobacteria
s54	drugs from actinobacteria	Marine actinobacteria as a drug treasure house
s55	deep sea actinobacteria compounds	Deep sea actinomycetes and their secondary metabolites
s56	actinobacteria - dermacoccus compounds	Are there any other compounds isolated from Dermacoccus spp at all?
s57	rare actinomycete chemistry	Marine rare actinobacteria: isolation, characterization, and strategies for harnessing bioactive compounds
s58	algae derived fungal NPs	Marine Algicolous Endophytic Fungi - A Promising Drug Resource of the Era.
s59	octocoral teprenes	Terpenoids from octocorals of the genus *Pachyclavularia*
s60	cyanobacteria NPs	Extraction and applications of cyanotoxins and other cyanobacterial secondary metabolites
s61	cyanobacteria NPs	Cyanotoxins: producing organisms, occurrence, toxicity, mechanism of action and human health toxicological risk evaluation
s62	cyanobacterial macrolides	A review study on macrolides isolated from cyanobacteria
s63	cyanobacterial peptides	New peptides isolated from marine cyanobacteria, an overview over the past decade
s64	cyanobacterial compounds in discovery	Uncovering potential applications of cyanobacteria and algal metabolites in biology, agriculture and medicine: current status and future prospects
s65	cyanobacterial chemical diversity	Structural diversity, biological properties and applications of natural products from cyanobacteria. A review
s66	evolution of lanthipeptides in cyanobacteria	Evolutionary radiation of lanthipeptides in marine cyanobacteria
s67	holothurian chemistry	Sea cucumber glycosides: chemical structures, producing species and important biological properties
s68	dinoflagellate toxins	Biotechnological and pharmacological applications of biotoxins and other bioactive molecules from dinoflagellates
s69	cone snails	Cone snails: a big store of conotoxins for novel drug discovery
s70	cephalopods	Cephalopods: the potential for their use in medicine
s71	fucaceae NPs	Fucaceae: a source of bioactive phlorotannins
s72	fucaceae NPs	Cystoseira algae (Fucaceae): update on their chemical entities and biological activities

s73	Ecklonia NPs	Recent advances in pharmacological research on Ecklonia species: a review
s74	Lobophora NPs	Biological activities associated to the chemodiversity of the brown algae belonging to genus *Lobophora* (Dictyotales, Phaeophyceae)
s75	sponge chemistry	Structurally unprecedented metabolites from marine sponges
s76	Agelas NPs	Bioactive secondary metabolites from the marine sponge genus Agelas
s77	Hyrtios NPs	Bioactive natural products of marine sponges from the genus *Hyrtios*
s78	Pyhllospongia NPs	Secondary metabolites from the marine sponge genus *Phyllospongia*
s79	sponge derived bacteria	Bacteria from marine sponges: a source of new drugs
s80	microbiome	Marine microbiome as source of natural products
s81	Porphyra NPs	Bioactive compounds of edible purple laver *Porphyra* sp. (Nori)
s82	marine microbes	Marine microorganisms as a promising and sustainable source of bioactive molecules
s83	fungi	Secondary metabolites from Acremonium fungi: diverse structures and bioactivities
s84	marine algae	Marine algae as attractive source to skin care
s85	enzymes in NP biosynth	Aminoacyl-tRNA-utilizing enzymes in natural product biosynthesis
s86	flavid cat redox in biosynth	Flavin-catalyzed redox tailoring reactions in natural product biosynthesis
s87	terpene biosynth	Mining terpenoids production and biosynthetic pathway in thraustochytrids
s88	NRPS	Nonribosomal peptide synthesis-principles and prospects
s89	cembranoid biosynthesis	Polycyclic furanobutenolide-derived cembranoid and norcembranoid natural products: biosynthetic connections and synthetic efforts
s90	biosynthesis in proteobacteria	Investigating the biosynthesis of natural products from marine proteobacteria: a survey of molecules and strategies
s91	molecular engineering	Biosynthesis and molecular engineering of templated natural products
s92	metabolic engineering	Metabolic engineering for the microbial production of marine bioactive compounds
s93	actinomycetes activity	Focused review: cytotoxic and antioxidant potentials of mangrove-derived Streptomyces
s94	antifouling activity actinomycetes	Mini-review: antifouling natural products from marine microorganisms and their synthetic analogs
s95	cosmeceuticals	Marine microbial-derived molecules and their potential use in cosmeceutical and cosmetic products
s96	microalgae functonal food	Microalgae, a potential natural functional food source - a review
s97	functional foods	A review on trend of marine sources for the development of functional foods
s98	antifouling algae	Antifouling compounds from marine macroalgae
s99	alzheimers disease algae	Therapeutic potentials of microalgae in the treatment of Alzheimer's disease
s100	fish cosmaceuticals	Marine fish proteins and peptides for cosmeceuticals: a review
s101	neglected diseases	The role of natural products in drug discovery and development against neglected tropical diseases
s102	antifouling mechanisms	Review on molecular mechanisms of antifouling compounds: an update since 2012
s103	pore forming toxins	Pore-forming toxins in Cnidaria
s104	largazole bioactivity	Largazole analogues as histone deacetylase inhibitors and anticancer agents: an overview of structure-activity relationships
s105	oral bioavailability	Orally absorbed cyclic peptides
s106	voltage gated ion channel active compounds	Guanidinium toxins and their interactions with voltage-gated sodium ion channels
s107	ciguatera poisoning	An updated review of ciguatera fish poisoning: clinical, epidemiological, environmental, and public health management
s108	ion chanel ligands	Ladder-shaped ion channel ligands: current state of knowledge
s109	phycotoxins	Recent trends in marine phycotoxins from Australian coastal waters
s110	contoxins and ion channels	Conotoxins as tools to understand the physiological function of voltage-gated calcium (CaV) channels
s111	p-glycoprotein inhibitors	Natural products as alternative choices for P-glycoprotein (P-gp) inhibition
s112	leishmania	Marine algae as source of novel antileishmanial drugs: a review
s113	PPARα	The potential of natural products for targeting PPARα.
s114	algae cosmeceuticals	Algal bioactive compounds in the cosmeceutical industry: a review

s115	multiple roles of puupehenones	Pleiotropic role of puupehenones in biomedical research
s116	marine bioactivities	Marine-derived bioactive compounds for value-added applications in bio- and non-bio sectors
s117	dermatophytosis	Natural products: an alternative to conventional therapy for dermatophytosis?
s118	alzheimers disease	Alzheimer's disease and natural products: future regimens emerging from nature
s119	antimicrobial actinobacteria	Advances in antimicrobial natural products derived from marine actinomycetes
s120	antimicrobial from bacteria	Antibacterial compounds from marine bacteria, 2010-2015
s121	antibacterial antinomycetes	Actinomycetes: still a source of novel antibiotics
s122	antimicrobial MNP	Current status and future prospects of marine natural products (MNPs) as antimicrobials
s123	antifungal	Antifungal potential of marine natural products
s124	antiinfection MNPs cyanobacteria	Antibacterial, antifungal and antimycobacterial compounds from cyanobacteria
s125	antibiotic resistance	Natural products as platforms to overcome antibiotic resistance
s126	cytotoxin from microbes	Cytotoxic natural products from marine sponge-derived microorganisms
s127	cytotoxins from penicillium	Marine-derived Penicillium species as producers of cytotoxic metabolites
s128	holothurian cytotox mechanisms	Mechanisms of cancer cell killing by sea cucumber-derived compounds
s129	marine anticancer	An updated review on marine anticancer compounds: the use of virtual screening for the discovery of small-molecule cancer drugs
s130	anticancer MNP	Anticancer and cancer preventive compounds from edible marine organisms
s131	fucoxanthin and cancer prevention	Antitumor and cancer-preventative function of fucoxanthin: a marine carotenoid
s132	cytotoxic sponge	Cytotoxic compounds derived from marine sponges. A review (2010-2012)
s133	anticancer MNP	Marine sponge natural products with anticancer potential: an updated review
s134	marine anticancer	Current status of marine-derived compounds as warheads in anti-tumor drug candidates
s135	anticancer MNP	Mass spectrometry in the pharmacokinetic studies of anticancer natural products
s136	mollusc anticancer	Marine mollusk-derived agents with antiproliferative activity as promising anticancer agents to overcome chemotherapy resistance
s137	anticancer NP gene modulators	Anticancer natural compounds as epigenetic modulators of gene expression
s138	tumor modulation	Modulation of tumor microenvironment by chemopreventive natural products
s139	cytotoxic MNP	Structure-activity relationship studies of new marine anticancer agents and their synthetic analogues
s140	chemical communication	Finding food: how marine invertebrates use chemical cues to track and select food
s141	chemoreception	Taste and smell in aquatic and terrestrial environments
s142	cone snails and fish	Linking neuroethology to the chemical biology of natural products: interactions between cone snails and their fish prey, a case study
s143	predator prey interactions	Chemical mediation as a structuring element in marine gastropod predator-prey interactions



19 Actinobacteria *Streptomyces* sp // Bohai Sea // Isolation, structure elucidation and racemization of (+)- and (-)-pratensilins A-C: unprecedented spiro indolinone-naphthofuran alkaloids from a marine *Streptomyces* sp.

1 // N // (+)-pratensilin A // weak to mod. cytotox. vs. 8 HTCLs, IC_{50} between 18.4 - 67.4 µM. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

2 // N // (-)-pratensilin A // weak to mod. cytotox. vs. 8 HTCLs, IC_{50} between 18.4 - 67.4 µM. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

3 // N // (+)-pratensilin B // weak cytotox. vs. 8 HTCLs. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

4 // N // (-)-pratensilin B // weak cytotox. vs. 8 HTCLs. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

5 // N // (+)-pratensilin C // weak cytotox. vs. 8 HTCLs. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

6 // N // (-)-pratensilin C // weak cytotox. vs. 8 HTCLs. // abs. config. assigned by X-ray struct. and ECD data (theo. vs. exp.).

20 Actinobacteria *Streptomyces pactum* // S. China Sea // Activation and characterization of a cryptic gene cluster reveals a cyclization cascade for polycyclic tetramate macrolactams

7 // N // pactamide A // Potent cytotox. vs. 4 HTCL, IC_{50} between 0.24 - 0.51 µM. // abs. config. assigned based on ECD and NMR data compar. with known congeners, and biosyn. grounds.

8 // N // pactamide B // Low cytotox. vs. 4 HTCL, IC_{50} between 21.9 - 26.1 µM. // abs. config. assigned based on data compar. with known congeners, and biosyn. grounds.

9 // N // pactamide C // Mod. cytotox. vs. 4 HTCL, IC_{50} between 0.71 - 2.42 µM. // abs. config. assigned based on data compar. with known congeners, and biosyn. grounds.

10 // N // pactamide D // Low cytotox. vs. 4 HTCL, IC_{50} between 14.5 - 19.3 µM. // abs. config. assigned based on data compar. with known congeners, and biosyn. grounds.

11 // N // pactamide E // Mod. cytotox. vs. 4 HTCL, IC_{50} between 5.1 - 8.7 µM. // abs. config. assigned based on data compar. with known congeners, and biosyn. grounds.

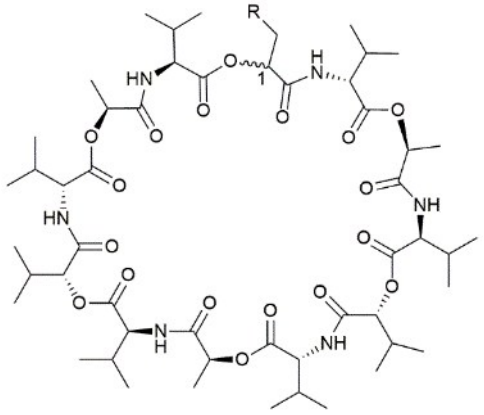
12 // N // pactamide F // Mod. cytotox. vs. 4 HTCL, IC_{50} between 2.6 - 2.9 µM. // abs. config. assigned based on data compar. with known congeners, and biosyn. grounds.

21 Actinobacteria *Streptomyces pactum* // S. China Sea // Genome mining and activation of a silent PKS/NRPS gene cluster direct the production of totopotensamides

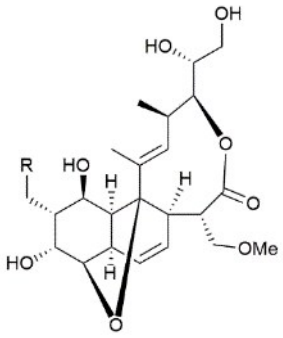
13 // N // totopotensamide C // No AB or cytotox. activ. // *

3 Marine microorganisms and phytoplankton:

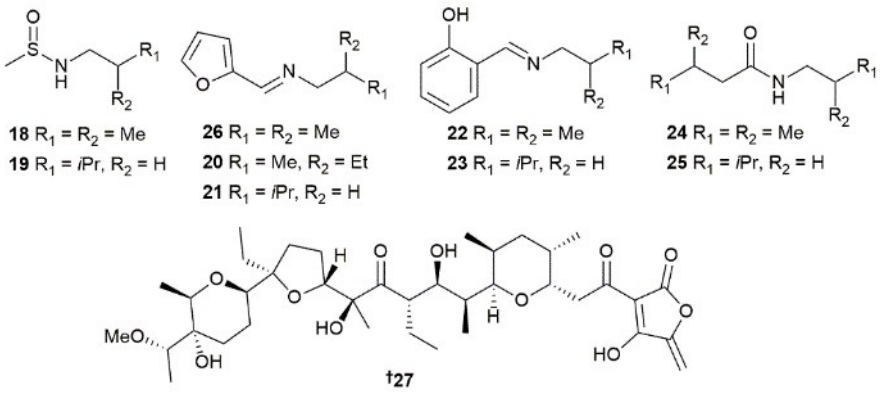
3.1 Marine-sourced bacteria



†**14** R = Me, (1*S*)
†**15** R = H, (1*R*)



†**16** R = H
†**17** R = OMe



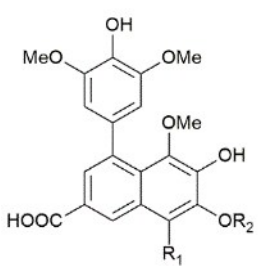
18 $R_1 = R_2 = Me$
19 $R_1 = iPr$, $R_2 = H$
26 $R_1 = R_2 = Me$
20 $R_1 = Me$, $R_2 = Et$
21 $R_1 = iPr$, $R_2 = H$
22 $R_1 = R_2 = Me$
23 $R_1 = iPr$, $R_2 = H$
24 $R_1 = R_2 = Me$
25 $R_1 = iPr$, $R_2 = H$
†**27**

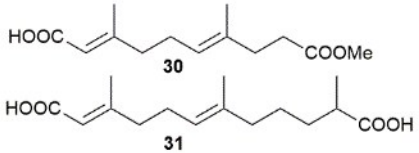
23 Actinobacteria *Streptomyces* sp // Zhoushan City, China // Antiproliferative cyclodepsipeptides from the marine actinomycete *Streptomyces* sp. P11-23B downregulating the tumor metabolic enzymes of glycolysis, glutaminolysis, and lipogenesis
14 // N // streptodepsipeptide P11A // Mod. cytotox. vs. 4 glioma HTCLs, IC_{50}s between 0.3 to 0.4 µM. Mod. tox. vs. hum. astrocytes, IC_{50} = 9.1 µM. cpd downregulates expression of metabolic regulators such as HK2, PFKFB3, PKM2, GLS, and FASN in glioma U87-MG cells. // abs. config. determ. by hydrolysis and chiral HPLC and GC analyses.
15 // N // streptodepsipeptide P11B // Mod. cytotox. vs. 4 glioma HTCLs, IC_{50}s between 0.1 to 1.4 µM. Mod. tox. vs. hum. astrocytes, IC_{50} = 9.1 µM. // abs. config. determ. by hydrolysis and chiral HPLC and GC analyses.

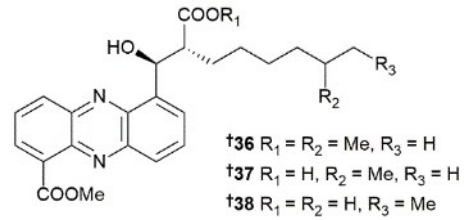
24 Actinobacteria *Pseudonocardia carboxydivorans* // Avilés Canyon, Asturias, Spain // Branimycins B and C, antibiotics produced by the abyssal actinobacterium *Pseudonocardia carboxydivorans* M-227
16 // N // branimycin B // Mod. AM vs. 28 strains, MICs between 1 to >160 µg/mL. // abs. config. assigned based on data compar. with congener.
17 // N // branimycin C // Mod. AM vs. 28 strains, MICs between 16 to >128 µg/mL. // abs. config. assigned based on data compar. with congener.

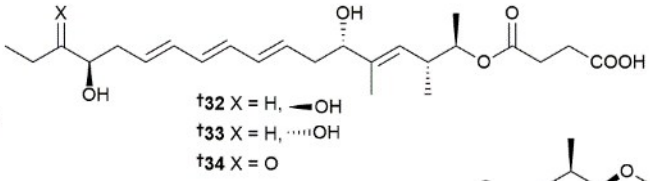
26 Actinobacteria *Salinispora pacifica* // Fiji // Nitrogen-containing volatiles from marine *Salinispora pacifica* and Roseobacter- group bacteria
18 // N // N-isobutylmethanesulfinamide // * // struct. confirmed by total synth..
19 // N // N-isopentylmethanesulfinamide // * // struct. confirmed by total synth..
20 // N // (E)-1-(furan-2-yl)-N-(2-methylbutyl)methanimine // * // struct. confirmed by total synth..
21 // N // (E)-1-(furan-2-yl)-N-isopentylmethanimine // * // struct. confirmed by total synth..
22 // N // (E)-2-((isobutylimino)methyl)phenol // * // struct. confirmed by total synth..
23 // N // (E)-2-((isopentylimino)methyl)phenol // * // struct. confirmed by total synth..
24 // N // N-isobutyl-3-methylbutanamide // * // struct. confirmed by total synth..
25 // N // N-isopentyl-4-methylpentanamide // * // struct. confirmed by total synth..
26 // M // (E)-1-(furan-2-yl)-N-isobutylmethanimine // * // struct. confirmed by total synth.

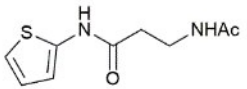
30 Actinobacteria *Actinomadura* sp // Florida Keys // Chemical genomics, structure elucidation, and in vivo studies of the marine-derived anticlostridial ecteinamycin.
27 // N // ecteinamycin // Potent in vitro and in vivo AB activ. vs. *Clostridium difficile* NAP1/B1/027 (MIC = 59 ng/µL) MOA is ionophoric, with K+ transport dysregulation. // abs. config. determ. by X-ray struct.

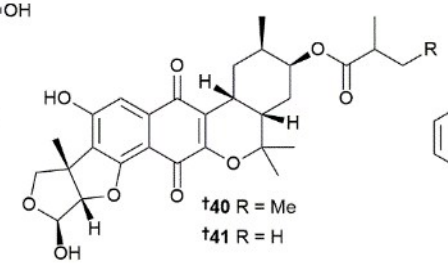


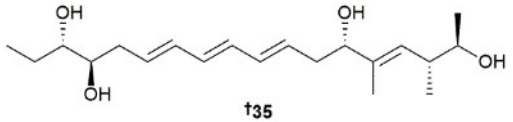


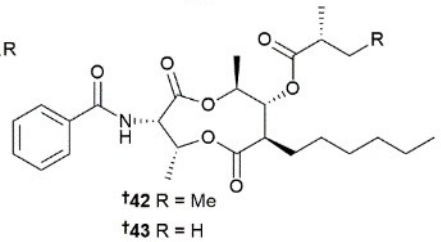












32 Proteobacteria *Phaeobacter inhibens* // * // Roseochelin B, an algaecidal natural product synthesized by the Roseobacter *Phaeobacter inhibens* in response to algal sinapic acid
28 // N // roseochelin A // Mod. activ. vs. *Emiliania huxleyi* (alga) with IC_{50} = 51 µM. No signif. AB activ. Binds to Fe. // struct. confirmed by X-ray crystal diffrac. anal..
29 // N // roseochelin B // Mod. activ. vs. *Emiliania huxleyi* (alga) with IC_{50} = 51 µM. No signif. AB activ. Binds to Fe. // struct. confirmed by X-ray crystal diffrac. anal..

33 Actinobacteria *Streptomyces* sp // Ansell Point, Vancouver, Canada // Two new compounds from a marine-derived *Streptomyces* sp.
30 // N // (2E, 6E)-10-methoxy3,7-dimethyl-10-oxodeca-2,6-dienoic acid // No AB vs. 3 strains. // *
31 // N // (2E, 6E)-3,7,11- trimethyldodeca-2,6-dienedioic acid // Low AB vs. 2 strains (MIC = 64 µg/ml). // *

34 Actinobacteria *Streptomyces* sp. // S. area of Jeju Is., S. Korea // QM-HiFSA-aided structure determination of succinilenes A-D, new triene polyols from a marine-derived *Streptomyces*
32 // N // succinilene A // Low cytotox. vs. SNU638 (IC_{50} = 11.2 µg/mL). weak inhib. vs LPS-induced NO prod at 20 and 40 µM. // abs. config. by J-based config anal., Mosher and CD
33 // N // succinilene B // No cytotox. vs. SNU638. weak inhib. effects vs LPS-induced NO prod at 20 and 40 µM. // abs. config. assigned by J-based config anal., Mosher and CD
34 // N // succinilene C // No cytotox. vs. SNU638. weak inhib. effects vs LPS-induced NO prod at 20 and 40 µM. // abs. config. assigned by J-based config anal., Mosher and CD
35 // N // succinilene D // No cytotox. vs. SNU638. No inhib. effects vs LPS-induced NO prod at 20 and 40 µM. // abs. config. assigned by J-based config anal., Mosher and CD

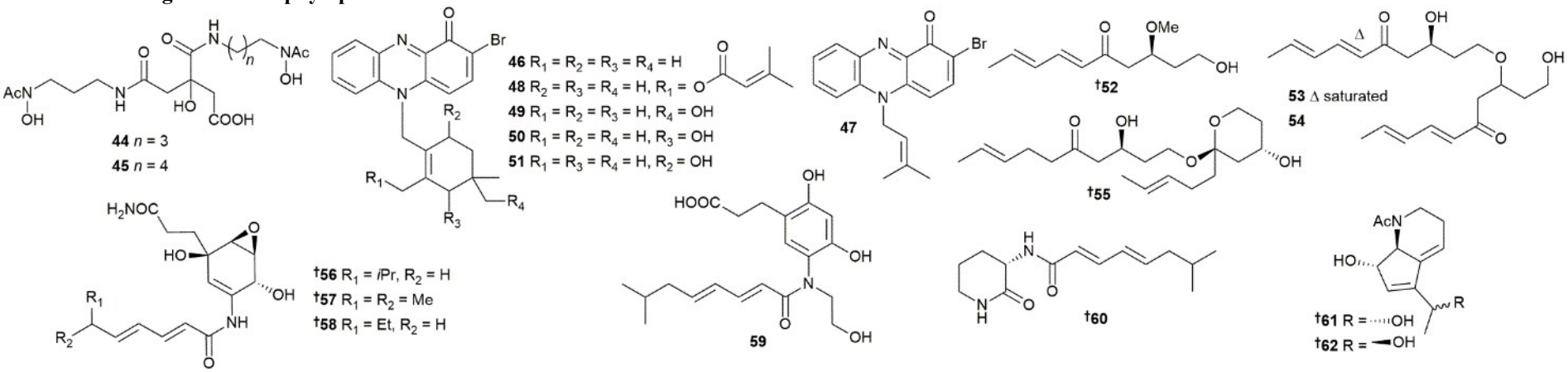
35 Actinobacteria *Streptomyces* sp. // * // New streptophenazines from marine *Streptomyces* sp. 182SMLY
36 // N // (-)-streptophenazine M // No cytotox. vs. 4 HTCLs. No AB vs. 2 strains. // abs. config. assigned based on data compar. with congener.
37 // N // (-)-streptophenazine N // No cytotox. vs. 4 HTCLs. No AB vs. 2 strains. // abs. config. assigned based on data compar. with congener.
38 // N // (-)-streptophenazine O // No cytotox. vs. 4 HTCLs. No AB vs. 2 strains. // abs. config. assigned based on data compar. with congener.

36 Actinobacteria *Streptomyces* sp. //Zhuhai, Guangdong, China // Novel propanamide analogue and antiproliferative diketopiperazines from mangrove *Streptomyces* sp. Q24
39 // N // 3-acetylamino-N-2-thienyl-propanamide // No cytotox. vs. 2 HTCLs. No AM vs. 3 strains up to 100 µM. // *

37 Actinobacteria *Streptomyces* sp. // San Francisco Bay tidal flat, USA // Naphthablins B and C, meroterpenoids identified from the marine sediment-derived *Streptomyces* sp. CP26-58 using HeLa cell-based cytological profiling
40 // N // naphthablin B // weak cytotox. vs. HeLa, 25% growth inhib. at 33 µM. // abs. config. assigned based on data compar. with congener.
41 // N // naphthablin C // weak cytotox. vs. HeLa, 32% growth inhib. at 33 µM. // abs. config. assigned based on ECD expt. and theoretical data compar..

38 Actinobacteria *Streptomyces antibioticus* // Taishan mangrove site, Guangdong province, China // Neoantimycins A and B, two unusual benzamido nine-membered dilactones from marine-derived *Streptomyces antibioticus* H12-15
42 // N // neoantimycin A // weak cytotox. vs. 3 HTCLs, IC_{50} = 33.6 to >50 µM. No AF activ. vs. C. albicans. // abs. config. determ. using both ECD calc.s, and biosyn. reasoning.
43 // N // neoantimycin B // weak cytotox. vs. 3 HTCLs, IC_{50} = 41.6 to >50 µM. No AF activ. vs. C. albicans. // abs. config. determ. using both ECD calc.s, and biosyn. reasoning.

3 Marine microorganisms and phytoplankton: 3.1 Marine-sourced bacteria



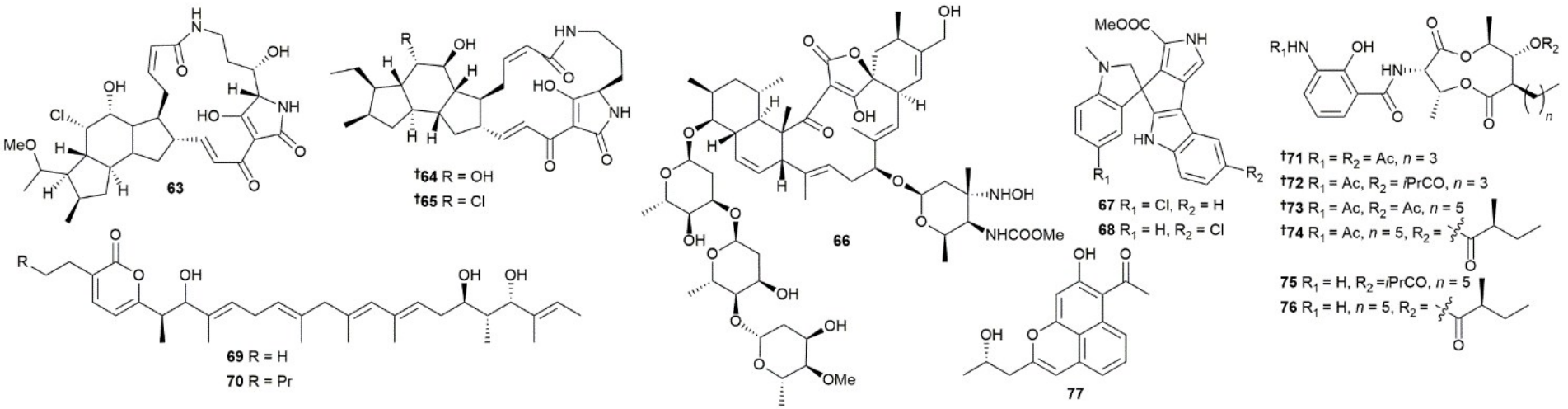
39 Actinobacteria *Streptomyces fradiae* // Sagami Bay, Japan // Fradiamine A, a new siderophore from the deep-sea actinomycete *Streptomyces fradiae* MM456M-mF7
44 // N // fradiamine A // Mod. AM vs. 8 *Clostridium* strains with MICs between 32 to >128 µg/mL. // Chemical struct. suggests siderophore
45 // M // fradiamine B // Mod. AM vs. 8 *Clostridium* strains with MICs between 8 to >128 µg/mL. // Chemical struct. suggests siderophore

40 Actinobacteria *Streptomyces* sp // Palau and Solomon Is. // Marinocyanins, cytotoxic bromo-phenazinone meroterpenoids from a marine bacterium from the S*treptomycete* clade MAR4
46 // N // marinocyanin A // Potent cytotox. vs. HCT-116 (IC_{50} = 0.049 µM). Mod. AM vs. *S. aureus* (MIC = 2.37 µM) and *C. albicans* (MIC = 0.95 µM). // X-ray crystal struct.
47 // N // marinocyanin B // Potent cytotox. vs. HCT-116 (IC_{50} = 0.029 µM). Mod. AM vs. *S. aureus* (MIC = 33.92 µM) and *C. albicans* (MIC = 5.79 µM). // *
48 // N // marinocyanin C // Potent cytotox. vs. HCT-116 (IC_{50} = 0.078 µM). Mod. AM vs. *S. aureus* (MIC = 30.71 µM) and *C. albicans* (MIC = 3.90 µM). // *
49 // N // marinocyanin D // Mod. cytotox. vs. HCT-116 (IC_{50} = 10.56 µM). Mod. AM vs. *S. aureus* (MIC = 36.62 µM) and *C. albicans* (MIC = 14.67 µM). // *
50 // N // marinocyanin E // Mod. cytotox. vs. HCT-116 (IC_{50} = 7.28 µM). Mod. AM vs. *S. aureus* (MIC = 36.62 µM) and *C. albicans* (MIC = 14.67 µM). // *
51 // N // marinocyanin F // Low cytotox. vs. HCT-116 (IC_{50} = 17.14 µM). Mod. AM vs. *S. aureus* (MIC = 36.62 µM) and *C. albicans* (MIC = 14.67 µM). // *

41 Actinobacteria *Streptomyces misionensis* // Ria de Vigo, Galicia, Spain // Streptenols F-I isolated from the marine-derived *Streptomyces misionensis* BAT-10-03-023
52 // N // streptenol F // No cytotox. vs. 4 HTCLs, GI_{50} >10 µM. // abs. config. determ. by chemical and spec methods, including Mosher's.
53 // N // streptenol G // No cytotox. vs. 4 HTCLs, GI_{50} >10 µM. // abs. config. determ. by chemical and spec methods, including Mosher's.
54 // N // streptenol H // No cytotox. vs. 4 HTCLs, GI_{50} >10 µM. // abs. config. determ. by chemical and spec methods, including Mosher's.
55 // N // streptenol I // No cytotox. vs. 4 HTCLs, GI_{50} >10 µM. // abs. config. determ. by chemical and spec methods, including Mosher's.

42 Actinobacteria *Streptomyces* sp. // S. Carolina // Daryamide analogues from a marine-derived *Streptomyces* species
56 // N // daryamide D // No cytotox. vs. 4 lung HTCLs. No antibac vs. 2 strains. // abs. config. determ. by ECD and Mosher's method.
57 // N // daryamide E // No cytotox. vs. 4 lung HTCLs. No antibac vs. 2 strains. // abs. config. determ. by ECD data compar. with congener.
58 // N // daryamide F // No cytotox. vs. 4 lung HTCLs. No antibac vs. 2 strains. // abs. config. determ. by ECD data compar. with congener.
59 // N // carpatamide D // No cytotox. vs. 4 lung HTCLs. No antibac vs. 2 strains. // -
60 // N // ornilactam A // No cytotox. vs. 4 lung HTCLs. No antibac vs. 2 strains. // abs. config. determ. Mosher's method.

43 Actinobacteria *Streptomyces chartreusis* // Hainan Is., China // Strepchazolins A and B: two new alkaloids from a marine *Streptomyces chartreusis* NA02069
61 // N // strepchazolin A // weak AB vs. *B. subtilis* (MIC = 64.0 µM). weak inhib. activ. vs AchE (IC_{50} = 50.6 µM). // abs. config. determ. by X-ray studies.
62 // N // strepchazolin B // No AB vs. *B. subtilis*. No inhib. activ. vs AchE. // abs. config. determ. by modified Mosher's method.



44 Actinobacteria *Streptomyces* sp // * // Chlokamycin, a new chloride from the marine-derived *Streptomyces* sp MA2-12
63 // N // chlokamycin // Low cytotox. vs. 2 HTCLs [Jurkat (IC_{50}= 24.7 µM), HCT-116 (IC_{50}= 33.5 µM). No AM vs. 3 strains (MICs > 100 µM). // *

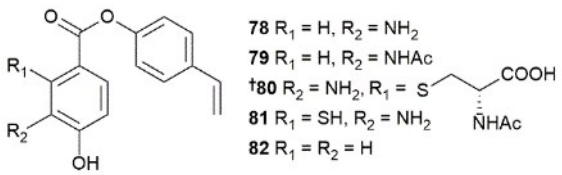
45 Actinobacteria *Streptomyces xiamenensi* // * // Anti-pancreatic cancer capsimycins from the mangrove-derived *Streptomyces xiamenensi*s 318 and post-modification via a novel cytochrome P450 monooxygenase
64 // N // capsimycin C // No cytotox. vs. 1 pancreatic HTCL. // abs. config. determ. by ECD data compar.s with known analogues.
65 // N // capsimycin D // No cytotox. vs. 1 pancreatic HTCL. // abs. config. determ. by ECD data compar.s with known analogues.

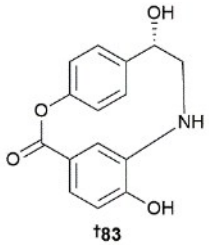
46 Actinobacteria *Streptomyces* sp // Cantabrian Sea // Lobophorin K, a new NP with cytotox activ produced by *Streptomyce*s sp. M-207 from the deep-sea coral *Lophelia pertusa*
66 // N // lobophorin K // Mod. cytotox. vs. 6 HTCLs (IC_{50} between 6.3 to >42.6 µM). Mod. AM vs. 6 strains (MIC90 = 40 to >160 µg/mL). // *

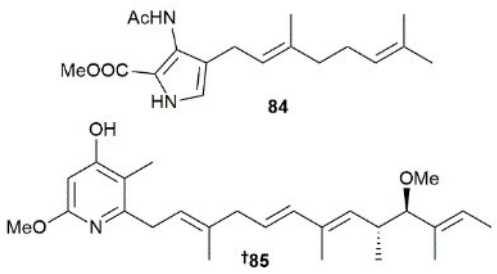
47 Actinobacteria *Streptomyces* sp // Tautra ridge, Trondheim fjord, Norway // New NPs identified by combined genomics-metabolomics profiling of marine *Streptomyces* sp. MP131-18
67 // N // spiroindimicin E // * // *
68 // N // spiroindimicin F // * // *
69 // N // lagunapyrone D // * // *
70 // N // lagunapyrone E // * // *

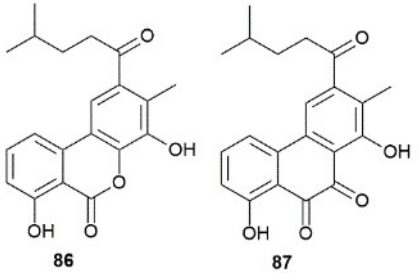
48 Actinobacteria *Streptomyces* sp // Hainan, China // *Streptomyces* sp. Antimycins suppress HeLa cells via depletion HPV E6/E7 by ROS-dependent ubiquitin-proteasome system
71 // N // antimycin E // Potent cytotox. vs. several HTCLs (some IC_{50s} nM) // abs. config. determ. by ECD data compar.s with known analogues.
72 // N // antimycin F // Potent cytotox. vs. several HTCLs (some IC50s nM) // abs. config. determ. by ECD data compar.s with known analogues.
73 // N // antimycin G // Potent cytotox. vs. several HTCLs (some IC_{50}s nM) // abs. config. determ. by ECD data compar.s with known analogues.
74 // N // antimycin H // Potent cytotox. vs. several HTCLs (some IC_{50}s nM) // abs. config. determ. by ECD data compar.s with known analogues.
75 // M // deformylated antimycin A2a // Potent cytotox. vs. several HTCLs (some IC_{50}s nM) // *
76 // M // deformylated antimycin A1a // Potent cytotox. vs. several HTCLs (some IC*50*s nM) // *

49 Actinobacteria *Streptomyces griseorubens* // Hurghada coast, Red Sea, Eygpt // New oxaphenalene derivative from marine-derived *Streptomyces griseorubens* sp. ASMR4
77 // N // 8-hydroxy-2-(2-hydroxypropyl)-7-acetyl-1-oxaphenalene // No cytotox. vs. 2 HTCLs, no AB vs. 5 strains. // *





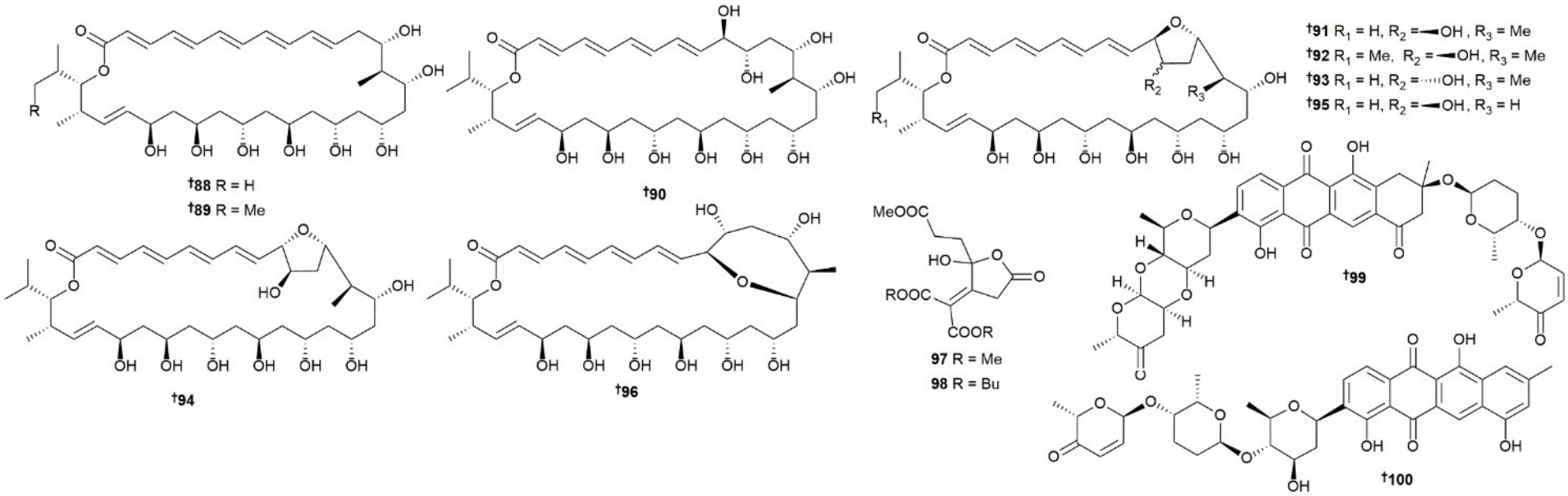




50 Actinobacteria *Streptomyces* sp // Qiao Mangrove Forest, Zhuhai City, Guangdong, China // Cytotoxic bagremycins from mangrove-derived *Streptomyces* sp. Q22
78 // M // bagremycin A // No cytotox. vs. 4 glioma HTCLs. No AM vs. 3 strains. // *
79 // M // bagremycin B // Mod. cytotox. vs. 4 glioma HTCLs (IC_{50} between 7.3 to 13.3 µM). // *
80 // N // bagremycin C // Mod. cytotox. vs. 4 glioma HTCLs induces apoptosis in U87MG cells. No AM vs. 3 strains // abs. config. determ. by degrad. and chiral HPLC of hydrolysate.
81 // N // bagremycin D // No cytotox. vs. 4 glioma HTCLs. No AM vs. 3 strains. // *
82 // N // bagremycin E // No cytotox. vs. 4 glioma HTCLs. No AM vs. 3 strains. // *
83 // N // bagrelactone A // No cytotox. vs. 4 glioma HTCLs. No AM vs. 3 strains. // abs. config. unable to be determ. by Mosher's method, but assigned by chiro-optical compar.

51 Actinobacteria *Streptomyces* sp // Guangdong Province, China // Geranylpyrrol A and piericidin F from *Streptomyces* sp. CHQ-64ΔrdmF
84 // N // geranylpyrrol A // No cytotox. vs. HeLa, NB4, A549, and H1975 cell lines (IC_{50} >30 µM). // *
85 // N // piericidin F // Potent cytotox.vs. HeLa, NB4, A549, and H1975 cells, IC_{50} values of 0.003, 0.037, 0.56, and 0.49 µM. // abs. config. determ. via coupling constant anal., NOESY experiment, and ECD anal..

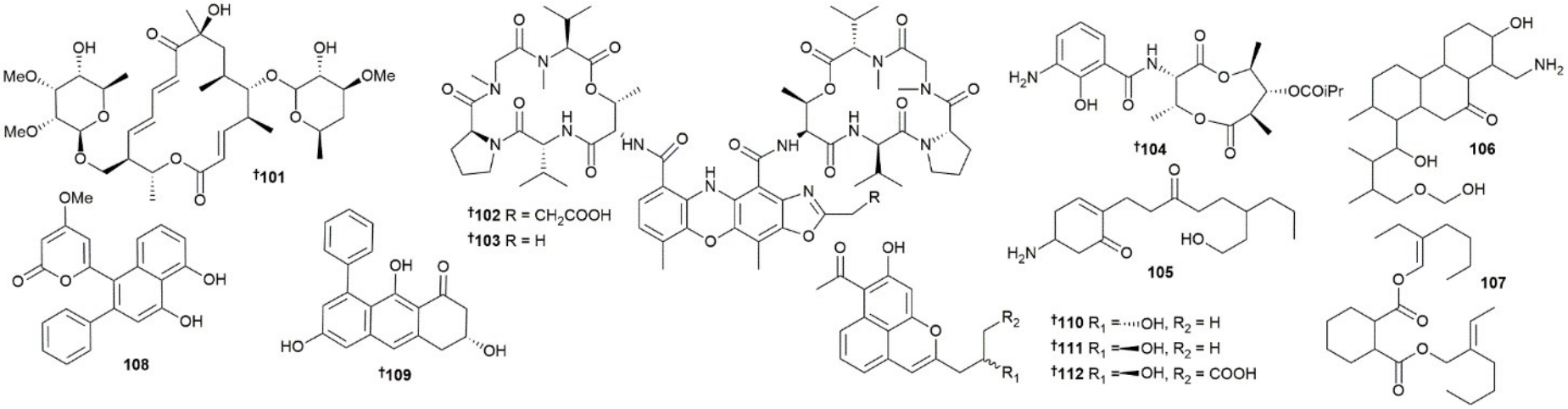
52 Actinobacteria *Streptomyces* sp // S. California // Potent inhibition of monoamine oxidase B by a piloquinone from marine-derived *Streptomyces* sp. CNQ-027
86 // M // 4,7-dihydroxy-3-methyl-2-(4-methyl-1-oxopentyl)-6H-dibenzo[b,d]pyran-6-one // Mod. inhib. of hum. MAO-B (IC_{50} = 1.21 µM) and MAO-A (IC_{50} = 6.47 µM). // *
87 // M // 1,8-dihydroxy-2-methyl-3-(4-methyl-1-oxopentyl)-9,10-phenanthrenedione // weak inhib. of hum. MAO-B (IC_{50} = 14.50 µM) and MAO-A (IC_{50} >80 µM). // *



53 Actinobacteria *Streptomyces* sp // Qi'ao Mangrove Forest, Zhuhai City, Guangdong, China // Rare polyene-polyol macrolides from mangrove-derived *Streptomyces* sp. ZQ4BG
88 // M // flavofungin I // weak AM vs. 3 strains; best activ. towards *C. albicans* with MIC = 12.5 µg/mL. weak cytotox. vs. 4 glioma HTCLs // abs. config. determ. Mosher esters.
89 // M // flavofungin II // weak AM vs. 3 strains; best activ. towards *C. albicans* with MIC = 12.5 µg/mL. weak cytotox. vs. 4 glioma HTCLs. // abs. config. determ. Mosher esters.
90 // N // flavofungin III // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
91 // N // flavofungin IV // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
92 // N // flavofungin V // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
93 // N // flavofungin VI // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
94 // N // flavofungin VII // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
95 // N // flavofungin VIII // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.
96 // N // flavofungin IX // No AM vs. 3 strains. No cytotox. vs. 4 glioma HTCLs. // abs. config. determ. via prep. of acetonide deriv. and Mosher esters.

54 Actinobacteria *Streptomyces ghanaensis* // Yellow Sea, Shandong Province, China // Ghanamycins A and B, two novel γ-butyrolactones from marine-derived *Streptomyces ghanaensis* TXC6-16
97 // N // ghanamycin A // weak AM vs. 4 phytopathogen strains; MIC between 375 – 750 µg/mL. // *
98 // N // ghanamycin B // weak AM vs. 4 phytopathogen strains; MIC between 50 – 750 µg/mL. // *

55 Actinobacteria *Streptomyces lusitanus* // S. China Sea // Cytotoxic rearranged angucycline glycosides from deep sea-derived *Streptomyces lusitanus* SCSIO LR32
99 // N // grincamycin G // No cytotox. vs. Jurkat T cells, IC_{50} >20 µM. // abs. config. determ. via conversion to know congener with known abs. config.
100 // N // grincamycin H // Mod. cytotox. vs. Jurkat T cells, IC_{50} = 3.0 µM. // abs. config. tentatively assigned based on NMR data compar., and biosyn. grounds.



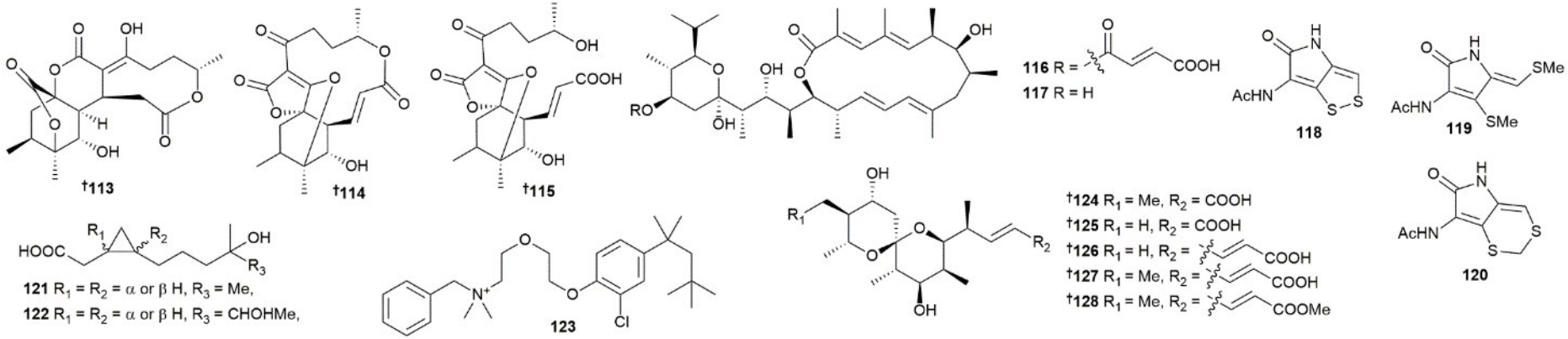
56 Actinobacteria *Streptomyces* sp // * // Chalcomycins from marine-derived *Streptomyces* sp. and their antimicrobial activities
101 // N // chalcomycin E // No AM vs. 4 strains. // abs. config. determ. by compar. of NMR data, and biosyn. Grounds.

57 Actinobacteria *Streptomyces* sp // Heishijiao Bay, Dalian, China // Neo-actinomycins A and B, natural actinomycins bearing the 5H-oxazolo[4,5-b]phenoxazine chromophore, from the marine-derived *Streptomyces* sp. IMB094
102 // N // neo-actinomycin A // Mod. AM vs. 37 strains;. Potent cytotox. vs. 2 HTCLs, IC_{50} = 65.8 nM (A549) and IC_{50} = 38.7 nM (HCT116). // abs. config. determ. via Marfey's
103 // N // neo-actinomycin B // No AM vs. 37 strains; MICs >128 µg/mL. Potent cytotox. vs. 2 HTCLs, IC_{50} = 38.7 nM (A549) and IC_{50} = 339.1 nM (HCT116). // Previously synth.ed as a deriv. of actinomycin D. abs. config. determ. based on data anal. with congeners.

58 Actinobacteria *Streptomyces somaliensis* // S. China Sea // Discovery of antimycin-type depsipeptides from a wbl gene mutant strain of deepsea-derived *Streptomyces somaliensis* SCSIO ZH66 and their effects on pro-inflammatory cytokine production
104 // N // somalimycin // Low cytotox. vs. hum. umbilical cells, IC_{50} = 62.6 µM. // abs. config. determ. by NMR data compar. with congener and Marfey's method.

59 Actinobacteria *Streptomyces coelicoflavus* // Dockyard, Visakhapatnam, India // Purification and structural elucidation of three bioactive compounds isolated from *Streptomyces coelicoflavus* BC 01 and their biological activity
105 // N // BC 01_C1 // Mod. AM vs. 10 strains; MICs from 25 to 100 µg/mL. weak AO activ. in DPPH assay, ~52% inhib. at 20 µg/mL. // *
106 // N // BC 01_C2 // Mod. AM vs. 10 strains; MICs from 12.5 to 125 µg/mL. weak AO activ. in DPPH assay, ~62% inhib. at 20 µg/mL. // *
107 // N // BC 01_C3 // Mod. AM vs. 10 strains; MICs from 12.5 to 125 µg/mL. weak AO activ. in DPPH assay, ~63% inhib. at 20 µg/mL. // *

60 Actinobacteria *Streptomyces* sp // * // Phenolic polyketides from the marine alga-derived *Streptomyces* sp. OUCMDZ-3434
108 // N // 3-O-methylwailupemycin G // Low alpha-glucosidase activ., IC_{50} = 863 µM. No AV activ. vs. influenza A (H1N1) at 50 µg/mL. // *
109 // N // wailupemycin J // No alpha-glucosidase activ., IC_{50} > 5 mM. No cytotox. vs. HeLa, IC_{50} >50 µM. Mod. AV activ. vs. influenza A (H1N1) // abs. config. by chiro-optical data.
110 // N // R-wailupemycin K // No alpha-glucosidase active, No cytotox. vs. HeLa. Mod. AV activ. vs. influenza A (H1N1) // abs. config. assigned by X-ray struct. and Mosher's
111 // N // S-wailupemycin K // No alpha-glucosidase activ., Mod. cytotox. vs. HeLa, IC_{50} = 8.2 µM. No AV activ. vs. influenza A (H1N1) // abs. config. by chiro-optical data compar.
112 // N // wailupemycin L // No alpha-glucosidase activ., IC_{50} > 5 mM. No cytotox. vs. HeLa, No AV activ. vs. influenza A (H1N1) // abs. config. by chiro-optical data compar.



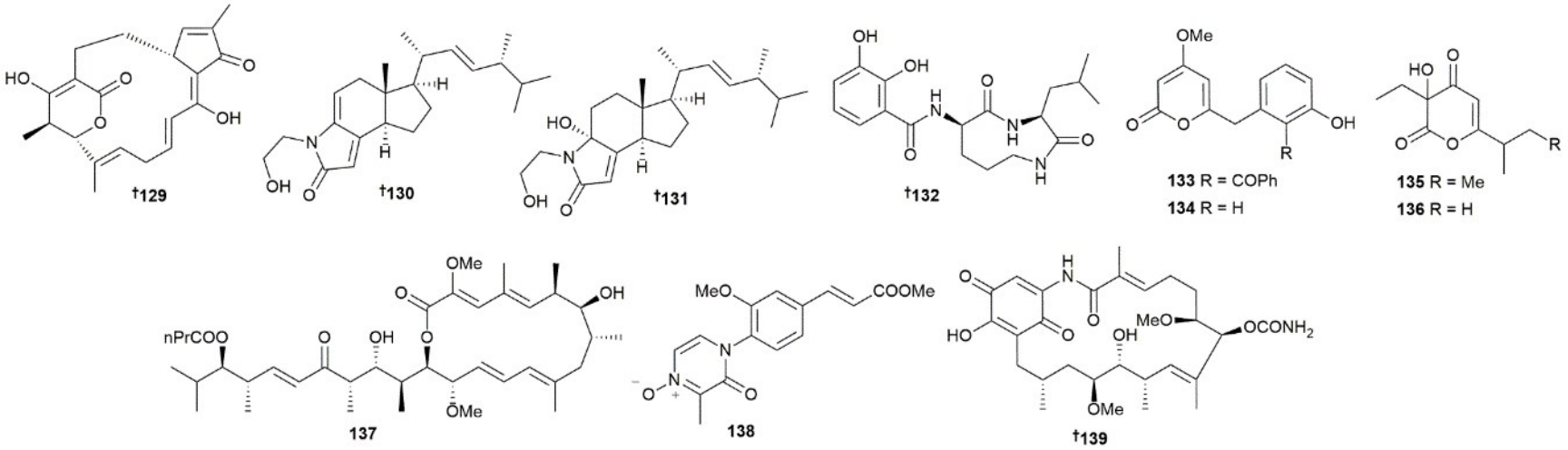
61 Actinobacteria *Streptomyces koyangensis* // S. China Sea // Neoabyssomicins A-C, polycyclic macrolactones from the deep-sea derived *Streptomyces koyangensis* SCSIO 5802
113 // N // neoabyssomicin A // No AB vs. 12 strains. No anti-HIV-1 replication activ. (0.016 to 50 µg/mL), however some promotion of viral replication (10 to 50 µg/mL). // abs. config. assigned based on X-ray struct. and ECD data.
114 // N // neoabyssomicin B // No AB vs. 12 strains. No anti-HIV-1 replication activ. (0.016 to 50 µg/mL). // abs. config. assigned based on ECD data.
115 // N // neoabyssomicin C // No AB vs. 12 strains. No anti-HIV-1 replication activ. (0.016 to 50 µg/mL), however some promotion of viral replication (10 to 50 µg/mL). // abs. config. assigned based on synth. data and biosyn. consid.

62 Actinobacteria *Streptomyces* sp // Kenting, S. Taiwan // Bafilomycins N and O, bafilomycin analogues produced by *Streptomyces* sp. GIC10-1 from sponge *Theonella* sp.
116 // N // bafilomycin N // Potent to mod. cytotox. activ. vs. 4 HTCLs; IC_{50} values from 0.01 – 31.8 µnM. IA towards 1 HTCL at 2.0 µg/mL. // *
117 // N // bafilomycin O // Potent to mod. cytotox. activ. vs. 4 HTCLs; IC_{50} values from 54.2 – 389.6 µnM. IA towards 1 HTCL at 2.0 µg/mL. // *

63 Actinobacteria *Streptomyces* sp // Dongtou, Wenzhou, Zhejiang Province, P. R. China // Derivatives of holomycin and cyclopropaneacetic acid from *Streptomyces* sp. DT-A37.
118 // M // holomycin // Mod. cytotox. vs. H1975 cells, IC_{50} = 1 µM.. Mod. AM vs. 4 strains, MIC = 64 to >128 µM. // *
119 // N // (1Z)-S,S'-dimethyldihydroholomycin // No cytotox. vs. H1975 cells at 10 µM.. Low. AM vs. 4 strains, MIC >128 µM. // *
120 // N // holomycin A // No cytotox. vs. H1975 cells at 10 µM.. Low. AM vs. 4 strains, MIC >128 µM. // *
121 // N // cis-[2-(4-hydroxy-4-methylpentyl)cyclopropyl]-acetic acid // No cytotox. vs. H1975 cells at 10 µM. Low. AM vs. 4 strains, MIC >128 µM. // *
122 // N // cis-[2-(4,5-dihydroxy-4-methylhexyl)cyclopropyl]-acetic acid // No cytotox. vs. H1975 cells at 10 µM.. Low. AM vs. 4 strains, MIC >128 µM. // *

64 Actinobacteria *Streptomyces* sp // Pollonia, Milos, Greece // Inhibitory potential of strepthonium A against Shiga toxin production in enterohemorrhagic *E. coli* (EHEC) strain EDL933
123 // N // strepthonium A // Exhibits anti-Stx (shiga toxin) potentIAl and is able to inhibit Stx prod without influencing bact.l growth. // *

65 Actinobacteria *Streptomyces* sp // S. China Sea // Pteridic acids C-G spirocyclic polyketides from the marine-derived *Streptomyces* sp. SCSGAA 0027
124 // N // pteridic acid C // No AM vs. 5 strains. No cytotox. vs. 4 HTCLs. No AV vs. HSV T1. // abs. config. by quantum chemical calc.; data compar. with congeners.
125 // N // pteridic acid D // No AM vs. 5 strains. No cytotox. vs. 4 HTCLs. No AV vs. HSV T1. // abs. config. by quantum chemical calc.; data compar. with congeners.
126 // N // pteridic acid E // weak AM vs. 5 strains; No cytotox. vs. 4 HTCLs. No AV vs. HSV T1. // abs. config. by quantum chemical calc.; data compar. with congeners.
127 // N // pteridic acid F // weak AM vs. 5 strains; No cytotox. vs. 4 HTCLs. No AV vs. HSV T1. // abs. config. by quantum chemical calc.; data compar. with congeners.
128 // N // pteridic acid G // weak AM vs. 5 strains; best activ. vs *B. subtilis* (zone of inhib. = 7 mm at 50 µg per disk). No cytotox. vs. 4 HTCLs. No AV vs. HSV T1. // abs. config. determ. by modified Mosher's method and quantum chemical calc.



66 Actinobacteria *Streptomyces* sp // Sanya, Hainan, China // Hainanmycin A, a cyclo-heptadeca macrolide from the mangrove-derived *Streptomyces* sp. 219807
129 // N // hainanmycin A // No cytotox. vs. 8 HTCLs. // abs. config. determ. by quantum chemical calc. NMR and ECD

67 Actinobacteria *Streptomyces anandii* // Zhapo mangrove site, Hailing Is., Yangjiang, Guangdong Province, China // Anandins A and B, two rare steroidal alkaloids from a marine *Streptomyces anandii* H41-59
130 // N // anandin A // Mod. cytotox. vs. MCF-7, SF-268, and NCI-H460 with IC_{50} values of 7.5, 7.9, 7.8 µg/mL, respectively. No AM activ. vs. 5 strains. // abs. config. by X-ray
131 // N // anandin B // No cytotox. vs. MCF-7, SF-268, and NCI-H460 at 20 µg/mL. No AM activ. vs. 5 strains. // abs. config. assigned by ECD data (theo. vs. exp.).

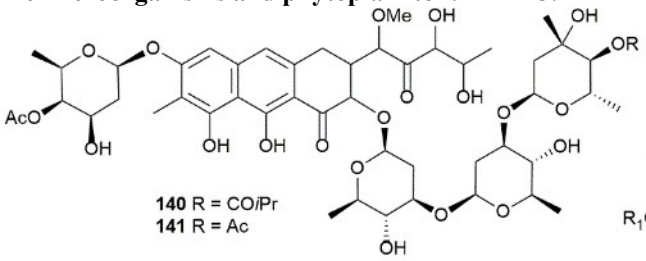
68 Actinobacteria *Streptomyces* sp // Pollonia, Milos, Greece // Isolation of petrocidin A, a new cytotoxic cyclic dipeptide from the marine sponge-derived bacterium *Streptomyces* sp. SBT348
132 // N // petrocidin A // Mod. cytotox. vs. HL-60 (IC_{50} = 3.9 µg/mL) and HT-29 (IC_{50} = 5.3 µg/mL). // abs. config. determ. by Marfey's method.

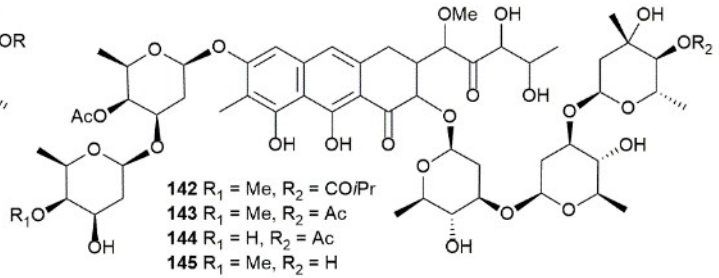
69 Actinobacteria *Streptomyces ambofaciens* // Zoumberi Bay, Attiki, Greece // α-Pyrone polyketides from *Streptomyces ambofaciens* BI0048, an endophytic actinobacterial strain isolated from the red alga *Laurencia glandulifera*
133 // N // zoumbericin A // No AB activ. vs. 3 strains. No cytotox. vs. 2 HTCLs. // *
134 // N // zoumbericin B // No AB activ. vs. 3 strains. No cytotox. vs. 2 HTCLs. // *
135 // N // germicidin K // No AB activ. vs. 3 strains. No cytotox. vs. 2 HTCLs. // *
136 // N // germicidin L // No AB activ. vs. 3 strains. No cytotox. vs. 2 HTCLs. // *

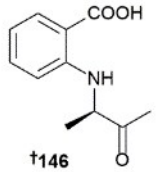
70 Actinobacteria *Streptomyces* sp // Shanwei city, China // Bioactive bafilomycins and a new N-arylpyrazinone derivative from marine-derived *Streptomyces* sp. HZP-2216E
137 // N // 23-O-butyrylbafilomycin D // Mod. cytotox. vs. 4 glioma HTCLs, IC_{50}s between 0.44 to 0.98 µM. Mod. AB activ. vs. MRSA, MIC 7.4 µM, MBC 14.8 µM. No activ. towards *E.coli.* // *
138 // N // streptoarylpyrazole A // No cytotox. vs. 4 glioma HTCLs. No AB activ. vs. 2 strains. // *

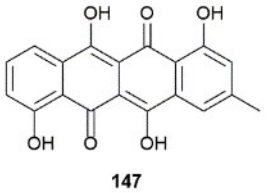
71 Actinobacteria *Streptomyces samsuensis* // Yung Shue O, Hong Kong // Biological and chemical diversity of bacteria associated with a marine flatworm
139 // N // 4,5-dihydro-17-O-demethylgeldanamycin // No AB, cytotox., and AF activ. // abs. config. assigned based on compar. of spectro. data compar. and biosyn. grounds.

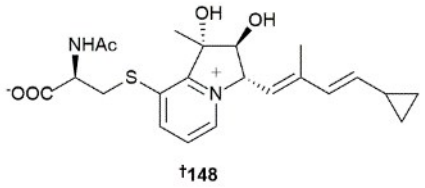
3 Marine microorganisms and phytoplankton: 3.1 Marine-sourced bacteria

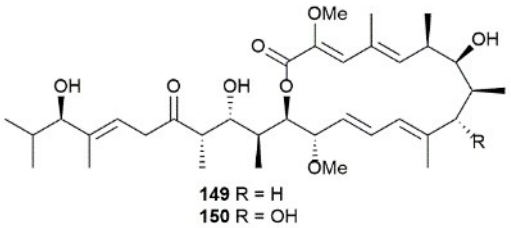


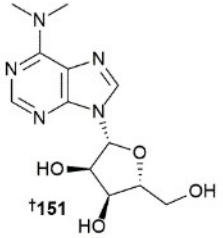


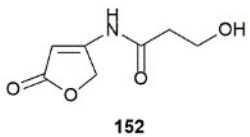


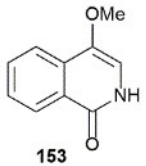












72 Actinobacteria *Streptomyces* sp // Sea of Japan, Russia coast // The antitumor antibiotics complex of aureolic acids from sediment-associated strain of *Streptomyces* sp KMM 9048
140 // N // chromomycin A2-1 // Mod. AB vs. 4 strains. No cytotox. vs. 2 HTCLs at 1.25 - 10.0 µM. // *
141 // N // chromomycin A3-1 // Mod. AB vs. 4 strains. No cytotox. vs. 2 HTCLs at 1.25 - 10.0 µM. // *
142 // N // C59H86O26 // Mod. AB vs. 4 strains. Potent to no cytotox. vs. 9 HTCLs. // New chromomycin, most probably diastereoisomer of chromomycin A2
143 // N // C57H82O26 // Mod. AB vs. 4 strains. No cytotox. vs. 2 HTCLs at 1.25 - 10.0 µM. // New chromomycin, most probably diastereoisomer of chromomycin A3
144 // N // C56H80O26 // Mod. AB vs. 4 strains. No cytotox. vs. 2 HTCLs at 1.25 - 10.0 µM. // New chromomycin, most probably diastereoisomer of 4B-O-demethylchromomycin A3
145 // N // C55H79O25 // * // New chromomycin analogue, most probably diastereoisomer of 4E-deacetylchromomycin A4

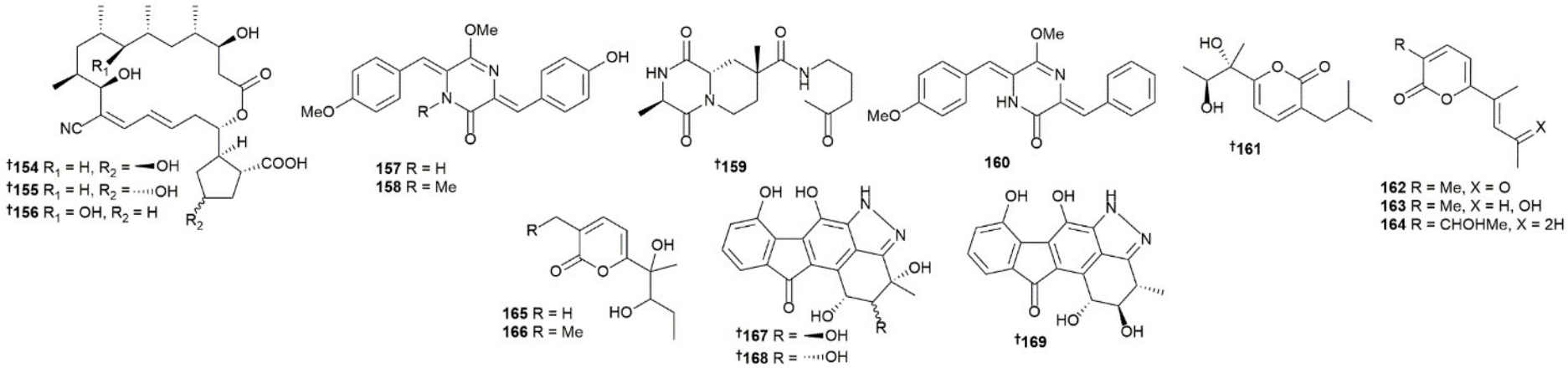
73 Actinobacteria *Streptomyces* sp // * // Isolation and structural elucidation of nitrogenous secondary metabolites from terrestrial and marine *Streptomyces* spp.
146 // N // (R)-2-(1-methyl-2-oxopropylamino)-benzoic acid // No AM activ. vs. 8 strains. // abs. config. determ. by ECD calc.s.

74 Actinobacteria *Streptomyces* sp // Sharks Bay, Sharm el-Sheikh, S. Sinai, Egypt // Sharkquinone from marine *Streptomyces* sp. EGY1 with TRAIL resistance-overcoming activity
147 // M // sharkquinone // Act. vs TRAIL resistance at 10 µM in hum. gastric adenocarcinoma (AGS) cells. // *

75 Actinobacteria *Streptomyces* sp // * // A unique indolizinium alkaloid streptopertusacin A and bioactive bafilomycins from marine-derived *Streptomyces* sp. HZP-2216E
148 // N // streptopertusacin A // No cytotox. vs. 2 HTCLs. Mod. AB vs. MRSA, MIC 40 µg/mL. // abs. config. determ. by chemical degrad., Marfey's method, and ECD calc.s.
149 // N // 21,22-en-bafilomycin D // Mod. cytotox. vs. 2 HTCLs [U251 (IC_{50} = 0.21 µM), C6 (IC_{50} = 1.08 µM). Mod. AB vs. MRSA, MIC 12.5 µg/mL. // *
150 // N // 21,22-en-9-hydroxybafilomycin D // Mod. cytotox. vs. 2 HTCLs [U251 ($IC5_0$ = 0.36 µM), C6 (IC_{50} = 0.12 µM). Mod. AB vs. MRSA, MIC 12.5 µg/mL. // *

76 Actinobacteria *Streptomyces coeruleoaurantiacus* // West Plana Cay, Bahamas // FUSION-guided hypothesis development leads to the identification of N6,N6-dimethyladenosine, a marine-derived AKT pathway inhibitor
151 // N // N 6,N6-dimethyladenosine // MOA involves rapid attenuation of AKT signaling // abs. config. assigned based on data compar. with commercial synth. material.

77 Actinobacteria *Nocardiopsis lucentensis* // Hurghada, Red Sea, Eygpt // New bioactive compounds from the marine-derived actinomycete *Nocardiopsis lucentensis* sp. ASMR2
152 // N // 3'-hydroxy-N-(2-oxo-2,5-dihydrofuran-4-yl)propionamide // No AM vs. 6 strains. No cytotox. vs. 2 HTCLs. // *
153 // N // 4-methoxy-2H-isoquinolin-1-one // No AM vs. 6 strains. No cytotox. vs. 2 HTCLs. // *



78 Actinobacteria *Nocardiopsis* sp, // Jeung-do Is. Shinan-gun, Jeollanamdo, Korea // Borrelidins C-E: new antibacterial macrolides from a saltern-derived halophilic *Nocardiopsis* sp.
154 // N // borrelidin C // weak AM vs. 7 strains; MICs from 16 to >250 µg/mL. weak cytotox. vs. 6 HTCLs; IC_{50} values from 5.5 – 96 µM. // abs. config. determ. By Mosher's and CD
155 // N // borrelidin D // weak AM vs. 7 strains; MICs from 63 to >250 µg/mL. weak cytotox. vs. 6 HTCLs; IC_{50} values from 6.7 – 71 µM. // abs. config. determ. by Mosher's and CD a
156 // N // borrelidin E // weak AM vs. 7 strains; MICs from 250 to >250 µg/mL. No cytotox. vs. 6 HTCLs; IC_{50} >100 µM. // abs. config. determ. by Mosher's and CD

79 Actinobacteria *Nocardiopsis* sp. // * // New diketopiperazine derivatives with cytotoxicity from *Nocardiopsis* sp. YIM M13066
157 // N // nocazine F // Mod. cytotox. vs. 6 HTCLs (IC_{50} between 3.86 to 22.5 µM). No AM vs. 4 strains. inhib. of T3SS, with inhib. on the secretion of the SPI-1 effector SipC. // *
158 // N // nocazine G // Mod. cytotox. vs. 6 HTCLs (IC_{50} between 2.60 to >40 µM). Low AM vs. 4 strains, best MIC = 25.8 µM vs B. subtilis. // *

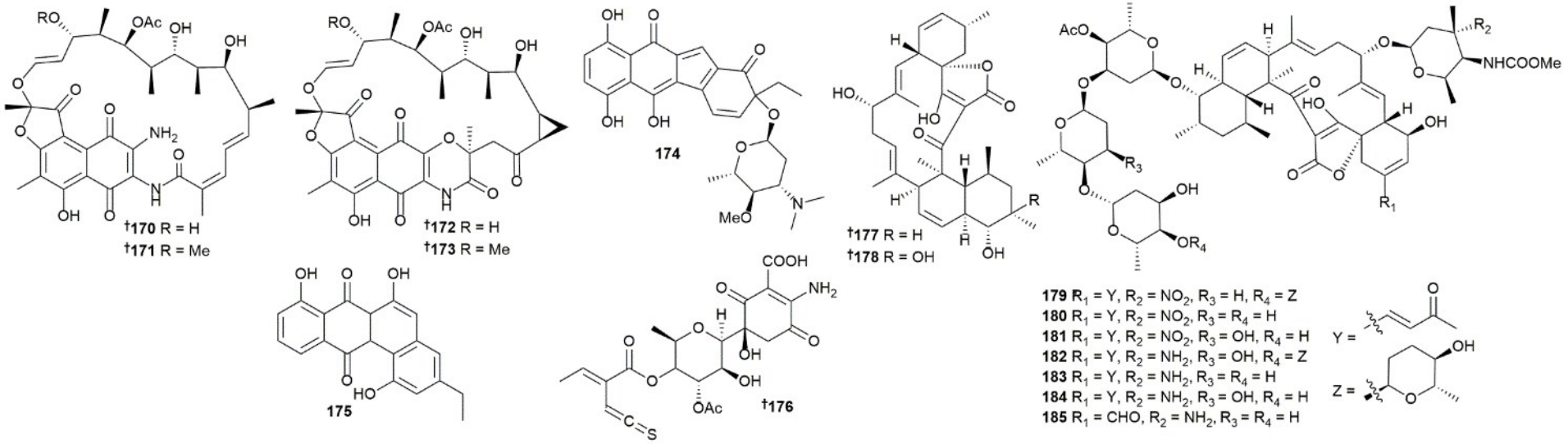
80 Actinobacteria *Nocardiopsis* sp // Xieyang Is., Guangxi Province, China // A new diketopiperazine of *Nocardiopsis alba* isolated from *Anthogorgia caerulea*
159 // N // nocarazepine A // * // abs. config. determ. by optical rotation comparion with known congeners.

81 Actinobacteria *Nocardiopsis alba* // Chichijima, Ogasawara, Japan // Isomethoxyneihumicin, a new cytotoxic agent produced by marine *Nocardiopsis alba* KM6-1
160 // N // isomethoxyneihumicin // Mod. cytotox. vs. Jurkat cells with IC_{50} = 6.98 µM. Arrested cell cycle of Jurkat cells in G2/M phase (66% at 15 µM). // 2:1 mixt. of tautomers.

82 Actinobacteria *Nocardiopsis dassonvillei* // Arctic ocean // A new α-pyrone from the deep-sea actinomycete *Nocardiopsis dassonvillei* subsp. *dassonvillei* DSM 43111(T)
161 // N // nocapyrone S // No cytotox. vs. 6 HTCLs. // abs. config. assigned by ECD data (theo. vs. exp.).

83 Actinobacteria *Nocardiopsis* sp. // * // α-pyrone derivatives from a marine actinomycete *Nocardiopsis* sp. YIM M13066
162 // N // nocapyrone O // No cytotox. vs. 6 HTCLs at 50 µM. // struct. confirmed by X-ray crystal diffrac. anal..
163 // N // nocapyrone P // No cytotox. vs. 6 HTCLs at 50 µM. // *
164 // N // nocapyrone Q // No cytotox. vs. 6 HTCLs at 50 µM. // *
165 // N // nocapyrone R // No cytotox. vs. 6 HTCLs at 50 µM. // *
166 // N // nocapyrone Q // No cytotox. vs. 6 HTCLs at 50 µM. // *

84 Actinobacteria, *Micromonospora rosaria* // S. China Sea // Pyrazolofluostatins A-C, pyrazole-fused benzo[a]fluorenes from South China Sea *Micromonospora rosaria* SCSIO N160
167 // N // pyrazolofluostatin A // weak AM. vs. 5 strains, no cytotox. vs. 4 HTCL, weak antioxid.(EC_{50} 48.6 µM) // abs. config. determ. by X-ray anal.
168 // N // pyrazolofluostatin B // weak AM. vs. 5 strains, no cytotox. vs. 4 HTCL, // abs. config. tentatively assigned based on data comp. and biosynth. with congener.
169 // N // pyrazolofluostatin C // weak AM. vs. 5 strains, no cytotox. vs. 4 HTCL, // abs. config. tentatively assigned based on data comp. and biosynth. with congener.



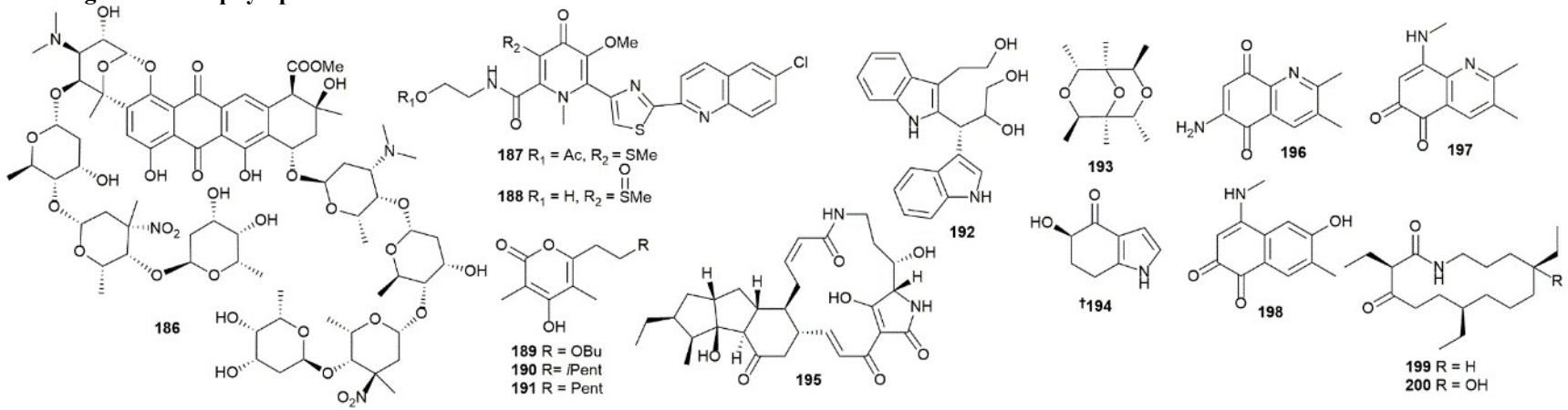
85 Actinobacteria, *Micromonospora* sp. // Barkley Sound, British Columbia, Canada // Aminorifamycins and sporalactams from *Micromonospora* sp. from sediment are potent antibiotics
170 // N // 3-amino-27-demethoxy-27-hydroxyrifamycin S // Potent AM vs. 10 strains, MIC_{90} between 0.0003 to >10 µM. // abs. config. determ. by X-ray anal.
171 // N // 3-amino-rifamycin S // Potent AM vs. 10 strains, MIC90 between 0.0001 to >10 µM. // abs. config. assigned from data compar. with congener, and biosyn. grounds.
172 // N // sporalactam A // Mod. AM vs. 10 strains, MIC_{90} between 0.8 to >50 µM. // abs. config. assigned from data compar. with congener, and biosyn. grounds.
173 // N // sporalactam B // Potent AM vs. 10 strains, MIC_{90} between 0.06 to >50 µM. // abs. config. assigned from data compar. with congener, and biosyn. grounds.

86 Actinobacteria *Micromonospora echinospora* // S. China Sea // Isolation and biosynthesis of benzo[b]fluorene nenestatin A from deep-sea *Micromonospora echinospora* SCSIO 04089
174 // N // nenestatin A // No AM vs. 7 strains; MICs >64 µg/mL. // *
175 // N // homo-dehydrorabelomycin E // Mod. AM vs. 7 strains; MICs 1 - 8 µg/mL, to IA // *

87 Actinobacteria *Micromonospora matsumotoense* // Avilés Canyon, Cantabrian Sea // Paulomycin G, a new natural product with cytotoxic activity against tumor cell lines produced by deep-sea sediment derived *Micromonospora matsumotoense* M-412 from the Avilés canyon in the Cantabrian Sea
176 // N // paulomycin G // Mod. cytotox. vs. 3 HTCLs; IC_{50} between 1.58 to 4.30 µM. // abs. config. assigned from compar. of spectro. data compar. and biosyn. grounds.

88 Actinobacteria *Micromonospora harpali* // S. China Sea // Antimicrobial spirotetronate metabolites from marine-derived *Micromonospora harpali* SCSIO GJ089
177 // N // 22-dehydroxymethyl-kijanolide // No AB vs. 5 strains. // abs. config. Suggested from data compar. with congeners and biosyn. reasoning
178 // N // 8-hydroxy-22-dehydroxymethyl-kijanolide // No AB vs. 5 strains. // abs. config. Suggested from data compar. with congeners and biosyn. reasoning
179 // N // microsporanate A // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
180 // N // microsporanate B // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
181 // N // microsporanate C // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
182 // N // microsporanate D // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
183 // N // microsporanate E // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
184 // N // microsporanate F // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *
185 // N // tetrocarcin P // Mod. AB vs. *B. thuringiensis* BT01 and *B. subtilis* BS01 with MIC between 0.016 to 8.0 µg/mL. // *

3 Marine microorganisms and phytoplankton: 3.1 Marine-sourced bacteria



89 Actinobacteria, *Micromonospora* sp. // * // Coculture of marine invertebrate-associated bacteria enable biosynthesis and discovery of a new antibiotic, keyicin
186 // N // keyicin // Mod. AB activ. vs. *B. subtilis* (MIC = 8.0 µg/mL) and MRSA (MIC = 2.0 µg/mL); MOA appears to affect fatty acid biosynthesis. // *

90 Actinobacteria *Saccharomonospora* sp. // La Jolla Submarine Canyon, La Jolla, California // Lodopyridones B and C from a marine sediment bacterium *Saccharomonospora* sp.
187 // N // lodopyridone B // weak inhibit. vs. BACE1 at > 1 µM. No PPAR or AchE inhib. or AB (vs. several strains). // *
188 // N // lodopyridone C // weak inhibit. vs. BACE1 at > 1 µM. No PPAR or AchE inhib. or AB (vs. several strains). // *

91 Actinobacteria *Saccharomonospora* sp. // La Jolla, California, USA // Saccharomonopyrones A-C, new α-pyrones from a marine sediment bacterium *Saccharomonospora* sp. CNQ-490
189 // N // saccharomonopyrone A // NA in MAO inhib., AchE inhib., BACE1 inhib., anti-osteoporosis, cytotox., anti-tyrosinase, and AB assays. weak AO activ.; IC_{50} >140 µM. // *
190 // N // saccharomonopyrone B // NA in MAO inhib., AchE inhib., BACE1 inhib., anti-osteoporosis, cytotox., anti-tyrosinase, anti-oxidant and AB assays. // *
191 // N // saccharomonopyrone C // NA in MAO inhib., AchE inhib., BACE1 inhib., anti-osteoporosis, cytotox., anti-tyrosinase, AO and AB assays. // *

92 Actinobacteria *Rubrobacter radiotolerans* // Xisha Is., China // Antichlamydial dimeric indole derivatives from marine actinomycete *Rubrobacter radiotolerans*
192 // N // C21H22N2O3 // Antichlamydial activ. vs. 4 strains, IC_{50} between 46.5 - 96.3 µM. // *

93 Actinobacteria *Nesterenkonia flava* // Eastern Pacific Ocean // Anti-allergic compounds from the deep-sea-derived actinomycete *Nesterenkonia flava* MCCC 1K00610
193 // N // nesterenkoniane // weak anti-allergic activ. on IgE-medIAted rat mast RBL-2H3 cells (9.8% inhib. at 20 µg/mL. // *

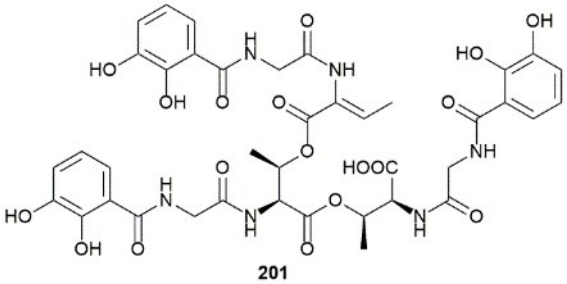
94 Actinobacteria *Microbacterium* sp // S.W. Indian Ocean // Microindolinone A, a novel 4,5,6,7-tetrahydroindole, from the deep-sea actinomycete *Microbacterium* sp. MCCC 1A11207
194 // N // microindolinone A // No cytotox. vs. 1 HTCL (RBL-2H3) at 20 µg/mL. // abs. config. determ. by anal. of ECD data.

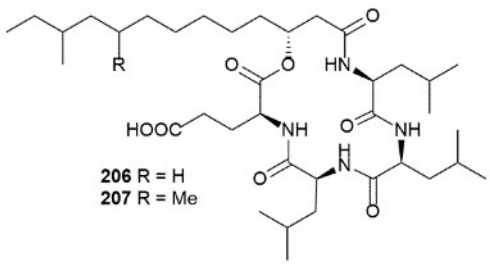
95 Actinobacteria *Actinoalloteichus cyanogriseus* // * // Polycyclic tetramate macrolactams from the marine-derived *Actinoalloteichus cyanogriseus* WH1-2216-6
195 // N // 16-hydroxymaltophilin // mod. cytotox. vs. 7 HTCLs, IC_{50} between 0.1 to 9.7 µM. No AF activ. vs. *Aspergillus fumigatus*. // *

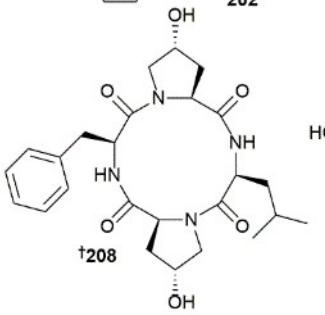
96 Actinobacteria *Saccharopolyspora* sp. // * // Quinoline and naphthalene derivatives from *Saccharopolyspora* sp. YIM M13568
196 // N // 6-amino-2,3-dimethylquinoline-5,8-dione // weak cytotox. vs. 4 HTCLs, IC_{50} = 14.3 to 23.7 µM. // *
197 // N // 2,3-dimethyl-8-(methylamino) quinoline-5,6-dione // weak cytotox. vs. 4 HTCLs, IC_{50} = 13.9 to >30 µM. // X-ray struct. determ.
198 // N // 2-hydroxy-3-methyl-8-(methylamino)naphthalene-5,6-dione // No cytotox. vs. 4 HTCLs, IC_{50} >30 µM. // *

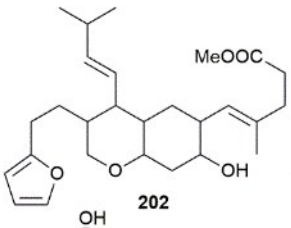
97 Actinobacteria, unknown genus // Indian Ocean // New fluvirucinins C1 and C2 produced by a marine derived actinomycete
199 // N // fluvirucinin C1 // No cytotox. vs. 4 HTCLs at 10 µM . No AM vs. 4 strains at 10 µg/disk. // Rel. config. assigned from compar. of spectro. data compar. and biosyn.
200 // N // fluvirucinin C2 // No cytotox. vs. 4 HTCLs at 10 µM . No AM vs. 4 strains at 10 µg/disk. // Rel. config. assigned from compar. of spectro. data compar. and biosyn.

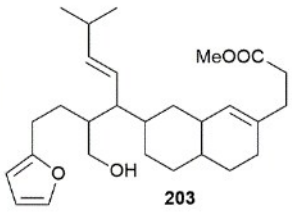
3 Marine microorganisms and phytoplankton: 3.1 Marine-sourced bacteria

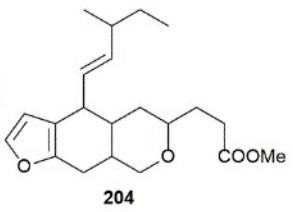


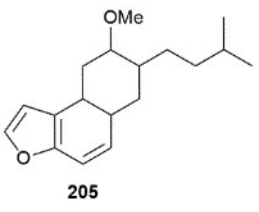


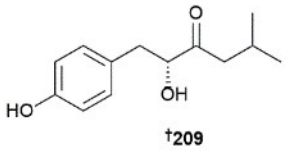


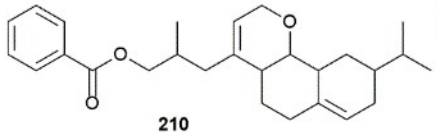


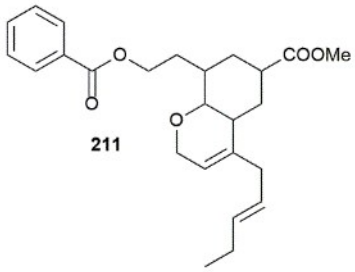












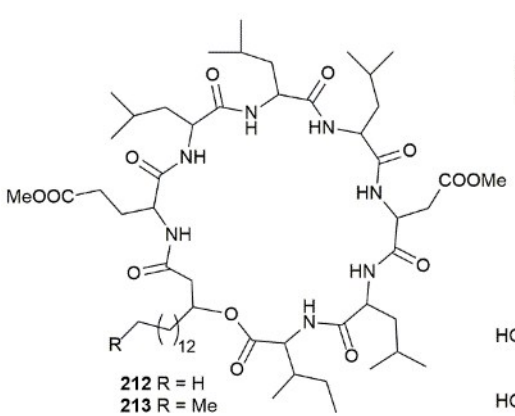
98 Firmicutes *Bacillus subtilis* // Zhanjiang, Guangdong, China // Catechol amide iron chelators produced by a mangrove-derived *Bacillus subtilis*
201 // N // tribenglthin A // No siderophoric activ. // *

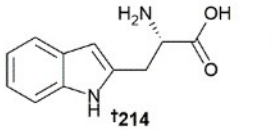
99 Firmicutes *Bacillus subtilis* // Gulf of Mannar, India // Antimicrobial polyketide furanoterpenoids from seaweed-associated heterotrophic bacterium *Bacillus subtilis* MTCC 10403
202 // N // (4E)-methyl 13-((16-(furan-3-yl) ethyl)-octahydro-7-hydroxy-4-((E)-23-methylbut-21-enyl)-2H-chromen-6-yl)-4-methylpent-4-enoate // Potent AB vs. 4 strains; MICs between 3.12 to 6.25 µg/mL. // *
203 // N // methyl 11-(4-((E)-15-(17-(furan-2-yl) ethyl)-28-hydroxy-24-methylhept-22-en-14-yl)-5,6,7,8,9,10,-octahydronaphthalen-7-yl)propanoate // Low AB vs. 4 strains; MICs >25 µg/mL. // *
204 // N // methyl 3-(4,5,6,7,8,9-hexahydro-9-((E)-3-methylpent-1-enyl)-4H-furo[3,2-g]isochromen-6-yl) propanoate // Mod. AB vs. 4 strains; MICs >7 µg/mL. // *
205 // N // 5,6,7,8,9,12-hexahydro-11-isopentyl-10-methoxynaphtho[2,1-b]furan // Low AB vs. 4 strains in disc diffusion assay. // *

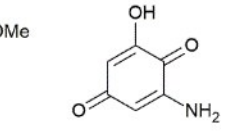
100 Firmicutes *Bacillus subtilis* // Gageocho reef, Republic of Korea // Bacilotetrins A and B, anti-Staphylococcal cyclic-lipotetrapeptides from a marine-derived *Bacillus subtilis*
206 // N // bacilotetrin A // Mod. AB activ. vs. 5 MRSA strains, MICs between 8 to 32 No cytotox. vs. 2 HTLCs. // partial abs. config. by Marfey's
207 // N // bacilotetrin B // Mod. AB activ. vs. 5 MRSA strains, MICs between 16 to 32 to NA µg/mL. No cytotox. vs. 2 HTLCs. // partial abs. config. by Marfey's

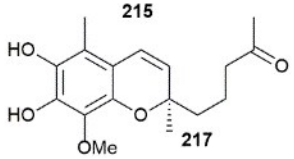
101 Firmicutes *Bacillus cereus* // Providencia Is., Colombia // Cereusitin A, a cyclic tetrapeptide from a *Bacillus cereus* strain isolated from the soft coral *Antillogorgia* (syn. *Pseudopterogorgia*) *elisabethae*
208 // N // cereusitin A // weak AF vs *Colletotrichum gloeosporoides, IA* vs *Fusarium oxysporum* // abs. config. determ. by Marfey's method.
209 // N // 4-(R)-hydroxysattabacin // * // abs. config. determ. by optical rotation compar. with natural and synth. analogues.

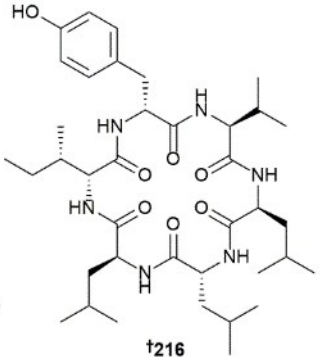
102 Firmicutes *Bacillus amyloliquefaciens* // Gulf of Mannar, India // Antibacterial polyketides from *Bacillus amyloliquefaciens* associated with edible red seaweed *Laurenciae papillosa*
210 // N // 3-(octahydro-9-isopropyl-2H-benzo [h] chromen-4-yl)-2-methylpropyl benzoate // Mod. AB vs 3 strains, zone of inhib.s ranged from 14 to 18 mm. // *
211 // N // methyl 8-(2-(benzoyloxy)-ethyl)-hexahydro-4-((E)-pent-2-enyl)-2H-chromene-6-carboxylate // Mod. AB vs 3 strains, zone of inhib.s ranged from 12 to 16.7 mm. // *

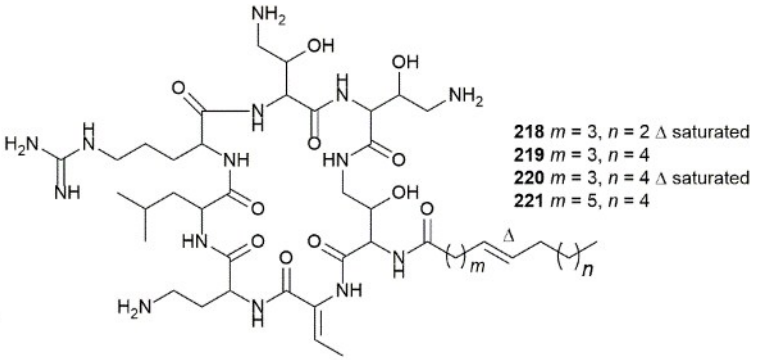












103 Firmicutes *Bacillus* sp // * // Pumilacidin-like lipopeptides derived from marine bacterium Bacillus sp. strain 176 suppress the motility of *Vibrio alginolyticus*.
212 // N // CLP1 // inhib. of *Vibrio alginolyticu*s motility and Induces cell aggregation; inhib. biofilm formation vs pathogenic bact. without inducing cell death. // *
213 // N // CLP2 // inhib. of *Vibrio alginolyticu*s motility and Induces cell aggregation; inhib. biofilm formation vs pathogenic bact. without inducing cell death. // *

104 Firmicutes *Bacillus amyloliquefaciens* // Antarctic // Isotryptophan from Antarctic *Bacillus amyloliquefaciens* Pc3: purification, identification, characterization, and antifungal activity
214 // M // isotryptophan // Mod. AF activ. vs. 70 strains; MICs from 3.125 to 6.25 µg/mL. // abs. config. assigned based on optical rotation data.

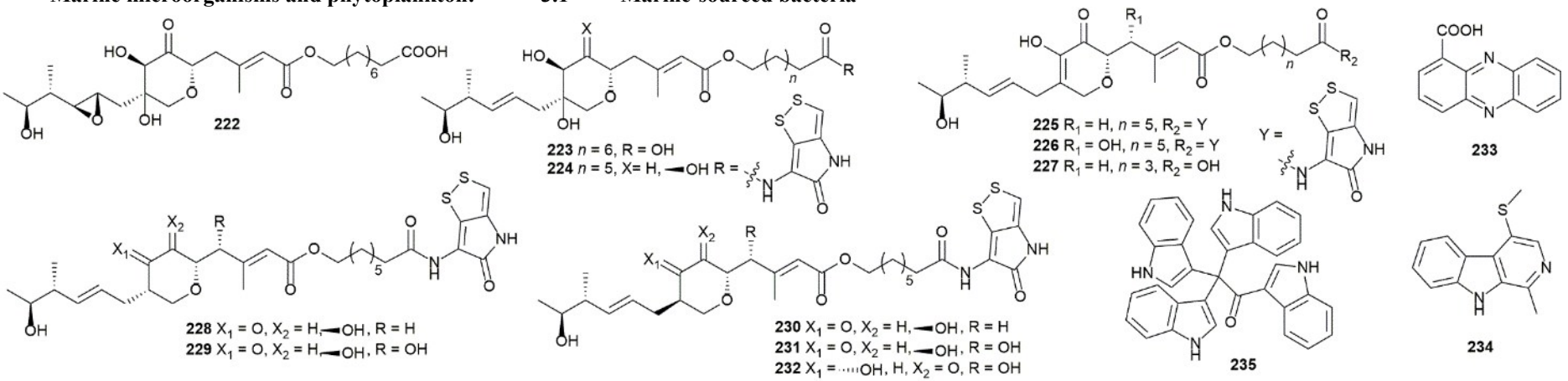
105 Firmicutes *Geobacillus* sp // Eastern Pacific // A novel benzoquinone compound isolated from deep-sea hydrothermal vent triggers apoptosis of tumor cells
215 // N // 2-amino-6-hydroxy-[1,4]-benzoquinone // Some cytotox. activ. towqrds breast cancer, gastric cancer, and melanoma, triggers apoptosis via ROS mechanism. // *

106 Firmicutes *Thermoactinomyces vulgaris* // * // Thermoactinoamide A, an antibiotic lipophilic cyclopeptide from the Icelandic thermophilic bacterium *Thermoactinomyces vulgaris*
216 // N // thermoactinamide A // Mod. AB activ. vs. S. aureus, MIC = 35 µM. IA vs. 5 other bac. strains at 140 µM. // abs. config. determ. by adv. Marfey's anal..

107 Proteobacteria *Pseudoalteromonas* sp // * // Pseudoalteromone C: a novel ubichromenol derivative from bacterium *Pseudoalteromonas* sp CGH2XX isolated from the cultured-type octocoral *Lobophytum crassum*
217 // N // pseudoalteromone C // * // *

108 Proteobacteria *Pseudoalteromonas* sp // Ogi-machi, Sado-shi, Niigata Pref., Japan // Identification and biological activity of ogipeptins, novel LPS inhibitors produced by marine bacterium
218 // N // ogipeptin A // inhib. of LPS (IC_{50} = 4.8 nM). AB activ. vs. 4 strains with MICs between 0.25 to 128 µg/ml. // abs. config. not determ.
219 // N // ogipeptin B // inhib. of LPS (IC_{50} = 6.0 nM). AB activ. vs. 4 strains with MICs between 0.25 to 64 µg/ml. // abs. config. not determ.
220 // N // ogipeptin C // inhib. of LPS (IC_{50} = 4.1 nM). AB activ. vs. 4 strains with MICs between 0.25 to 32 µg/ml. // abs. config. not determ.
221 // N // ogipeptin D // inhib. of LPS (IC_{50} = 5.6 nM). AB activ. vs. 4 strains with MICs between 0.5 to 16 µg/ml. // abs. config. not determ.

3 Marine microorganisms and phytoplankton: 3.1 Marine-sourced bacteria

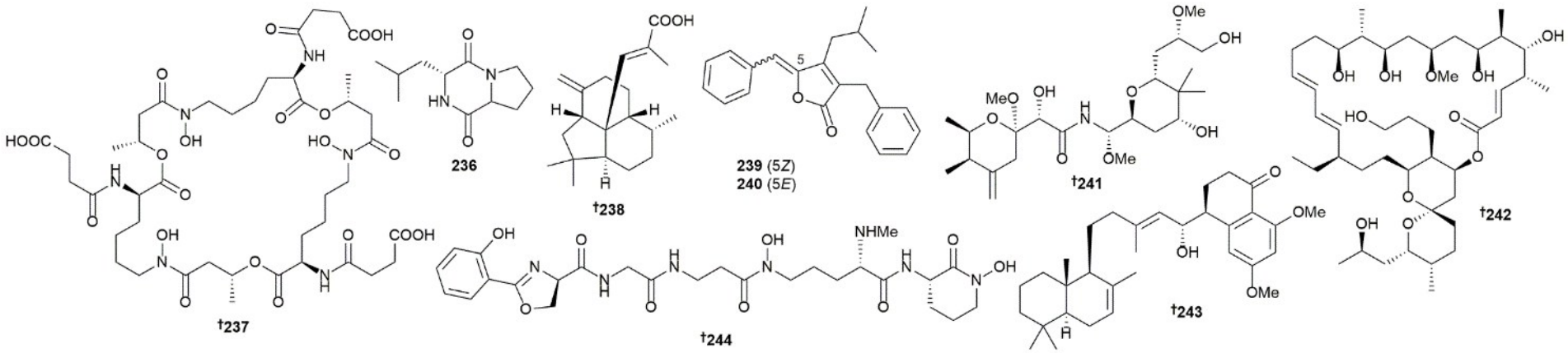


109 Proteobacteria *Pseudoalteromonas* sp // * // Selected mutations reveal new intermediates in the biosynthesis of mupirocin and the thiomarinol antibiotics
222 // N // mupirocin P // * // *
223 // N // desepoxy-mupirocin P // * // *
224 // N // 8-hydroxythiomarinol C // * // *
225 // N // 6,7-diketothiomarinol C // * // *
226 // N // 6,7-diketothiomarinol A // * // *
227 // N // 6,7-diketothiomarinolic acid C6 // * // *
228 // N // 7-ketothiomarinol C // * // *
229 // N // 7-ketothiomarinol A // * // *
230 // N // 8-epi-7-ketothiomarinol C // * // *
231 // N // 8-epi-7-ketothiomarinol A // * // *
232 // N // 8-epi-7-epi-6-ketothiomarinol A // * // *

110 Proteobacteria *Pseudomonas aeruginosa* // China Yellow Sea // Antagonistic activity and mode of action of phenazine-1-carboxylic acid, produced by marine bacterium *Pseudomonas aeruginosa* PA31x, against Vibrio anguillarum In vitro and in a zebrafish In vivo model
233 // M // phenazine-1-carboxylic acid // Mod. AB vs. *Vibrio anguillarum* C312 (MIC = 50 µg/mL and IC_{50} = 39.02 µg/mL). // *

111 Proteobacteria *Pseudomonas benzenivorans* // California State Beaches // Evaluating nitrogen-containing biosynthetic products produced by saltwater culturing of several California littoral zone Gram-negative bacteria
234 // N // 1-methyl-4-methylthio-β-carboline // * // *

112 Proteobacteria *Pseudovibrio denitrificans* // * // Cytotoxic indole alkaloids from *Pseudovibrio denitrificans* BBCC725
235 // N // tetra(indol-3-yl)ethanone // Mod. cytotox. vs. 2 HTCLs; L929 cells (EC_{50} = 7 µM) and A549 cells (EC_{50} = 8 µM). // *



113 Proteobacteria *Vibrio alginolyticus* // Fujian Province, China // Antifouling activity towards mussel by small-molecule compounds from a strain of *Vibrio alginolyticus* bacterium associated with sea anemone *Haliplanella* sp.
236 // M // cyclo(Pro-Leu) // signif. antifoul. activ. vs the mussel *Perna viridis*, the barnacle *Balanus albicostatus*, and the marine bact. *Pseudomonas* sp. TB4 // *

114 Proteobacteria *Thalassospira profundimaris* // Florida Keys // Thalassosamide, a siderophore discovered from the marine-derived bacterium *Thalassospira profundimaris*
237 // N // thalassosamide // Siderophoric activ. Mod. *in vitro* AB activ.vs *P. aeruginosa* and *E. coli* with MICs of 64 µg/mL. // abs. config. determ. by Marfey's and ECD

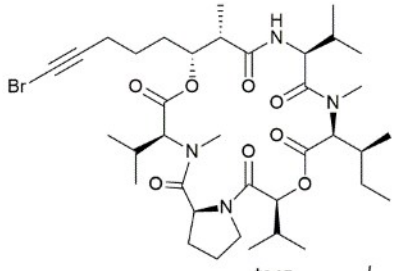
115 Proteobacteria *Enhygromyxa* sp // Kashiwazaki, Niigata, Japan // An unusual diterpeneâ€"enhygromic acid and deoxyenhygrolides from a marine myxobacterium, *Enhygromyxa* sp.
238 // N // enhygromic acid // weak cytotox. vs. 2HTCLs, IC_{50} = 46 to >30 µM. NGF enhancer of PC12 cells. MIC of 8 ug/ml vs. *B. subtilis*// abs. config. determ. By ECD
239 // N // deoxyenhygrolide A // No cytotox. vs. 2 HTCLs. No AM vs. 7 strains. // *
240 // N // deoxyenhygrolide B // No cytotox. vs. 2 HTCLs. No AM vs. 7 strains. // *

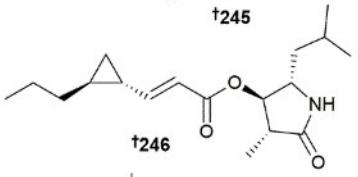
116 Proteobacteria *Labrenzia* sp // Kenya // Bacterial production of a pederin analogue by a free-living marine alpha proteobacterium
241 // N // 18-O-demethylpederin // Potent cytotox. vs. 4 HTCLs, GI_{50} between 2.0 to 2.9 nM. // abs. config. tentatively assigned based on compar. of data with congener.

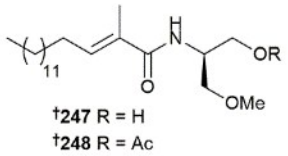
117 Actinobacteria *Actinoalloteichus sp.* // * // Synthesis and configuration of neomaclafungin A
242 // R // neomaclafungin A // * // abs. config. determ. by total synth..

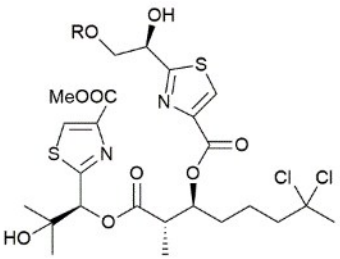
121 Actinobacteria *Actinomadura* sp // * // Total synthesis and stereochemical assignment of actinoranone
243 // R // actinoranone // Mod. cytotox. vs. 10 HTCL; IC_{50} values low uM // Total syn. of 4 stereoisomers unambiguously assigned rel. and abs. configs.

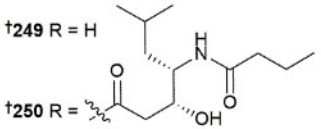
128 Actinobacteria *Actinomadura* sp // Canary Basin, Atlantic Ocean // Structural reassignment and absolute stereochemistry of madurastatin C1 (MBJ-0034) and the related aziridine siderophores: madurastatins A1, B1, and MBJ-0035
244 // M // madurastatin C1 // * // abs. config. determ. by Harada's advanced Marfey's method.

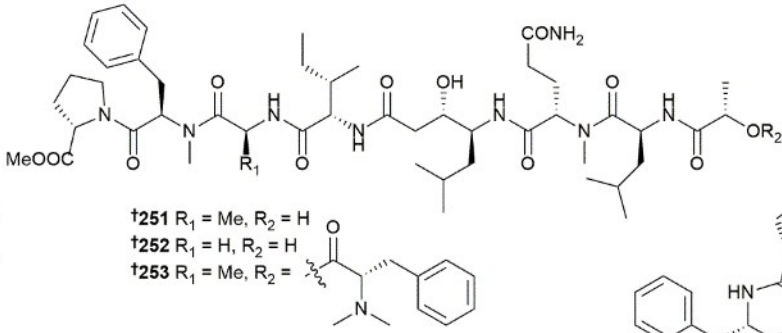


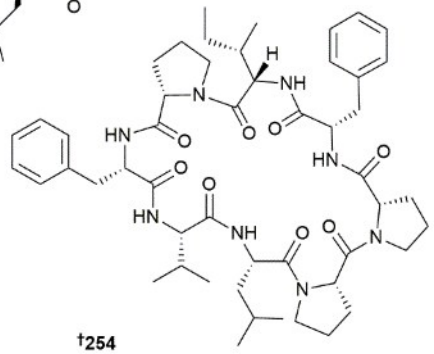












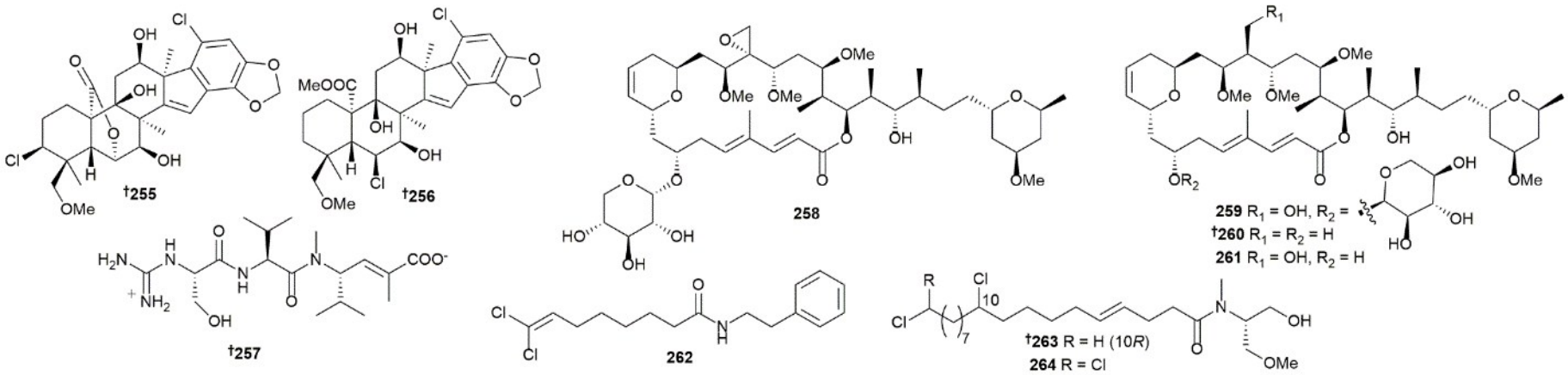
130 Cyanobacteria *Okeania* sp // Odo, Okinawa Prefecture, Japan // Odobromoamide, a terminal alkynyl bromide-containing cyclodepsipeptide from the marine cyanobacterium Okeania sp.
245 // N // odobromoamide // Mod. tox. vs brine shrimp signif. cytotox. vs 39 HTCL, average GI_{50} = 28 nM. // abs. config. by chemical degrad. and derivatization with HPLC anal.

131 Cyanobacteria *Oscillatoria* sp // Hoshino, Okinawa Prefecture, Japan // Isolation and total synthesis of hoshinolactam, an antitrypanosomal lactam from a marine cyanobacterium
246 // N // hoshinolactam // Potent. activ. vs *T. brucei brucei* (GUT at 3.1 strain) IC_{50} 3.9 nM; no cytotox. vs hum. fetal lung fibroblast MRC-5 cells (IC_{50} > 25 µM). // abs. config. determ. by the first total synth.

132 Cyanobacteria *Okeania* sp // Algetah Alkabira reef, Jeddah, Saudi Arabia // Serinolamides and lyngbyabellins from an *Okeania* sp. cyanobacterium collected from the Red Sea
247 // N // serinolamide C // Mod. antifoul. activ. vs *Amphibalanus amphitrite* larvae, inhibited settlement < 1 µg/mL// abs. config. determ. by Marfey's anal. of their hydrolysates
248 // N // serinolamide D // Mod. antifoul. activ. vs *Amphibalanus amphitrite* larvae, inhibited settlement < 1 µg/mL // abs. config. determ. by Marfey's anal. of their hydrolysates
249 // N // lyngbyabellin O // Strong antifoul. activ. vs *Amphibalanus amphitrite* larvae (EC_{50} 0.38 µM);) // abs. config. determ. by chiral-phase HPLC of degrad. products
250 // N // lyngbyabellin P // Strong antifoul. activ. vs *Amphibalanus amphitrite* larvae (EC_{50} 0.73 µM); mod. $_{cytotox.}$ vs MCF-7 (GI_{50} = 90 µM) // abs. config. by compar. of exp. data

133 Cyanobacteria *Leptolyngbya* and *Phormidium* // Cetti Bay, Guam // Grassystatins D-F, potent aspartic protease inhibitors from marine cyanobacteria as potential antimetastatic agents targeting invasive breast cancer
251 // N // grassystatin D // Potent activ. vs. cathepsins D (IC_{50} = 2000 nM) and E (IC_{50} = 30 nM). // abs. config. determ. by chiral HPLC-MS and Marfey's method
252 // N // grassystatin E // Potent activ. vs. cathepsins D (IC_{50} = 900 nM) and E (IC_{50} = 5 nM). // abs. config. determ. by chiral HPLC-MS anal. and Marfey's
253 // N // grassystatin F // Potent activ. vs. cathepsins D (IC_{50} = 50 nM) and E (IC_{50} = 0.5 nM). Inhibited cleavage of cystatin C and PAI-1. // abs. config. determ. by acid hydrolysis and chiral HPLC-MS anal. and Marfey's method using known stds.

134 Cyanobacteria *Symploca* sp // Vatia Bay, American Samoa // Integrating molecular networking and biological assays to target the isolation of a cytotoxic cyclic octapeptide, samoamide A, from an American Samoan marine cyanobacterium
254 // N // samoamide A // Mod. cytotox. towards several HTCL, best activ. vs H460 hum. non-small-cell lung cancer cells (IC_{50} = 1.1 µM). // abs. config. determ. by Marfey's anal.



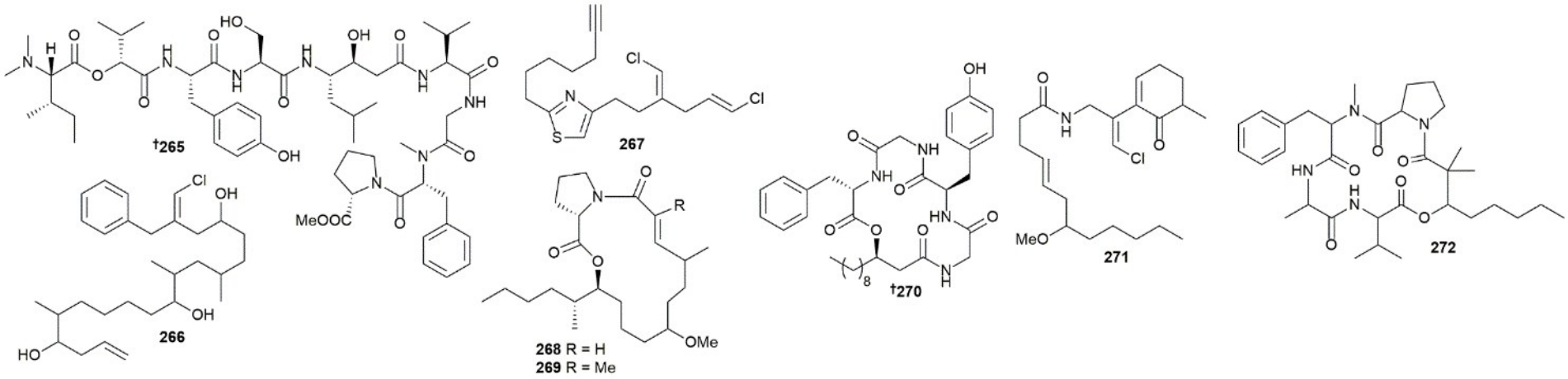
135 Cyanobacteria *Scytonema* sp // Bermuda // Cyanobacterial ent-sterol-like natural products from a deviated ubiquinone pathway
255 // N // merosterol A // Mod. cytotox. towards HeLa cells, IC_{50} = 1.8 µM. IA towards Gram +ve and -ve bact. at 100 µg/mL. // abs. config. by CD
256 // N // merosterol B // Low cytotox. towards HeLa cells, IC_{50} = 11.6 µM. IA towards Gram +ve and -ve bact. at 100 µg/mL. // abs. config. by CD

136 Cyanobacteria *Moorea producens* // Hector's Bay, S.east Jamaica // A maldiisotopic approach to discover natural products: cryptomaldamide, a hybrid tripeptide from the marine cyanobacterium *Moorea producens*
257 // N // cryptomaldamide // Low cytotox. towards 1 HTCL (IC_{50} = 40 µM); no activ. towards mammalian voltage gated sodium channel Nav1.4 at 10 µM. // abs. config. by Marfey's

137 Cyanobacteria *Leptolyngbya* sp // Okinawa, Japan // Leptolyngbyolides, cytotoxic macrolides from the marine cyanobacterium *Leptolyngbya* sp.: isolation, biological activity, and catalytic asymmetric total synthesis
258 // N // leptolyngbyolide A // Potent cytotox. towards HeLaS3 cells, IC_{50} = 0.099 µM; F-actin depolymerizing activ., IC_{50} = 12.6 µM. // abs. config. tentatively assigned
259 // N // leptolyngbyolide B // Potent cytotox. towards HeLaS3 cells, IC_{50} = 0.16 uM; F-actin depolymerizing activ., IC_{50} = 11.6 uM // abs. config. tentatively assigned
260 // N // leptolyngbyolide C // Potent cytotox.. towards HeLaS3 cells, IC_{50} = 0.64 uM; F-actin depolymerizing activ., IC_{50} = 26.9 uM // abs. config. determ. by asym. total synth.
261 // N // leptolyngbyolide D // Potent cytotox. towards HeLaS3 cells, IC_{50} = 0.15 uM; F-actin depolymerizing activ., IC_{50} = 21.5 uM // abs. config. tentatively assigned

138 Cyanobacteria *Symploca* sp // Punta Caracol, Bocas del Toro, Panama // Discovery and synthesis of caracolamide A, an ion channel modulating dichlorovinylidene containing phenethylamide from a Panamanian marine cyanobacterium cf. *Symploca* Species
262 // N // caracolamide A // *In vitro* Ca influx and Ca channel oscillation modulatory activ. when tested as low as 10 pM; no tox. towards NCI-H460 cells (IC_{50} > 10 µM) // *

139 Cyanobacteria *Moorea bouillonii* // Mantanani Is., Sabah, Malaysia // Columbamides D and E: chlorinated fatty acid amides from the marine cyanobacterium *Moorea bouillonii* collected in Malaysia
263 // N // columbamide D // No cytotox. vs. 2 HTCLs at 22 µM. // abs. config. determ. by total synth. of all 4 stereoisomers.
264 // N // columbamide E // NT // abs. config. only partially determ. Sample isol. as a 3:4 mixutre of columbamides D and E.



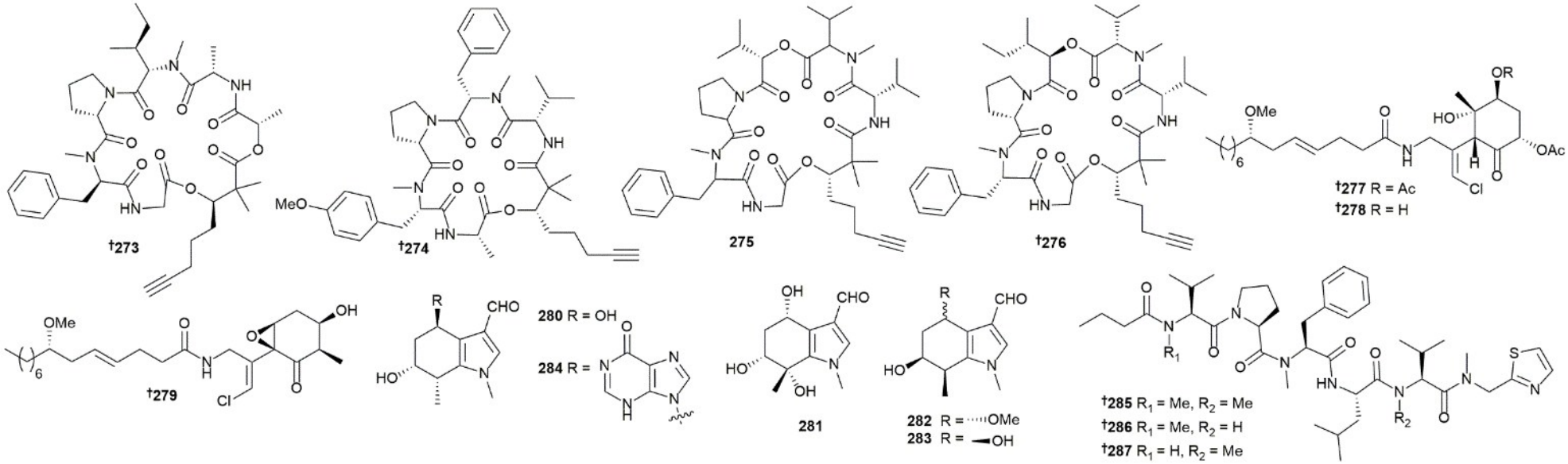
144 Cyanobacteria *Symploca* sp. // Bahamas // Synthesis and structure revision of symplocin A
265 // R // symplocin A // * // abs. config. determ. by total synth..

146 Cyanobacteria *Trichodesmium thiebautii* // Padre Is., Corpus Christi, Texas, USA // Trichophycin A, a cytotoxic linear polyketide isolated from a *Trichodesmium thiebautii* Bloom
266 // N // trichophycin A // Mod. cytotox. vs murine neuroblastoma cell line Neuro-2A (EC50: 6.5 μM) and HCT-116 cells (EC50: 11.7 μM). // *

147 Cyanobacteria *Trichodesmium* sp // Gulf of Mexico // Trichothiazole A, a dichlorinated polyketide containing an embedded thiazole isolated from *Trichodesmium* blooms
267 // N // trichothiazole A // mod. cytotox. to Neuro-2 A cells (EC50: 13.3 μM). // *

148 Cyanobacteria *Trichodesmium thiebautii* // Padre Is., Corpus Christi, Texas, USA // Tricholides A and B and unnarmicin D: new hybrid PKS-NRPS macrocycles isolated from an environmental collection of *Trichodesmium thiebautii*
268 // N // tricholide A // No AB activ. vs. 3 strains. No cytotox. vs. HCT-116 at 25 μM. // abs. config. only partially determ. Amino acid abs. config. assigned by Marfey's method.
269 // N // tricholide B // No AB activ. vs. 3 strains. No cytotox. vs. HCT-116 at 25 μM. Low cytotox. vs. Neuro-2A cells (EC_{50} = 14.5 μM). // abs. config. only partially determ. Amino acid abs. config. assigned by Marfey's method.
270 // N // unnarmicin D // No AB activ. vs. 3 strains. No cytotox. vs. 2 HTCLs. // abs. config. determ. by Marfey's and Mosher's method, plus NMR studies.

149 Cyanobacteria *Moorea producens* // Key West, Florida, USA // Biologically active new metabolites from a Florida collection of *Moorea producens*
271 // N // malyngamide Y // Mod. cytotox. (EC_{50} = 1.45 × 10−5 μM) to a lung HTCL (NCI-H460) and mouse neuro-2a neuroblastoma cell line. // *
272 // N // floridamide // weak cytotox. (EC_{50} = 1.89 × 10−5 μM) vs lung HTCL (NCI-H460) and mouse neuro-2a neuroblastoma cell line. // *

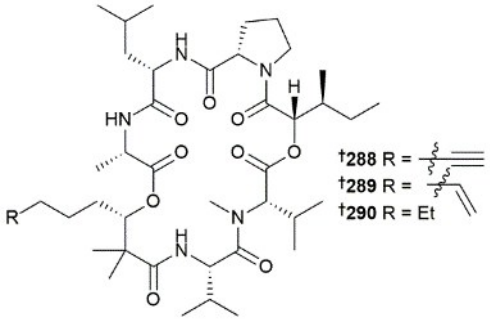


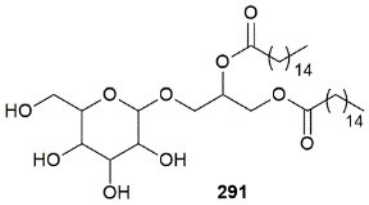
150 Cyanobacteria *Moorea producens* // Dudawali Bay, Papua New Guinea // Dudawalamides A-D, antiparasitic cyclic depsipeptides from the marine cyanobacterium *Moorea producens*
273 // N // dudawalamide A // Mod. antimal. (IC_{50} = 3.6 µM), anti-Chagas (12% GI at 10 µg/mL. // abs. config. by X-ray cryst.
274 // N // dudawalamide B // Mod. antimal. (IC_{50} = 8.0 µM), anti-Chagas (7% GI at 10 µg/mL), // abs. config. by Marfey's and chiral GCMS, and HPLC
275 // N // dudawalamide C // Mod. antimal. activ. (IC_{50} = 10 µM); // abs. config. only partially determ. due to limited quantities
276 // N // dudawalamide D // Mod. antimal. (IC_{50} = 3.5 µM), anti-Chagas (60% GI at 10 µg/mL), anti-Leishman. (IC_{50} = 2.6 µM) activ // abs. config.by Marfey's chiral GCMS, HPLC

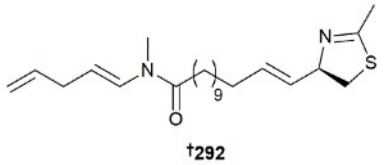
151 Cyanobacteria *Moorea producens* // Bise, Okinawa Prefecture, Japan // Three new malyngamides from the marine cyanobacterium *Moorea producens*
277 // N // 6,8-di-O-acetylmalyngamide 2 // signif. stimulated glucose uptake in cultured L6 myotubes via AMPK pathway. // abs. config. determ. via compar. of chiro-optical data
278 // N // 6-O-acetylmalyngamide 2 // weakly stimulated glucose uptake in cultured L6 myotubes via AMPK pathway. // abs. config. by Moshers and compar. of chiro-optical data
279 // N // N-demethyl-isomalyngamide I // weakly stimulated glucose uptake in cultured L6 myotubes via AMPK pathway. // abs. config. partially determ.

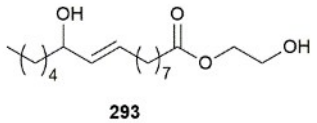
152 Cyanobacteria *Moorea producens* // Kuba, Nakagusuku Nakagami District, Okinawa, Japan // Five new indole derivatives from the cyanobacterium *Moorea producens*
280 // N // C11H15NO3 // No activ. vs. LI210 cell line or diatom *Nitzschia amabili*s at 20 µg/mL. No activ. vs. *E. coli* at 20 µg/disc. // *
281 // N // C11H15NO4 // No activ. vs. LI210 cell line or diatom *Nitzschia amabili*s at 20 µg/mL. No activ. vs. *E. coli* at 20 µg/disc. // *
282 // N // C12H17NO3 // No activ. vs. LI210 cell line or diatom *Nitzschia amabili*s at 20 µg/mL. No activ. vs. *E. coli* at 20 µg/disc. // *
283 // N // C11H15NO3 // No activ. vs. LI210 cell line or diatom *Nitzschia amabili*s at 20 µg/mL. No activ. vs. *E. coli* at 20 µg/disc. // *
284 // N // C16H17N5O3 // No activ. vs. LI210 cell line or diatom *Nitzschia amabili*s at 20 µg/mL. No activ. vs. *E. coli* at 20 µg/disc. // *

153 Cyanobacteria *Okeania* sp // Bise, Okinawa Prefecture, Japan // Biseokeaniamides A, B, and C, sterol O-acyltransferase inhibitors from an *Okeania* sp. marine cyanobacterium
285 // N // biseokeaniamide A // weak cytotox. vs 2 HTCLs; inhib. sterol O-acyltransferases (SOAT1-4), IC_{50} between 1.8 to 9.6 µM. // abs. config. by chiral HPLC and Marfey's
286 // N // biseokeaniamide B // Low cytotox. vs 2 HTCLs; inhib. sterol O-acyltransferases (SOAT1-4), IC_{50} between 2.5 to 9.9 µM // abs. config. by chiral HPLC and Marfey's
287 // N // biseokeaniamide C // Low cytotox. vs 2 HTCLs; inhib. sterol O-acyltransferases (SOAT1-4), IC_{50} between 9.6 to >12 µM // abs. config. by chiral HPLC and Marfey's







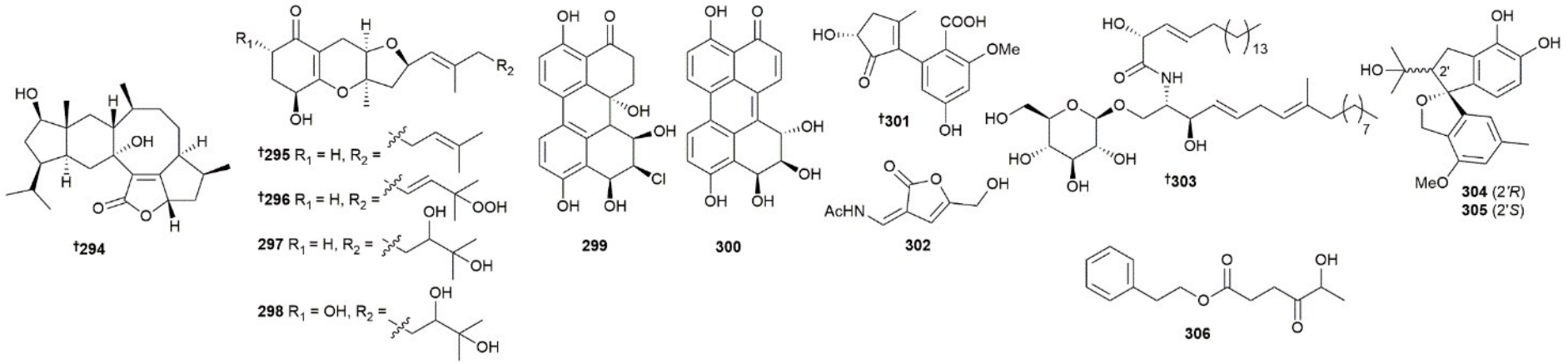


154 Cyanobacteria *Okeania* sp // Kohama Is., Okinawa Prefecture, Japan // Kohamamides A, B, and C, cyclic depsipeptides from an *Okeania* sp. marine cyanobacterium
288 // N // kohamamide A // Low cytotox. vs 2 HTCLs // abs. config. by chiral HPLC and compar. of optical rotation
289 // N // kohamamide B // Low cytotox. vs 2 HTCLs // abs. config. by chiral HPLC and compar. of optical rotation
290 // N // kohamamide C // Low cytotox. vs 2 HTCLs // abs. config. by chiral HPLC and compar. of optical rotation

155 Cyanobacteria *Oscillatoria acuminata* // Mandapam, Ramanathapuram District, Tamil Nadu, India // In vitro antibacterial activity of MGDG-palmitoyl from Oscillatoria acuminata NTAPC05 against extended-spectrum β-lactamase producers
291 // N // monogalactosyldiacylglycerol-palmitoyl // mod. AB towards 3 ESBL bact., MIC 100 µg/mL. cpd damages bac. membrane leading to cell lysis. // *

156 Cyanobacteria *Caldora penicillata* // Lau Lau Bay, Saipan // Laucysteinamide A, a hybrid PKS/NRPS metabolite from a Saipan cyanobacterium, cf. *Caldora penicillata*
292 // N // laucysteinamide A // Low cytotox. towards 1 HTCL (IC_{50} = 11 µM). // abs. config. determ. by compar. of energy-minimized molecular models with CD

157 Cyanobacteria *Leptolyngbya* sp // Gulf of Thailand // Inhibition of *Vibrio* spp. by 2-hydroxyethyl-11-hydroxyhexadec-9-enoate of marine cyanobacterium *Leptolyngbya* sp. LT19
293 // N // 2-hydroxyethyl-11-hydroxyhexadec-9-enoate // weak AB vs the Gram-negative *Vibrio harveyi* and *V. parahaemolyticus* // *

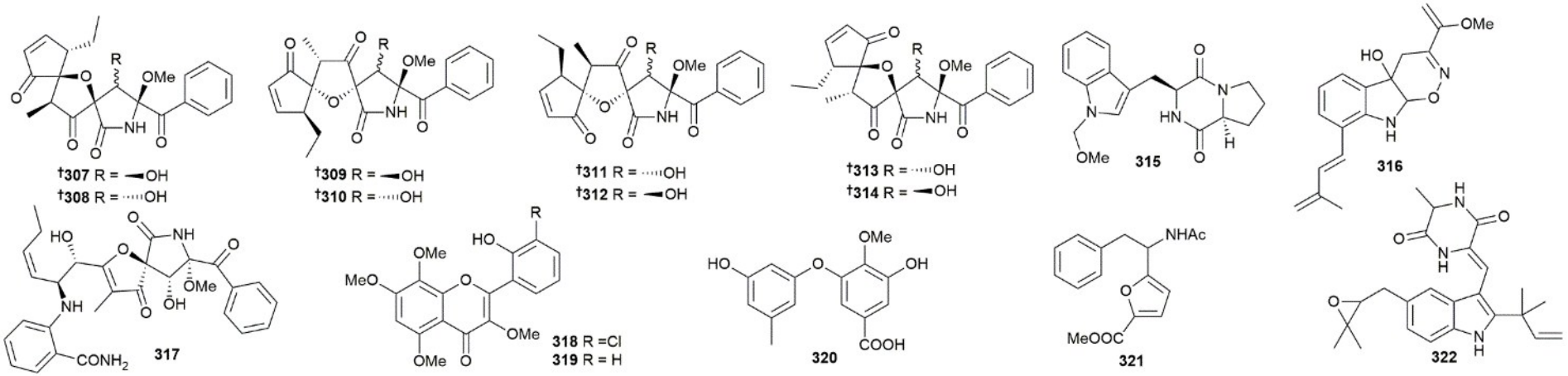


158 Ascomycota *Alternaria alternata* // (red alga, *Lomentaria hakodatensis*) Kongdong Is., China // Sesteralterin and tricycloalterfurenes A-D: terpenes with rarely occurring frameworks from the marine-alga-epiphytic fungus *Alternaria alternata* k21-1
294 // N // sesteralterin // weak-mod. activ. vs 3 phytoplankton strains, IA vs 1 zooplankton strain and 1 bact. // *
295 // N // tricycloalterfurene A // weak-mod. activ. vs 3 phytoplankton and 1 zooplankton strain, IA vs 1 bact. // *
296 // N // tricycloalterfurene B // weak-mod. activ. vs 3 phytoplankton and 1 zooplankton strain, IA vs 1 bact. // *
297 // N // tricycloalterfurene C // weak-mod. activ. vs 3 phytoplankton and 1 zooplankton strain, IA vs 1 bact. // *
298 // N // tricycloalterfurene D // weak-mod. activ. vs 3 phytoplankton and 1 zooplankton strain, IA vs 1 bact. // *

159 Ascomycota *Alternaria* sp // (sediment) Sansha City, S. China Sea // Inhibitors of BRD4 protein from a marine-derived fungus *Alternaria* sp. NH-F6
299 // N // 12β-Chloro-3,9α,11β,13β,16-pentahydroxy-8,9,10,11,12,13-hexahydro-6(7H)-one // mod. inhib. BRD4 protein // *
300 // N // 3,11α,12β,13β,16-pentahydroxy-11,12-dihydroperylen-6(13H)-one // potent inhib. BRD4 protein // *
301 // N // alternarienonic acid B // IA // *
302 // N // 2-(N-vinylacetamide)-4-hydroxymethyl-3-ene-butyrolactone // IA // *
303 // N // chrysogeside F // IA // *

160 Ascomycota *Arthrinium* sp // (sponge, *Sarcotragus muscarum*) Mersin, Turkey // Spiroarthrinols A and B, two novel meroterpenoids isolated from the sponge-derived fungus *Arthrinium* sp
304 // N // spiroarthrinol A // IA vs 1 HTCL. // *
305 // N // spiroarthrinol B // IA vs 1 HTCL. // *

161 Ascomycota *Arthrinium arundinis* // (sponge, *Phakellia fusca*) Xisha Islands, China // One-strain many compounds method for production of polyketide metabolites using the sponge-derived fungus *Arthrinium arundinis* ZSDS1-F3
306 // M // phenethyl 5-hydroxy-4-oxohexanoate // IA vs 10 HTCLs // *



162 Ascomycota *Aspergillus fumigatus* // (fish, *Mugil cephalus*) Osaka bay, Japan // absolute configuration of eight cephalimysins isolated from the marine-derived *Aspergillus fumigatus* .
307 // N // cephalimysin E // * // *
308 // N // cephalimysin F // * // *
309 // N // cephalimysin G // * // *
310 // N // cephalimysin H // * // *
311 // N // cephalimysin I // * // *
312 // N // cephalimysin J // * // *
313 // N // cephalimysin K // * // *
314 // N // cephalimysin L // * // *

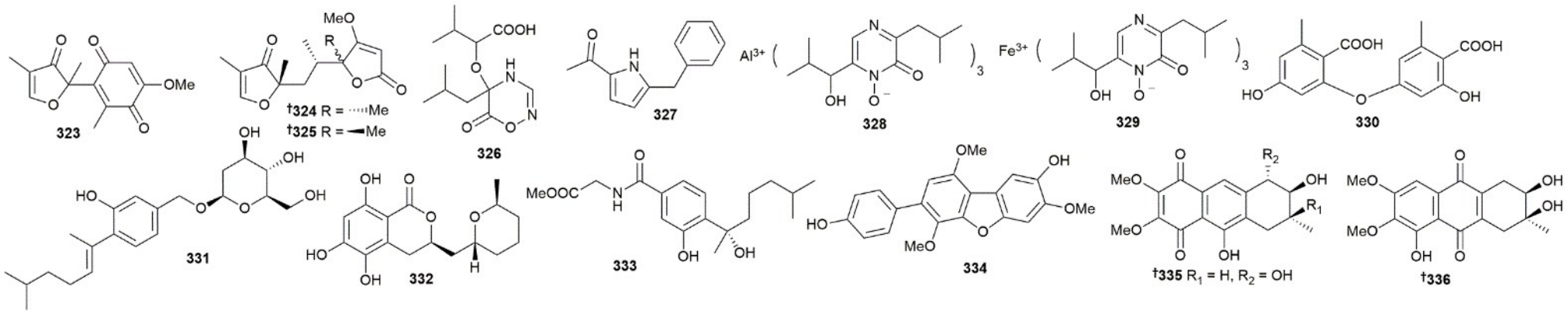
163 Ascomycota *Aspergillus fumigatus* // (sediment) Red Sea, Hurghada, Egypt // Dual induction of new microbial secondary metabolites by fungal bacterial co-cultivation
315 // N // brevianamide X // * // *
316 // N // luteoride D // * // *
317 // N // pseurotin G // * // *

164 Ascomycota *Aspergillus candidus* // (gorgonian, *Anthogorgia ochracea*) Weizhou coral reefs, S. China Sea // Aspergivones A and B, from a gorgonian-derived *Aspergillus candidus*
318 // N // aspergivone A // IA vs a-glucosidase, 6 HTCLs, 7 bact. and 1 fungus // *
319 // N // aspergivone B // slight activ. vs a-glucosidase, IA vs 6 HTCLs, 7 bact. and 1 fungus // struct. in SciFinder but no references.

165 Ascomycota *Aspergillus carneus* // (seawater) Sanya, Hainan Province, China // Bioactive phenyl ether derivatives from the marine-derived fungus *Aspergillus carneus*
320 // N // 3-hydroxy-5-(3-hydroxy-5-methylphenoxy)-4-methoxybenzoic acid // mod. AO (DPPH), weak AV vs 4 strains // *

166 Ascomycota *Aspergillus niger* // (sediment) Pecém port, Ceará, Brazil // New cytotoxic furan from the marine sediment-derived fungi *Aspergillus niger*
321 // N // C16H17NO4 // signif. cytotox. vs 1 HTCL. // *

167 Ascomycota *Aspergillus ruber* // (crinoid, *Himerometra magnipinna*) Coral Reef National Reserve, Xuwen, Guangdong China // Effect of culture conditions on metabolites produced by the crinoid-derived fungus *Aspergillus ruber* 1017
322 // N // epoxyisoechinulin A // IA AB vs 12 strains. // *



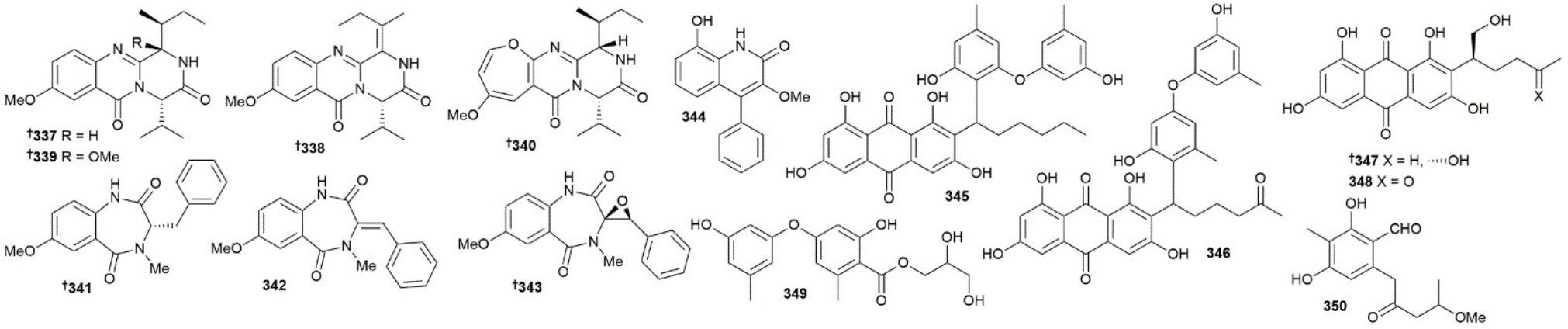
168 Ascomycota *Aspergillus sclerotiorum, Penicillium citrinum* // (gorgonian *Muricella flexuosa*) S. China Sea // New furanone derivatives and alkaloids from the co-culture of marine-derived fungi *Aspergillus sclerotiorum* and *Penicillium citrinum*
323 // N // (±)-sclerotiorumin A // IA vs 3 HTCLs, brine shrimp, and 5 strains bact. // *
324 // N // (8α)-sclerotiorumin B // IA vs 3 HTCLs, brine shrimp, and 5 strains bact. // *
325 // N // (8β)-sclerotiorumin B // IA vs 3 HTCLs, brine shrimp, and 5 strains bact. // *
326 // N // sclerotiorumin C // IA vs 3 HTCLs, brine shrimp, and 5 strains bact. // *
327 // N // 1-(4-benzyl-1H-pyrrol-3-yl)ethanone // mod. tox. vs brine shrimp, growth promoter in 1 strain bact., IA vs 4 other strains and 3 HTCLs // *
328 // N // (±)-aluminiumneohydroxyaspergillin // signif. tox. vs brine shrimp, weak-signif. cytotox. vs 3 HTCLs, growth promoter in 1 strain bact., IA vs 4 other strains // *
329 // N // (±)-ferrineohydroxyaspergillin // mod. tox. vs brine shrimp, weak cytotox. vs 3 HTCLs, IA vs 5 bact.. // *

169 Ascomycota *Aspergillus sydowii* // (sponge, *Stelleta* sp.) S. Korea // New metabolites from the sponge-derived fungus *Aspergillus sydowii* J05B-7F-4
330 // N // diorcinolic acid // weak cytotox. vs 3 HTCLs // *
331 // N // β-D-glucopyranosyl aspergillusene A // weak cytotox. vs 3 HTCLs // *

170 Ascomycota *Aspergillus sydowii* // (sediment) Mediterranean Sea // Asperentin B, a new inhibitor of the protein tyrosine phosphatase 1B
332 // N // asperentin B // strong inhib. protein tyrosine phosphatase 1B (PTP1B), IA vs 4 bact., 2 fungi, 2 HTCLs, // *

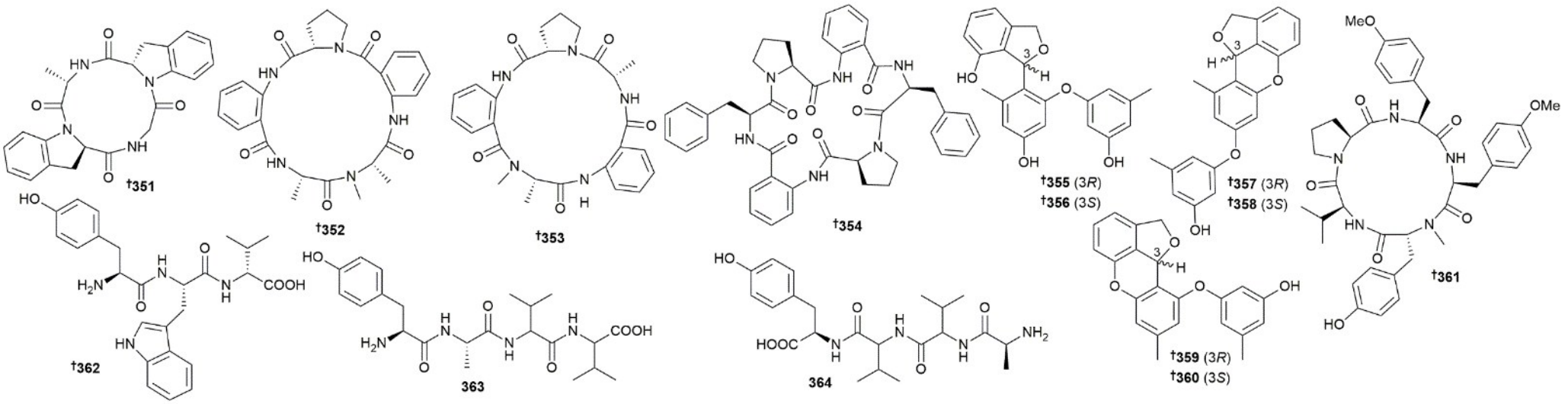
171 Ascomycota *Aspergillus sydowii* // (sediment) Bohai Sea, Tianjin, China // A new sydonic acid derivative from a marine derived-fungus *Aspergillus sydowii*
333 // N // methyl (3-hydroxy-4-(2-hydroxy-6-methylheptan-2-yl)benzoyl)glycinate // IA vs 1 bact. and 1 fungus. // *

172 Ascomycota *Aspergillus tritici* // (coral, *Galaxea fascicularis*) Port Dickson, Malaysia // Cytotoxic and antibacterial compounds from the coral-derived fungus *Aspergillus tritici* SP2-8-1
334 // N // 4-methyl-candidusin A // weak cytotox. vs 3 HTCLs, weak AB vs 4 strains, IA vs 1 strain // *
335 // N // aspetritone A // good cytotox. vs 3 HTCLs, mod.-good AB vs 5 strains // *
336 // N // aspetritone B // mod.-good cytotox. vs 3 HTCLs, mod. AB vs 5 strains // *



173 Ascomycota *Aspergillus versicolor* // (crab, *Xenographus testudinatus*) Kueishantao, Taiwan // New compounds from a hydrothermal vent crab-associated fungus *Aspergillus versicolor* XZ-4
337 // N // versicomide A // IA vs 3 bact. // *
338 // N // versicomide B // IA vs 3 bact. // *
339 // N // versicomide C // IA vs 3 bact. // *
340 // N // versicomide D // IA vs 3 bact. // Planar struct. in Scifinder but diastereoisomer? WHY?
341 // N // 7-methoxycyclopeptin // weak AB vs 1 strain // *
342 // N // 7-methoxydehydrocyclopeptin // IA vs 3 bact. // *
343 // N // 7-methoxycyclopenin // weak AB vs 1 strain // *
344 // N // 9-hydroxy-3-methoxyviridicatin // weak AB vs 1 strain // *

174 Ascomycota *Aspergillus versicolor* // (sediment) S. China Sea // Anti-HSV-1, antioxidant and antifouling phenolic compounds from the deep-sea-derived fungus *Aspergillus versicolor* SCSIO 41502
345 // N // (±)-aspergilol G // IA AV vs 1 strain, IA radical scavenging (DPPH), NT antifoul. // *
346 // N // (±)-aspergilol H // signif. AV vs 1 strain, IA radical scavenging (DPPH), NT antifoul. // *
347 // N // aspergilol I // signif. AV vs 1 strain, IA radical scavenging (DPPH), NT antifoul. // *
348 // M // SC3-22-3 // IA // *
349 // N // 4-carbglyceryl-3,3'-dihydroxy-5,5'-dimethyldiphenyl ether // AV NT, IA radical scavenging (DPPH), signif. antifoul. (bryozoan larvae) // *
350 // N // 2,4-dihydroxy-6-(4-methoxy-2-oxopentyl)-3-methylbenzaldehyde // AV and antifoul. NT, IA radical scavenging (DPPH) // *

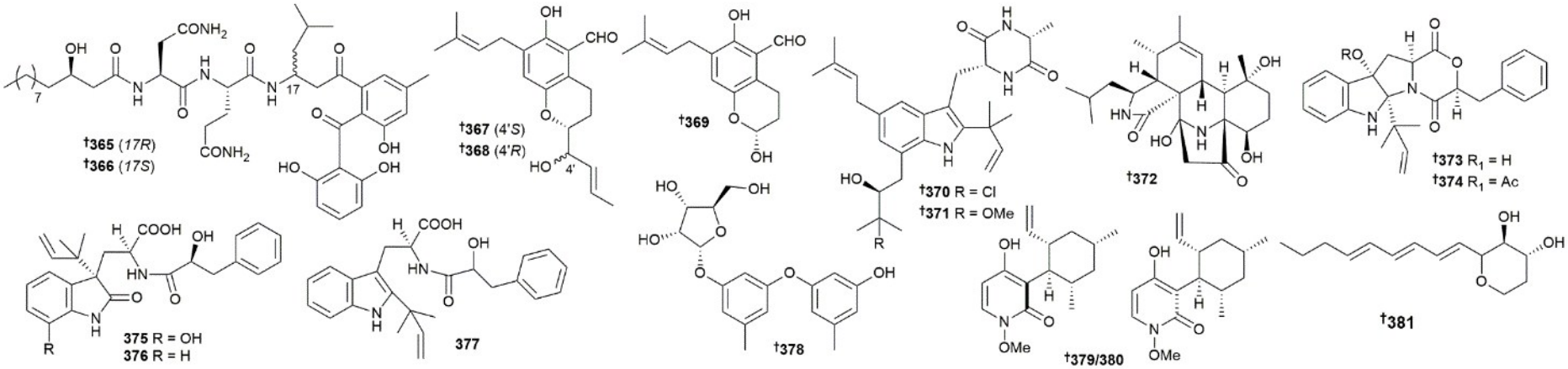


175 Ascomycota *Aspergillus versicolor* // (gorgonian, *Pseudopterogorogia* sp.) S. China Sea // Versicotides D-F, new cyclopeptides with lipid-lowering activities
351 // N // versicotide D // lipid-lowering effect via regulation of cholesterol efflux // *
352 // N // versicotide E // lipid-lowering effect via regulation of cholesterol efflux // *
353 // N // versicotide F // lipid-lowering effect via regulation of cholesterol efflux // *

176 Ascomycota *Aspergillus versicolor* // (gorgonian coral, *Carijoa* sp.) Weizhou coral reef, S. China Sea // Aspersymmetide A, a new centrosymmetric cyclohexapeptide from the marine-derived fungus *Aspergillus versicolor*
354 // N // aspersymmetide A // weak cytotox. vs 2 HTCLs, IA vs brine shrimp, 2 strains bact., 2 viruses and 2 enzymes // *

177 Ascomycota *Aspergillus versicolor* // (sponge, *Phakellia fusca*) Yongxing Is. // Structure, absolute configuration, and variable-temperature 1H-NMR study of (±)-versiorcinols A-C, three racemates of diorcinol monoethers from the sponge-associated fungus *Aspergillus versicolor* 16F-11
355 // N // (+)-versiorcinol A // weak-mod. AB vs 3 strains, IA vs 4 pthers and 2 HTCLs // *
356 // N // (-)-versiorcinol A // weak-mod. AB vs 3 strains, IA vs 4 pthers and 2 HTCLs // *
357 // N // (+)-versiorcinol B // IA vs 7 strains bact. and 2 HTCLs // *
358 // N // (-)-versiorcinol B // IA vs 7 strains bact. and 2 HTCLs // *
359 // N // (+)-versiorcinol C // IA vs 7 strains bact. and 2 HTCLs // *
360 // N // (-)-versiorcinol C // IA vs 7 strains bact. and 2 HTCLs // *

178 Ascomycota *Aspergillus* sp // (gorgonian *Melitodes squamata*) Sanya, Hainan Province, China // Antiviral peptides from marine gorgonian-derived fungus *Aspergillus* sp. SCSIO 41501
361 // N // aspergillipeptide D // AV vs 2 strains // *
362 // N // aspergillipeptide E // AV vs 1 strain // *
363 // N // aspergillipeptide F // IA // *
364 // N // aspergillipeptide G // IA // *



179 Ascomycota *Aspergillus* sp // (submerged decayed wood) Jeju Is., Korea // Asperphenins A and B, lipopeptidyl benzophenones from a marine-derived *Aspergillus* sp. fungus
365 // N // asperphenin A // signif. cytotox. vs 4 HTCLs // *
366 // N // asperphenin B // signif. cytotox. vs 4 HTCLs // *

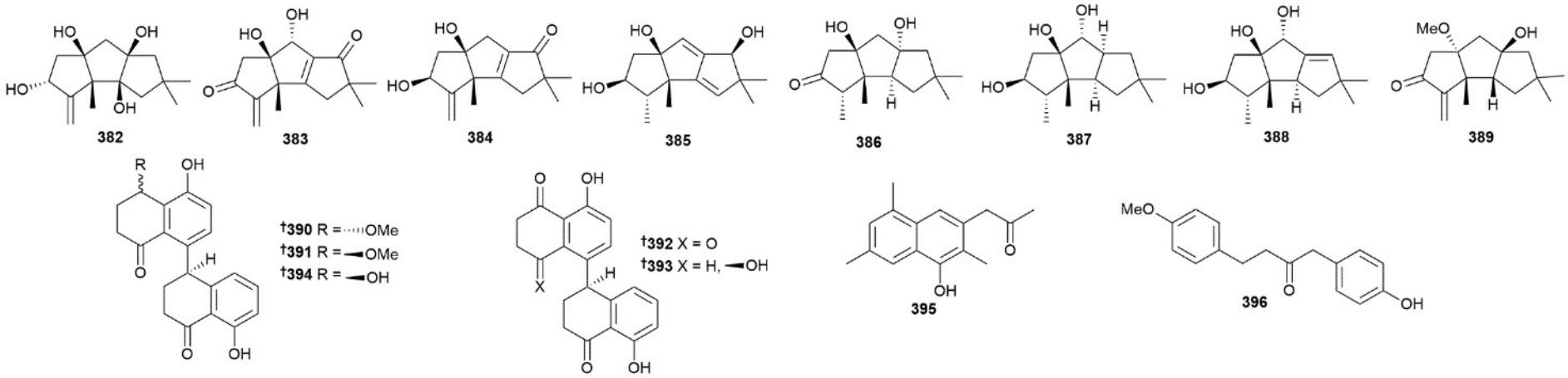
180 Ascomycota *Aspergillus* sp // (unidentified marine organism) Ross Sea // Chemical constituents isolated from Antarctic marine-derived *Aspergillus* sp. SF-5976 and their anti-inflammatory effects in LPS-stimulated RAW 264.7 and BV2 cells
367 // N // asperanin A // suppression of iNOS and COX-2 protein expression // *
368 // N // asperanin B // suppression of iNOS and COX-2 protein expression // *
369 // N // asperanin C // suppression of iNOS and COX-2 protein expression // *
370 // N // 5-prenyl-dihydrovariecolorin F // suppression of iNOS and COX-2 protein expression // *
371 // N // 5-prenyl-dihydrorubrumazine A // suppression of iNOS and COX-2 protein expression // *

181 Ascomycota *Aspergillus* sp // (isopod, *Ligia oceanica*) unspecified location // Aspochalazine A, a novel polycyclic aspochalasin from the fungus *Aspergillus* sp. Z4
372 // N // aspochalazine A // weak cytotox. vs 1 HTCL // *

182 Ascomycota *Aspergillus* sp // (sand) Caleta Bay, Acapulco, Guerrero, Mexico // Dioxomorpholines and derivatives from a marine-facultative *Aspergillus s*pecies
373 // N // 9-deoxy-PF1233 B // * // *
374 // N // 9-deoxy-PF1233 A // * // *
375 // N // seco-PF1233 B carboxylic acid // inhib. of P-glycoprotein, IA vs 9 HTCLs // *
376 // N // 9-deoxy-seco-PF1233 B carboxylic acid // * // *
377 // N // 4,9-dideoxy-seco-PF1233 B carboxylic acid // inhib. of P-glycoprotein, IA vs 9 HTCLs // *

183 Ascomycota *Aspergillus* sp // (sediment) S. China Sea // Identification and biological evaluation of secondary metabolites from marine derived fungi-*Aspergillus* sp. SCSIOW3, cultivated in the presence of epigenetic modifying agents
378 // N // diorcinol 3-O-α-D-ribofuranoside // mod. biomembrane protective effect // *

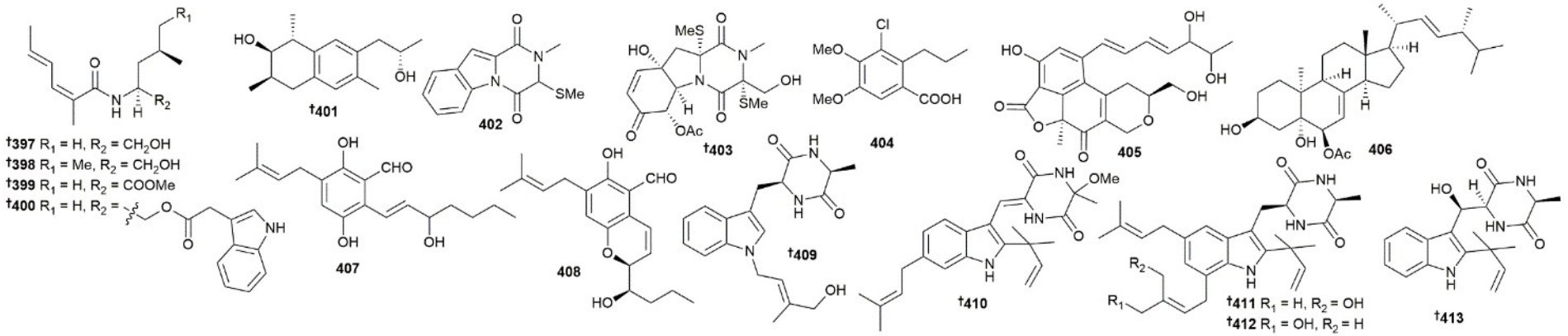
184 Ascomycota *Tolypocladium album* // (mollusc, *Siphonaria* sp.) Moora Park, Shorncliffe, Queensland, Australia // Chaunopyran A: co-cultivation of marine mollusk-derived fungi activates a rare class of 2-alkenyl-tetrahydropyran
379/380 // N // methyl-pyridoxatin // IA AF (1 strain), IA as a siderophore // *
381 // N // chaunopyran A // IA AF (1 strain), NT as siderophore // *



185 Basidiomycota *Chondrostereum* sp // (red alga, *Pterocladiella capillacea*) Northern Taiwan // Hirsutane-type sesquiterpenes with inhibitory activity of microglial nitric oxide production from the red alga-derived fungus *Chondrostereum* sp. NTOU4196
382 // N // chondroterpene A // signif. inhib. of NO prod, low tox. to 1 norm. cell line // *
383 // N // chondroterpene B // weak inhib. of NO prod, tox. NT // *
384 // N // chondroterpene C // weak inhib. of NO prod, tox. NT // *
385 // N // chondroterpene D // weak inhib. of NO prod, tox. NT // *
386 // N // chondroterpene E // weak inhib. of NO prod, tox. NT // *
387 // N // chondroterpene F // weak inhib. of NO prod, tox. NT // *
388 // N // chondroterpene G // weak inhib. of NO prod, tox. NT // *
389 // N // chondroterpene H // signif. inhib. of NO prod but via cell death, toxic to 1 norm. cell line // *

186 Ascomycota *Cladosporium cladosporioides* // (red alga, *Laurencia okamurai)* Qingdao, China // Characterization of cladosporols from the marine algal-derived endophytic fungus *Cladosporium cladosporioides* EN-399 and configurational revision of the previously reported cladosporol derivatives
390 // N // cladosporol F // * // *
391 // N // cladosporol G // * // *
392 // N // cladosporol H // * // *
393 // N // cladosporol I // * // *
394 // N // cladosporol J // * // *

187 Ascomycota *Dichotomomyces* sp // (soft coral, *Lobophytum crassum*) Hainan Sanya National Coral Reef Reserve, China // Secondary metabolites from the marine-derived fungus *Dichotomomyces* sp. L-8 and their cytotoxic activity
395 // N // dichotone A // * // *
396 // N // dichotone B // * // *



188 Ascomycota *Dichotomomyces cejpii* // (soft coral, *Lobophytum crassum*) Hainan Sanya National Coral Reef Reserve, China // Diverse secondary metabolites from the marine-derived fungus *Dichotomomyces cejpii* F31-1
397 // N // dichotomocej A // weak cytotox. vs 1 HTCL, AB NT // *
398 // N // dichotomocej B // * // *
399 // N // dichotomocej C // * // *
400 // N // dichotomocej D // * // *
401 // N // dichocetide A // * // *
402 // N // (±)-dichocerazine A // IA vs 1 HTCL, AB NT // *
403 // N // dichocerazine B // * // *

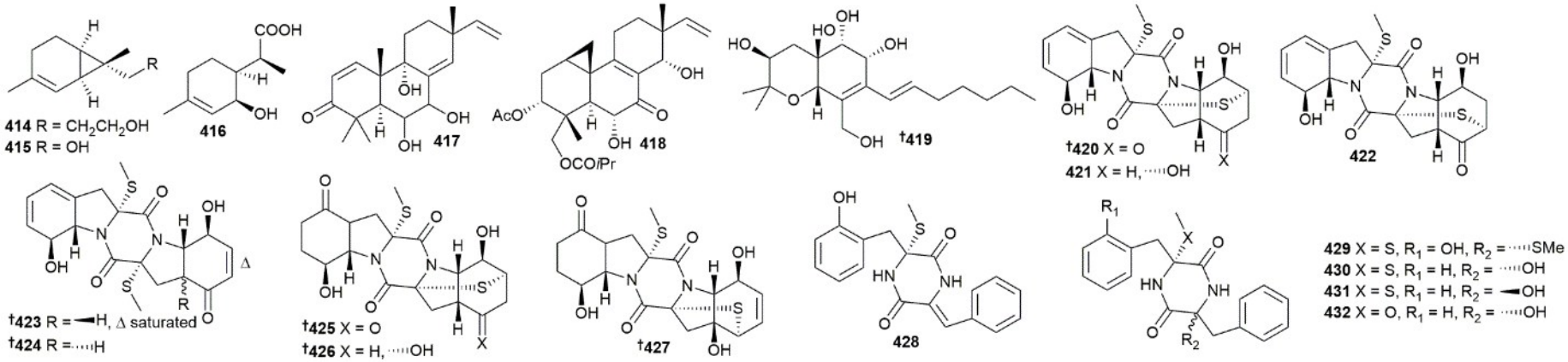
189 Ascomycota *Engyodontium album* // (sediment) Atlantic Ocean // Secondary metabolites produced by the deep-sea-derived fungus *Engyodontium album*
404 // N // engyodontiumin A // mod. AB vs 5 strains, IA vs 15 HTCLs // *

190 Ascomycota *Epicoccum nigrum* // (unspecified green alga) Cabrera, Spain // Biosynthetic studies on acetosellin and structure elucidation of a new acetosellin derivative
405 // N // 5',6'-dihydroxyacetosellin // * // *

191 Ascomycota *Eurotium rubrum*, *Aspergillus ruber* // (green alga, *Codium fragile*) Yantai, China // Steroids from an endophytic *Eurotium rubrum* strain
406 // N // 3β,5α-dihydroxy-10α-methyl-6β-acetoxy-ergosta-7,22-diene // weak inhib. AChE, IA vs 2 fungi. // *

192 Ascomycota *Eurotium* sp // (gorgonian, *Subergorgia suberosa*) Xisha Is. // Two benzaldehyde derivatives and their artefacts from a gorgonian-derived *Eurotium* sp. fungus
407 // N // 3'-OH-tetrahydroauroglaucin // * // *
408 // N // (3'S*, 4'R*)-6-(3',5-epoxy-4'-hydroxy-1'-heptenyl)-2-hydroxy-3-(3''-methyl-2''-butenyl)benzaldehyde // * // *

193 Ascomycota *Aspergillus cristatus* // (brown alga, *Sargassum thunbergii*) Qingdao, China // Indolediketopiperazine alkaloids from Eurotium cristatum EN-220, an endophytic fungus isolated from the marine alga *Sargassum thunbergii*
409 // N // N-(4'-hydroxyprenyl)-cyclo(alanyltryptophyl) // IA AB vs 6 strains, IA AF, vs 9 strains, IA vs brine shrimp and nematodes, AO activ. (DPPH) NT // *
410 // N // isovariecolorin I // lethal vs brine shrimp, weak activ. vs nematodes, mod. AO activ. (DPPH), IA AB vs 6 strains, IA AF, vs 9 strains. // *
411 // N // 30-hydroxyechinulin // weak activ. vs brine shrimp, IA vs nematodes, IA AB vs 6 strains, IA AF, vs 9 strains, AO activ. (DPPH) NT // *
412 // N // 29-hydroxyechinulin // IA vs brine shrimp and nematodes, IA AB vs 6 strains, IA AF, vs 9 strains, AO activ. (DPPH) NT // *
413 // R // rubrumline M // weak activ. vs brine shrimp, IA vs nematodes, IA AB vs 6 strains, IA AF, vs 9 strains, AO activ. (DPPH) NT // *

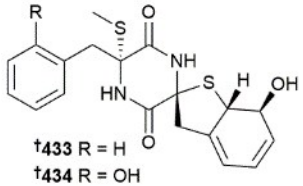


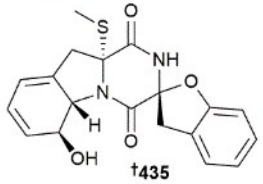
194 Ascomycota *Eutypella scoparia* // (sediment) S. China Sea // Monoterpenes and sesquiterpenes from the marine sediment-derived fungus *Eutypella scoparia* FS46
414 // N // eutypellol A // IA vs 3 HTCLs and 1 bact. // *
415 // N // eutypellol B // IA vs 3 HTCLs and 1 bact. // *
416 // M // 2-(2-hydroxy-4-methylcyclohex-3-enyl)propanoic acid // IA vs 3 HTCLs and 1 bact. // *

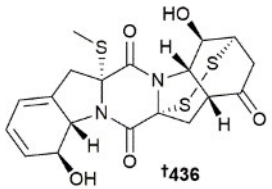
195 Ascomycota *Eutypella* sp // (sediment) S. China Sea // Cytotoxic pimarane-type diterpenes from the marine sediment-derived fungus *Eutypella* sp. FS46
417 // N // scopararane H // IA vs 3 HTCLs // *
418 // N // scopararane I // mod. cytotox. vs 3 HTCLs // *

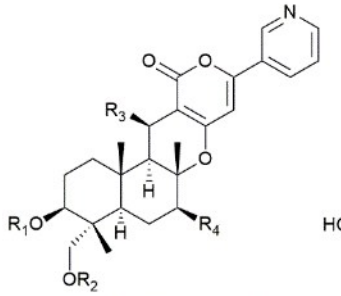
196 Ascomycota *Eutypella* sp // (gorgonian, *Dichotella gemmacea*) Weizhou coral reef, S. China Sea // A new hexahydrobenzopyran derivative from the gorgonian-derived fungus *Eutypella* sp
419 // N // cytosporin L // weak-good AB vs 5 strains, signif. AV vs 1 strain // *

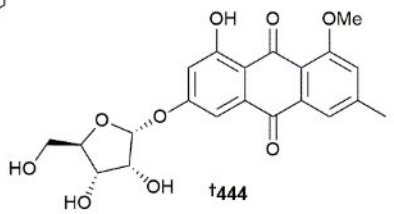
197 Ascomycota *Eutypella* sp // (sediment) S. Atlantic Ocean // Eutypellazines A-M, thiodiketopiperazine-type alkaloids from deep sea derived fungus *Eutypella* sp. MCCC 3A00281
420 // N // eutypellazine A // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
421 // N // eutypellazine B // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
422 // N // eutypellazine C // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
423 // N // eutypellazine D // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
424 // N // eutypellazine E // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
425 // N // eutypellazine F // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
426 // N // eutypellazine G // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
427 // N // eutypellazine H // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
428 // N // eutypellazine I // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
429 // N // eutypellazine J // signif. AV vs 1 strain and reactivation latent HIV-1, no cytotox. to norm. hum. cell line // *
430 // N // eutypellazine K // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
431 // N // eutypellazine L // signif. AV vs 1 strain, no cytotox. to norm. hum. cell line // *
432 // N // eutypellazine M // IA // *

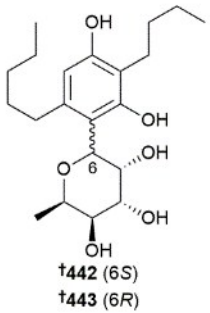








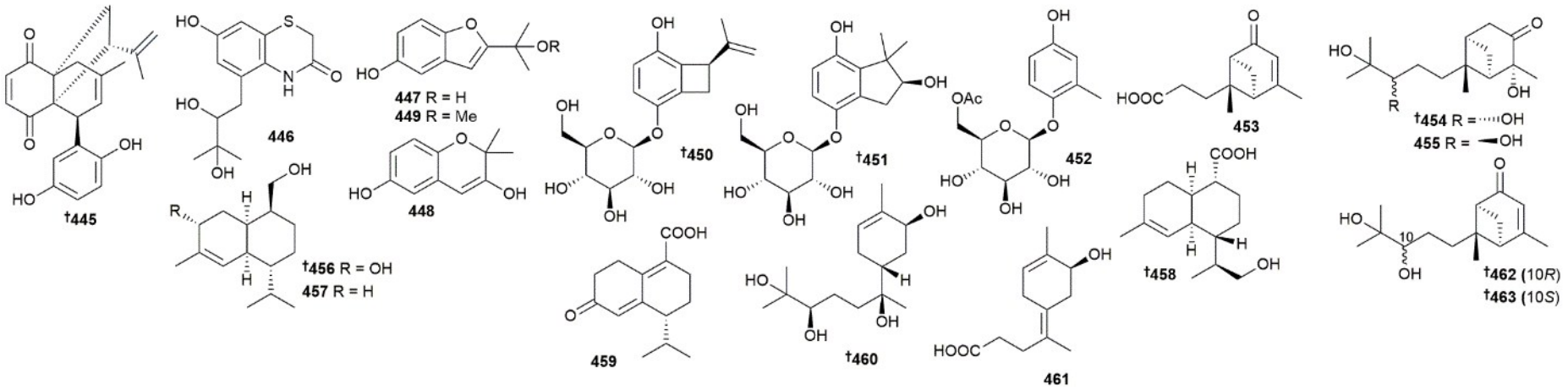




198 Ascomycota *Eutypella* sp // (sediment) S. Atlantic Ocean // Eutypellazines N-S, new thiodiketopiperazines from a deep sea sediment derived fungus *Eutypella* sp. with anti-VRE activities
433 // N // eutypellazine N // weak AB vs 2 strains // *
434 // N // eutypellazine O // weak AB vs 2 strains // *
435 // N // eutypellazine P // mod. AB vs 2 strains // *
436 // N // eutypellazine Q // mod. AB vs 2 strains // *
437 // N // eutypellazine R // mod. AB vs 2 strains // *
438 // N // eutypellazine S // mod. AB vs 2 strains // *

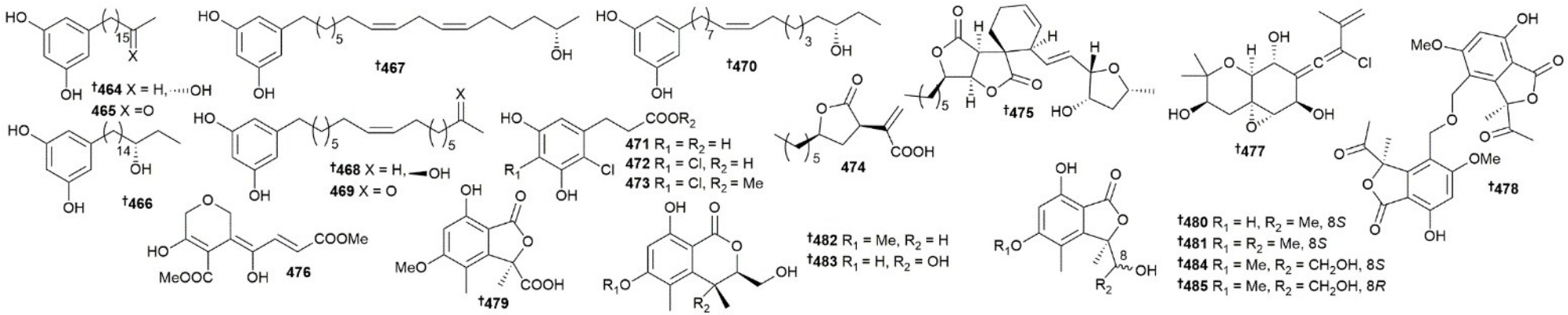
199 Ascomycota *Fusarium lateritium* // (sponge, *Phyllospongia foliascens*) Hainan Sanya National Coral Reef Reserve, Hainan, P. R. China // Two new pyripyropenes from the marine fungus *Fusarium lateritium* 2016F18-1
439 // N // 13-dehydroxy-1,11-deacetylpyripyropene A // IA vs 6 HTCLs // *
440 // N // 1-deacetylpyripyropene A // IA vs 6 HTCLs // *
441 // M // 11-deacetylpyripyropene O // IA vs 6 HTCLs // *

200 Ascomycota *Gaeumannomyces* sp // (halophyte plant, *Phragmites communis*) Suncheon, S. Korea // Bioactive secondary metabolites produced by an endophytic fungus *Gaeumannomyces* sp. JS0464 from a maritime halophyte *Phragmites communis*
442 // N // stemphol C // signif. inhib. of NO prod. // *
443 // N // stemphol D // signif. inhib. of NO prod. // *
444 // N // 1-O-methyl-6-O-(α-D-ribofuranosyl)-emodin // signif. inhib. of NO prod. // *



201 Ascomycota *Gliomastix* sp. // (coral, *Stylophora* sp.) Ain El-Sokhna, Eygpt // Hydroquinone derivatives from the marine-derived fungus *Gliomastix* sp.
445 // N // gliomastin A // strong cytotox. vs murine TCL, IA vs 7 strains bact. // *
446 // N // gliomastin B // IA vs murine TCL and 7 strains bact. // *
447 // N // gliomastin C // mod. anti-TB activ., IA vs murine TCL and 6 strains bact. // *
448 // N // gliomastin D // IA vs murine TCL and 7 strains bact. // *
449 // N // 9-O-methylgliomastin C // IA vs murine TCL and 7 strains bact. // *
450 // N // acremonin A 1-O-β-D-glucopyranoside // IA vs murine TCL and 7 strains bact. // *
451 // N // gliomastin E 1-O-β-D-glucopyranoside // IA vs murine TCL and 7 strains bact. // *
452 // N // 6'-O-acetyl-isohomoarbutin // IA vs murine TCL and 7 strains bact. // *

202 Ascomycota *Graphostroma* sp // (hydrothermal sulphide deposit) Atlantic Ocean // Sesquiterpenes from a deep-sea-derived fungus *Graphostroma* sp. MCCC 3A00421
453 // N // xylariterpenoid E // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
454 // N // xylariterpenoid F // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
455 // N // xylariterpenoid G // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
456 // N // khusinol B // signif. AI (NO prod inhib.), weak anti-allergic effect (RBL-2H3 cells) // *
457 // N // khusinol C // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
458 // N // khusinol D // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
459 // N // khusinol E // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
460 // N // graphostromabisabol A // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
461 // N // graphostromabisabol B // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
462 // M // (10R)-xylariterpenoid B // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *
463 // M // (10S)-xylariterpenoid A // weak AI (NO prod inhib.), IA anti-allergic effect assay. // *

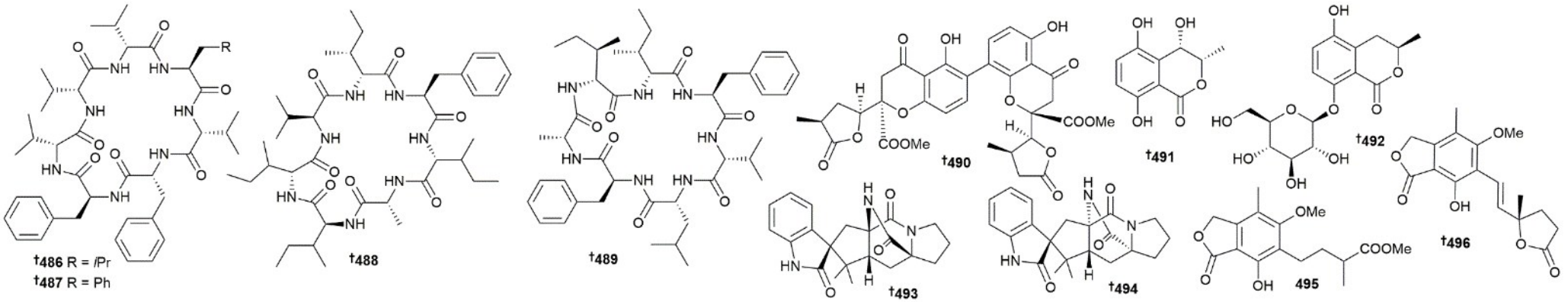


203 Ascomycota *Hansfordia sinuosae* // (sponge, *Niphates* sp.) S. China Sea // New resorcinol derivatives from a sponge-derived fungus *Hansfordia sinuosae*
464 // N // hansfordiol A // IA vs 5 HTCLS and 6 strains bact. // *
465 // N // hansfordiol B // IA vs 5 HTCLS and 6 strains bact. // *
466 // N // hansfordiol C // IA vs 5 HTCLS and 6 strains bact. // *
467 // N // hansfordiol D // IA vs 5 HTCLS and 6 strains bact. // *
468 // N // hansfordiol E // IA vs 5 HTCLS and 6 strains bact. // *
469 // N // hansfordiol F // IA vs 5 HTCLS and 6 strains bact. // *
470 // N // hansfordiol G // IA vs 5 HTCLS and 6 strains bact. // *
471 // N // hansfordiol H // IA vs 5 HTCLS and 6 strains bact. // *
472 // N // hansfordiol I // IA vs 5 HTCLS and 6 strains bact. // *
473 // N // hansfordiol J // IA vs 5 HTCLS and 6 strains bact. // *

204 Ascomycota *Hypoxylon monticulosum* // (sponge, *Sphaerocladina* sp.) Tahiti // Compounds from *Hypoxylon monticulosum* CLL-205 isolated from a sponge from the Tahiti coast
474 // N // deoxysporothric acid // weak cytotox. vs 1 HTCL, IA vs 3 strains bact., hyaluronidase and elastase // *
475 // N // sporochartine A // signif. inhib. hyaluronidase, IA vs elastase, 3 strains bact. and 1 HTCL // *

205 Ascomycota *Isaria felina* // (sediment) Vietnam coast // Unique prostate cancer-toxic polyketides from marine sediment-derived fungus *Isaria felina*
476 // N // isariketide B // IA vs 3 HTCLs // *
477 // N // oxirapentyn L // IA vs 3 HTCLs // *

206 Ascomycota *Leptosphaeria* sp // (sediment) Indian Ocean // Isobenzofuranones and isochromenones from the deep-sea derived fungus *Leptosphaeria* sp. SCSIO 41005
478 // N // leptosphaerin J // IA vs 3 HTCLs and 3 viruses // *
479 // N // leptosphaerin K // IA vs 3 HTCLs and 3 viruses // *
480 // N // leptosphaerin L // IA vs 3 HTCLs and 3 viruses // *
481 // N // leptosphaerin M // IA vs 3 HTCLs and 3 viruses // *
482 // N // clearanol I // IA vs 3 HTCLs and 3 viruses // *
483 // N // clearanol J // IA vs 3 HTCLs and 3 viruses // *
484 // R // clearanol E // IA vs 3 HTCLs and 3 viruses // *
485 // R // clearanol D // IA vs 3 HTCLs and 3 viruses // *

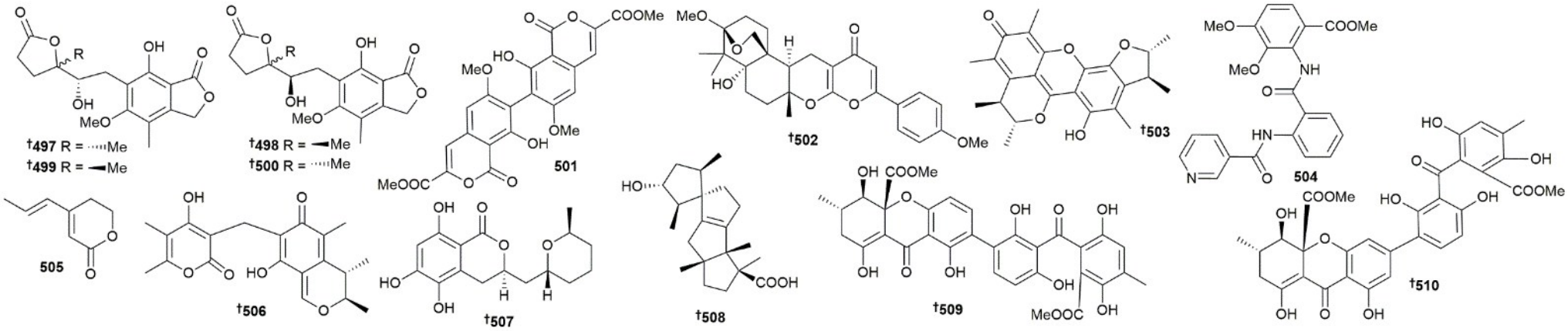


207 Ascomycota *Mortierella* sp. // (sediment) Frobisher Bay, Nunavut, Canada // Mortiamides A-D, cyclic heptapeptides from a novel *Mortierella* sp. obtained from Frobisher Bay
486 // N // mortiamide A // IA vs 4 bact., 1 fungus and 2 norm. and 2 HTCLs // *
487 // N // mortiamide B // IA vs 4 bact., 1 fungus and 2 norm. and 2 HTCLs // *
488 // N // mortiamide C // IA vs 4 bact., 1 fungus and 2 norm. and 2 HTCLs // *
489 // N // mortiamide D // IA vs 4 bact., 1 fungus and 2 norm. and 2 HTCLs // *

208 Ascomycota *Neosartorya fennelliae, N. tsunodae* // (sponge, *Clathria reinwardtii*) Samaesan Is., Amphur Sattahip, Chonburi Province, Thailand // A new dihydrochromone dimer and other secondary metabolites from cultures of the marine sponge-associated fungi *Neosartorya fennelliae* KUFA 0811 and *Neosartorya tsunodae* KUFC 9213
490 // N // paecilin E // mod. AB vs 3 Gram-positive strains, IA vs 3 Gram-negative strains // *

209 Ascomycota *Paraconiothyrium sporulosum* // (sediment) Bohai Bay, Liaoning Province, China // 3,4-Dihydroisocoumarin derivatives from the marine-derived fungus *Paraconiothyrium sporulosum* YK-03
491 // N // (3S,4S)-4,5-dihydroxymellein // IA vs 2 HTCLs. // *
492 // N // R-(-)-mellein-8-O-β-D-glucopyranoside // IA vs 2 HTCLs. // *

210 Ascomycota *Penicillium brevicompactum* // (sediment) S. China Sea // Brevianamides and mycophenolic acid derivatives from the deep-sea-derived fungus *Penicillium brevicompactum* DFFSCS025
493 // N // brevianamide X // IA vs 1 HTCL, 2 bact., 2 fungi and bryozoan larvae // Diastereoisomer of known cpd
494 // N // brevianamide Y // IA vs 1 HTCL, 2 bact., 2 fungi and bryozoan larvae // *
495 // N // 6-(methyl 3-methylbutanoate)-7-hydroxy-5 -methoxy-4-methylphthalan-1-one // signif. antofouling activ. (bryozoan larvae), IA vs 1 HTCL, 2 bact. and 2 fungi // *
496 // N // (3'S)-(E)-7-hydroxy-5-methoxy-4-methyl-6-(2-(2-methyl-5-oxotetrahydrofuran-2-yl)vinyl) isobenzofuran-1(3H)-one // IA vs 1 HTCL, 2 bact., 2 fungi and bryozoan larvae // *



211 Ascomycota *Penicillium brevicompactum* // (sediment) S. China Sea // Bioactive natural products from the marine-derived *Penicillium brevicompactum* OUCMDZ-4920
497 // N // (–)-brevicolide A // IA vs 6 HTCLs and 1 murine TCL. // *
498 // N // (+)-brevicolide A // IA vs 6 HTCLs and 1 murine TCL. // *
499 // N // (–)-brevicolide B // IA vs 6 HTCLs and 1 murine TCL. // *
500 // N // (+)-brevicolide B // IA vs 6 HTCLs and 1 murine TCL. // *

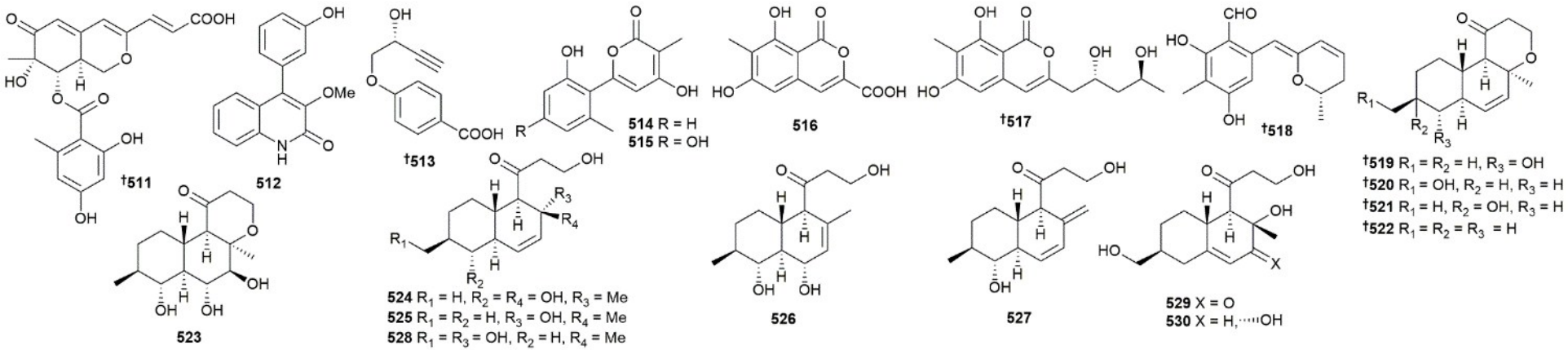
212 Ascomycota *Penicillum chrysogenum* // (sediment) Indian Ocean // Structurally diverse secondary metabolites from a deep-sea-derived fungus *Penicillium chrysogenum* SCSIO 41001 and their biological evaluation
501 // N // bipenicilisorin // signif. cytotox. vs 3 HTCLs, IA AB vs 3 strains, IA COX-3 // *
502 // N // yaminterritrem C // IA vs 3 HTCLs, 3 strains bact. and COX-2 // *
503 // N // penicitrinone F // weak-mod. cytotox. vs 1 HTCL, IA vs 2 others, 3 strains bact. and COX-2 // *
504 // N // terremide D // IA // *
505 // N // (E)-4-(propen-1-yl)-5,6-dihydro-2H-pyran-2-one // IA // *

213 Ascomycota *Penicillium citrinum* // (sediment) Langqi Is., Fujian, China // Dicitrinone D, an antimitotic polyketide isolated from the marine-derived fungus *Penicillium citrinum*
506 // N // dicitrinone D // cytotox. vs 8 HTCLs, IA vs 1 norm. hum. cell line // *

214 Ascomycota *Penicillium coralligerum* // (sea cucumber) São Paulo Plateau, Brazil // Cladomarine, a new anti-saprolegniasis compound isolated from the deep-sea fungus, *Penicillium coralligerum* YK-247
507 // N // cladomarine // good activ. vs 2 oomycetes, IA vs 2 bact. and 1 fungus // *

215 Ascomycota *Penicillium granulatum* // (sediment) Prydz Bay, Antarctica // Spirograterpene A, a tetracyclic spiro-diterpene with a fused 5/5/5/5 ring system from the deep-sea-derived fungus *Penicillium granulatum* MCCC 3A00475
508 // N // spirograterpene A // mod. antiallergic effect // *

216 Ascomycota *Penicillium oxalicum* // (sediment) Langqi Is., Fujian, China // Secalonic acids H and I, two new secondary metabolites from the marine-derived fungus *Penicillium oxalicum*
509 // N // secalonic acid H // weak cytotox. vs 3 HTCLs // *
510 // N // secalonic acid I // weak cytotox. vs 3 HTCLs // *



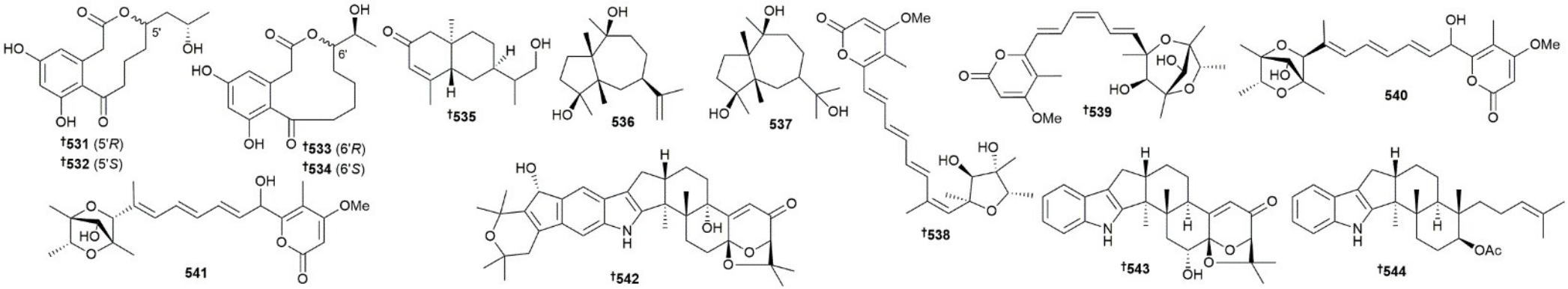
217 Ascomycota *Penicillium pinophilum* // (sediment) Gulf of Mannar, India // Fractionation of azaphilones from marine fungus *Penicillim pinophilum* and their antibacterial activity
511 // N // pinophilin G // mod. AB vs 1 strain. // *

218 Ascomycota *Penicillium polonicum* // (shark, *Isurus oxyrinchus*) Wenzhou, Zhejiang Province, China // A new quinolinone from a shark gill fungus *Penicillium polonicum* AP2T1
512 // N // 3-methoxyviridicatol // inactvie vs 4 bact., 2 fungi, brine shrimp and 2 HTCLs // *

219 Ascomycota *Penicillium polonicum* // (shark, *Isurus oxyrinchus*) Wenzhou, Zhejiang Province, China // A new acetylenic compound and from a shark gill-derived *Penicillium* strain
513 // N // (-)-WA // weak AB vs 3 strains // Planar struct. known

220 Ascomycota *Penicillium raistrickii* // (sediment) Zhanhua, Shandong Province of China // Pyran rings containing polyketides from *Penicillium raistrickii*
514 // N // penicipyran A // IA vs 3 HTCLs // *
515 // N // penicipyran B // IA vs 3 HTCLs // *
516 // N // penicipyran C // IA vs 3 HTCLs // *
517 // N // penicipyran D // IA vs 3 HTCLs // *
518 // N // penicipyran E // mod. activ. vs 2 HTCLs // *

221 Ascomycota *Penicillium thomii* // (seagrass, *Zostera marina*) Sea of Japan // Zosteropenillines: polyketides from the marine derived fungus *Penicillium thomii*
519 // N // zosteropenilline A // IA vs 1 HTCL, IA NO downregulation // *
520 // N // zosteropenilline B // IA vs 1 HTCL, mod. NO downregulation // *
521 // N // zosteropenilline C // IA vs 1 HTCL, IA NO downregulation // *
522 // N // zosteropenilline D // * // *
523 // N // zosteropenilline E // * // *
524 // N // zosteropenilline F // * // *
525 // N // zosteropenilline G // IA vs 1 HTCL, IA NO downregulation // *
526 // N // zosteropenilline H // IA vs 1 HTCL, mod. NO downregulation // *
527 // N // zosteropenilline I // NT vs 1 HTCL, IA NO downregulation // *
528 // N // zosteropenilline J // IA vs 1 HTCL, mod. NO downregulation // *
529 // N // zosteropenilline K // IA vs 1 HTCL, NT NO downregulation // *
530 // N // zosteropenilline L // * // *

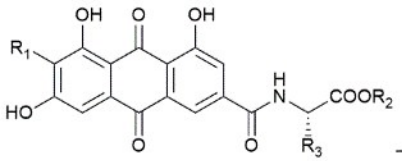


222 Ascomycota *Penicllium sumatrense* // (sediment) Indian Ocean // Sumalactones A-D, four new curvularin-type macrolides from a marine deep sea fungus *Penicillium sumatrense*
531 // N // sumalactone A // IA AI (NO prod inhib.) // *
532 // N // sumalactone B // IA AI (NO prod inhib.) // *
533 // N // sumalactone C // IA AI (NO prod inhib.) // *
534 // N // sumalactone D // IA AI (NO prod inhib.) // *

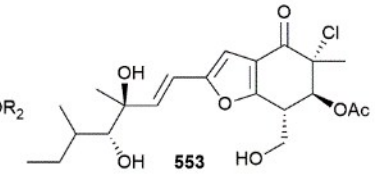
223 Ascomycota *Penicillium thomii* // (seagrass, *Zostera marina*) Sea of Japan // New thomimarine E from marine isolate of the fungus *Penicillium thomii*
535 // N // thomimarine E // mod. AI (NO prod inhib.) // *
536 // M // guaiadiol A // mod. AI (NO prod inhib.) // *
537 // M // 4,10,11-trihydroxyguaiane // mod. AI (NO prod inhib.) // *

224 Ascomycota *Penicillium* sp // (sediment) Zhoushan, China // Stress-driven discovery of novel cryptic antibiotics from a marine fungus *Penicillium* sp. BB1122
538 // N // neocitreoviridin // AB vs 3 strains (weak vs 2, signif. vs 1) // Production elicited by stress induction with cobalt
539 // N // 10Z-isocitreoviridinol // AB vs 3 strains (strong vs 1, mod. vs 1, weak vs 1) // *
540 // N // penicillstressol // AB vs 3 strains (strong vs 1, signif. vs 1, weak vs 1) // *
541 // N // isopenicillstressol // AB vs 3 strains (strong vs 1, signif. vs 1, weak vs 1) // *

225 Ascomycota *Penicillium* sp // (sea anemone, *Haliplanella luciae*) Qingdao, China // Three new indole diterpenoids from the sea-anemone-derived fungus *Penicillium* sp. AS-79
542 // N // 22-hydroxylshearinine F // IA AB vs 16 strains // *
543 // N // 6-hydroxylpaspalinine // weak AB activ. vs 1 strain, IA vs 15 strains // *
544 // N // 7-O-acetylemindole SB // IA AB vs 16 strains // *



†**545** R_1 = H, R_2 = Me, R_3 = *i*Pr
†**546** R_1 = R_2 = H, R_3 = *i*Pr
†**547** R_1 = Cl, R_2 = H, R_3 = *i*Pr
†**548** R_1 = H, R_2 = Me, R_3 = *s*Bu
†**549** R_1 = R_2 = H, R_3 = *s*Bu
†**550** R_1 =Cl, R_2 = H, R_3 = *s*Bu
†**551** R_1 =Cl, R_2 = H, R_3 = *i*Bu
†**552** R_1 = R_2 = R_3 = H



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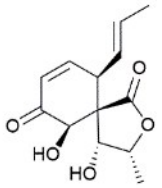
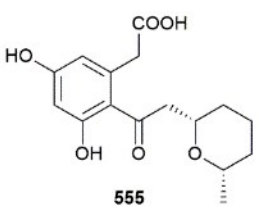


†**554**



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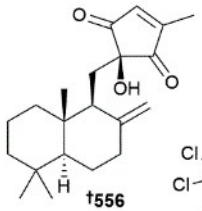
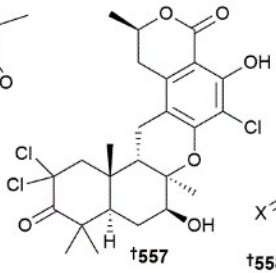
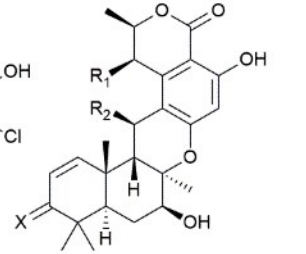


†**556**



†**557**



†**558** R_1 = H, R_2 = OH, X = O
†**559** R_1 = OAc, R_2 = H, X = O
†**560** R_1 = OAc, R_2 = H, X = H, β-OH
†**561** R_1 = OMe, R_2 = H, X = O

226 Ascomycota *Penicillium* sp // (sedimemt) S. China Sea // Amino acid conjugated anthraquinones from the marine-derived fungus *Penicillium* sp. SCSIO sof101
545 // N // emodacidamide A // good immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
546 // N // emodacidamide B // signif. immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
547 // N // emodacidamide C // good immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
548 // N // emodacidamide D // good immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
549 // N // emodacidamide E // good immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
550 // N // emodacidamide F // signif. immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
551 // N // emodacidamide G // signif. immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *
552 // N // emodacidamide H // signif. immunomod. activ. (inhibit interleukin-2 secretion), IA vs 3 HTCLs // *

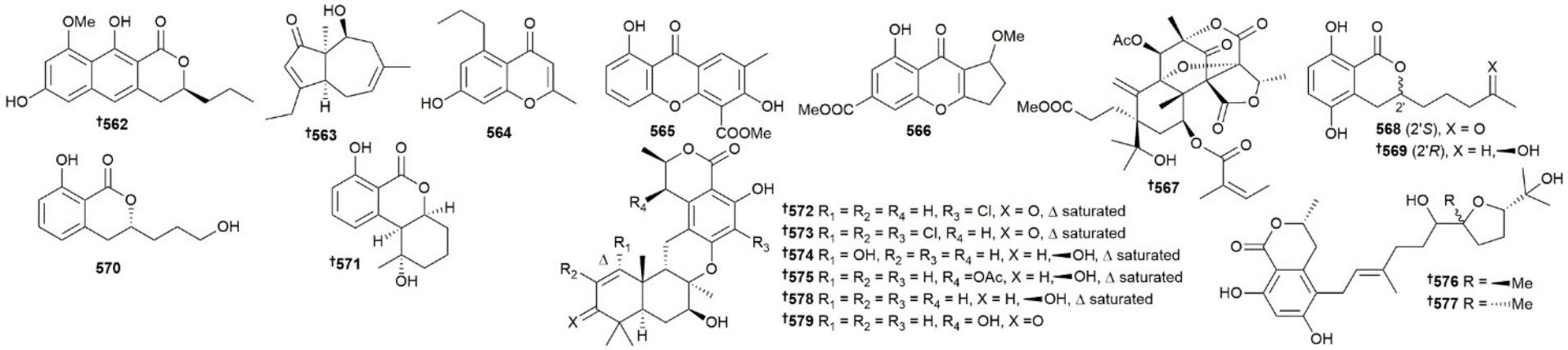
227 Ascomycota *Pencillium* sp // (sponge, *Axinella corrugata*) Arvoredo Biological Marine Reserve, Santa Catarina state, Brazil // Arvoredolâ€”an unusual chlorinated and biofilm inhibiting polyketide from a marine *Penicillium* sp. of the Brazilian coast
553 // N // arvoredol // inhib. of biofilm formation, signif. cytotox. vs 1 HTCL // *

228 Ascomycota *Penicillium* sp // (unidentified bryozoan) JeJu Is., Korea // Penicillospirone from a marine isolate of *Penicillium* sp. (SF-5292) with anti-inflammatory activity
554 // N // penicillospirone // AI via NO and prostaglandin E2 inhib. // *

229 Ascomycota *Penicllium* sp // (unidentified sponge) Ross Sea // Anti-inflammatory effects of curvularin-type metabolites from a marine-derived fungal strain *Penicillium* sp. SF-5859 in lipopolysaccharide-induced RAW264.7 macrophages
555 // N // curvulone C // IA AI (NO and PGE2 prod inhib.) // *

230 Ascomycota *Penicillium* sp // (sediment) Northern S. China Sea // Penicilliumin B, a methylcyclopentenedione from a deep sea-derived *Penicillium* strain with renoprotective activities
556 // N // Penicilliumin B // renoprotective via inhib. of kidney fibrogenic action // *

231 Ascomycota *Penicillium* sp // (worm, *Sipunculus nudus*) Haikou Bay, China // Chrodrimanins O-S from *Penicillium* sp. SCS-KFD09 isolated from a marine worm, *Sipunculusnudus*
557 // N // chrodrimanin O // mod. inhib. PTP1B, IA vs 3 HTCLs and 1 norm. hum. cell line // *
558 // N // chrodrimanin P // * // *
559 // N // chrodrimanin Q // IA vs PTP1B, 3 HTCLs and 1 norm. hum. cell line // *
560 // N // chrodrimanin R // mod. inhib. PTP1B, IA vs 3 HTCLs and 1 norm. hum. cell line // *
561 // N // chrodrimanin S // mod. inhib. PTP1B, IA vs 3 HTCLs and 1 norm. hum. cell line // *

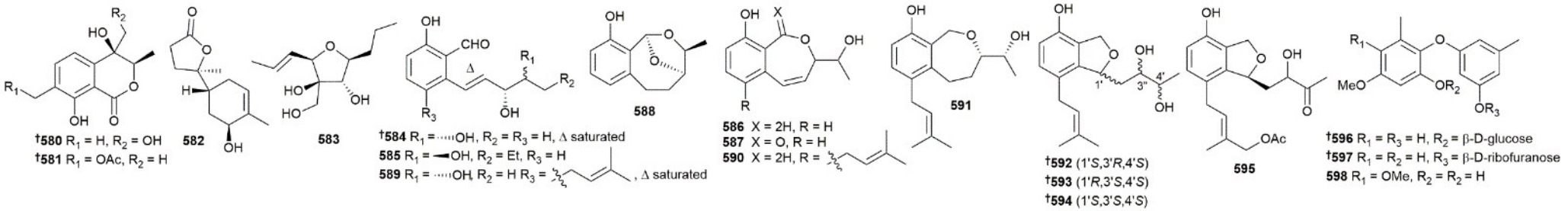


232 Ascomycota *Penicillium* sp // (peanut worm, *Sipunculus nudus*) Haikou Bay, China // Metabolites with Gram-negative bacteria quorum sensing inhibitory activity from the marine animal endogenic fungus *Penicillium* sp. SCS-KFD08
562 // N // penicitor A // IA // *
563 // N // aculene E // Quorum sensing inhib. vs 1 strain. // *
564 // N // penicitor B // Quorum sensing inhib. vs 1 strain. // *

233 Ascomycota *Penicillum* sp // (sediment) Indian Ocean // Xanthones and quinolones derivatives produced by the deep-sea-derived fungus *Penicillium* sp. SCSIO Ind16F01
565 // N // 3,8-dihydroxy-2-methyl-9-oxoxanthene-4-carboxylic acid methyl ester // IA vs 2 viruses and 3 HTCLs. // *
566 // N // coniochaetone J // V. weak activ. vs 1 virus, IA vs another virus and 3 HTCLs. // *

234 Ascomycota *Penicillium* sp // (sediment) Kueishantao, Taiwan // Isolation and antibiotic screening of fungi from a hydrothermal vent and characterization of *Penicillium* metabolites
567 // N // austinone // IA vs 3 strains bact. and 3 HTCLs. // *
568 // N // penicillisocoumarin A // weak AB vs 1 strain, IA vs 3 HTCLs. // *
569 // N // penicillisocoumarin B // weak AB vs 1 strain, IA vs 3 HTCLs. // *
570 // N // penicillisocoumarin C // IA vs 3 strains bact. and 3 HTCLs. // *
571 // N // penicillisocoumarin D // weak AB vs 1 strain, IA vs 3 HTCLs. // *

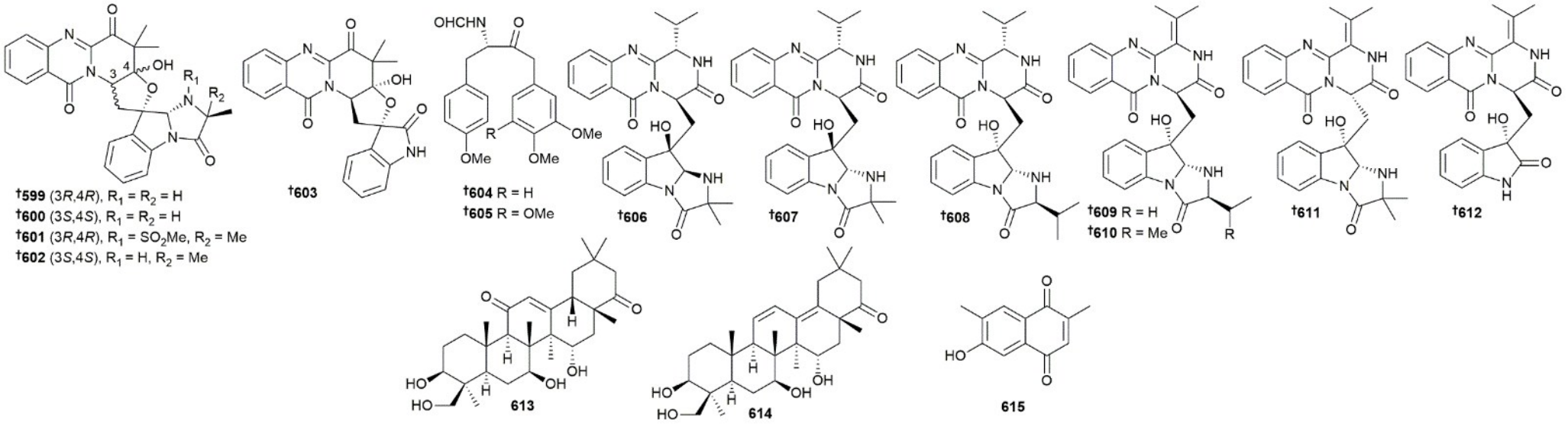
235 Ascomycota *Penicillium* sp // (annelid worm, *Sipunculus nudus*) Haikou Bay, China // Chrodrimanins K-N and related meroterpenoids from the fungus *Penicillium* sp. SCS-KFD09 isolated from a marine worm, Sipunculus nudus
572 // N // chrodrimanin K // good AV activ., IA vs AChE, a-glucosidase, 1 strain bact., 1 nematode // *
573 // N // chrodrimanin L // IA vs AChE, a-glucosidase, 1 strain bact., 1 virus, 1 nematode // *
574 // N // chrodrimanin M // IA vs AChE, a-glucosidase, 1 strain bact., 1 virus, 1 nematode // *
575 // N // chrodrimanin N // good AV activ., IA vs AChE, a-glucosidase, 1 strain bact., 1 nematode // *
576 // N // verruculide B2 // weak AB (1 strain), IA vs AChE, a-glucosidase, , 1 virus, 1 nematode // *
577 // N // verruculide B3 // IA vs AChE, a-glucosidase, 1 strain bact., 1 virus, 1 nematode // *
578 // R // chrodrimanin F // IA vs AChE, a-glucosidase, 1 strain bact., 1 nematode, NT AV. // *
579 // R // chrodrimanin A // IA vs AChE, a-glucosidase, 1 strain bact., 1 nematode, NT AV. // *



236 Ascomycota *Pestalotia heterocornis* // (sponge, *Phakellia fusca*) Xisha Is., China // New metabolites and bioactive chlorinated benzophenone derivatives produced by a marine-derived fungus *Pestalotiopsis heterocornis*
580 // N // pestaloisocoumarin A // mod. AB vs 2 strains, weak AF vs 3 strains, IA vs 4 HTCLs, // *
581 // N // pestaloisocoumarin B // mod. AB vs 2 strains, weak AF vs 1 strain, IA vs 4 HTCLs, // *
582 // N // isopolisin B // IA // *
583 // N // pestalotiol A // IA // *

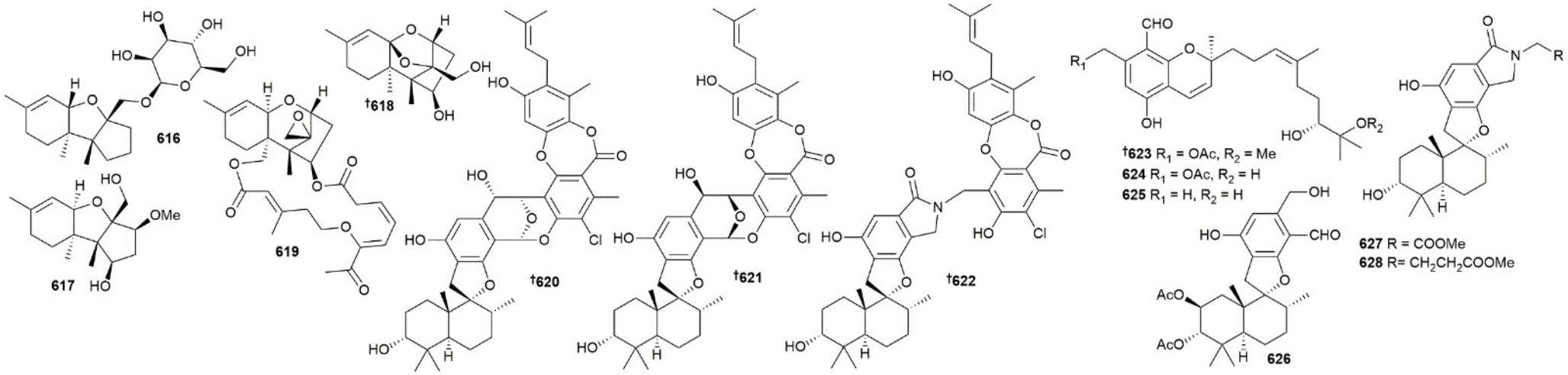
237 Ascomycota *Pestalotiopsis heterocornis* // (sponge, *Phakellia fusca*) Xisha Is., Sansha City, Hainan Province, China // Polyketide derivatives from a marine-sponge-associated fungus *Pestalotiopsis heterocornis*
584 // N // heterocornol A // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, IA vs 2 fungi. // *
585 // N // heterocornol B // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, IA vs 2 fungi. // *
586 // N // heterocornol C // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, weak AF vs 2 strains // *
587 // N // heterocornol D // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *
588 // N // heterocornol E // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *
589 // N // heterocornol F // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, IA vs 2 fungi. // *
590 // N // heterocornol G // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, weak AF vs 2 strains // *
591 // N // heterocornol H // weak cytotox. vs 4 HTCLs, weak AB vs 2 strains, inactvie vs 2 fungi. // *
592 // N // heterocornol I // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *
593 // N // heterocornol J // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *
594 // N // heterocornol K // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *
595 // N // heterocornol L // IA vs 4 HTCLs, 2 bact. and 2 fungi. // *

238 Ascomycota *Phoma* sp // (gorgonian, *Dichotella gemmacea*) Weizhou coral reef, S. China Sea // Bioactive diphenyl ethers and isocoumarin derivatives from a gorgonian-derived Fungus *Phoma* sp. (TA07-1)
596 // N // phomaether A // strong AB vs 4 strains, mod. brine shrimp tox. // *
597 // N // phomaether B // IA AB vs 5 strains, no brine shrimp tox.? // *
598 // N // phomaether C // strong AB vs 4 strains, mod. brine shrimp tox. // *



239 Ascomycota *Scedosporium apiospermum* // (soft coral, *Lobophytum crassum*) Hainan Sanya National Coral Reef Reserve, P. R. China // Amino acid-directed strategy for inducing the marine-derived fungus *Scedosporium apiospermum* F41-1 to maximize alkaloid diversity
599 // N // scedapin A // IA vs 6 HTCLS and 1 virus // *
600 // N // scedapin B // * // *
601 // N // scedapin C // signif. AV vs 1 strain, IA vs 6 HTCLs // *
602 // N // scedapin D // * // *
603 // N // scedapin E // NT vs 6 HTCLS, IA AV. // *
604 // N // scedapin F // * // *
605 // N // scedapin G // * // *
606 // N // scequinadoline A // signif. AV vs 1 strain, IA vs 6 HTCLs // *
607 // N // scequinadoline B // IA vs 6 HTCLS . AV activ. NT // *
608 // N // scequinadoline C // * // *
609 // N // scequinadoline D // IA vs 6 HTCLS and 1 virus // *
610 // N // scequinadoline E // IA vs 6 HTCLS and 1 virus // *
611 // N // scequinadoline F // * // *
612 // N // scequinadoline G // NT vs 6 HTCLS, IA AV. // *

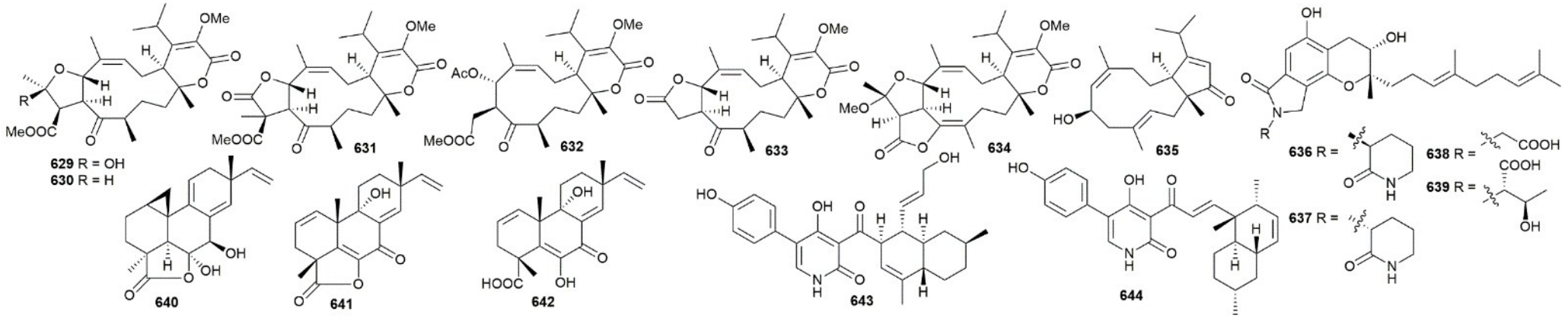
240 Ascomycota *Scopulariopsis* sp // (coral, *Stylophora* sp.) Ain El-Sokhna, Egypt // Triterpenoids and a naphthoquinone derivative from a hard coral-derived fungus *Scopulariopsis* sp.
613 // N // 3β,7β,15α,24-tetrahydroxyolean-12-ene-11,22-dione // IA vs 4 bact. and 1 murine cancer cell line // *
614 // N // 15α,22β,24-trihydroxyolean-11,13-diene-3-one // IA vs 4 bact. and 1 murine cancer cell line // *
615 // N // 6-hydroxy-2,7-dimethyl-1,4-naphthoquinone // IA vs 4 bact. and 1 murine cancer cell line // *



241 Ascomycota *Stachybotrys chartarum* // (sponge, *Niphates recondite*) Beibuwan Bay, Guangxi Province, China // Cytotoxic trichothecene-type sesquiterpenes from the sponge-derived fungus *Stachybotrys chartarum* with tyrosine kinase inhibition
616 // N // chartarene A // signif. activ. vs 4 HTCLs, IA vs 5 tyrosine kinases // *
617 // N // chartarene B // signif. activ. vs 1 HTCL and 5 tyrosine kinases // *
618 // N // chartarene C // signif. activ. vs 4 HTCLs and 5 tyrosine kinases // *
619 // N // chartarene D // potent activ. vs 5 HTCLs and 5 tyrosine kinases // *

242 Ascomycota *Stachybotrys chartarum* // (sponge, Niphates recondite) unspecified location // Chartarolides A-C, novel meroterpenoids with antitumor activities
620 // N // chartarolide A // * // *
621 // N // chartarolide B // * // *
622 // N // chartarolide C // * // *

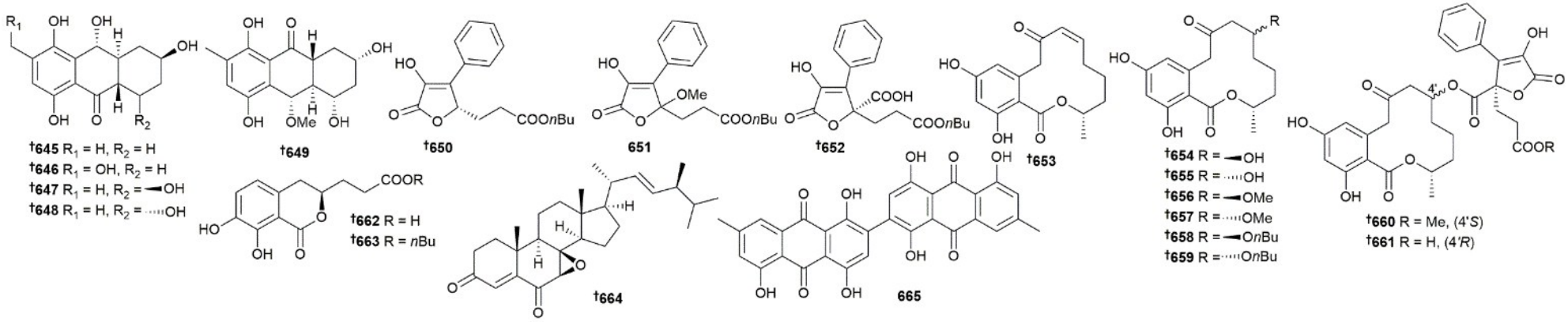
243 Ascomycota *Stachybothys chartarum* // (crinoid, *Himerometra magnipinna*) Zhanjiang Mangrove National Nature Reserve, Guangdong Province, China // Antiviral and anti-inflammatory meroterpenoids: stachybonoids A-F from the crinoid-derived fungus *Stachybotrys chartarum* 952
623 // N // stachybonoid A // signif. AV vs 1 strain. NT for NO prod inhib.. // *
624 // N // stachybonoid B // IA vs 1 virus. NT for NO prod inhib.. // *
625 // N // stachybonoid C // IA vs 1 virus. NT for NO prod inhib.. // *
626 // N // stachybonoid D // IA vs 1 virus and AI (NO prod inhib.) // *
627 // N // stachybonoid E // IA vs 1 virus and AI (NO prod inhib.) // *
628 // N // stachybonoid F // mod. AI (NO prod inhib.), IA vs 1 virus // *



244 Ascomycota *Stachybothys chartarum* // (crinoid, *Himerometra magnipinna*) Zanjiang Mangrove National Nature Reserve, China // Atranones with enhancement neurite outgrowth capacities from the crinoid-derived fungus S*tachybotrys chartarum* 952
629 // N // atranone L // IA vs 1 HTCL. // *
630 // N // atranone M // IA vs 1 HTCL. // *
631 // N // atranone N // * // *
632 // N // atranone O // IA vs 1 HTCL. // *
633 // N // atranone P // IA vs 1 HTCL. // *
634 // N // 22-epimer-methylatranone B // IA vs 1 HTCL. // *
635 // N // (1R,6R,11R)-6-hydroxydolabella-3E,7E,12-trien-14-one // * // *

245 Ascomycota *Stachybotrys longispora* // Shanghai Ocean University (CCTCCM 2012272) // Producing novel fibrinolytic isoindolinone derivatives in marine fungus *Stachybotrys longispora* FG216 by the rational supply of amino compounds according to its biosynthesis pathway.
636 // N // FGFC4 // IA // *
637 // N // FGFC5 // IA // *
638 // N // FGFC6 // good fibrinolytic activ. // *
639 // N // FGFC7 // good fibrinolytic activ. // *

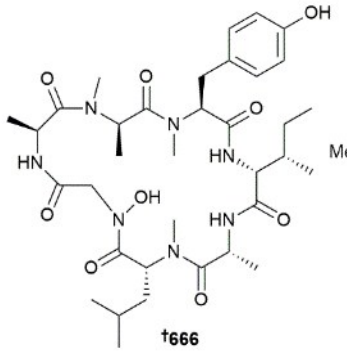
246 Ascomycota *Stilbella fimetaria* // (seawater) Fanoe Is., Denmark // A dereplication and bioguided discovery approach to reveal new compounds from a marine-derived fungus *Stilbella fimetaria*
640 // N // myrocin F // weak cytotox. vs 4 HTCLs, IA vs 2 bact. and 2 fungi // *
641 // N // libertellenone M // very weak cytotox. vs 4 HTCLs, IA vs 2 bact. and 2 fungi // *
642 // N // libertellenone M opened γ-lactone // * // *
643 // N // hydroxyl-ilicicolin H // No AF vs 4 strains. NT vs HTCLs // *
644 // N // ilicicolin I // No AF vs 4 strains. NT vs HTCLs // *



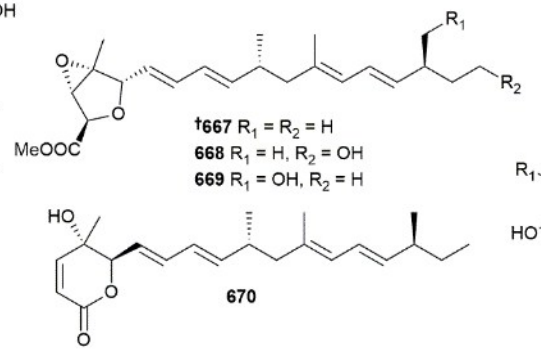
247 Ascomycota *Talaromyces islandicus* // (red alga, *Laurencia okamurai*) Qingdao, China // Antioxidant hydroanthraquinones from the algal-derived fungus *Talaromyces islandicus*
645 // N // 8-hydroxyconiothyrinone B // good AB vs 1 strain, weak vs another, mod. AO activ. (DPPH and ANTS), IA vs 2 HTCLs // *
646 // N // 8,11-dihydroxyconiothyrinone // good AB vs 1 strain, weak vs 2 others, mod. AO activ. (DPPH and ANTS), IA vs 2 HTCLs // *
647 // N // 4R,8-dihydroxyconiothyrione B // good AB vs 1 strain, weak vs 2 others, mod. AO activ. (DPPH and ANTS), IA vs 2 HTCLs // *
648 // N // 4S,8-dihydroxyconiothyrinone B // good AB vs 1 strain, weak vs 2 others, mod. AO activ. (DPPH and ANTS), IA vs 2 HTCLs // *
649 // N // 4S,8-dihydroxy-10-O-methyldendryol E // good AB vs 1 strain, mod. AO activ. (DPPH and ANTS), IA vs 2 HTCLs // *

248 Ascomycota *Talaromyces rugulosus* // (sponge, *Axinella cannabina*) Sñßacñk-úzmir, Turkey // Lactones from the sponge-derived fungus *Talaromyces rugulosus*
650 // N // lactone acid n-butyl ester // IA vs 3 strains bact and 1 murine TCL. // *
651 // N // 4-methoxylactone acid n-butyl ester // IA vs 3 strains bact and 1 murine TCL. // *
652 // N // lactone diacid 7-O-n-butyl ester // IA vs 3 strains bact and 1 murine TCL. // *
653 // N // (3S)-cis-resorcylide // IA vs 3 strains bact and 1 murine TCL. // *
654 // N // (3S,7S)-7-hydroxyresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
655 // N // (3S,7R)-7-hydroxyresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
656 // N // (3S,7S)-7-methoxyresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
657 // N // (3S,7R)-7-methoxyresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
658 // N // (3S,7S)-7-O-n-butylresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
659 // N // (3S,7R)-7-O-n-butylresorcylide // IA vs 3 strains bact and 1 murine TCL. // *
660 // N // talarodilactone A // Good cytotox vs 1 murine TCL. IA vs 3 strains bact. // *
661 // N // talarodilactone B // Good cytotox vs 1 murine TCL. IA vs 3 strains bact. // *
662 // N // talumarin A // IA vs 3 strains bact and 1 murine TCL. // *
663 // N // talumarin B // IA vs 3 strains bact and 1 murine TCL. // *

249 Ascomycota *Talaromyces stipitatus* // (sponge, *Stylissa flabelliformis*) Samaesarn Is., Thailand // A new ergosterol analog, a new bis-anthraquinone and anti-obesity activity of anthraquinones from the marine sponge-associated fungus *Talaromyces stipitatus* KUFA 0207
664 // N // talarosterone // * // *
665 // N // bis(1,4,5-trihydroxy-7-methylanthraquinone) // * // *

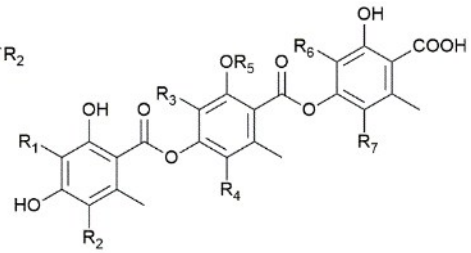


†666

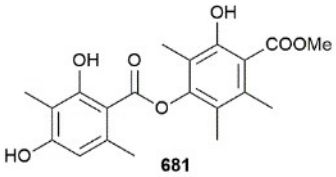


†667 R_1 = R_2 = H
668 R_1 = H, R_2 = OH
669 R_1 = OH, R_2 = H

670



671 R_1 = R_2 = R_5 = R_7 = H, R_3 = R_4 = R_6 = Me
672 R_1 = R_2 = R_7 = H, R_3 = R_4 = R_5 = R_6 = Me
673 R_1 = R_3 = R_4 = R_5 = Me, R_2 = R_6 = R_7 = H
674 R_1 = R_4 = R_5 = R_6 = Me, R_2 = R_3 = R_7 = H
675 R_1 = R_3 = R_5 = R_6 = Me, R_2 = R_4 = R_7 = H
676 R_1 = R_3 = R_5 = R_6 = R_7 = Me, R_2 = R_4 = H
677 R_1 = R_3 = R_4 = R_6 = Me, R_2 = R_5 = R_7 = H
678 R_1 = R_2 = R_4 = R_7 = H, R_3 = R_5 = R_6 = Me
679 R_1 = R_2 = R_4 = H, R_3 = R_5 = R_6 = R_7 = Me
680 R_1 = R_3 = R_4 = R_5 = R_6 = R_7 = Me, R_2 = Cl
682 R_1 = R_3 = R_4 = R_6 = R_7 = Me, R_2 = R_5 = H
683 R_1 = R_2 = R_5 = H, R_3 = R_4 = R_6 = R_7 = Me
684 R_1 = R_3 = R_4 = R_5 = R_6 = Me, R_2 = R_7 = H
685 R_1 = R_3 = R_4 = R_5 = R_6 = R_7 = Me, R_2 = H

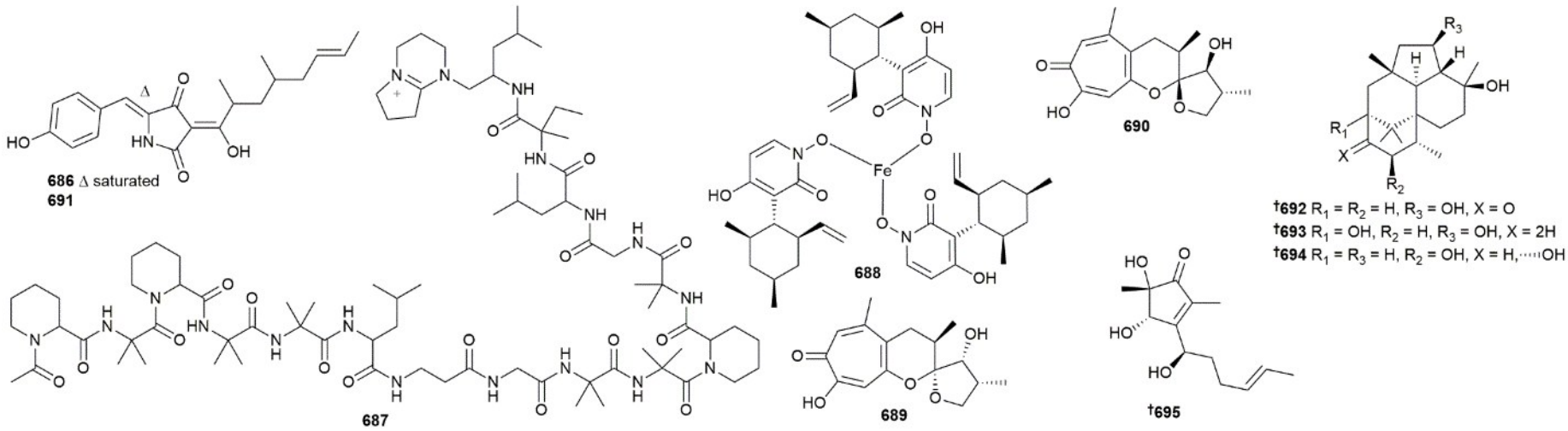


681

250 Ascomycota *Talaromyces* sp // (unidentified tunicate) Tweed Heads, N.S.W., Australia // Talarolide A, a cyclic heptapeptide hydroxamate from an Australian marine tunicate-associated fungus, *Talaromyces* sp. (CMB-TU011)
666 // N // talarolide A // IA vs 2 HTCLs, 1 fungal and 6 bact.l strains // *

251 Ascomycota *Talaromyces aculeatus, Penicillium variabile* // (sediment) Indian Ocean (*Talaromyces*); (rhizosphere soil, unidentified mangrove) Fujian Province, China (*Penicillium*) // Inducing secondary metabolite production by combined culture of *Talaromyces aculeatus* and *Penicillium variabile*
667 // N // penitalarin A // IA // *
668 // N // penitalarin B // IA // *
669 // N // penitalarin C // IA // *
670 // N // nafuredin B // signif. cytotox. vs 6 HTCLs. // *

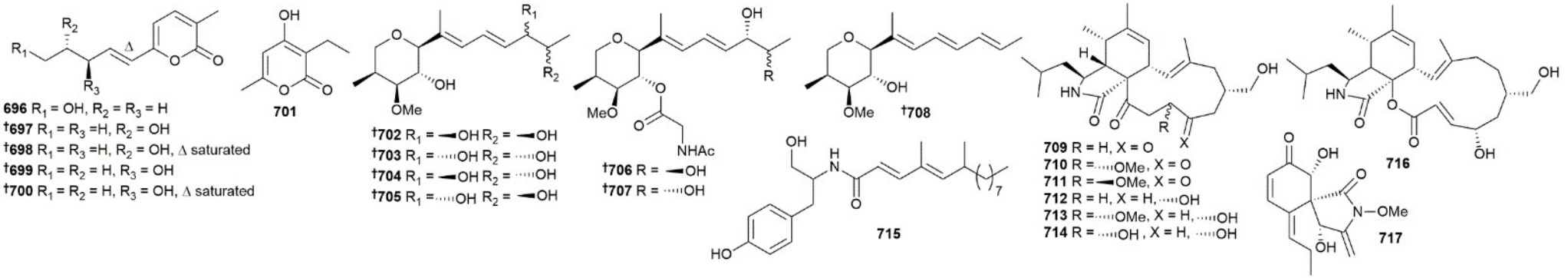
252 Ascomycota *Thielavia* sp // (seawater) Port Shelter, Hong Kong // Thielavins W-Z7, new antifouling thielavins from the marine-derived fungus *Thielavia* sp. UST030930-004
671 // N // thielavin W // good antifoul. activ. vs barnacle larvae // *
672 // N // thielavin X // good antifoul. activ. vs barnacle larvae // *
673 // N // thielavin Y // good antifoul. activ. vs barnacle larvae // *
674 // N // thielavin Z // IA // *
675 // N // thielavin Z1 // IA // *
676 // N // thielavin Z2 // mod. antifoul. activ. vs barnacle larvae // *
677 // N // thielavin Z3 // good antifoul. activ. vs barnacle larvae // *
678 // N // thielavin Z4 // mod. antifoul. activ. vs barnacle larvae // *
679 // N // thielavin Z5 // mod. antifoul. activ. vs barnacle larvae // *
680 // N // thielavin Z6 // mod. antifoul. activ. vs barnacle larvae // *
681 // N // thielavin Z7 // good antifoul. activ. vs barnacle larvae // *
682 // M // thielavin A // mod. antifoul. activ. vs barnacle larvae // *
683 // M // thielavin H // mod. antifoul. activ. vs barnacle larvae // *
684 // M // thielavin J // IA // *
685 // M // thielavin K // IA // *



253 Ascomycota *Tolypocladium geodes* // (unspecified sponge sample) unspecified location // Establishing the secondary metabolite profile of the marine fungus: *Tolypocladium geodes* sp. MF458 and subsequent optimisation of bioactive secondary metabolite production
686 // N // tolypocladenol C // mod. cytotox. vs 5 HTCLs // *
687 // M // efrapeptin D // Good cytotox. vs 18 HTCLs. // *
688 // M // terricolin // * // *
689 // M // malletenin B // mod. cytotox. vs 17 HTCLs // *
690 // M // malletenin E // mod. cytotox. vs 17 HTCLs // *
691 // M // tolypocladenol A1/A2 // mod. cytotox. vs 6 HTCLs // *

254 Ascomycota *Trichoderma harzianum* // (sponge, *Halichondria okadai*) unspecified location // Trichodermanins C-E, new diterpenes with a fused 6-5-6-6 ring system produced by a marine sponge-derived fungus
692 // N // trichodermanin C // mod. cytotox. vs 3 leukaemIA cell lines // *
693 // N // trichodermanin D // weak cytotox. vs 3 leukaemIA cell lines // *
694 // N // trichodermanin E // weak cytotox. vs 3 leukaemIA cell lines // *

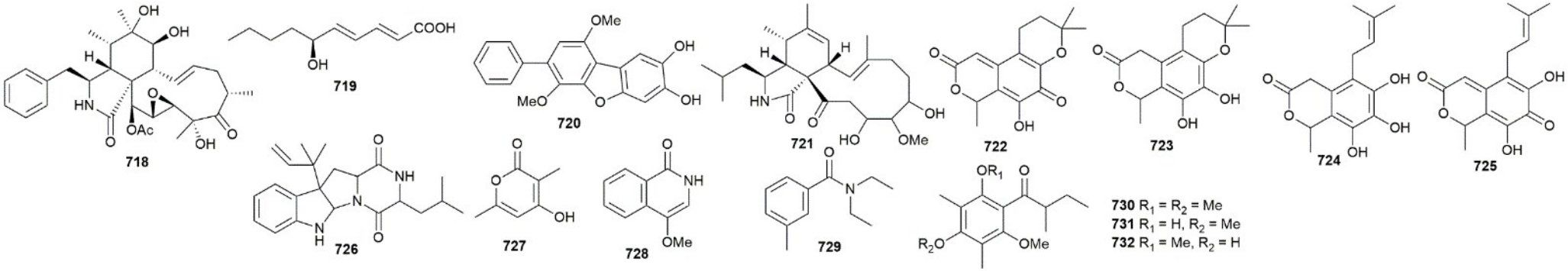
255 Ascomycota *Trichoderma* sp // (sponge, *Hymeniacidon perleve*) Dongji Is., Zhejiang, China // 5-Hydroxycyclopenicillone, a new β-amyloid fibrillization inhibitor from a sponge-derived fungus *Trichoderma* sp. HPQJ-34
695 // N // 5-hydroxycyclopenicillone // mod. AO activ. (DPPH) and anti-abfibrillisation and neuroprotective effects // *



256 Ascomycota *Truncatella angustata* // (sponge, *Amphimedon* sp.) Yongxin Is., Hainan, China // Angupyrones A - E, α-pyrone analogues from a sponge-associated fungus *Truncatella angustata*
696 // N // angupyrone A // mod. AO activ. (luciferase) // *
697 // N // angupyrone B // mod. AO activ. (luciferase) // *
698 // N // angupyrone C // mod. AO activ. (luciferase) // *
699 // N // angupyrone D // mod. AO activ. (luciferase) // *
700 // N // angupyrone E // mod. AO activ. (luciferase) // *
701 // M // 3-ethyl-6-methyl-2*H*-pyran-2-one // mod. AO activ. (luciferase) // *

257 Ascomycota *Westerdykella dispersa* // (sediment) Guangzhou, Guangdong, China // New alkenylated tetrahydropyrans from the marine sediment-derived fungus *Westerdykella dispersa*
702 // N // (12R,13R)-dihydroxylanomycinol // mod. AF vs 7 strains, weak AB vs 10 strains // *
703 // N // (12S,13S)-dihydroxylanomycinol // mod. AF vs 7 strains, weak AB vs 10 strains // *
704 // N // (12R,13S)-dihydroxylanomycinol // mod. AF vs 7 strains, weak AB vs 10 strains // *
705 // N // (12S,13R)-dihydroxylanomycinol // mod. AF vs 7 strains, weak AB vs 10 strains // *
706 // N // (12S,13R)-N-acetyl-dihydroxylanomycin // mod. AF vs 7 strains, weak AB vs 10 strains // *
707 // N // (12S,13S)-N-acetyl-dihydroxylanomycin // mod. AF vs 7 strains, weak AB vs 10 strains // *
708 // M // lanomycin // mod. AF vs 7 strains, weak AB vs 10 strains // AF activity already known

258 Ascomycota *Westerdykella dispersa* // (sediment) Guangzhou, Guangdong province, China // Alkaloids from the marine sediment-derived fungus *Westerdykella dispersa*
709 // N // 18-oxo-19,20-dihydrophomacin C // IA vs 8 bact. and 5 HTCLs. // *
710 // N // 18-oxo-19-methoxy-19,20-dihydrophomacin C // IA vs 8 bact. and 5 HTCLs. // *
711 // N // 18-oxo-19-hydroxyl-19,20-dihydrophomacin C // IA vs 8 bact. and 5 HTCLs. // *
712 // N // 19,20-dihydrophomacin C // weak cytotox. vs 1 HTCL, IA vs 8 bact.. // *
713 // N // 19-methoxy-19,20-dihydrophomacin C // weak cytotox. vs 5 HTCLs, IA vs 8 bact.. // *
714 // N // 19-hydroxyl-19,20-dihydrophomacin C // weak cytotox. vs 1 HTCL, IA vs 8 bact.. // *
715 // N // gymnastatin Z // weak cytotox. vs 5 HTCLs, mod. AB vs 1 strain. // *
716 // M // phomacin B // weak cytotox. vs 5 HTCLs, IA vs 8 bact.. // *
717 // M // triticone D // IA vs 8 bact. and 5 HTCLs. // *



259 Ascomycota *Xylaria* sp // (sediment) South China Sea // Cytochalasin P1, a new cytochalasin from the marine-derived fungus *Xylaria* sp. SOF11
718 // N // cytochalasin P1 // good cytotox. vs 2 HTCLs, IA v 2 others // *

260 Ascomycota *Xylaria* sp // (unidentified gorgonian) Xisha Is. // New fatty acid from a gorgonian-derived *Xylaria* sp. fungus
719 // N // (2E,4E,6S)-6-hydroxydeca-2,4-dienoic acid // IA vs 3 bact. and 4 HTCLs // *

261 Ascomycota *Aspergillus candidus* // (unidentified colonial ascidian) Shikotan Is., Japan // Metabolites of the marine fungus *Aspergillus candidus* KMM 4676 associated with a Kuril colonial ascidian.
720 // M // 4"-dehydroxycandidusin A // * // *

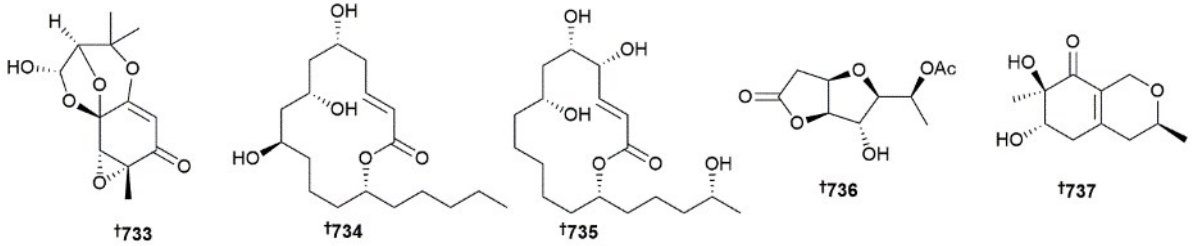
262 Ascomycota *Aspergillus* sp. // (gorgonian, *Muricella abnormaliz*) Xisha Islands, S. China Sea // Cytochalasins from the gorgonian-derived fungus *Aspergillus* sp. XS-2009-0B15
721 // M // aspochalasin K // mod. AB vs 1 strain. // *

263 Ascomycota *Oidiodendron griseum* // (sediment) unspecified location // Bioactive metabolites from the deep subseafloor fungus *Oidiodendron griseum* UBOCC-A-114129
722 // M // fuscin // * // *
723 // M // dihydrofuscin // * // *
724 // M // dihydrosecofuscin // v weak AB vs 9 strains, IA CK-1 inhib.. // *
725 // M // secofuscin // weak AB vs 9 strains, weak casein kinase 1 (CK-1) inhib.. // *

264 Ascomycota *Penicillium* sp. // (sediment) South China Sea // Mass spectrometric characteristics of prenylated indole derivatives from marine-derived *Penicillium* sp. NH-SL.
726 // M // brevicompanine B // IA vs 1 murine cell line. // *

265 Ascomycota *Penicillium* sp. // (brown alga, *Padina* sp.) South China Sea, Vietnam // Aromatic metabolites of marine fungus *Penicillium* sp. KMM 4672 associated with a brown alga *Padina* sp.
727 // M // 4-hydroxy-3,6-dimethyl-2-pyrone // IA vs 2 murine cell lines. // *
728 // M // 4-methoxyisoquinolin-1(2*H*)-one // IA vs 2 murine cell lines. // *
729 // M // *N*,*N*-Diethyl-3-methylbenzamide // IA vs 2 murine cell lines. // *

266 Ascomycota *Dichotomyces* sp. // (sponge, *Callyspongia* cf. *flammea*) Bear Is., Sydney, Australia // Volatiles from the fungal microbiome of the marine sponge *Callyspongia* cf. *flammea*.
730 // M // isotorquatone // good algicidal activ. (as racemate) // *
731 // M // chartabomone // mod. AB vs 1 strain, good algicidal activ. // *
732 // M // dichotomone // mod. AB vs 2 strains, no activ. vs 1 alga // *



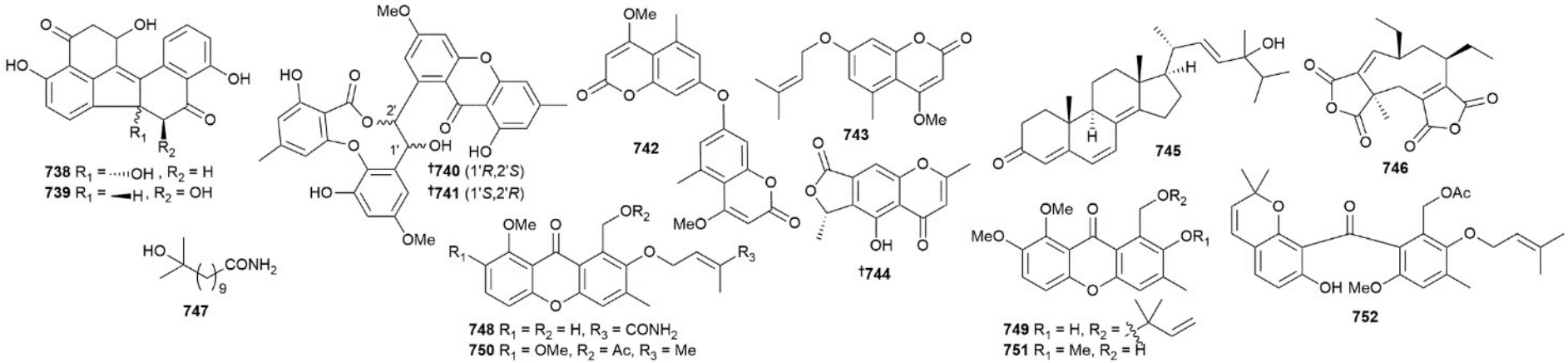
267 Ascomycota *Acremonium persicinum* // (sponge) // Revision of the structure of acremine P from a marine-derived strain of *Acremonium persicinum*
733 // R // acremine P // * // *

268 Ascomycota Gliomastix sp. // (sponge) // Asymmetric Total Syntheses of Two Possible Diastereomers of Gliomasolide E and Its Structural Elucidation
734 // R // gliomasolide E // * // First synth. determines stereochem.

269 * // * // Determination of the absolute configuration of gliomasolide D through total syntheses of the C-17 epimers
735 // R // gliomasolide D // * // First synth. determines stereochem.

270 * // * // Total synthesis, configuration assignment, and cytotoxic activity evaluation of protulactone A
736 // R // protulactone A // IA vs NCI60 cell line panel // *

271 * // * // Asymmetric total synthesis and revision of absolute configurations of azaphilone derivative felinone A
737 // R // felinone A // * // *



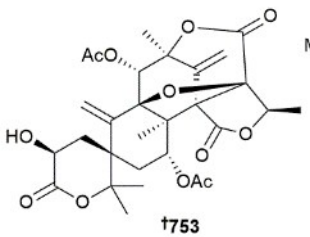
286 Ascomycota *Annulohypoxylon* sp. // (fruit, *Rhizophora racemosa*) Cameroon // Daldinone derivatives from the mangrove-derived endophytic fungus *Annulohypoxylon* sp.
738 // N // daldinone H // * // *
739 // N // daldinone J // IA vs 3 bact. and 2 HTCLs. // *

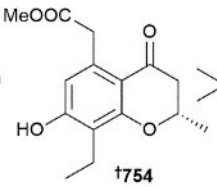
287 Ascomycota *Kandelia candel* // (leaves, *Kandelia obovata*) Shankou Mangrove Nature Reserve, Guangxi Province, China // (+)- and (-)-Ascomlactone A: a pair of novel dimeric polyketides from a mangrove endophytic fungus Ascomycota sp. SK2YWS-L
740 // N // (+)-ascomlactone A // signif. a-glucosidase inhib. // *
741 // N // (-)-ascomlactone A // signif. a-glucosidase inhib. // *

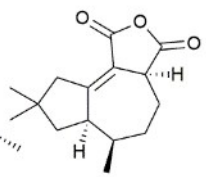
288 Ascomycota *Aspergillus clavatus* // (root, *Myoporum bontioides*) Leizhou Peninsula, China // Antifungal activity of compounds from the mangrove fungus *Aspergillus clavatus* R7
742 // N // 4,4'-dimethoxy-5,5'-dimethyl-7,7'-oxydicoumarin // signif. AF vs 3 strains. // *
743 // N // 7-(γ,γ-dimethylallyloxy)-5-methoxy-4-methylcoumarin // IA // *
744 // N // (S)-5-hydroxy-2,6-dimethyl-4H-furo[3,4-g]benzopyran-4,8(6H)-dione // signif. AF vs 3 strains. // *
745 // N // 24-hydroxylergosta-4,6,8(14),22-tetraen-3-one // Strong AF vs 3 strains. // *

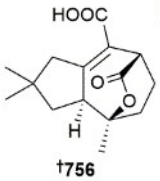
289 Ascomycota *Aspergillus fumigatus* // (leaves, *Acrostichum specioum*) Dongzhaigang, Haikou, Hainan Province, China // Metabolites with insecticidal activity from *Aspergillus fumigatus* JRJ111048 isolated from mangrove plant Acrostichum specioum endemic to Hainan Island
746 // N // aspergide // potent insecticidal activ. (Spodoptera litura), IA vs 3 fungi. // *
747 // N // 11-methyl-11-hydroxyldodecanoic acid amide // IA // *

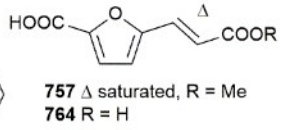
290 Ascomycota *Aspergillus versicolor* // (rhizosphere soil, *Thespesia populnea*) Guangxi Province, China // Versicones E-H and arugosin K produced by the mangrove-derived fungus *Aspergillus versicolor* HDN11-84
748 // N // versicone E // IA vs 5 HTCLs. // *
749 // N // versicone F // IA vs 5 HTCLs. // *
750 // N // versicone G // mod. cytotox. vs 3 HTCLs. // *
751 // N // versicone H // IA vs 5 HTCLs. // *
752 // N // arugosin K // mod. cytotox. vs 3 HTCLs. // *

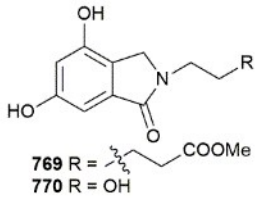


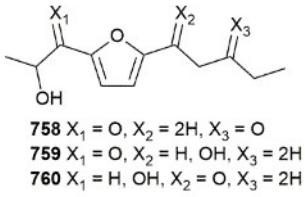


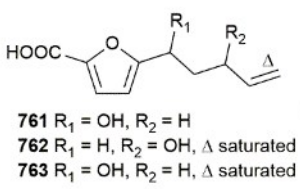


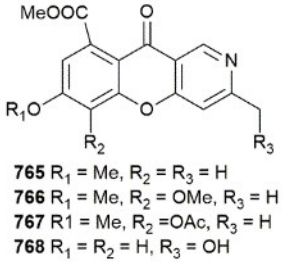












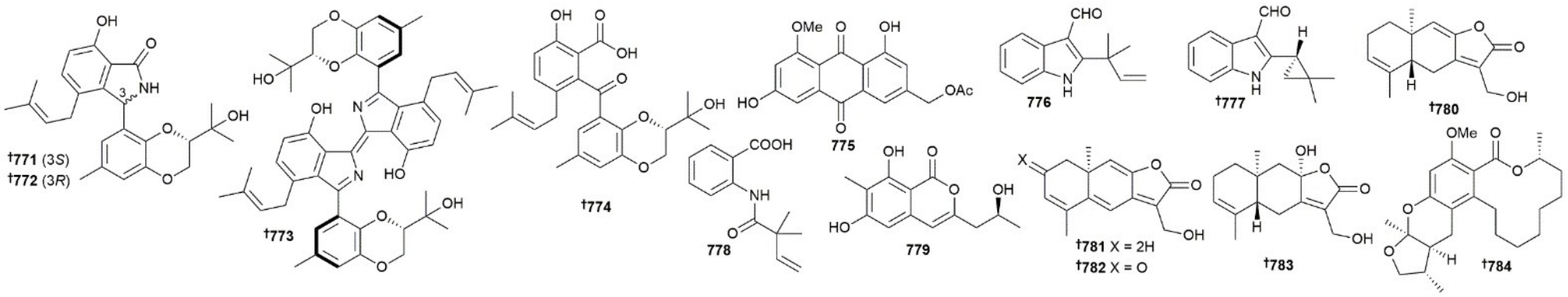
291 Ascomycota *Aspergillus* sp // (leaves, *Sonneratia apetala*) Hainan Is., China // Acetylcholinesterase inhibitory meroterpenoid from a mangrove endophytic fungus *Aspergillus* sp. 16-5c
753 // N // 2-hydroacetoxydehydroaustin // IA vs 4 HTCLs and AchE // *

292 Ascomycota *Aspergillus* sp // (soil, unspecified mangrove) Sanya // Aspergone, a new chromanone derivative from fungus *Aspergillus* sp. SCSIO41002 derived of mangrove soil sample
754 // N // aspergone // IA vs 10 HTCLs and COX-2. // *

293 Basidiomycota *Coriolopsis* sp // (branch, *Ceriops tagal*) Dong Zhai Gang Mangrove National Nature Reserve, Hainan Province, China // Two new tremulane sesquiterpenes from a mangrove endophytic fungus, *Coriolopsis* sp. J5
755 // N // coriolopsin A // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
756 // N // coriolopsin B // * //

294 Basidiomycota *Coriolopsis* sp // (branch, *Ceriops tagal*) Dong Zhai Gang Mangrove National Nature Reserve, Hainan Is., China // New furan derivatives from a mangrove-derived endophytic fungus *Coriolopsis* sp. J5
757 // N // 5-(3-methoxy-3-oxopropyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
758 // N // 1-(5-(1,2-dihydroxy-propyl)-furan-2-yl)-pentan-1-one // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
759 // N // 2-hydroxy-1-(5-(1-hydroxy-pentyl)-furan-2-yl)propan-1-one // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
760 // N // 5-(1-hydroxy-pent-4-enyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
761 // N // 5-(3-hydroxy-pentyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
762 // N // 5-(1-hydroxy-pentyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
763 // M // 5-(1-hydroxypentyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *
764 // N // (E)-5-(2-carboxyvinyl)-furan-2-carboxylic acid // IA vs 3 HTCLs, 2 bact. and 4 fungi. // *

295 Ascomycota *Diaporthe phaseolorum* // (branch, Acanthus ilicifolius) unspecified location // Alkaloids from the mangrove endophytic fungus *Diaporthe phaseolorum* SKS019
765 // N // diaporphasine A // IA vs 5 HTCLs. // *
766 // N // diaporphasine B // IA vs 5 HTCLs. // *
767 // N // diaporphasine C // IA vs 5 HTCLs. // *
768 // N // diaporphasine D // IA vs 5 HTCLs. // *
769 // N // meyeroguilline C // IA vs 5 HTCLs. // *
770 // N // meyeroguilline D // IA vs 5 HTCLs. // *

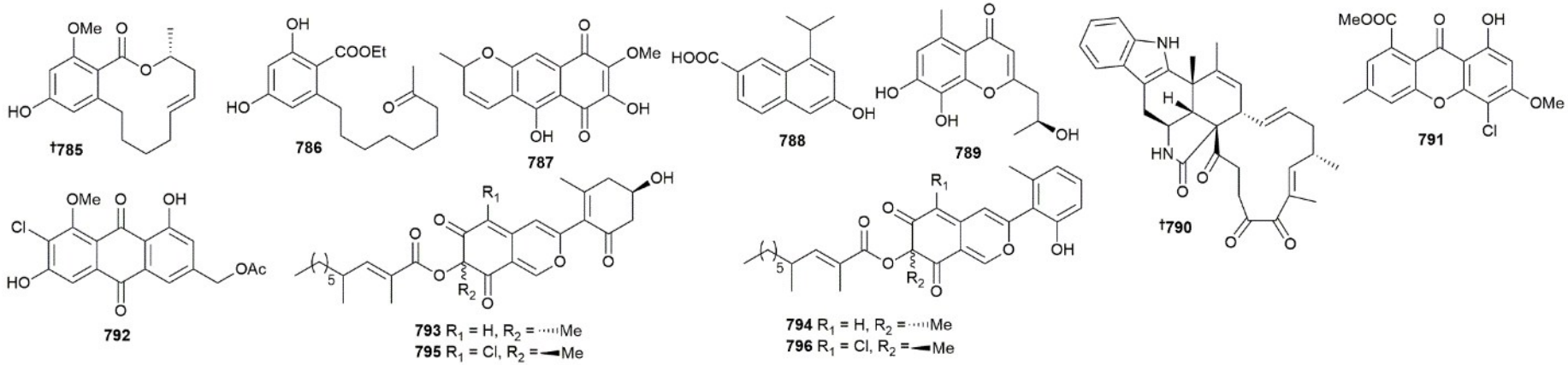


296 Ascomycota *Diaporthe* sp // (branch, *Excoecaria agallocha*) Zhuhai, Guangdong province, China // Diaporisoindoles A-C: three isoprenylisoindole alkaloid derivatives from the mangrove endophytic fungus *Diaporthe* sp. SYSU-HQ3
771 // N // diaporisoindole A // signif. AB vs Mycobact. tuberculosis protein tyrosine phosphatase B (MptpB), IA vs PTP1B // *
772 // N // diaporisoindole B // IA // *
773 // N // diaporisoindole C // IA // *
774 // N // tenellone C // signif. AB vs Mycobact. tuberculosis protein tyrosine phosphatase B (MptpB), IA vs PTP1B // *

297 Ascomycota *Eurotium chevalieri* // (twig, *Rhizophora mucronata*) Kung Krabaen Bay, Chanthaburi Province, Eastern Thailand // Antibacterial and antibiofilm activities of the metabolites isolated from the culture of the mangrove-derived endophytic fungus *Eurotium chevalieri* KUFA 0006
775 // N // acetylquestinol // IA AB vs 7 strains. // *
776 // N // 2-(2-methyl-3-en-2-yl)-1H-indole-3-carbaldehyde // IA AB vs 7 strains. // *
777 // N // 2-(2,2-dimethylcyclopropyl)-1H-indole-3-carbaldehyde // IA AB vs 7 strains. // *
778 // N // 2[(2,2-dimethylbut-3-enoyl)amino]benzoic acid // IA AB vs 7 strains. // *
779 // N // 6,8-dihydroxy-3-(2S-hydroxypropyl)-7-methyl-1H-isochromen-1-one // IA AB vs 7 strains. // *

298 Ascomycota *Eutypella* sp // (rhizosphere, unspecified mangrove) Jimei, Fujian Province, China // New 12,8-eudesmanolides from *Eutypella* sp. 1-15
780 // N // 13-hydroxy-3,8,7(11)-eudesmatrien-12,8-olide // weak-mod. cytotox. vs 2 HTCLs, mod. AB vs 2 strains. // *
781 // N // 13-hydroxy-3,5,8,7(11)-eudesmatetraen-12,8-olide // IA vs 2 HTCLs and 2 bact.. // *
782 // N // 2-one-13-hydroxy-3,5,8,7(11)-eudesmatetraen-12,8-olide // IA vs 2 HTCLs and 2 bact.. // *
783 // N // 8,13-dihydroxy-3,7(11)-eudesmadien-12,8-olide // IA vs 2 HTCLs and 2 bact.. // *

299 Ascomycota *Lasiodiplodia theobromae* // (leaves, *Acanthus ilicifolius*) Zhanjiang Mangrove Nature Reserve, Guangdong, China // Lasiodiplactone A, a novel lactone from the mangrove endophytic fungus *Lasiodiplodia theobromae* ZJ-HQ1
784 // N // lasiodiplactone A // strong inhib. NO prod and a-glucosidase , IA vs 5 HTCLs. // *



300 Ascomycota *Lasiodiplodia* sp // (*Excoecaria agallocha*) Mangrove National Nature Reserve, Gaoqiao, Zhanjiang city, Guangdong Province, China // New lasiodiplodins from mangrove endophytic fungus *Lasiodiplodia* sp. 318#
785 // N // 12E,15R-5-hydroxy-3-methoxy-16-methyl-8,9,10,11,14,15-hexahydro-1H-benzo[c][1]oxacyclodocecin-1-one // weak cytotox. vs 3 HTCLs // *
786 // N // ethyl 24-dihydroxy-6-(8-oxononyl)benzoate // mod. cytotox. vs 3 HTCLs. // *

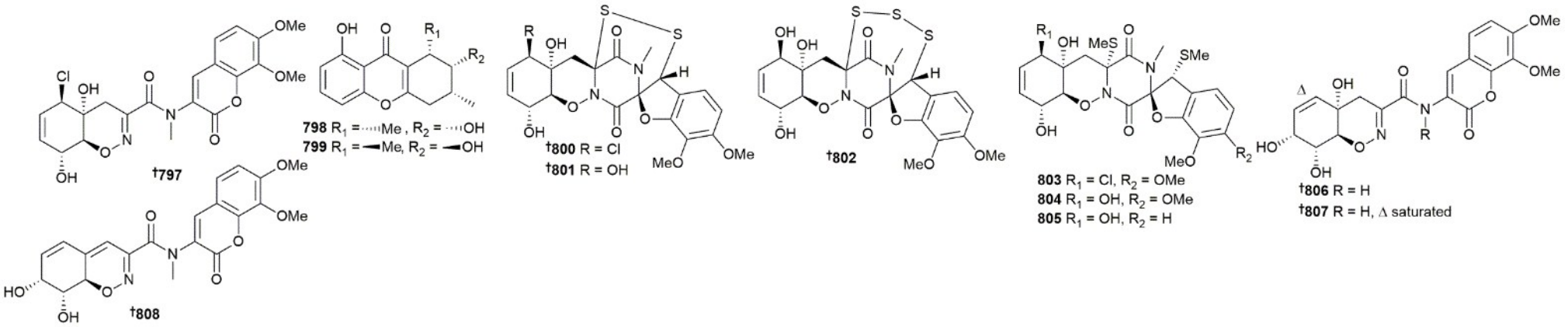
301 Ascomycota *Leptosphaerulina* sp // (branch, *Acanthus ilicifolius*) Shankou, Guangxi Province, China // New pyranonaphthazarin and 2-naphthoic acid derivatives from the mangrove endophytic fungus *Leptosphaerulina* sp. SKS032
787 // N // leptospyranonaphthazarin A // weak AB vs 2 strains. // *
788 // N // leptosnaphthoic acid A // weak AB vs 2 strains. // *

302 Ascomycota *Penicillium aculeatum* // (leaves *Kandelia candel*) Yangjiang, Guangdong province, China // A new antibacterial chromone derivative from mangrove-derived fungus *Penicillium aculeatum* (No. 9EB)
789 // N // (2'S*)-2-(2'-hydroxypropyl)-5-methyl-7, 8-dihydroxy-chromone // Good AB vs 1 strain, inactvie vs 4 oathers and α-glucosidase. // *

303 Ascomycota *Penicillium chrysogenum* // (*Myoporum bontioides*) Leizhou Peninsula, China // Penochalasin K, a new unusual chaetoglobosin from the mangrove endophytic fungus *Penicillium chrysogenum* V11 and its effective semi-synthesis
790 // N // penochalasin K // Selective AF vs 2 strains, signif. cytotox. vs 3 HTCLs. // *

304 Ascomycota *Penicillium citrinum* // (*Bruguiera sexangula* var. *rhynchopetala*) S. China Sea // New chlorinated xanthone and anthraquinone produced by a mangrove-derived fungus *Penicillium citrinum* HL-5126
791 // N // 4-chloro-1-hydroxy-3-methoxy-6-methyl-8-methoxycarbonyl-xanthen-9-one // IA vs 6 strains bact. // *
792 // N // 2'-acetoxy-7-chlorocitreorosein // weak AB vs 2 strains. // *

305 Ascomycota *Penicillium janthinellum* // (rhizome soil, unspecified mangrove) Dongzhaigang Mangrove Natural Reserve, Hainan Is., China // Penicilones A-D, anti-MRSA azaphilones from the marine-derived fungus *Penicillium janthinellum* HK1-6
793 // N // penicilone A // IA // *
794 // N // penicilone B // signif. AB vs 6 strains. // *
795 // N // penicilone C // signif. AB vs 6 strains. // *
796 // N // penicilone D // signif. AB vs 6 strains. // *

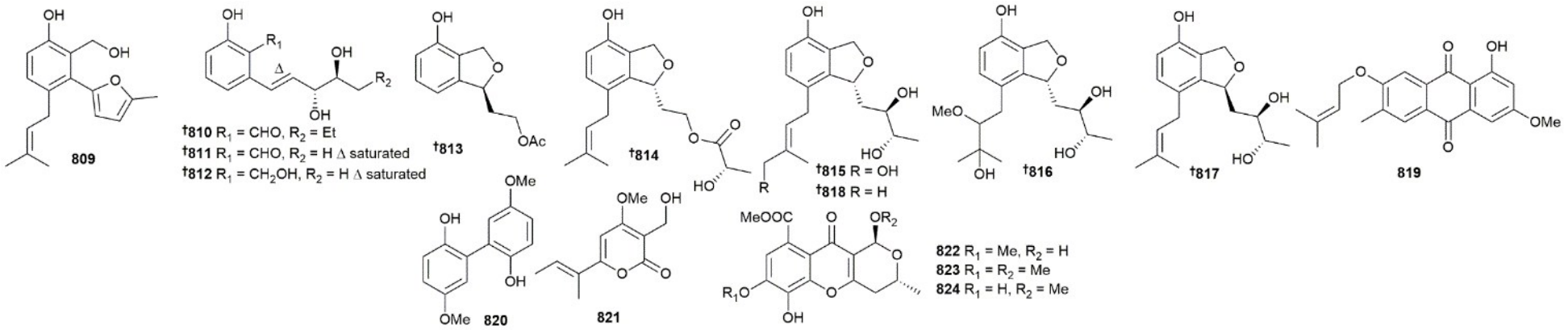


306 Ascomycota *Penicillium janthinellum* // (root, *Sonneratia caseolaris*) Hainan Is., China // N-Me-trichodermamide B isolated from *Penicillium janthinellum*, with antioxidant properties through Nrf2-mediated signaling pathway
797 // N // N-Me-trichodermamide B // AO via induction of expression of heme oxygenase-1 (HO-1) // *

307 Ascomycota *Penicillium* sp // (mangrove sediment, unspecified species) Sanya, Hainan, China // Penixanthones A and B, two new xanthone derivatives from fungus *Penicillium* sp. SYFz-1 derived of mangrove soil sample
798 // N // penixanthone A // weak cytotox. vs 10 HTCLs. // *
799 // N // penixanthone B // IA // *

308 Ascomycota *Penicillium janthinellum* // (root, *Sonneratia caseolaris*) Hainan Province, China // Penicisulfuranols A-F, alkaloids from the mangrove endophytic fungus *Penicillium janthinellum* HDN13-309
800 // N // penicisulfuranol A // strong cytotox. vs 2 HTCLs. // *
801 // N // penicisulfuranol B // strong cytotox. vs 2 HTCLs. // *
802 // N // penicisulfuranol C // strong cytotox. vs 2 HTCLs. // *
803 // N // penicisulfuranol D // IA vs 2 HTCLs. // *
804 // N // penicisulfuranol E // IA vs 2 HTCLs. // *
805 // N // penicisulfuranol F // IA vs 2 HTCLs. // *

309 Ascomycota *Penicillium janthinellum* // (root, *Sonneratia caseolaris*) unspecified location) // Trichodermamides D-F, heterocyclic dipeptides with a highly functionalized 1,2-oxazadecaline core isolated from the endophytic fungus *Penicillium janthinellum* HDN13-309
806 // N // trichodermamide D // IA vs 6 HTCLs and 4 AO enzymes. // *
807 // N // trichodermamide E // IA vs 6 HTCLs and 4 AO enzymes. // *
808 // N // trichodermamide F // IA vs 6 HTCLs and 4 AO enzymes. // *



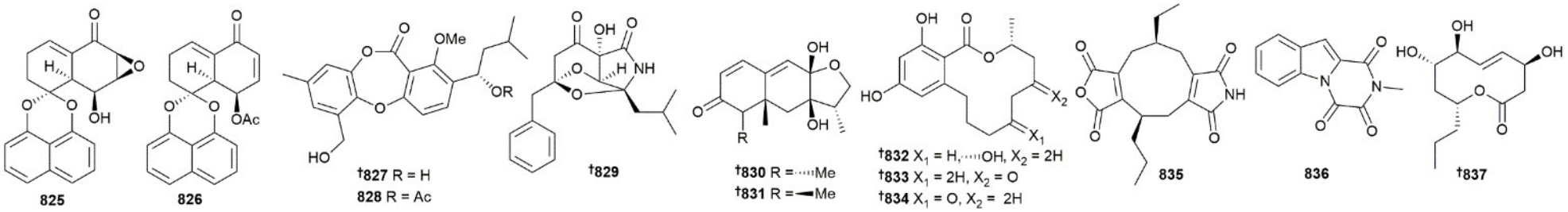
310 Ascomycota *Pestalotiopsis vaccinii* // (branch, *Kandelia candel*) coastal China // Vaccinols J-S, salicyloid derivatives from the marine mangrove-derived endophytic fungus *Pestalotiopsis vaccinii*
809 // N // vaccinol J // signif. AV vs 1 strain, IA vs 3 HTCLs. // *
810 // N // vaccinol K // IA vs 3 HTCLs. // *
811 // N // vaccinol L // IA vs 3 HTCLs. // *
812 // N // vaccinol M // IA vs 3 HTCLs. // *
813 // N // vaccinol N // IA vs 3 HTCLs. // *
814 // N // vaccinol O // IA vs 3 HTCLs. // *
815 // N // vaccinol P // IA vs 3 HTCLs. // *
816 // N // vaccinol Q // IA vs 3 HTCLs. // *
817 // N // vaccinol R // IA vs 3 HTCLs. // *
818 // N // vaccinol S // IA vs 3 HTCLs. // *

311 Ascomycota *Phoma* sp // (roots, *Myoporum bontioides*) Leizhou peninsula, Guangdong Province, China // Identification and antifungal activity of metabolites from the mangrove fungus *Phoma* sp. L28
819 // N // 7-(γ,γ)-dimethylallyloxymacrosporin // weak AF vs 3 strains, IA vs 3 others // *

312 Ascomycota *Phomopsis longicolla* // (leaves, *Bruguiera sexangula* var. *rhynchopetela*) South China Sea // A new biphenyl derivative from the mangrove endophytic fungus *Phomopsis longicolla* HL-2232
820 // N // 5,5'-dimethoxybiphenyl-2,2'-diol // mod. AB vs 1 strain. // *

313 Ascomycota *Phomopsis* sp // (branch, *Acanthus ilicifolius*) Hainan Province, China // A new α-pyrone from the mangrove endophytic fungus *Phomopsis* sp. HNY29-2B
821 // N // phomopyrone A // IA AB vs 3 strains. // *

314 Ascomycota *Phomopsis* sp // (*Rhizophora stylosa*) Sanya city, Hainan province, P. R. China // Chaetochromones A - C, three new polyketides from mangrove plant derived endophytic fungus *Phomopsis* sp. SCSIO 41006.
822 // N // chaetochromone A // IA vs 3 HTCLs, 5 bact. and COX-2. // *
823 // N // chaetochromone B // IA vs 3 HTCLs, 5 bact. and COX-2. // *
824 // N // chaetochromone C // IA vs 3 HTCLs, 5 bact. and COX-2. // *



315 Ascomycota *Rhytidhysteron rufulum* // (leaves, *Azima sarmentosa*) Samutsakhon province, Thailand // Identification of spirobisnaphthalene derivatives with anti-tumor activities from the endophytic fungus *Rhytidhysteron rufulum* AS21B
825 // N // rhytidenone G // weak-mod. cytotox. vs 2 HTCLs // *
826 // N // rhytidenone H // potent cytotox. vs 2 HTCLs // *

316 Ascomycota *Talaromyces stipitatus* // (leaves, *Acanthus ilicifolius*) Shankou Mangrove Nature Reserve, Guangxi Province, China // Depsidones from *Talaromyces stipitatus* SK-4, an endophytic fungus of the mangrove plant Acanthus ilicifolius
827 // N // talaromyone A // IA vs 2 bact. and a-glucosidase. // *
828 // N // talaromyone B // mod. activ. vs 1 bact. and a-glucosidase. // *

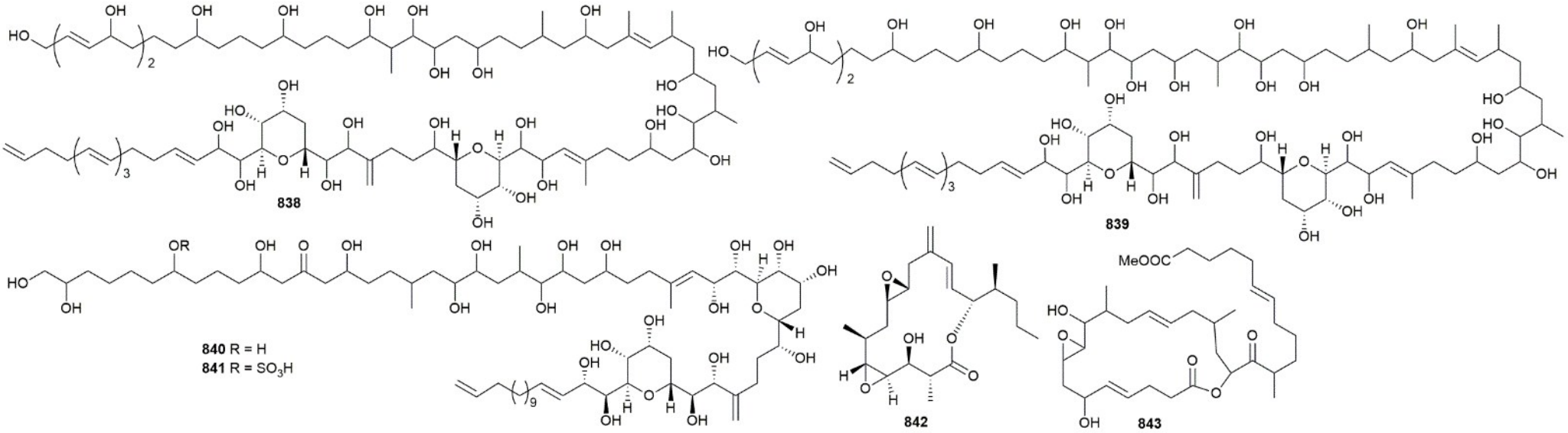
317 Ascomycota *Talaromyces* sp. // (leaves, *Kandelia obovata*) Huizhou Mangrove Nature Reserve, Guangdong Province, China // Talaramide A, an unusual alkaloid from the mangrove endophytic fungus *Talaromyces* sp. (HZ-YX1) as an inhibitor of mycobacterial PknG
829 // N // talaramide A // potent mycobact.l protein kinase G (PknG) inhib. // *

318 Ascomycota *Trichoderma* sp // (bark, *Clerodendrum inerme*) Zhanjiang Mangrove National Nature Reserve, and Maoming Experimental Station, Guangdong, China // Induction of diverse bioactive secondary metabolites from the mangrove endophytic fungus *Trichoderma* sp. (Strain 307) by co-cultivation with *Acinetobacter johnsonii* (Strain B2)
830 // N // microsphaeropsisin B // IA a-glucosidase inhib. and vs 2 rat TCLs. // *
831 // N // microsphaeropsisin C // mod. a-glucosidase inhib., IA vs 2 rat TCLs. // *
832 // N // (3R, 7R)-7-hydroxy-de-O-methyllasiodiplodin // Potent a-glucosidase inhib., IA vs 2 rat TCLs. // *
833 // N // (3R)-5-oxo-de-O-methyllasiodiplodin // Potent a-glucosidase inhib., IA vs 2 rat TCLs. // *
834 // N // (3R)-7-oxo-de-O-methyllasiodiplodin // mod. a-glucosidase inhib., IA vs 2 rat TCLs. // *

319 Ascomycota *Fusarium graminearum* // (unspecified mangrove) S. China Sea // A new nonadride derivative from the co-culture broth of two mangrove fungi
835 // N // (-)-byssochlamic acid imide // mod. AF vs 2 strains. // Co-culture 2 species

320 Ascomycota *Hypocrea virens* // * // Total synthesis and structural revision of a mangrove alkaloid.
836 // R // 2-methylpyrazino[1,2-α]indole-1,3,4(2*H*)-trione // * // *

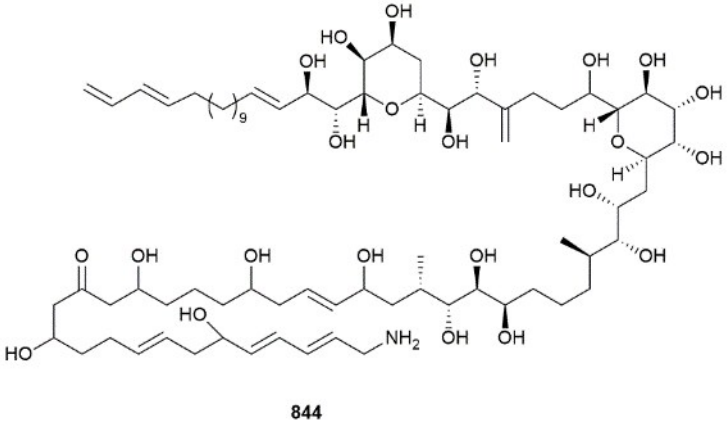
321 0 // * // Total enantioselective synthesis of the endophytic fungal polyketide phomolide H and its structural revision
837 // R // phomolide H // * // *



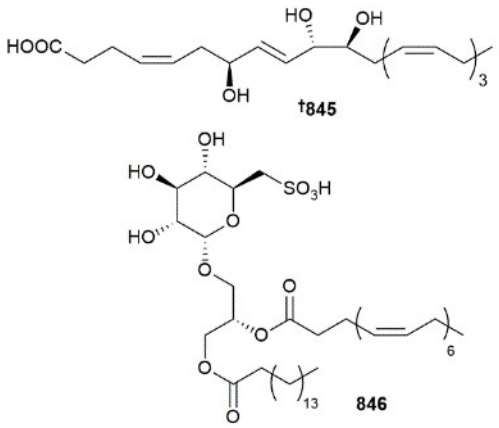
326 Miozoa *Amphidinium carterae* // Goseong Province, Korea // Structures of the largest amphidinol homologues from the dinoflagellate *Amphidinium carterae* and structure-activity relationships
838 // N // amphidinol 20 // weak haemolytic activ. (hum. erythrocytes). IA vs 1 fungus. // *
839 // N // amphidinol 21 // weak haemolytic activ. (hum. erythrocytes). IA vs 1 fungus. // *

327 Miozoa *Amphidinium carterae* // (brown alga, *Dyctiota dichotoma*) Lake Fusaro, Naples, Italy // The missing piece in biosynthesis of amphidinols: first evidence of glycolate as a starter unit in new polyketides from *Amphidinium carterae*
840 // N // amphidinol A // weak AF vs 1 strain // *
841 // N // amphidinol B // IA // *

328 Miozoa *Amphidinium* sp // (seagrass, *Thalassia hemprichii*) Iriomote Is., Japan // Iriomoteolides-9a and 11a: two new odd-numbered macrolides from the marine dinoflagellate *Amphidinium* species
842 // N // iriomoteolide-9a // weak cytotox. vs 1 HTCL. // *
843 // N // iriomoteolide-11a // mod. cytotox. vs 1 HTCL. // *

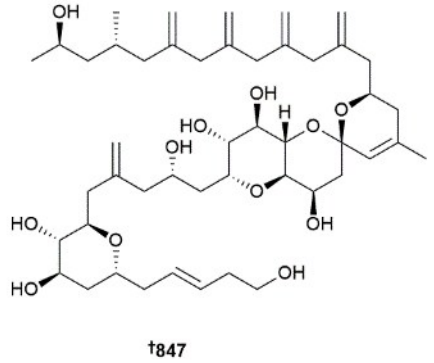


844



†845

846

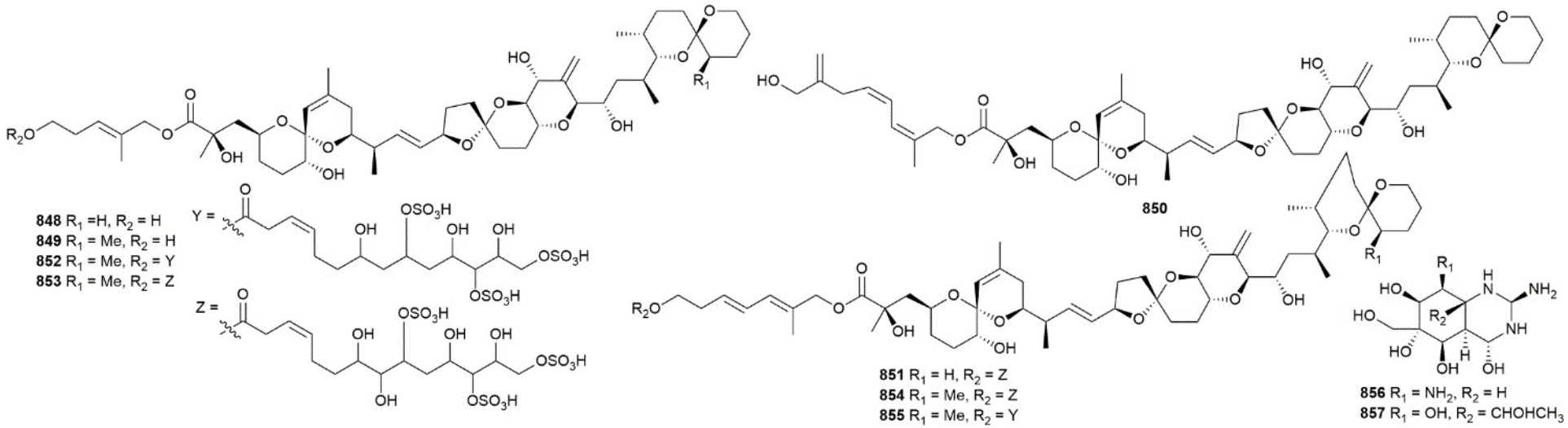


†847

329 Miozoa *Karlodinium armiger* // Scandinavian Culture Collection for Algae and Protozoa // Karmitoxin: an amine-containing polyhydroxy-polyene toxin from the marine dinoflagellate *Karlodinium armiger*
844 // N // karmitoxin // potent cytotox. (lethality) vs copepod *Acartia tonsa*. // *

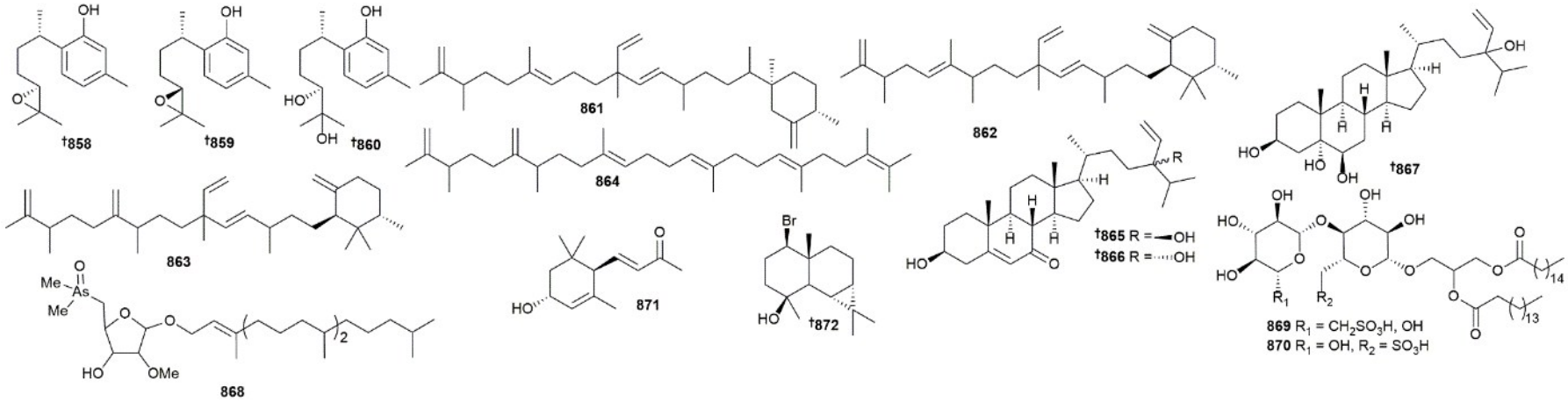
330 Miozoa *Oxyrrhis marina* // Gunsan, Korea // Characterization of a new trioxilin and a sulfoquinovosyl diacylglycerol with anti-inflammatory properties from the dinoflagellate *Oxyrrhis marina*
845 // N // (4Z,8E,13Z,16Z,19Z)-7(S),10(S),11(S)-trihydroxydocosapentaenoic acid // signif. AI (NO prod inhib.), IA vs 1 murine and 1 HTCL. // *
846 // N // 1-O-hexadecanosy-2-O-docosahexaenoyl-3-O-(6-sulfo-α-D-quinovopyranosyl)-glycerol // signif. AI (NO prod inhib.), weak cytotox. vs 1 murine and 1 HTCL. // *

331 Miozoa *Prorocentrum lima* // (brown alga, *Sargassum fulvellum*) Geomundo Is., Korea // Limaol: a polyketide from the benthic marine dinoflagellate *Prorocentrum lima*
847 // N // limaol // mod. cytotox. vs 3 HTCLs // *



332 Miozoa *Prorocentrum lima* // Nova Scotia, Canada // Sulfated diesters of okadaic acid and DTX-1: Self-protective precursors of diarrhetic shellfish poisoning (DSP) toxins
848 // N // OA C6-diol // * // *
849 // N // DTX-1 C6-diol // * // *
850 // N // OA C10-diol // * // *
851 // N // DTX-4b // * // *
852 // N // DTX-7a // * // *
853 // N // DTX-7b // * // *
854 // N // DTX-7c // * // *
855 // N // DTX-7d // * // *

333 Miozoa *Prorocentrum minimum* // National Center for Marine Algae and Microbiota, Bigelow, Maine, U.S.A. // The association of bacterial C9-based TTX-like compounds with *Prorocentrum minimum* opens new uncertainties about shellfish seafood safety
856 // N // C9H20N4O5 // * // *
857 // N // C11H23N3O7 // * // *



338 Chlorophyta *Udotea orientalis* // Papua New Guinea coast // Bioactive new metabolites from *Udotea orientalis* growing on the gorgonian coral *Pseudopterogorgia rigida*
858 // N // curcuepoxide A // * // *
859 // N // curcuepoxide B // * // *
860 // N // (+)-10α-hydroxycurcudiol // * // *

339 Chlorophyta *Botryococcus braunii* // * // Isolation and characterization of cyclic C33 botryococcenes and a trimethylsqualene isomer from *Botryococcus braunii* race B
861 // N // cyclic C33-1 botryococcene // * // contains an unusual methylenecyclohexane
862 // N // cyclic C33-2 botryococcene // * // *
863 // N // cyclic C33-3 botryococcene // * // *
864 // N // C33-2 tetramethylsqualene // * // *

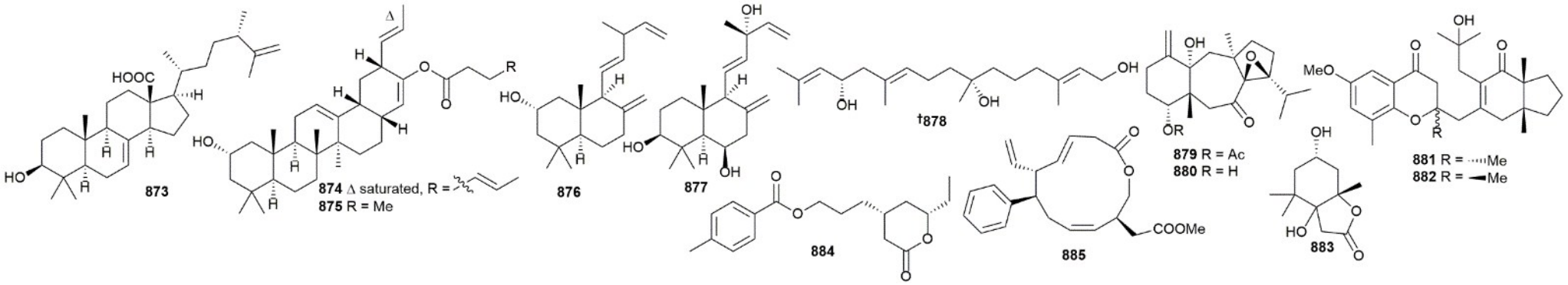
340 Chlorophyta *Ulva australis* // Dalian, China // Sterols from the green alga *Ulva australis*
865 // N // (24R)-5,28-stigmastadiene-3β,24-diol-7-one // * // *
866 // N // (24S)-5,28-stigmastadiene-3β,24-diol-7-one // * // *
867 // N // vinylcholesta-3β,5α,6β,24-tetraol // * // *

341 Chlorophyta *Dunaliella tertiolecta* // Oceanic waters // A 2-*O*-Methylriboside Unknown Outside the RNAWorld Contains Arsenic
868 // N // phytyl 5-dimethylarsinoyl-2-O-methyl-ribofuranoside// * // *

342 Chlorophyta *Codium dwarkense* // Gulf of Oman near Sur // Two new sulfonoglycolipids from the green alga *Codium dwarkense*
869 // N // codioside E // * // *
870 // N // codioside F // * // *

343 Chlorophyta Ulva pertusa // * // 3-Hydroxy-4,7-megastigmadien-9-one, isolated from *Ulva pertusa*, attenuates TLR9-mediated inflammatory response by down-regulating mitogen-activated protein kinase and NF-κB pathways
871 // M // 3-Hydroxy-4,7-megastigmadien-9-one // attenuates TLR-9 mediated inflammatory responses // *

345 Chlorophyta, *Neomeris annulata* // * // High-throughput in silico structure validation and revision of halogenated natural products is enabled by parametric corrections to DFT-computed ^{13}C NMR chemical shifts and spin-spin coupling constants
872 // R // 1R-bromo-ent-maaliol // * // DFT calc. used to correct relative config at C-4



347 Ochrophyta *Padina boergesenii* // Sur, Oman // New enzyme-inhibitory triterpenoid from marine macro brown alga *Padina boergesenii* Allender & Kraft
873 // N // padinolic acid // very weak (IC_{50} > 100 ug/ml) urease, a-glucosidase and lipid peroxidation activ. // *

348 Ochrophyta *Sargassum wightii* // Gulf of Mannar, India // Previously undescribed frido oleanenes and oxygenated labdanes from the brown seaweed *Sargassum wightii* and their protein tyrosine phosphatase-1B inhibitory activity
874 // N // 2α-hydroxy-(28,29)-frido-olean-12(13), 21(22)-dien-20-propyl-21-hex-40(E)-enoate // 1.9 uM PTP1B, 93 uM α-amylase, 75 uM α-glucosidase // *
875 // N // 2α-hydroxy-(28, 29)-frido-olean-12 (13), 21(22)-dien-20-prop-2-(E)-en-21-butanoate // 1.7 uM PTP1B, 57 uM α-amylase, 38 uM α-glucosidase // *
876 // N // 2α-hydroxy-8(17),12E,14-labdatriene // 1.1 mM PTP1B, 450 uM α-amylase, 38- uM α-glucosidase // *
877 // N // 3β,6β,13α-trihydroxy-8(17),12E,14-labdatriene // 0.9 mM PTP1B, 340 uM α-amylase, 250 uM α-glucosidase // *

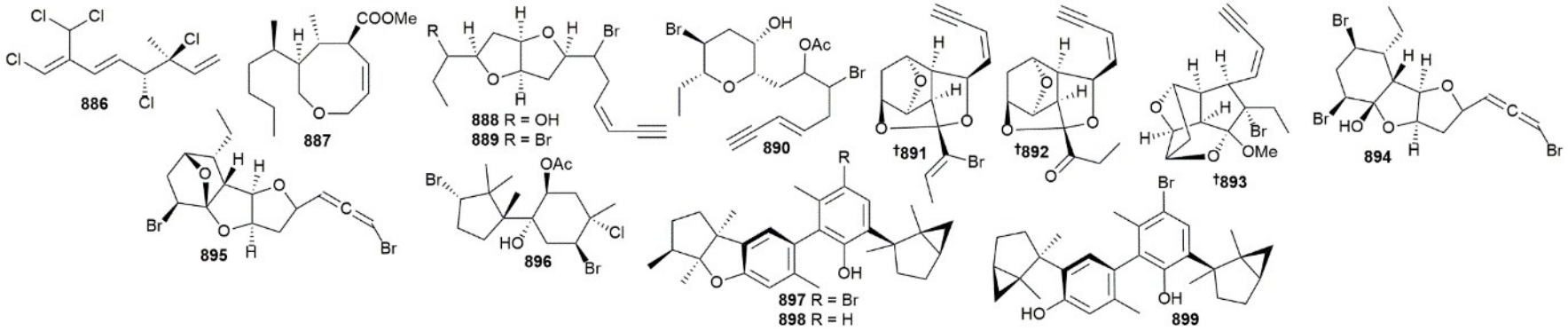
349 Ochrophyta *Bifurcaria bifurcata* // Kilkee, County Clare, Ireland // Bifurcatriol, a new antiprotozoal acyclic diterpene from the brown alga *Bifurcaria bifurcata*
878 // N // bifurcatriol // 2.0 uM antimal. *P. falciparum*, 11.8 uM *T. brucei rhodesiense*, 47.8 uM, T. cruzi, 18.8 uM *Leishman. donovani,*170 uM cytotox // abs. config. determ. by VCD

350 Ochrophyta *Canistrocarpus cervicornis* // Drunken Man's Cay, Port Royal, Kingston, Jamaica // Two new oxodolastane diterpenes from the Jamaican macroalga *Canistrocarpus cervicornis*
879 // N // 4R-acetoxy-8S,9S-epoxy-14S-hydroxy-7-oxodolastane // EC_{50} > 100 uM PC3 and HT29 HTCL // *
880 // N // 4R-hydroxy-8S,9S-epoxy-14S-hydroxy-7-oxodolastane // NA @ 47.8 uM vs PC3 and HT29 HTCL // *

351 Ochrophyta *Cystoseira baccata* // Areosa, Viana do Castelo, Portugal // Antileishmanial activity of meroditerpenoids from the macroalgae *Cystoseira baccata*
881 // N // 3R-tetraprenyltoluquinone // 94.4 uM *Lieshmania infantum* promastigotes, > 88 uM vs intracellular amastigotes, 84.5 uM vs peritoneal macrophages // isol. as a diasteromeric mixt. with 3S
882 // N // 3S-tetraprenyltoluquinone // 94.4 uM *Lieshmania infantum* promastigotes, > 88 uM vs intracellular amastigotes, 84.5 uM vs peritoneal macrophages // isol. as a diasteromeric mixt. with 3R

352 Ochrophyta *Cystoseira schiffneri* // Tunisia // Natural products among brown algae: the case of *Cystoseira schiffneri* Hamel (Sargassaceae, Phaeophyceae).
883 // N // schiffnerilolide // * // *

353 Ochrophyta *Sargassum wightii* // Gulf of Mannar, India // Unprecedented antioxidative and anti-inflammatory aryl polyketides from the brown seaweed *Sargassum wightii*
884 // N // 4-(8-ethyl-tetrahydro-7-oxo-2H-pyran-5-yl)-propyl-4′-methylbenzoate // >1mM AO activ. vs DPPH and ABTS and >1 mM antiinflammatory activ. vs COX-1, COX-2 and 5-LOX // NMR data suggests struct. is incorrect
885 // N // methyl-2-(12-oxo-7-phenyl-8-vinyl-1-oxa-4,9-cyclododecadien-3-yl)-acetate // >1mM AO activ. vs DPPH and ABTS and >1 mM antiinflammatory activ. vs COX-1, COX-2 and 5-LOX // NMR data suggests struct. is incorrect



374 Rhodophyta *Plocamium cartilagineum* // East coast of S. Africa // Cytotoxic halogenated monoterpenes from *Plocamium cartilagineum*
886 // N // (-)-(5E,7Z)-348-trichloro-7-dichloromethyl-3-methyl-157-octatriene // IC_{50} 13 uM vs lung cancer (NCI-H460) // *

376 Rhodophyta *Kappaphycus alvarezii* // Mandapam, India // Unprecedented antioxidative cyclic ether from the red seaweed *Kappaphycus alvarezii* with anti-cyclooxygenase and lipoxidase activities
887 // N // (3S,4R,5S,6Z)-3-((R)-hexan-2'-yl)-3,4,5,8-tetrahydro-4-methyl-2H-oxocin-5-yl acetate // >1mM AO activ. vs DPPH and ABTS and >1 mM AI activ. vs COX-1, COX-2 and 5-LOX // NMR data suggests struct. is incorrect

377 Rhodophyta *Laurencia obtusa* // Salman Gulf, Saudi Arabia // Isolaurenidificin and bromlaurenidificin, two new C15-acetogenins from the red alga *Laurencia obtusa*
888 // N // isolaurenidificin // weak cytotox vs 4 HTCL, 14 uM vs peripheral blood neutrophils // *
889 // N // bromlaurenidificin // weak cytotox vs 4 HTCL, 11 uM vs peripheral blood neutrophils // *

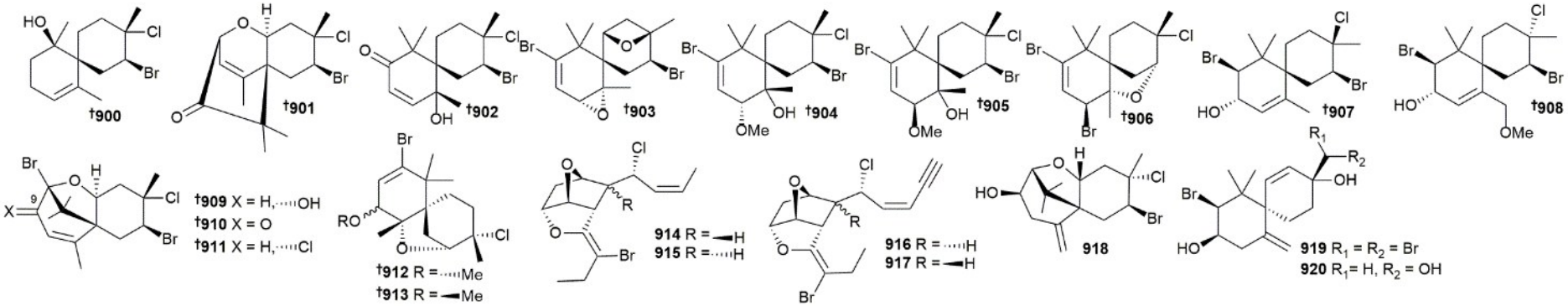
378 Rhodophyta *Laurencia obtusa* // Sagone Bay, Corsica, France // Chemical composition of *Laurencia obtusa* extract and isolation of a new C15-acetogenin
890 // N // sagonenyne // * // *

379 Rhodophyta *Laurencia obtusa* // Salman's Gulf, Saudi Arabia // Bio-active maneonenes and isomaneonene from the red alga *Laurencia obtusa*
891 // N // jeddahenyne A // IC_{50} 15.9 uM vs peripheral blood neutrophils // abs. config. determ. by X-ray crystallography
892 // N // jeddahenyne B // IC_{50} 12.4 uM vsvs // abs. config. determ. by X-ray crystallography
893 // N // 12-debromo-12-methoxy isomaneonene-A // IC_{50} 35.0 uM vs peripheral blood neutrophils // abs. config. determ. by analogy to jeddahenyne A and B

380 Rhodophyta *Laurencia* sp // Omaezaki, Shizuoka Prefecture, Japan // New marine antifouling compounds from the red alga *Laurencia* sp.
894 // N // hachijojimallene A // antifoul. act EC_{50} 0.31 uM vs barncle larvae // *
895 // N // hachijojimallene B // antifoul. act EC_{50} 0.76 uM vs barncle larvae // *

381 Rhodophyta *Laurencia natalensis* // Cape Vidal, E. South Africa // Cuparane sesquiterpenes from *Laurencia natalensis* Kylin as inhibitors of alpha-glucosidase, dipeptidyl peptidase IV and xanthine oxidase
896 // N // 8-deoxyalgoane // very weak active vs a-glucosidase and dipeptidase IV // *

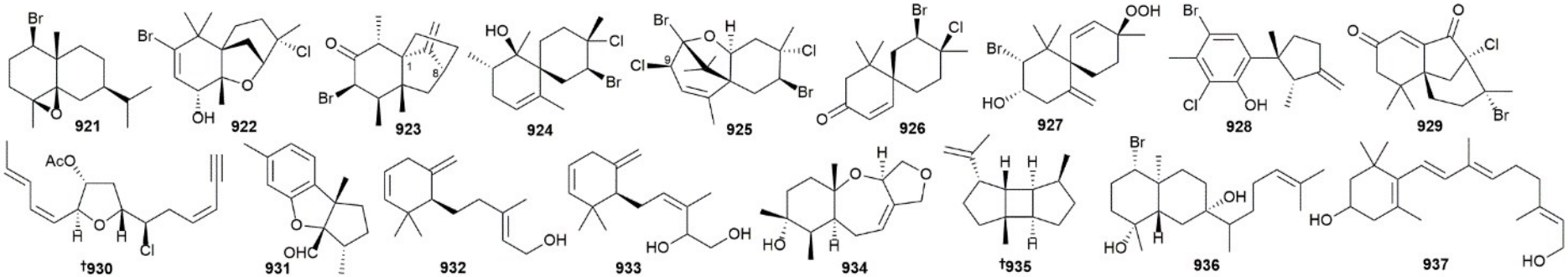
382 Rhodophyta *Laurencia okamurai* // Nanji Is., East China Sea, Zhejiang province, China // Structural and stereochemical studies of laurokamurols A-C, uncommon bis-sesquiterpenoids from the Chinese red alga *Laurencia okamurai* Yamada
897 // N // laurokamurol A // PTP1B IC_{50} 8.1 uM // *
898 // N // laurokamurol B // PTP1B IC_{50} 12.5 uM // *
899 // N // laurokamurol C // PTP1B IC_{50} 6.1 uM // *



383 Rhodophyta *Laurencia composita* // Nanji Is., E. China Sea, Zhejiang Province, China // Compositacins A-K: bioactive chamigrane-type halosesquiterpenoids from the red alga *Laurencia composita* Yamada.
900 // N // compositacin A // * // abs. config. determ. by analogy to compositacin B
901 // N // compositacin B // tested for AF activ. vs 8 strains weak active // abs. config. determ. by ECD and DFT compar.
902 // N // compositacin C // tested for AF activ. vs 8 strains weak active // abs. config. determ. by analogy to compositacin B
903 // N // compositacin D // tested for AF activ. vs 8 strains weak active // abs. config. determ. by analogy to compositacin B
904 // N // compositacin E // * // abs. config. determ. by analogy to compositacin B
905 // N // compositacin F // * // abs. config. determ. by analogy to compositacin B
906 // N // compositacin G // tested for AF activ. vs 8 strains mod active 4ug/ml vs Microsporum gypseum // abs. config. determ. by analogy to compositacin B
907 // N // compositacin H // * // abs. config. determ. by analogy to compositacin B
908 // N // compositacin I // tested for AF activ. vs 8 strains weak active // abs. config. determ. by analogy to compositacin B
909 // N // compositacin J // tested for AF activ. vs 8 strains weak active // abs. config. determ. by analogy to compositacin B
910 // N // compositacin K // tested for AF activ. vs 8 strains weak active // abs. config. determ. by analogy to compositacin B
911 // N // compositacin L // * // abs. config. determ. by analogy to compositacin B

383 Rhodophyta, *Laurencia elata* // * // Cycloelatanene A and B: absolute configuration determination and structural revision by the crystalline sponge method
912 // R // cycloelatanene A // NT // rel config at C-4 revised and abs. config. determ using crystaline sponge method
913 // R // cycloelatanene B // NT // rel config at C-4 revised and abs. config. determ using crystaline sponge method

344 Rhodophyta, *Laurencia* spp // * // High-throughput in silico structure validation and revision of halogenated natural products is enabled by parametric corrections to DFT-computed 13C NMR chemical shifts and spin-spin coupling constants
914 // R // cis-maneonene-C // * // reassigned struct. of 12*E*-lembyne A as cis-maneonone C (and its stereochem. has now been defined)
915 // R // cis-maneonene-A // * // stereochem. at C-5 defined
916 // R // cis-maneonene-B // * // stereochem. at C-5 defined
917 // R // lembyne A // * // sames a Clardy cpd 18 ((12*Z*)-*cis*-maneonene-C)
918 // R // pinnatifenol // * // stereochem. defined
919 // R // tristichol A // * // revised to 3-epi
920 // R // tristichol B // * // revised to 3-epi



921 // R // 1β-bromo-4β,5β-epoxyselinane // * // revidsed to 4,5-epi
922 // R // 2,7-epoxychamigrenol // * // revised to 7,8-epi
923 // R // C15H21BrO // * // revised to 1,8-epi but orginal nOe evidence does not support this
924 // R // compositacin A // * // revised to 10-epi
925 // R // compositacin L // * // revised to 9-epi but this doesn't fit original ROESY evidence
926 // R // tristichone C // * // regiochemistry of the Cl and Br is revised
927 // R // rigidol // * // 3-hydroxy replaced with 3-hydroperoxy
928 // R // 10-bromo-8-chloro-7-hydroxylaurene // * // 11-iodo replaced by 8-chloro
929 // R // gomerone B // * // C-3 Cl replaced with Br and assigned opposite configuration

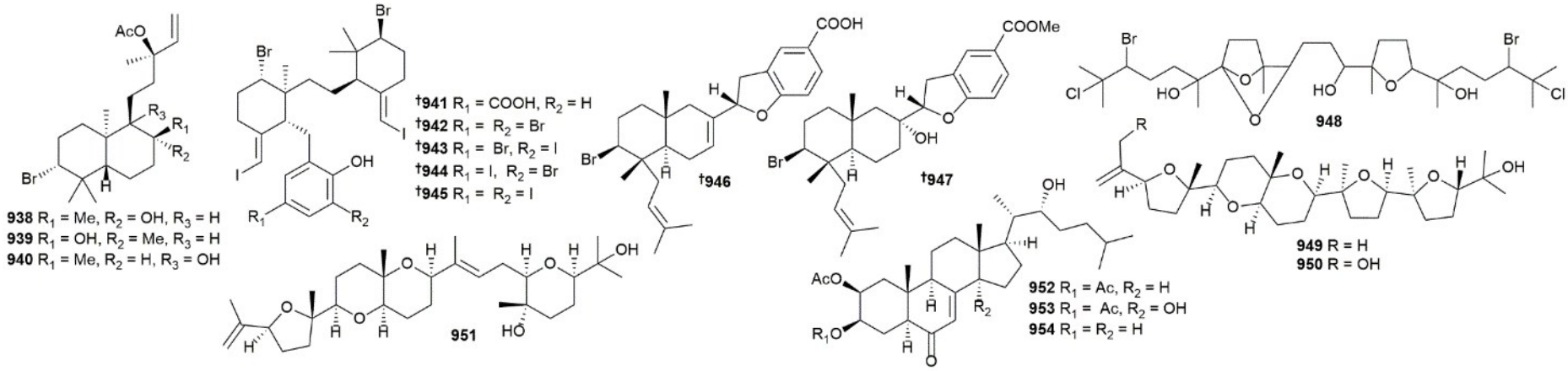
386 Rhodophyta, *Laurencia glandulifera* // * // Total synthesis of two possible diastereomers of natural 6-chlorotetrahydrofuran acetogenin and its stereostructural elucidation
930 // R // C18H23ClO2 // * // total synth. of the two C-6 diastereomers provided evidence to establish relative and absolute config of the natural product

380 Rhodophyta *Laurencia* sp // Omaezaki, Shizuoka Prefecture, Japan // New marine antifouling compounds from the red alga *Laurencia* sp.
931 // N // debromoaplysinal // antifoul. act EC_{50} 4.3 uM vs barncle larvae // *

387 Rhodophyta *Laurencia snackeyi* // Bum Bum Is., Semporna, Sabah // Non-halogenated new sesquiterpenes from Bornean *Laurencia snackeyi*
932 // N // snakeol // weak AB toward *E coli* and *Salmonella typhi* // *
933 // N // snakediol // weak AB toward *E coli* and *Salmonella typhi* // *
934 // R // palisadin D // NA vs *E. coli* and *S. typhi* // *

388 Rhodophyta *Laurencia pacifica* // Rocky Point, La Jolla, CA, USA // A red algal bourbonane sesquiterpene synthase defined by microgram-scale NMR-coupled crystalline sponge x-ray diffraction analysis
935 // R // prespatane // * // relative and abs. config. determ. by crystaline sponge method

380 Rhodophyta *Laurencia* sp // Omaezaki, Shizuoka Prefecture, Japan // New marine antifouling compounds from the red alga *Laurencia* sp.
936 // N // omaezol // antifoul. act EC_{50} 0.59 uM vs barncle larvae // *
937 // N // 11,12-dihydro-3-hydroxyretinol // * // *



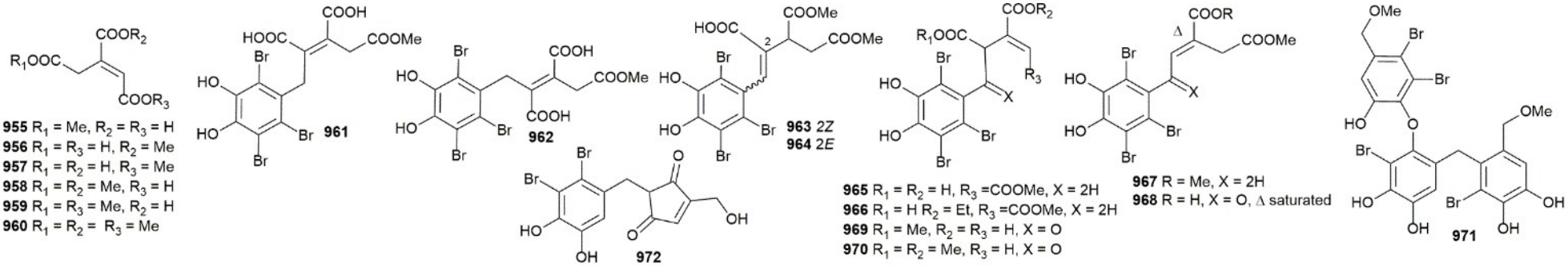
389 Rhodophyta *Laurencia alfredensis* // Three Sisters, Eastern Cape Province, Republic of S. Africa // Isolation, characterization and antiproliferative activity of new metabolites from the South African endemic red algal species *Laurencia alfredensis*
938 // N // 13-acetyl pinnatol A // weak active vs 2 HTCL // *
939 // N // isoconcinndiol 13-acetate // weak active vs 2 HTCL // *
940 // N // concinndiol 13-acetate // weak active vs 2 HTCL // *

390 Rhodophyta *Callophycus* sp. // Mango Bay Resort, Viti Levu, Fiji // Iodinated meroditerpenes from a red alga *Callophycus* sp.
941 // N // iodocallophycoic acid A // mod. AB act vs MRSA MIC 1.4 ug/mL VREF 2.2 ug/mL // abs. config. determ. by ECD and DFT compar.
942 // N // iodocallophycol A // NA vs MRSA and VREF // abs. config. determ. by ECD and DFT compar.
943 // N // iodocallophycol B // NA vs MRSA and VREF // abs. config. determ. by ECD and DFT compar.
944 // N // iodocallophycol C // NA vs MRSA and VREF // abs. config. determ. by ECD and DFT compar.
945 // N // iodocallophycol D // NA vs MRSA and VREF // abs. config. determ. by ECD and DFT compar.
946 // N // bromophycoic acid F // mod. AB act vs MRSA MIC 8.0 ug/mL VREF 1.6 ug/mL // abs. config. determ. by ECD and DFT compar.
947 // N // bromophycoic acid A methyl ester // NA vs MRSA and VREF // abs. config. determ. by ECD and DFT compar.

380 Rhodophyta *Laurencia* sp // Omaezaki, Shizuoka Prefecture, Japan // New marine antifouling compounds from the red alga *Laurencia* sp.
948 // N // intricatriol // * // *

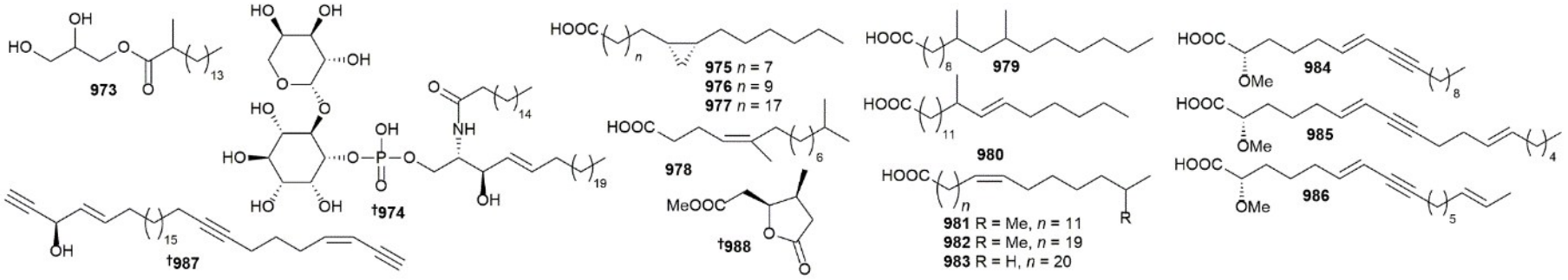
389 Rhodophyta *Laurencia alfredensis* // Three Sisters, Eastern Cape Province, Republic of S. Africa // Isolation, characterization and antiproliferative activity of new metabolites from the South African endemic red algal species *Laurencia alfredensis*
949 // N // alfredensinol A // weak active vs 2 HTCL // *
950 // N // alfredensinol B // weak active vs 2 HTCL // *
951 // N // alfredensinol C // weak active vs 2 HTCL // *
952 // N // alfredensterol // weak active vs 2 HTCL // *
953 // M // 14α-hydroxy alfredensterol // weak active vs 2 HTCL // *
954 // N // 3-deacetoxy alfredensterol // weak active vs 2 HTCL // *

6 Red algae



391 Rhodophyta *Symphyocladia latiuscula* // Qingdao, Shandong Province, China // Chemical diversity from a Chinese marine red alga, *Symphyocladia latiuscula*
955 // N // aconitate A // * // *
956 // N // aconitate B // * // *
957 // N // aconitate C // * // *
958 // N // aconitate D // * // *
959 // N // aconitate E // * // *
960 // N // aconitate F // * // *
961 // N // symphyocladin H // * // isol. as a mixt. with symphyocladin I
962 // N // symphyocladin I // * // isol. as a mixt. with symphyocladin H
963 // N // symphyocladin J // * // isol. as a mixt. with symphyocladin K
964 // N // symphyocladin K // * // isol. as a mixt. with symphyocladin J
965 // N // symphyocladin L // * // *
966 // N // symphyocladin M // * // *
967 // N // symphyocladin N // * // *
968 // N // symphyocladin O // * // *
969 // N // symphyocladin P // * // *
970 // N // symphyocladin Q // * // *

392 Rhodophyta *Odonthalia corymbifera* // Hokodate city, Japan // Two new algal bromophenols from *Odonthalia corymbifera*
971 // N // odonthalol // DPPH EC_{50} 13.5 uM, Tyrosinase activ. 31.0 uM // *
972 // N // odonthadione // DPPH EC_{50} 24.7 uM, Tyrosinase activ. 17.3 uM // *



400 Porifera *Halichondria sitiens* // Kolbeinsey, North Iceland // Lipophilic fractions from the marine sponge *Halichondria sitiens* decrease secretion of pro-inflammatory cytokines by dendritic cells and decrease their ability to induce a Th1 type response by allogeneic CD4+ T cells
973 // N // 2,3-dihydroxypropyl 2-methylhexadecanoate // * // *

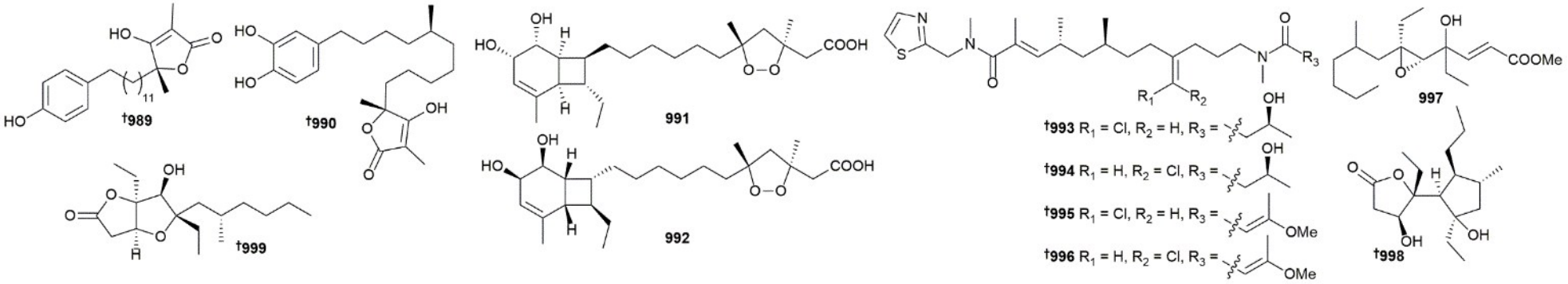
401 Porifera *Svenzea zeai* // Florida Keys, USA // Zeamide, a glycosylinositol phosphorylceramide with the novel core Arap(11β→6)Ins motif from the marine sponge *Svenzea zeai*
974 // N // zeamide // * // isol. as mixt. of homologues

402 Porifera *Aulosaccus* sp // Iturup Is., Kuril Is. // Fatty acids from a glass sponge *Aulosaccus* sp. occurrence of new cyclopropane-containing and methyl-branched acids
975 // N // cis-10,11-methylene-heptadecanoic acid // * // May be of mycobacterial origin
976 // N // cis-12,13-methylene-nonadecanoic acid // * // May be of mycobacterial origin
977 // N // cis-20,21-methylene-heptacosanoic acid // * // May be of mycobacterial origin
978 // N // 5,13-dimethyl-tetradec-4-enoic acid // * // May be of mycobacterial origin
979 // N // 10,12-dimethyl-octadecanoic acid // * // May be of mycobacterial origin
980 // N // (14E)-13-methyl-eicos-14-enoic acid // * // May be of mycobacterial origin
981 // N // 19-methyl-eicos-13-enoic acid // * // May be of mycobacterial origin
982 // N // 27-methyloctacos-21-enoic acid // * // May be of mycobacterial origin
983 // N // (22Z)-nonacos-22-enoic acid // * // May be of mycobacterial origin

403 Porifera *Cinachyrella* sp // Ambon, Indonesia // New 2-methoxy acetylenic acids and pyrazole alkaloids from the marine sponge *Cinachyrella* sp.
984 // N // cinachylenic acid B // Potent activ. vs. L5178Y murine leukaemia cell line // Probably isol. as mix of both enantiomers, but with residual optical activity
985 // N // cinachylenic acid C // Potent activ. vs. L5178Y murine leukaemia cell line // Probably isol. as mix of both enantiomers, but with residual optical activity
986 // N // cinachylenic acid D // Potent activ. vs. L5178Y murine leukaemia cell line // Probably isol. as mix of both enantiomers, but with residual optical activity

404 Porifera *Callyspongia* sp // Labuhan Bajo, Flores, Indonesia // A new cytotoxic polyacetylenic alcohol from a sponge *Callyspongia* sp.
987 // N // C31H46O // mod. activ. vs 1 rat cancer cell line. // abs. config. est. By Moshers Method.

405 Porifera *Plakortis* sp // Bunaken Is., Manado, Indonesia // Plakofuranolactone as a quorum quenching agent from the Indonesian sponge *Plakortis* cf. *lita*
988 // N // plakofuranolactone // mod. quorum quenching activ. via total protease inhib. // abs. config. est. by exptl. and calcd. optical rotation



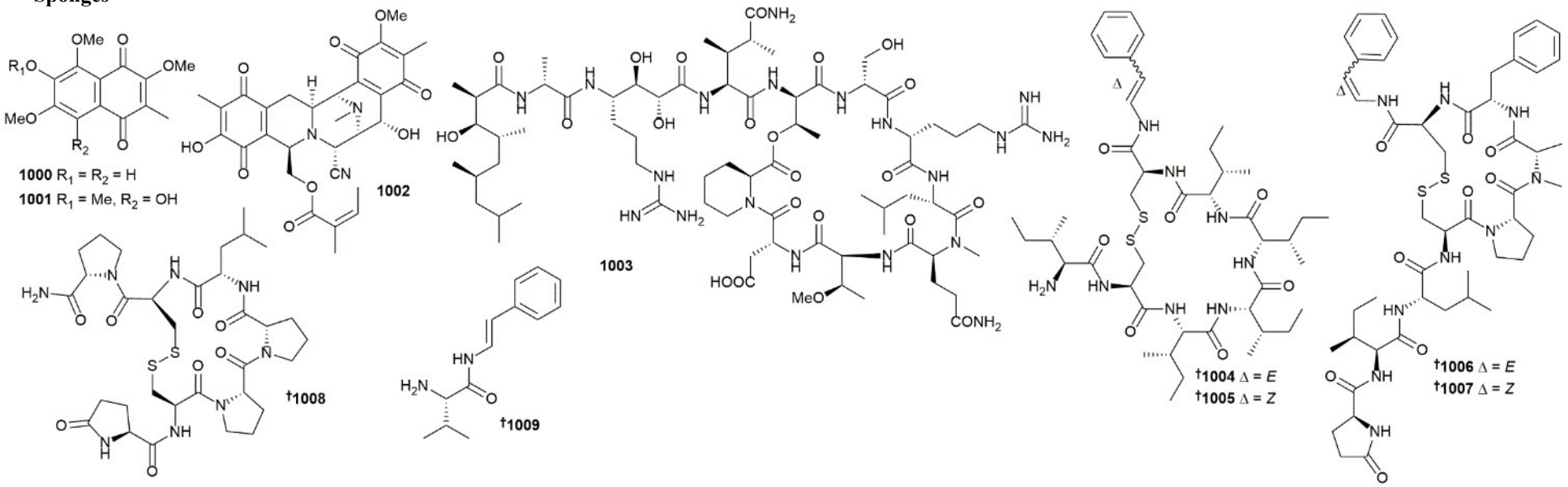
406 Porifera *Plakortis symbiotica-Xestospongia deweerdtae* // Mona Is., Puerto Rico // Exploring the sponge consortium *Plakortis symbiotica-Xestospongia deweerdtae* as a potential source of antimicrobial compounds and probing the pharmacophore for antituberculosis activity of smenothiazole A by diverted total synthesis
989 // N // plakinidone B // IA vs M. tuberculosis // abs. config. est. by compar. of calc. and expt. ECD/VCD spectra
990 // N // plakinidone C // IA vs M. tuberculosis // abs. config. est. by chemical interconversion, total synth. also achieved.

407 Porifera *Plakortis halichondrioides* // Mona Is., Puerto Rico // Plakortinic acids A and B: cytotoxic cycloperoxides with a bicyclo[4.2.0]octene unit from sponges of the genera *Plakortis* and *Xestospongia*
991 // N // plakortinic acid A // mixt. potent activ. vs 2 HTCLs // Unprecedented bibcyclo[4,2,0]-octene struct., isol. as a mixt.,
992 // N // plakortinic acid B // mixt. potent activ. vs 2 HTCLs // Unprecedented bibcyclo[4,2,0]-octene struct., isol. as a mixt.

408 Porifera *Petrosaspongia* sp // Biak, Indonesia // Biakamides A-D, unique polyketides from a marine sponge, act as selective growth inhibitors of tumor cells adapted to nutrient starvation
993 // N // biakamide A // mod. activ. vs 1 HTCL under glucose deficient conditions, mode of action via inhib. of complex I in the mitochondrIAl electron transport chain. // abs. config. Of 2° alcohol by Mosher's method, rel. and abs. configs estab. by total synth..
994 // N // biakamide B // mod. activ. vs 1 HTCL under glucose deficient conditions, mode of action via inhib. of complex I in the mitochondrIAl electron transport chain. // abs. config. Of 2° alcohol by Mosher's method, rel. and abs. configs estab. by total synth..
995 // N // biakamide C // Potent activ. vs 1 HTCL under glucose deficient conditions, mode of action via inhib. of complex I in the mitochondrIAl electron transport chain. // Rel. and abs. configs estab. by total synth., acid sensitive struct..
996 // N // biakamide D // Potent activ. vs 1 HTCL under glucose deficient conditions, mode of action via inhib. of complex I in the mitochondrIAl electron transport chain. // Rel. and abs. configs estab. by total synth..

409 Porifera *Agelas* sp // Xisha Is., S. China Sea // Alkaloids and polyketides from the South China Sea sponge *Agelas* aff. *nemoechinata*
997 // N // nemoechinoxide A // IA vs 4 HTCLs // *

410 Porifera *Plakorti*s sp // Yongxing Is. , S. China Sea // Chemistry and selective tumor cell growth inhibitory activity of polyketides from the South China Sea sponge *Plakortis* sp.
998 // N // simplextone E // IA vs 4 HTCLs // Rel. config. est. using DP4+ parameter, abs. config. est. by compar. of calc. and expt. ECD spectra
999 // R // plakortone Q // IA vs 4 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra

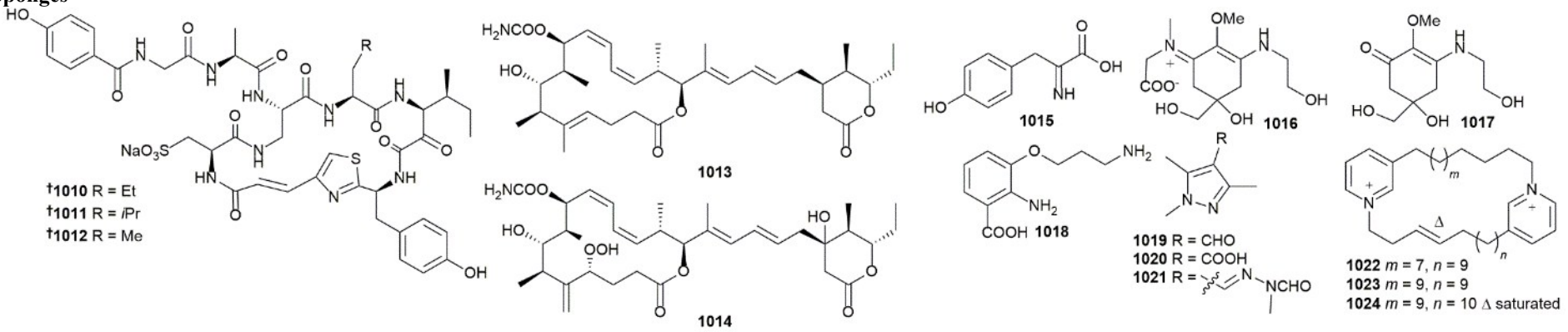


411 Porifera *Smenospongia cerebriformis* // Sea of Quangtri, Vietnam // Naphtoquinones and sesquiterpene cyclopentenones from the sponge *Smenospongia cerebriformis* with their cytotoxic activity
1000 // N // smenocerone A // IA // *
1001 // N // smenocerone B // mod. activ. vs. 5 HTCLs // *

412 Porifera *Xestospongia* sp // Puerto Galeria, Oriental Mondorou, Mindoro Is., The Philippines and Sichang Is., Thailand // Chemistry of renieramycins. 16. Structure of 7-desmethylrenieramycin O (= 14α-hydroxyrenieramycin S) from blue sponge, Xestospongia sp.
1002 // N // 7-desmethylrenieramycin O/14α-hydroxyrenieramycin S // mod. activ. vs 2 HTCLs // Product of photochemical reaction of renieramycin O

413 Porifera *Daedalopelta* sp // Alor Is., Indonesia // Daedophamide, a cytotoxic cyclodepsipeptide from a *Daedalopelta* sp. sponge collected in Indonesia
1003 // N // daedophamide // Potent activ. vs. 4 HTCLs // *

414 Porifera *Clathria basilana* // Ambon, Indonesia // Cyclic cystine-bridged peptides from the marine sponge *Clathria basilana* induce apoptosis in tumor cells and depolarize the bacterial cytoplasmic membrane
1004 // N // microcionamide C // Potent activ. vs. 5 HTCLs // abs. config. est. by Marfey's method
1005 // N // microcionamide D // Potent activ. vs. 5 HTCLs // abs. config. est. by Marfey's method
1006 // N // gombamide B // IA // abs. config. est. by Marfey's method
1007 // N // gombamide C // IA // abs. config. est. by Marfey's method
1008 // N // gombamide D // IA // abs. config. est. by Marfey's method
1009 // N // (*E*)-2-amino-3-methyl-N-styrylbutanamide // //



415 Porifera *Theonella* aff. *swinhoei* // Dos de la Baleine, Madagascar // Cyclotheonellazoles A-C, potent protease inhibitors from the marine sponge *Theonella* aff. *swinhoei*
1010 // N // cyclotheonellazole A // IA vs. P. falciparum, pM inhib. of chymotrypsin and elastase // abs. config. est. by Marfey's method
1011 // N // cyclotheonellazole B // IA vs. P. falciparum, pM inhib. of chymotrypsin and elastase // abs. config. est. by Marfey's method
1012 // N // cyclotheonellazole C // IA vs. P. falciparum, pM inhib. of chymotrypsin and elastase // abs. config. est. by Marfey's method

416 Porifera *Leiodermatium* sp // Miami Terrace (390-425 m depth), off the coast of Ft. Lauderdale, USA // Analogues of the potent antitumor compound leiodermatolide from a deep-water sponge of the genus *Leiodermatium*
1013 // N // leiodermatolide B // Potent activ. vs 1 HTCL // *
1014 // N // leiodermatolide C // mod. activ. vs 1 HTCL // *

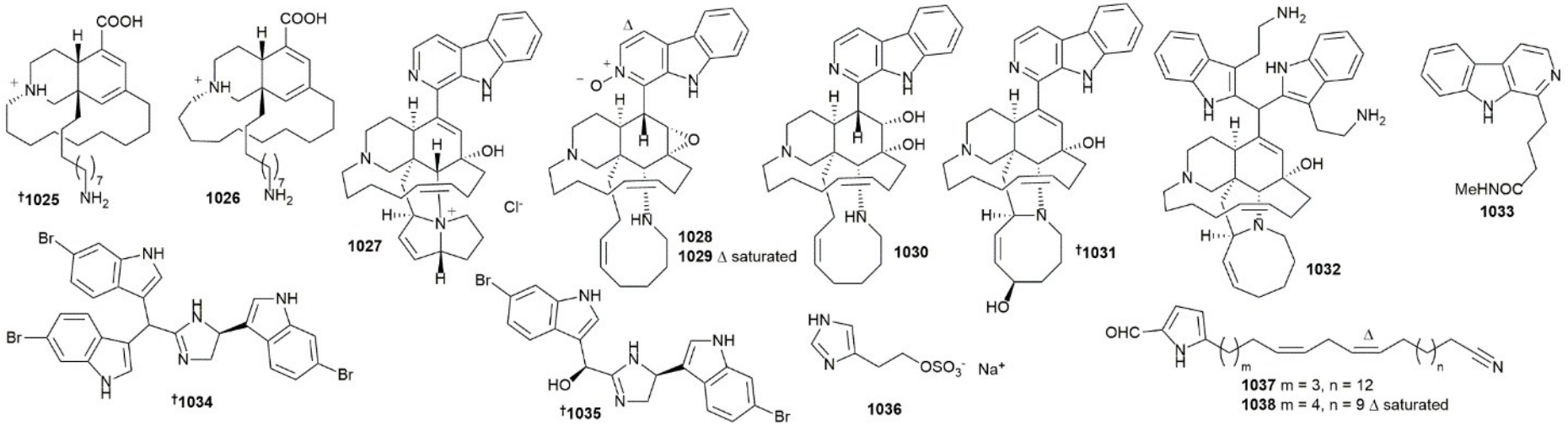
417 Porifera *Hymeniacidon perlevis* // Corranroo Bay, County Galway, Ireland // N-Didehydrotyrosine identified from the Northeastern Atlantic marine sponge *Hymeniacidon perlevis* after chemical screening
1015 // N // N-didehydrotyrosine // * // Possible biosynth. precursor to common sponge bromotyrosine metabolites

418 Porifera *Lendenfeldia chondrodes* // Yap state, Micronesia // Two new mycosporine-like amino acids LC-343 and mycosporine-ethanolamine from the Micronesian marine sponge *Lendenfeldia chondrodes*
1016 // N // LC-343 // * // *
1017 // N // mycosporine-ethanolamine // * // *

419 Porifera *Oscarella stillans* // Honda Bay, Philippines // Oscarellin, an anthranilic acid derivative from a Philippine sponge, *Oscarella stillans*, as an inhibitor of inflammatory cytokines in macrophages
1018 // N // oscarellin // Not cytotox. to RAW 264.7 cells, IAs JNK, ERK, AP-1 and NF-KB and activates ATF-3 immunomod. // struct. confirmed by total synth.

403 Porifera *Cinachyrella* sp // Ambon, Indonesia // New 2-methoxy acetylenic acids and pyrazole alkaloids from the marine sponge *Cinachyrella* sp.
1019 // N // cinachyrazole A // IA // *
1020 // N // cinachyrazole B // IA // *
1021 // N // cinachyrazole C // IA // *

420 Porifera *Haliclona* sp // Manado, North Sulawesi, Indonesia // Anti-mycobacterial alkaloids, cyclic 3-alkyl pyridinium dimers, from the Indonesian marine sponge *Haliclona* sp.
1022 // N // haliclocyclamine A // mod. antimycobact.l activ. in disk assay // *
1023 // N // haliclocyclamine B // mod. antimycobact.l activ. in disk assay // *
1024 // N // haliclocyclamine C // mod. antimycobact.l activ. in disk assay, weak kinase inhibbition of VHR // *



421 Porifera *Lissodendoryx florida* // Chirpoy Is., Sea of Okhotsk // Lissodendoric acids A and B, manzamine-related alkaloids from the Far Eastern sponge *Lissodendoryx florida*
1025 // N // lissodendoric acid A // IA vs. 2 HTCLs, potent inhib. of ROS prod in stimulated Neuro2A cells // abs. config. est. by compar. of calc. and expt. ECD spectra
1026 // N // lissodendoric acid B // IA vs. 2 HTCLs, potent inhib. of ROS prod in stimulated Neuro2A cells // *

422 Porifera *Acanthostrongylophora* sp // Kepulauan Seribu Marine National Park, Indonesia // Manzamine alkaloids from an *Acanthostrongylophora* sp. sponge
1027 // N // kepulauamine A // Potent AB activ. (MIC ng/mL range) vs. 6 strains, mod. activ. vs. 2 HTCLs // Unprecedented pyrrolizine containing metabolite
1028 // N // manzamine B N-oxide // IA as an AB vs. 6 strains, mod. activ. vs. 2 HTCLs // *
1029 // N // 3,4-dihydromanzamine B N-oxide // Potent AB activ. (MIC ng/mL range) vs. 6 strains, mod. activ. vs. 2 HTCLs // *
1030 // N // 11-hydroxymanzamine J // Potent AB activ. (MIC ng/mL range) vs. 6 strains, mod. activ. vs. 2 HTCLs // *
1031 // N // 31-hydroxymanzamine A // Potent AB activ. (MIC ng/mL range) vs. 6 strains, mod. activ. vs. 2 HTCLs // abs. config. by Mosher's method

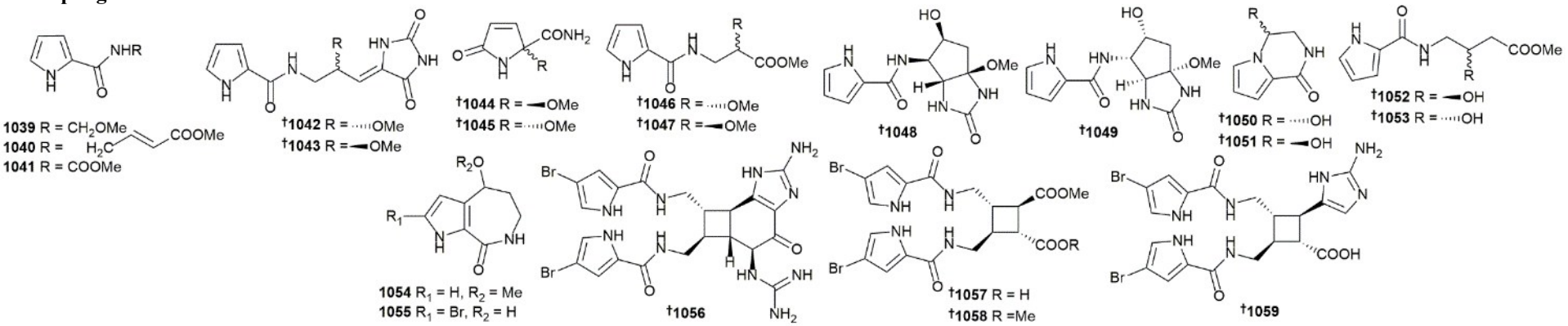
423 Porifera *Amphimedon* sp // Zamami, Okinawa, Japan // Zamamidine D, a manzamine alkaloid from an Okinawan *Amphimedon* sp. marine sponge
1032 // N // zamamidine D // mod. AB and AF activ. vs. 4 strains of each. // Unprecedented methylene-bistryptamine sidechain in place of normal manzamine β-carboline.

424 Porifera *Acanthostrongylophora ingens* // Sulawesi Is., Indonesia // Ingenine E, a new cytotoxic β-carboline alkaloid from the Indonesian sponge *Acanthostrongylophora ingens*
1033 // N // ingenine E // mod. activ. vs. 3 HTCLs // *

425 Porifera *Topsentia* sp // Ulong Channel (140 m depth), Palau // Tulongicin, an antibacterial tri-indole alkaloid from a deep-water *Topsentia* sp. sponge
1034 // N // tulongicin // Strong AB activ. vs. Gram (=), IA vs. Gram (-), strong anti-HIV activ. vs. 2 strains, mod. activ. vs 1 HTCL // abs. config. by. ECD spectra,
1035 // N // dihydrospongotine C // Strong AB activ. vs. Gram (+), IA vs. Gram (-), strong anti-HIV activ. vs. 2 strains, mod. activ. vs 1 HTCL // abs. config. est. by ECD spectra

426 Porifera *Dercitus japonensis* // Yonaguni Is., Okinawa, Japan // A new imidazole from the sponge *Dercitus* (*Halinastra*) *japonensis*
1036 // N // sodium 2-(1H-imidazol-4-yl)-ethyl sulfate // IA // Total synth. also achieved.

427 Porifera *Mycale lissochela* // Lingshui, Hainan Province, China // 5-Alkylpyrrole-2-carboxaldehyde derivatives from the Chinese sponge *Mycale lissochela* and their PTP1B inhibitory activities
1037 // N // mycalenitrile-15 // Inhibited PTP1B (IC_{50} = 8.6 μM) // *
1038 // N // mycalenitrile-16 // Inhibited PTP1B (IC_{50} = 10.0 μM) // *



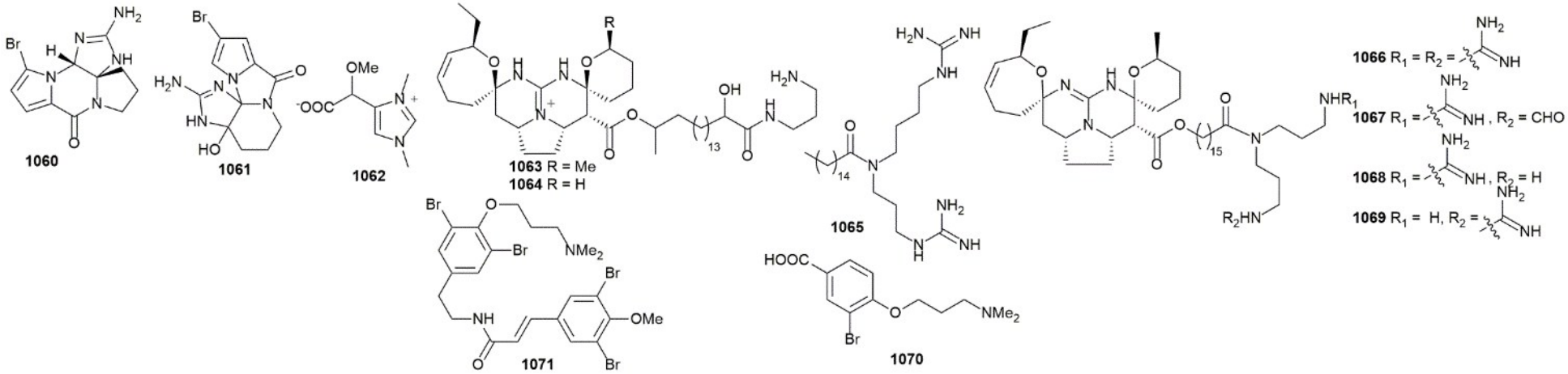
428 Porifera *Agelas nakamurai* // Xisha Is., South China Sea // Three new non-brominated pyrrole alkaloids from the South China Sea sponge *Agelas nakamurai*
1039 // N // nakamurine A // IA // *
1040 // N // nakamurine B // weak AM // *
1041 // N // nakamurine C // IA // *

429 Porifera *Agelas nakamurai* // Xisha Is. , South China Sea // Pyrrole derivatives and diterpene alkaloids from the South China Sea sponge *Agelas nakamurai*
1042 // N // (+)-nakamurine D // IA // isol. using chiral chromatography, abs. config. est. by compar. of calc. and expt. ECD spectra
1043 // N // (-)-nakamurine D // IA // isol. using chiral chromatography, abs. config. est. by compar. of calc. and expt. ECD spectra
1044 // N // (+)-nakamurine E // IA // isol. using chiral chromatography, abs. config. est. by compar. of calc. and expt. ECD spectra
1045 // N // (-)-nakamurine E // IA // isol. using chiral chromatography, abs. config. est. by compar. of calc. and expt. ECD spectra
1046 // R // (+)-methyl (2*R*)-2-hydroxy-3-[(1H-pyrrol-2-ylcarbonyl)amino]propanoate // IA // isol. using chiral chromatography, abs. config. est. by ECD
1047 // R // (-)-methyl (2*S*)-2-hydroxy-3-[(1H-pyrrol-2-ylcarbonyl)amino]propanoate // IA // isol. using chiral chromatography, abs. config. est. by. ECD spectra

409 Porifera *Agelas* sp // Xisha Is., S. China Sea // Alkaloids and polyketides from the South China Sea sponge *Agelas* aff. nemoechinata
1048 // N // (+)-nemoechine A // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra
1049 // N // (-)-nemoechine A // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra
1050 // N // (+)-nemoechine B // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra
1051 // N // (-)-nemoechine B // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra
1052 // N // (+)-nemoechine C // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra
1053 // N // (-)-nemoechine C // IA vs 4 HTCLs // Separated by chiral chromatography, abs. config. est. by compar. of expt. and calc. ECD spectra

430 Porifera *Axinella* sp // Xisha Is., South China Sea // Axinellin A and B: two new pyrrolactam alkaloids from *Axinella* sp.
1054 // N // axinelline A // * // *
1055 // N // axinelline B // * // *

431 Porifera *Agelas* sp // Yongxing Is. // New bromopyrrole alkaloids from the marine sponge *Agelas* sp.
1056 // N // hexazosceptrin // mod. AB activ. vs 2 Gram (+) strains // abs. config. est. by compar. of calc. and expt. ECD spectra
1057 // N // ageleste B // weak AB activ. vs 2 Gram (+) strains // abs. config. est. by compar. of calc. and expt. ECD spectra
1058 // N // ageleste C // weak AB activ. vs 2 Gram (+) strains // abs. config. est. by compar. of calc. and expt. ECD spectra
1059 // R // (9S,10R,9'S,10'R)-nakamuric acid // mod. AB activ. vs 2 Gram (+) strains // abs. config. est. by compar. of calc. and expt. ECD spectra



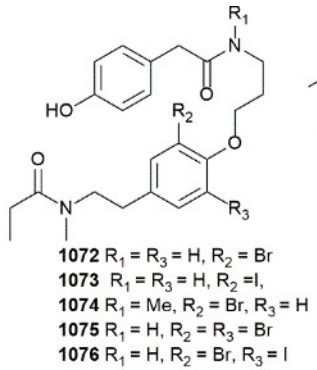
432 Porifera *Agelas* sp // Manado, N. Sulawesi, Indonesia // An anti-mycobacterial bisfunctionalized sphingolipid and new bromopyrrole alkaloid from the Indonesian marine sponge *Agelas* sp.
1060 // N // 5-bromophakelline // IA // *

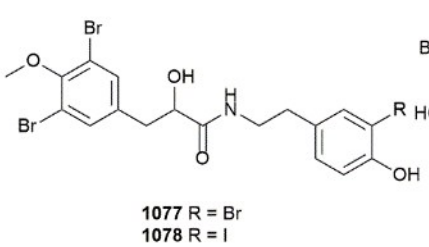
433 Porifera *Agelas oroides* // Grotte de Jarre, Marseille, France // Metabolomics approach to chemical diversity of the Mediterranean marine sponge *Agelas oroides*
1061 // N // monobromoagelaspongin // * // isol. as a racemate
1062 // N // (-)-equinobetaine B // * // Enantiomer of known cpd

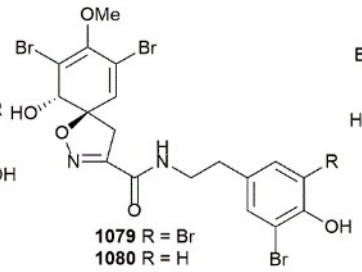
434 Porifera *Monanchora pulchra* // Dredge (157 m), Bering Strait // Normonanchocidins G and H, new pentacyclic guanidine alkaloids from the far-eastern marine sponge *Monanchora pulchra*
1063 // N // normonanchocidin G // mod. activ. vs. 3 HTCLs // *
1064 // N // normonanchocidin H // weak activ. vs. 3 HTCLs // *

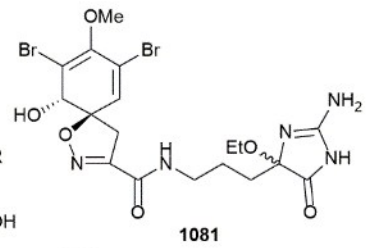
435 Porifera *Monanchora unguiculata* // Mitsio Is., Madagascar // Unguiculin A and ptilomycalins E-H, antimalarial guanidine alkaloids from the marine sponge *Monanchora unguiculata*
1065 // N // unguiculin A // mod. activ. vs. 1 HTCL and *P. falciparum*, selectivity 0.6 // *
1066 // N // ptilomycalin E // Potent activ. vs. 1 HTCL and *P. falciparum*, selectivity 2.4 // *
1067 // N // ptilomycalin F // Potent activ. vs. 1 HTCL and *P. falciparum*, selectivity 7.0 // *
1068 // N // ptilomycalin G // Potent activ. vs. 1 HTCL and *P. falciparum*, selectivity 2.0 // isol. as a mixt.
1069 // N // ptilomycalin H // Potent activ. vs. 1 HTCL and *P. falciparum*, selectivity 2.0 // isol. as a mixt.

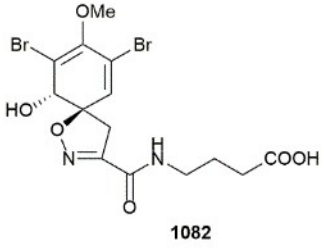
436 Porifera *Amphimedon* sp // Mitsio Is., Madagascar // Amphimedonoic acid and psammaplysene E, novel brominated alkaloids from *Amphimedon* sp.
1070 // N // amphimedonoic acid // IA // *
1071 // N // psammaplysene E // IA // *

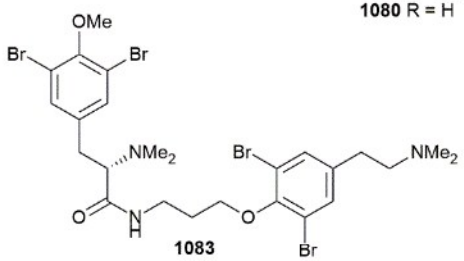


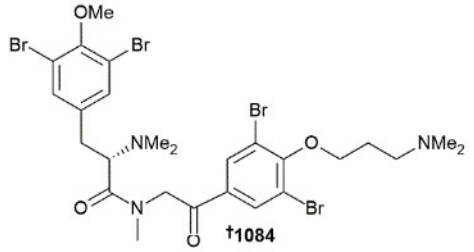








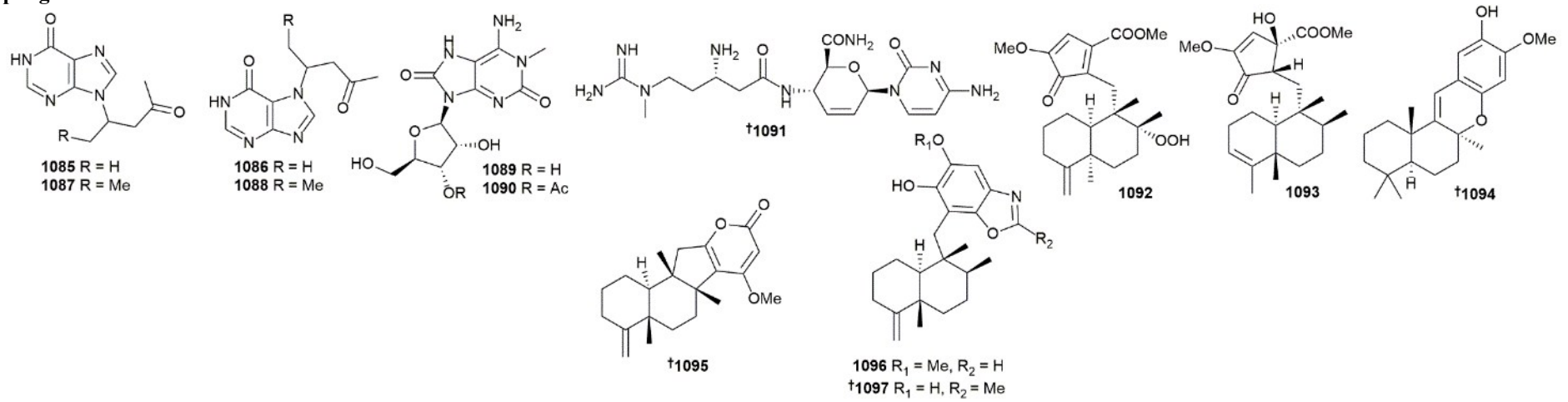




437 Porifera *Iotrochota* sp // Togian Is., Indonesia // Investigation of the physical and bioactive properties of bromo- and iodo-containing sponge-derived compounds possessing an oxyphenylethanamine core
1072 // N // enisorine A // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *
1073 // N // enisorine B // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *
1074 // N // enisorine C // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *
1075 // N // enisorine D // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *
1076 // N // enisorine E // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *
1077 // N // (+)-1-O-methylhemibastadinol 2 // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // Enantiomer of known cpd
1078 // N // (+)-1-O-methylhemibastadinol 4 // Inhibits *Yersinia pseudotuberculosis* TS33 levels, but has no effect on *Pseudomonas* TS33 and does not inhibit Yersinia growth // *

438 Porifera *Pseudoceratina verrucosa* // Dampier, Western Australia // Enantiodivergence in the biosynthesis of bromotyrosine alkaloids from sponges?
1079 // N // pseudoceratinamide A // mod. AB activ. vs various Gram (+) bact. // *
1080 // N // pseudoceratinamide B // mod. AB activ. vs various Gram (+) bact. // *
1081 // N // C18H23Br2N5O6 // mod. AB activ. vs various Gram (+) bact. // Potential artefact of isolation with EtOH, probable mixt. of diastereomers although no doubling of NMR signals due to isolation of chiral centres
1082 // N // C14H16Br2N2O6 // mod. AB activ. vs various Gram (+) bact. // Enantiomer of a known cpd

439 Porifera *Hexadella* sp-*Jaspis* sp-*Bubaris* sp // Para Is. & Pulau Saujung, Indonesia // Cytotoxic Anomoian B and Aplyzanzine B, New Bromotyrosine Alkaloids from Indonesian Sponges
1083 // N // anomoian B // mod. activ. vs 3 HTCLs, MOA via induction of apoptosis but not via generation of ROS or inhib. of histone deacetylase // *
1084 // N // aplyzanzine B // mod. activ. vs 3 HTCLs, MOA via induction of apoptosis but not via generation of ROS or inhib. of histone deacetylase // abs. config. by chemical degrad. and optical rotation



440 Porifera *Haliclona cymaeformis* // Xuwen coral reef, Guangdong Province, China // Four new 6-oxy purine alkaloids from the South China Sea sponge, *Haliclona cymaeformis*
1085 // N // 9-(4'-oxopentan-2'-yl)-1,9-dihydro-6H-purine-6-one // IA // isol. as mixt. with 1b
1086 // N // 7-(4'-oxopentan-2'-yl)-1,7-dihydro-6H-purine-6-one // IA // isol. as mixt. with 1a
1087 // N // 9-(5'-oxohexan-3'-yl)-1,9-dihydro-6H-purine-6-one // IA // isol. as mixt. with 2b
1088 // N // 7-(5'-oxohexan-3'-yl)-1,7-dihydro-6H-purine-6-one // IA // isol. as mixt. with 2a

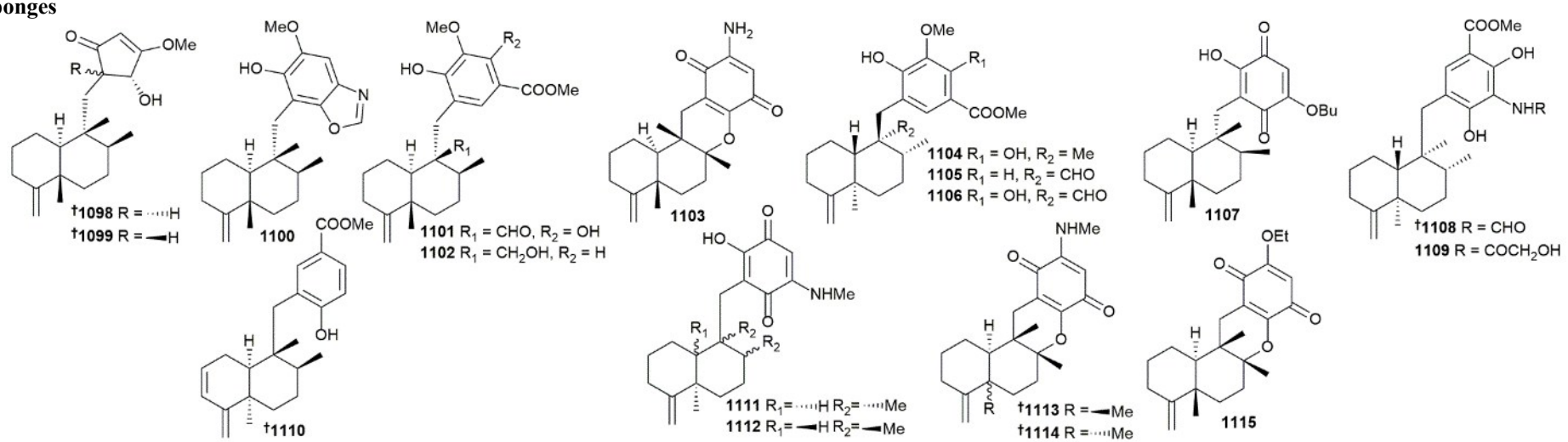
441 Porifera *Clathria strepsitoxa* // Ballyhenry Bay, Country Down, Ireland // Isoguanosine derivatives from the Northeastern Atlantic sponge *Clathria* (*Microciona*) *strepsitoxa*
1089 // N // C11H15N5O6 // IA // *
1090 // N // C13H17N5O7 // IA // *

442 Porifera *Theonella swinhoei* // Anguar Island, Palau // A new natural product analog of blasticidin S reveals cellular uptake facilitated by the NorA multidrug transporter.
1091 // N // P10 // AM vs 12 clinical isolates; P10 enters bact. via the NorA multidrug efflux pump // Also semisynthesied from blasticidin S

443 Porifera *Dactylospongia elegans* // Ambon, Indonesia // Cytotoxic drimane meroterpenoids from the Indonesian marine sponge *Dactylospongia elegans*
1092 // N // dactylospongenone G // * // Obtained as an inseperable mixt.
1093 // N // dactylospongenone H // * // Obtained as an inseperable mixt.

444 Porifera *Hyrtios digitatus* // Turner Reef, W. side, Swain Reefs, Queensland, Australia // Merosesquiterpene congeners from the Australian sponge *Hyrtios digitatus* as potential drug leads for atherosclerosis disease
1094 // N // (5S,8S,10S)-19-methoxy-9,15-ene-puupehenol // mod. inhib. of Scavenger recept. Class B Type 1 HepG2 stable cell lines, therefore target atherosclerosis disease // abs. config. est. by exptl. and calcd. optical rotation. Physicochemical property anal. by Lipinski's and Veber's rules suggest should be orally bioactive.

445 Porifera *Hyrtios* sp // Yongxing Is. , South China Sea // Meroterpenoids with protein tyrosine phosphatase 1B inhibitory activity from a *Hyrtios* sp. marine sponge
1095 // N // hyrtiolacton A // IA vs. 4 HTCLs and as PTP1B inhib. // abs. config. solved by X-ray anal., unprecedented 2-pyrone fused to meroterpenoid core
1096 // N // nakijinol F // * // *
1097 // N // nakijinol G // mod. PTP1B inhib., IA vs. 4 HTCLs // abs. config. solved by X-ray anal.

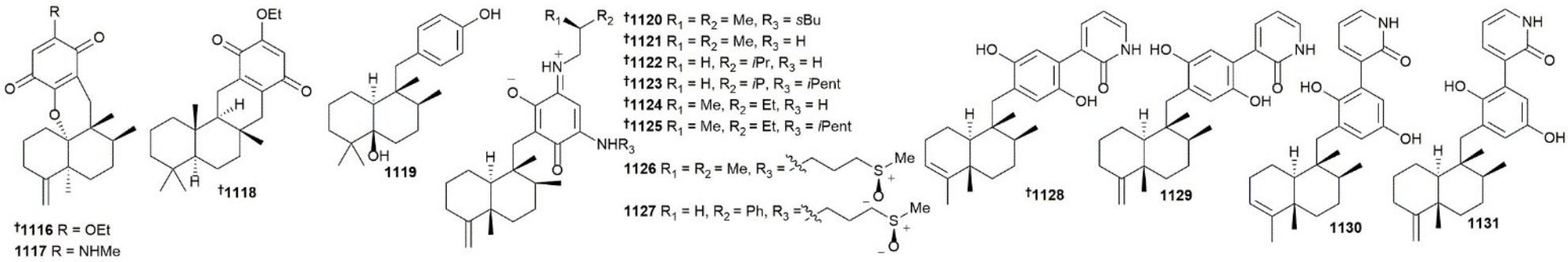


446 Porifera *Smenospongia cerebriformis* // Vinhmoc, Quangtri, Vietnam // Sesquiterpene derivatives from marine sponge *Smenospongia cerebriformis* and their anti-inflammatory activity
1098 // N // smenohaimien A // Not cytotox. to BV-2 microglial cells, but weak inhib. of NO prod in LPS-stimulated BV-2 cells // abs. config. est. by.ECD
1099 // N // smenohaimien B // Not cytotox. to BV-2 microglial cells, but weak inhib. of NO prod in LPS-stimulated BV-2 cells // abs. config. est. by ECD spectra
1100 // N // smenohaimien C // Not cytotox. to BV-2 microglial cells, but weak inhib. of NO prod in LPS-stimulated BV-2 cells // *
1101 // N // smenohaimien D // Not cytotox. to BV-2 microglial cells, but weak inhib. of NO prod in LPS-stimulated BV-2 cells // *
1102 // N // smenohaimien E // Not cytotox. to BV-2 microglIAl cells, but weak inhib. of NO prod in LPS-stimulated BV-2 cells // *

447 Porifera *Smenospongia cerebriformis* // Quang Tri Province, Vietnam // Sesquiterpene quinones and diterpenes from *Smenospongia cerebriformis* and their cytotoxic activity
1103 // N // smenohaimien F // mod. activ. vs. 5 HTCLs // *

448 Porifera *Spongia* sp // Son Cha, Thua Thien-Hue City, Vietnam // New merosesquiterpenes from a Vietnamese marine sponge of *Spongia* sp. and their biological activities
1104 // N // langconol A // IA vs 4 HTCLs, mod. activ. vs. 1 bact.l strain // *
1105 // N // langconol B // IA // *
1106 // N // langconol C // mod. activ. vs 4 HTCLs, mod. activ. vs 1 bact.l strain // *
1107 // N // langcoquinone C // mod. activ. vs 4 HTCLs, mod. activ. vs 2 bact.l strains // *

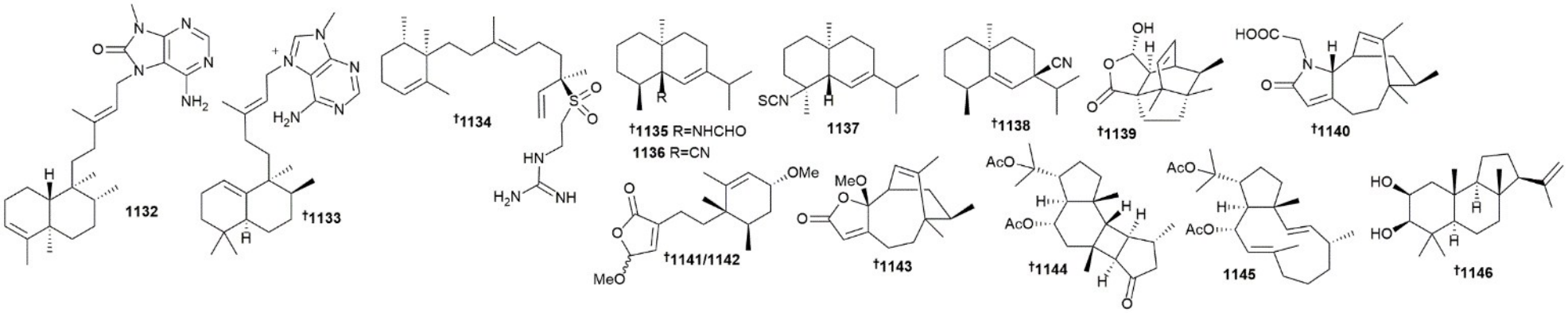
449 Porifera *Spongia pertusa* // Yongxing Is., South China Sea // Sesquiterpene quinones/hydroquinones from the marine sponge *Spongia pertusa* Esper
1108 // N // 18-deoxy-18-formamidodictyoceratin B // IA vs 4 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra
1109 // N // 18-deoxy-18-(2-hydroxyacetyl)aminodictyoceratin B // IA vs 4 HTCLs // *
1110 // N // dictyoceratin D // IA vs 4 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra
1111 // N // N-methyl-ent-smenospongine // IA vs 4 HTCLs // *
1112 // N // N-methyl-5-epi-smenospongine // IA vs 4 HTCLs // *
1113 // N // 20-demethoxy-20-methylaminodactyloquinone D // IA vs 4 HTCLs, mod. kinase inhib. (CDK-2, KD 4.8 μM) // abs. config. est. by compar. of calc. and expt. ECD spectra
1114 // N // 20-demethoxy-20-methylamino-5-epi-dactyloquinone D // IA vs 4 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra
1115 // N // 20-demethoxy-20-ethoxydactyloquinone E // IA vs 4 HTCLs // Probable artefact of isolation with EtOH



1116 // N // 20-demethoxy-20-ethoxydactyloquinone B // IA vs 4 HTCLs // Probable artefact of isolation with EtOH, abs. config. est. by compar. of calc. and expt. ECD spectra
1117 // N // 20-demethoxy-20-methylaminodactyloquinone B // IA vs 4 HTCLs // *
1118 // N // 20-demethoxy-20-ethoxycyclospongiaquinone-1 // IA vs 4 HTCLs // Probable artefact of isolation with EtOH, abs. config. est. by compar. of calc. and expt. ECD spectra
1119 // N // yahazunol B // IA vs 4 HTCLs // *

451 Porifera *Dactylospongia metachromia* // Rangiroa Is. & Fakarava Is., Tuamotu, French Polynesia // An unprecedented blue chromophore found in nature using a "chemistry first" and molecular networking approach: discovery of dactylocyanines A-H
1120 // N // dactylocyanine A // * // abs. config. solved by X-ray anal.
1121 // N // dactylocyanine B // * // abs. config. est. by chemical interconversion
1122 // N // dactylocyanine C // * // abs. config. est. by chemical interconversion
1123 // N // dactylocyanine D // * // abs. config. est. by chemical interconversion
1124 // N // dactylocyanine E // * // abs. config. est. by chemical interconversion
1125 // N // dactylocyanine F // * // abs. config. est. by chemical interconversion
1126 // N // dactylocyanine G // * // *
1127 // N // dactylocyanine H // * // *

452 Porifera *Dysidea villosa* // Yongxing Is., South China Sea // Dysivillosins A-D, unusual anti-allergic meroterpenoids from the marine sponge *Dysidea villosa*
1128 // N // dysivillosin A // No cytotox. vs. RBL-2H3 rat leukemIA cells, potent inhib.s of allergic cytokine prod // abs. config. est. by compar. of calc. and expt. ECD spectra
1129 // N // dysivillosin B // No cytotox. vs. RBL-2H3 rat leukemIA cells, potent inhib.s of allergic cytokine prod // *
1130 // N // dysivillosin C // No cytotox. vs. RBL-2H3 rat leukemIA cells, potent inhib.s of allergic cytokine prod // *
1131 // N // dysivillosin D // No cytotox. vs. RBL-2H3 rat leukemIA cells, potent inhib.s of allergic cytokine prod // *



409 Porifera *Agelas* sp // Xisha Is., S. China Sea // Alkaloids and polyketides from the South China Sea sponge *Agelas* aff. *nemoechinata*
1132 // N // nemoechine D // mod. activ. vs 1 HTCL, IA vs 3 HTCLs // *

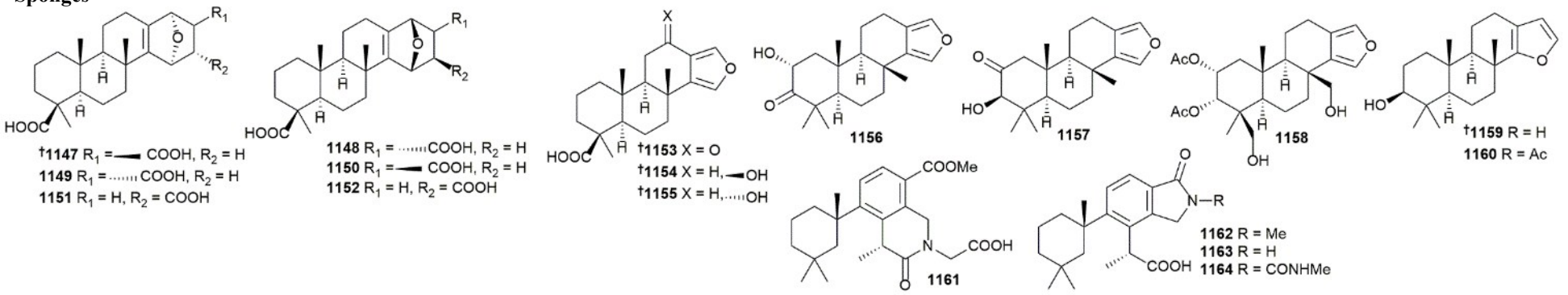
429 Porifera *Agelas nakamurai* // Xisha Is. , South China Sea // Pyrrole derivatives and diterpene alkaloids from the South China Sea sponge *Agelas nakamurai*
1133 // N // isoagelasine C // mod. AF activ. vs C. albicans, weak activ. vs 3 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra
1134 // N // isoagelasidine B // mod. AF activ. vs C. albicans, weak activ. vs 2 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra

453 Porifera *Axinyssa variabilis* // Yalong Bay, Hainan Province, China // Axiriabilines A-D, uncommon nitrogenous eudesmane-type sesquiterpenes from the Hainan sponge *Axinyssa variabilis*
1135 // N // axiriabiline A // IA vs. 3 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra
1136 // N // axiriabiline B // IA vs. 3 HTCLs // *
1137 // N // axiriabiline C // IA vs. 3 HTCLs // *
1138 // N // axiriabiline D // IA vs. 3 HTCLs // abs. config. est. by compar. of calc. and expt. ECD spectra

454 Porifera *Lamellodysidea herbacea* // Manadotua Is., Indonesia // Lamellodysidines A and B, sesquiterpenes isolated from the marine sponge *Lamellodysidea herbacea*
1139 // N // lamellodysidine A // IA // abs. config. solved by ECD; no interconversion between acetal epimers
1140 // N // lamellodysidine B // IA // abs. config. solved by ECD
1141/1142 // N // O,O-dimethyllingshuiolide A/11-epi-O,O-dimethyllingshuiolide A // IA // abs. config. solved by ECD
1143 // R // O-methylnakafuran-8 lactone // IA // abs. config. solved by ECD; possible artefact of isolation

455 Porifera *Dactylospongia elegans* // Yongxing Is. , South China Sea // New diterpenoids from the marine sponge *Dactylospongia elegans*
1144 // N // eleganstone A // weak activty vs. 3 microb. strains // abs. config. est. by compar. of calc. and expt. ECD spectra
1145 // N // (1R*,2E,4R*,8E,10S*,11S*,12R*)-10,18-diacetoxydolabella-2,8-dien-6-one // weak activty vs. 3 microb. strains // *

456 Porifera *Hymerhabdia* sp // Yantai, Shandong Province, China // Hymerhabdrin A, a novel diterpenoid with antifouling activity from the intertidal sponge *Hymerhabdia* sp.
1146 // N // hymerhabdrin A // Potent antifoul. activ. vs *Balanus amphitrite* (LC_{50} = 3.6 µg/mL) // abs. config. est. by compar. of calc. and expt. ECD spectra



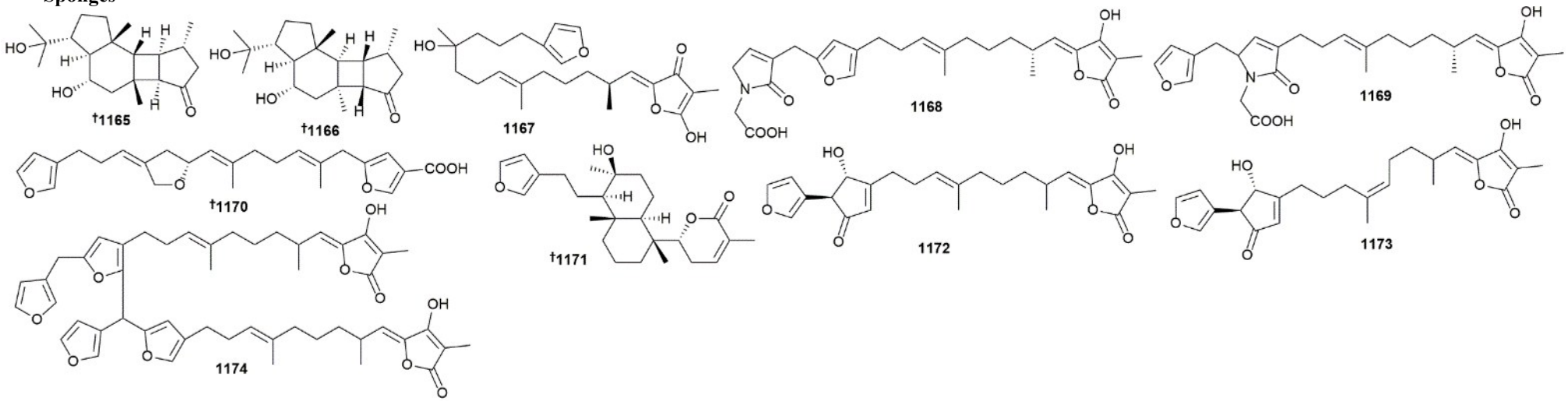
457 Porifera *Spongia ceylonensis* // Tiwoho, North Sulawesi, Indonesia // Ceylonins A-F, spongian diterpene derivatives that inhibit RANKL-induced formation of multinuclear osteoclasts, from the marine sponge *Spongia ceylonensis*
1147 // N // ceylonin A // Inhibited RANKL-induced osteoclastogenesis at 50 µM // First examples of bicyclic ether ring D spongian diterpenoids
1148 // N // ceylonin B // IA // First examples of bicyclic ether ring D spongian diterpenoids
1149 // N // ceylonin C // IA // First examples of bicyclic ether ring D spongian diterpenoids
1150 // N // ceylonin D // Inhibited RANKL-induced osteoclastogenesis at 50 µM // First examples of bicyclic ether ring D spongian diterpenoids
1151 // N // ceylonin E // Inhibited RANKL-induced osteoclastogenesis at 50 µM // First examples of bicyclic ether ring D spongian diterpenoids
1152 // N // ceylonin F // Inhibited RANKL-induced osteoclastogenesis at 50 µM // First examples of bicyclic ether ring D spongian diterpenoids

458 Porifera *Spongia ceylonensis* // Tiwoho, North Sulawesi, Indonesia // Ceylonins G-I: spongian diterpenes from the marine sponge *Spongia ceylonensis*
1153 // N // ceylonin G // IA // abs. config. solved by ECD
1154 // N // ceylonin H // IA // abs. config. solved by ECD
1155 // N // ceylonin I // IA // abs. config. solved by ECD

459 Porifera *Hyattella* aff. *Intestinalis* // Iriomote Is., Okinawa, Japan // Spongian diterpenes from the sponge *Hyattella* aff. *intestinalis*
1156 // N // 2α-hydroxyspongia-13(16),14-diene-3-one // IA // *
1157 // N // 3β-hydroxyspongia-13(16),14-diene-2-one // weak activ. vs. 1 HTCL // *
1158 // N // 2α,3α-diacetoxy-17,19-dihydroxyspongia-13(16),14-diene // IA // *

460 Porifera *Luffariella* sp // Cape Hedo, Okinawa, Japan // Two isospongian diterpenes from the sponge *Luffariella* sp.
1159 // M // C20H30O2 // weak activ. vs 1 HTCL // abs. config. est. By Moshers Method, known synth.
1160 // N // C22H32O3 // weak activ. vs 1 HTCL // *

461 Porifera *Darwinella* sp, Mollusca *Felimida grahami* // Ilha dos Papagaios, Cabo Frio, Rio de Janeiro state, Brazil // Rearranged terpenoids from the marine sponge *Darwinella cf. oxeata* and its predator, the nudibranch *Felimida grahami*
1161 // N // oxeatine // * // Contains unprecedented δ-lactam fused to an aromatic ring
1162 // N // oxeatamide H // IA // *
1163 // N // oxeatamide I // * // *
1164 // N // oxeatamide J // * // Also detected by LCMS in the mantle of the predatory nudibranch *Felimida grahami*



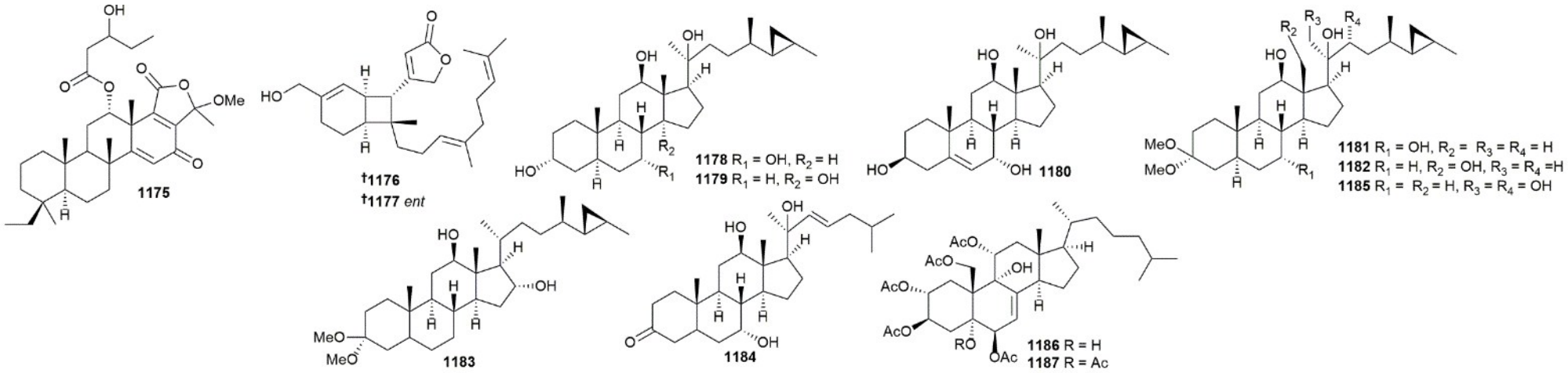
462 Porifera *Hippospongia lachne* // Xisha Is., S. China Sea // Unusual anti-allergic diterpenoids from the marine sponge *Hippospongia lachne*
1165 // N // hipposponlachnin A // No signif. tox. vs RBL-2H3 cells but inhibits IL-4 prod and release of β-hexosamidinase hence anti-allergy cpd // abs. config. est. by X-ray anal., possible product of photochemical [2+2]-cycloaddition
1166 // N // hipposponlachnin B // No signif. tox. vs RBL-2H3 cells but inhibits IL-4 prod and release of β-hexosamidinase hence anti-allergy cpd // abs. config. est. by X-ray anal., possible product of photochemical [2+2]-cycloaddition

463 Porifera *Ircina echinata* // Coto Is., Quangninh, Vietnam // Constituents from *Ircinia echinata* and their antiproliferative effect on six human cancer cell strains
1167 // N // 8-hydroxyisovariabilin // IA // *

464 Porifera *Ircinia oros* // Gökçeada, Northern Aegean Sea, Turkey // Antiprotozoal linear furanosesterterpenoids from the marine sponge *Ircinia oros*
1168 // N // ircinialactam E // weak activ. vs. three parasites // *
1169 // N // ircinialactam F // weak activ. vs. three parasites // *

465 Porifera *Luffariella variabilis* // Iriomote Is., Okinawa, Japan // Two furanosesterterpenoids from the sponge *Luffariella variabilis*
1170 // N // C25H30O5 // weak activ. vs. 1 HTCL // abs. config. solved by ECD
1171 // N // C25H36O4 // mod. activ. vs. 1 HTCL // abs. config. solved by ECD

466 Porifera *Psammocinia* sp // N. Sulawesi, Indonesia // Sulawesins A–C, furanosesterterpene tetronic acids that inhibit USP7, from a *Psammocinia* sp. marine sponge
1172 // N // sulawesin A // Inhibited USP7 (IC_{50} = 2.8 μM) // isol. as a mixt. of 4 diastereomers; ECD suggests isol. chromaphores within molecule
1173 // N // sulawesin B // Inhibited USP7 (IC_{50} = 4.6 μM) // isol. as a mixt. of 4 diastereomers; ECD suggests isol. chromaphores within molecule
1174 // N // sulawesin C // * // Presumed mixt. of diastereomers but degraded before anal.

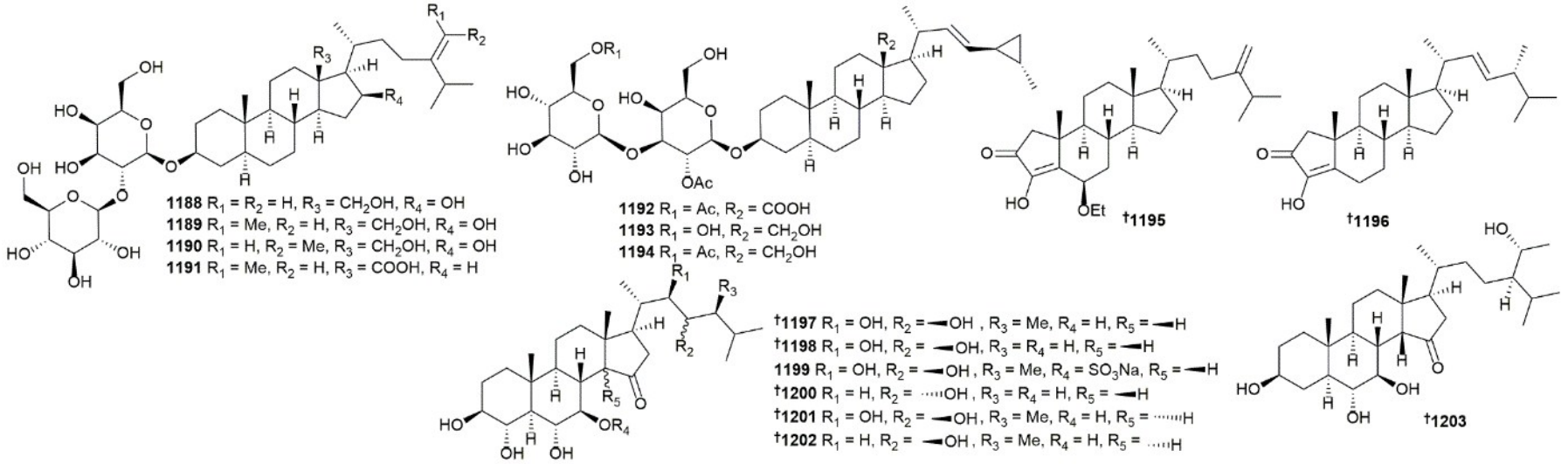


467 Porifera *Phyllospongia papyracea* // Sangihe Is., Indonesian Sea // Cytotoxic phyllactone analogs from the marine sponge *Phyllospongia papyrecea*
1175 // N // phyllactone H // weak activ. vs. 3 HTCLs // *

468 Porifera *Hippospongia lachne* // Yongxing Is., South China Sea // (±)-Hippolide J - a pair of unusual antifungal enantiomeric sesterterpenoids from the marine sponge *Hippospongia lachne*
1176 // N // (-)-hippolide J // Potent AF vs 8 clinically relevant strains, less potent than enantiomer // isol. as partial racemate, separated by chiral HPLC, abs. config. by ECD
1177 // N // (+)-hippolide J // Potent AF vs 8 clinically relevant strains, more potent than enantiomer // isol. as partial racemate, separated by chiral HPLC, abs. config. by ECD

469 Porifera *Petrosia* sp // Similan Is., Thailand // Sterols from Thai marine sponge *Petrosia* (*Strongylophora*) sp. and their cytotoxicity
1178 // N // 7α-hydroxyaragusterol I // weak activ. vs 5 of 7 HTCLs // *
1179 // N // 14-hydroxyaragusterol I // weak activ. vs 5 of 7 HTCLs // *
1180 // N // 26,27-cyclo-24,27-dimethylcholest-5-ene-3β,7α,12β,20β-tetraol // weak activ. vs 5 of 7 HTCLs // *
1181 // N // 7α-hydroxyaragusterolketal I // weak activ. vs 5 of 7 HTCLs // *
1182 // N // 26,27-cyclo-24,27-dimethylcholestan-3,3-dimethoxy-12β,18,20β-triol // * // *
1183 // N // 26,27-cyclo-24,27-dimethylcholestan-3,3-dimethoxy-12β,16α-diol // * // *
1184 // N // 7α,12β,20β-trihydroxycholesta-22E-en-3-one // weak activ. vs 5 of 7 HTCLs // *
1185 // N // 26,27-cyclo-24,27-dimethylcholestan-3,3-dimethoxy-12β,21,20α,22α-tetraol // weak activ. vs 5 of 7 HTCLs // *

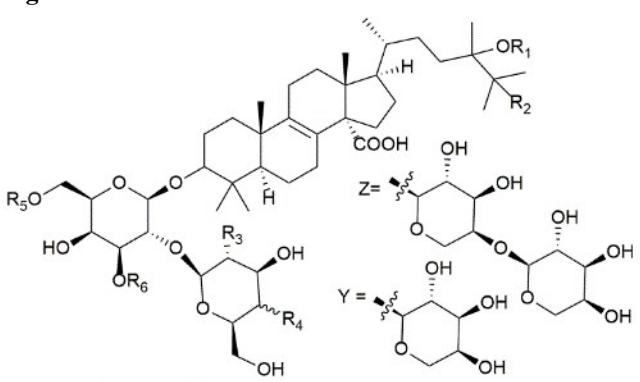
470 Porifera *Dysidea* sp // Dongshan Is., Guangdong Province, PR China // Two highly acetylated sterols from the marine sponge *Dysidea* sp.
1186 // N // dysiroid A // mod. AB activ. vs 4 strains // *
1187 // N // dysiroid B // mod. AB activ. vs 4 strains // *

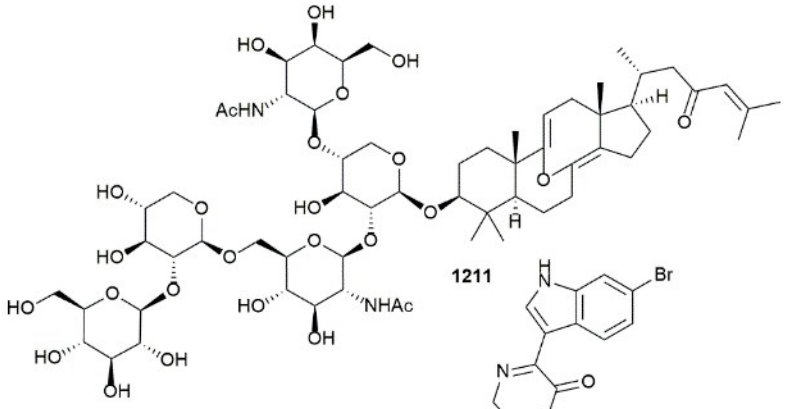


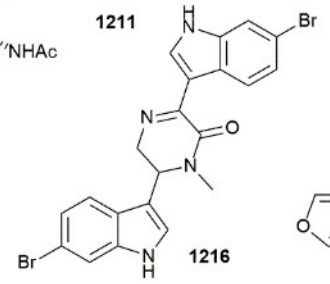
471 Porifera *Poecillastra compressa* // French coast, Mediterranean Sea, collected by ROV at 200 m depth // Poecillastrosides, steroidal saponins from the Mediterranean deep-sea sponge *Poecillastra compressa* (Bowerbank, 1866)
1188 // N // poecillastroside A // IA // abs. config. of sugar est. by hydrolysis and derivatisation
1189 // N // poecillastroside B // weak activty vs 1 HTCL // abs. config. of sugar est. by hydrolysis and derivatisation
1190 // N // poecillastroside C // weak activty vs 1 HTCL // abs. config. of sugar est. by hydrolysis and derivatisation
1191 // N // poecillastroside D // weak activty vs 1 HTCL, mod. AF activty vs *Aspergillus fumigatus* // abs. config. of sugar est. by hydrolysis and derivatisation
1192 // N // poecillastroside E // mod. AF activty vs *Aspergillus fumigatus* // abs. config. of sugar est. by hydrolysis and derivatisation
1193 // N // poecillastroside F // IA // abs. config. of sugar est. by hydrolysis and derivatisation
1194 // N // poecillastroside G // IA // abs. config. of sugar est. by hydrolysis and derivatisation

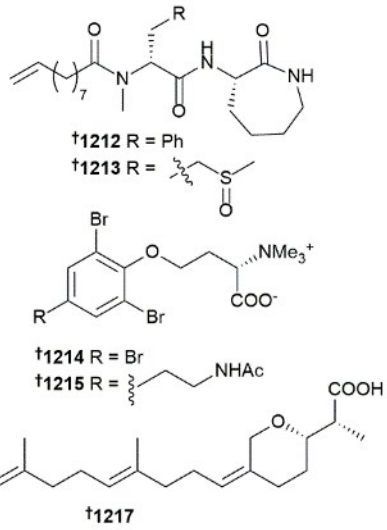
472 Porifera *Crella incrustans* // New Caledonia // Crellasterones A and B: A-norsterol derivatives from the New Caledonian sponge *Crella incrustans*
1195 // N // crellasterone A // * // Probable artefact of isolation with EtOH, abs. config. est. by compar. of calc. and expt. ECD spectra
1196 // N // crellasterone B // * // abs. config. est. by compar. of calc. and expt. ECD spectra

474 Porifera *Clathria gombawuiensis* // Gageo-do, Korea // Polyoxygenated steroids from the sponge *Clathria gombawuiensis*
1197 // N // gombasterol A // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, NA vs bact., fungi or two isolated enzymes // abs. config. by Mosher's
1198 // N // gombasterol B // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, NA vs bact., fungi or two isolated enzymes // abs. config. by Mosher's
1199 // N // gombasterol C // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, NA vs bact., fungi or two isolated enzymes // *
1200 // N // gombasterol D // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, NA vs bact., fungi or two isolated enzymes // abs. config. by Mosher's
1201 // N // gombasterol E // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, NA. vs bact., fungi or two isolated enzymes // abs. config. by Mosher's and X-ray
1202 // N // gombasterol F // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, no activ. vs bact., fungi or two isolated enzymes // abs. config.by Mosher's
1203 // R // clathriol A // Insulin mimetic, enhances 2-NBDG uptake at 20 µM; IA vs 2 HTCLs, no activ. vs bact., fungi or two isolated enzymes // abs. config. by Mosher's









475 Porifera *Erylus goffrilleri* // Arrecife-Seco reef, Cuba // Erylosides F8, V1-V3, and W-W2 - new triterpene oligoglycosides from the Carribean sponge *Erylus goffrilleri*
1204 // N // eryloside F8 // weak activ. vs. 1 HTCL; weak hemolytic activ. // *
1205 // N // eryloside V1 // weak activ. vs. 1 HTCL; mod. hemolytic activ. // *
1206 // N // eryloside V2 // mod. activ. vs. 1 HTCL; weak hemolytic activ. // *
1207 // N // eryloside V3 // mod. activ. vs. 1 HTCL; mod. hemolytic activ. // *
1208 // N // eryloside W // mod. activ. vs. 1 HTCL; weak hemolytic activ. // *
1209 // N // eryloside W1 // mod. activ. vs. 1 HTCL; mod. hemolytic activ. // *
1210 // N // eryloside W2 // weak activ. vs. 1 HTCL; weak hemolytic activ. // *

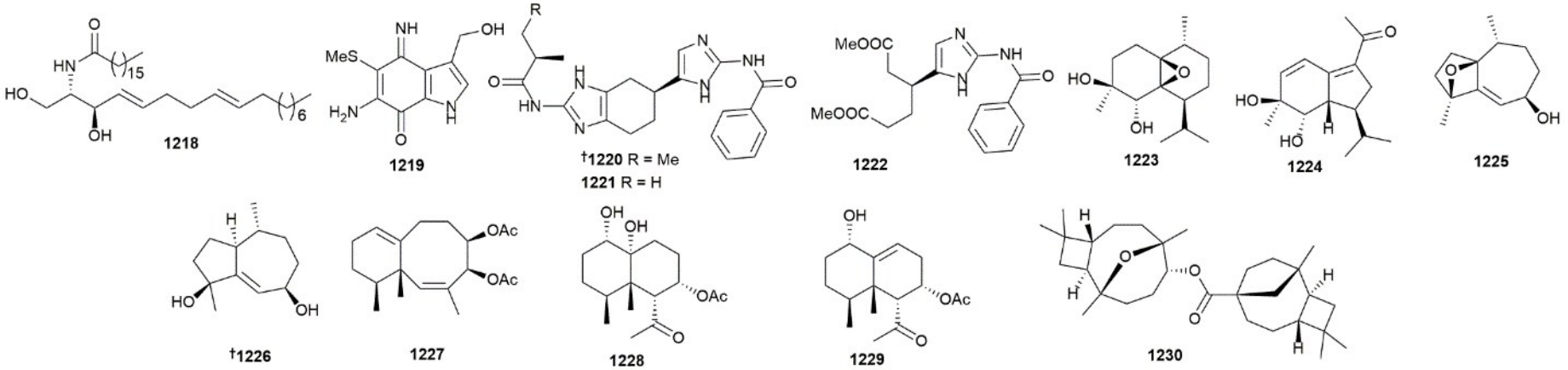
476 Porifera Unidentifed // Solomon Is. // A new sarasinoside congener, sarasinoside M2, from a marine sponge collected in the Solomon Islands
1211 // N // sarasinoside M2 // weak activ. vs. Neuro-Sa and HepG2 cells // *

493 * // * // Resolution of the confusion in the assignments of configuration for the ciliatamides, acylated dipeptides from marine sponges
1212 // R // ciliatamide A // * // abs. config. est. by synth.
1213 // R // ciliatamide D // * // abs. config. est. by synth.

498 * // * // Synthesis of purpuroine A, nakirodin A and MDN-0104: the hidden puzzles and risk of error in their configurational assignments
1214 // R // purpuroine // * // abs. config. solved by total synth.
1215 // R // nakarodin A // * // struct. proven incorrect by synth.

502 * // * // Revision of the structure and total synthesis of topsentin C
1216 // R // topsentin C // * // Revised following total synth.

514 * // * // Asymmetric total synthesis of (-)-astakolactin and confirmation of its stereostructure
1217 // R // astakolactin // * // Revised following total synth.



533 Cnidaria *Cespitularia stolonifera* // Hurghada, Egypt // Soft coral *Cespitularia stolonifera*: new cytotoxic ceramides and gastroprotective activity
1218 // N // 2S,3R-4E,8E-2-(heptadecanoylamino)-heptadeca-4,8-diene-1,3-diol // weakly cytotox. to 1 HTCL. // *

534 Cnidaria *Macrorhynchia philippina* // Northwestern Australia // Macrophilone A: structure elucidation, total synthesis, and functional evaluation of a biologically active iminoquinone from the marine hydroid *Macrorhynchia philippina*
1219 // N // macrophilone A // Inhibits protein sumoylation // *

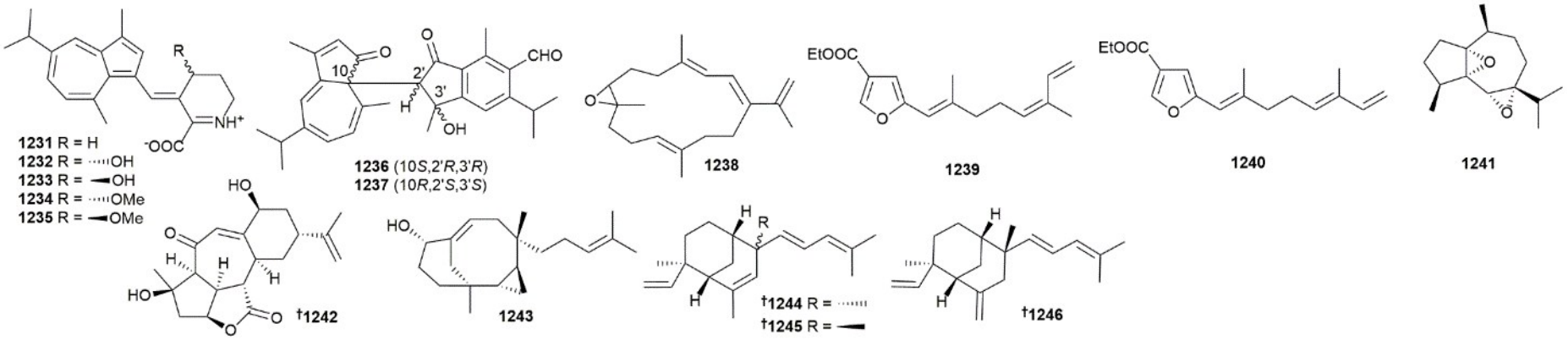
535 Cnidaria *Terrazoanthus onoi* // Marine Protected Area "El Pelado", Ecuador // Terrazoanthines, 2-aminoimidazole alkaloids from the tropical Eastern Pacific zoantharian *Terrazoanthus onoi*
1220 // N // terrazoanthine A // No AB or cytotox. activ. detected // abs config by ECD
1221 // N // terrazoanthine B // No AB or cytotox. activ. detected // *
1222 // N // terrazoanthine C // No AB or cytotox. activ. detected // *

536 Cnidaria *Sinularia nanolobata* // Lang Co, Hue, Vietnam // Sesquiterpene constituents from the soft coral *Sinularia nanolobata*
1223 // N // nanolobatol A // IA vs 8 HTCLs // *
1224 // N // nanolobatol B // IA vs 8 HTCLs // *

537 Cnidaria *Clavularia viridis* // Xisha Is., Hainan Province, China // Clavuridins A and B, two new trinor-guaiane sesquiterpenes isolated from the Xisha soft coral *Clavularia viridis*
1225 // N // clavuridin A // * // *
1226 // N // clavuridin B // weak cytotox. to 1 HTCL. // abs config by X-ray. Necessiates revision of prev reported struct..

538 Cnidaria *Nephthea chabrolii, Paralemnalia thyrsoides* // Green Islang, Taitong County, Taiwan // New cytotoxic terpenoids from soft corals Nephthea chabroli and *Paralemnalia thyrsoides*
1227 // N // parathyrsoidin E // weakly cytotox. to P388 cell line. No AV activ. // From *P. thyrsoides*
1228 // N // parathyrsoidin F // weakly cytotox. to P388 cell line. No AV activ. // From *P. thyrsoides*
1229 // N // parathyrsoidin G // weakly cytotox. to P388 cell line. No AV activ. // From *P. thyrsoides*

539 Cnidaria *Rumphella antipathes* // S. coast, Taiwan // Rumphellolide J, an ester of 4β,8β-epoxycaryophyllan-5-ol and rumphellaoic acid A, from the gorgonian *Rumphella antipathies*
1230 // N // rumphellolide J // * // *



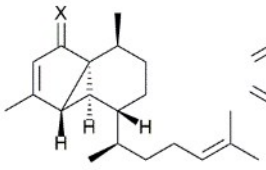
540 Cnidaria *Muriceides collaris* // Weizhou Is., S. China Sea S. Sea // Unusual Inner-Salt Guaiazulene Alkaloids and bis-Sesquiterpene from the South China Sea Gorgonian *Muriceides collaris*
1231 // N // muriceidine A // mod cytotox. vs 1 HTCL and antifoul. (Balanus sp.) // *
1232 // N // (-)-muriceidine B // IA vs 2 HTCLs. // isol. as racemate. Chiral HPLC gave enantiomers. abs config by ECD TDDFT calcs.
1233 // N // (+)-muriceidine B // IA vs 2 HTCLs. // isol. as racemate. Chiral HPLC gave enantiomers. abs config by ECD TDDFT calcs.
1234 // N // (-)-muriceidine C // IA vs 2 HTCLs. // isol. as racemate. Chiral HPLC gave enantiomers. abs config from ECD.
1235 // N // (+)-muriceidine C // mod cytotox. to HL-60 cell line. // isol. as racemate. Chiral HPLC gave enantiomers. abs config from ECD.
1236 // N // (+)-muriceidone A // IA vs 2 HTCLs. // isol. as racemate. Chiral HPLC gave enantiomers. abs config by ECD TDDFT calcs.
1237 // N // (-)-muriceidone A // IA vs 2 HTCLs. // isol. as racemate. Chiral HPLC gave enantiomers. abs config by ECD TDDFT calcs.

541 Cnidaria *Sarcophyton stellatu, Capnella fungiformis* // Mahambom, Madagascar // Isolation and structure elucidation of natural products of three soft corals and a sponge from the coast of Madagascar
1238 // N // (+)-(1E,3E,11E)-7,8-epoxycembra-1,3,11,15-tetraene // * // From *S. stellatum*. Enantiomer of known metabolite.
1239 // N // ethyl 5-[(1E,5Z)-2,6-dimethylocta-1,5,7-trienyl]furan-3-carboxylate // * // From *C. fungiformis*
1240 // M // ethyl 5-[(1E,5E)-2,6-dimethylocta- 1,5,7-trienyl]furan-3-carboxylate // * // From *C. fungiformis*
1241 // N // oxyfungifomin // * // From *C. fungiformis*

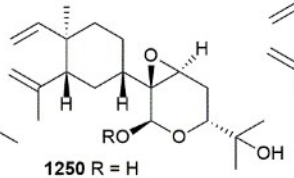
542 Cnidaria *Junceella fragilis* // Hainan Is., China // Fragilolides A-Q, norditerpenoid and briarane diterpenoids from the gorgonian coral *Junceella fragilis*
1242 // N // fragilolide A // IA vs 4 HTCLs. // abs config by ECD TDDFT calcs.

537 Cnidaria *Nephthea chabrolii, Paralemnalia thyrsoides* // Green Islang, Taitong County, Taiwan // New cytotoxic terpenoids from soft corals Nephthea chabroli and *Paralemnalia thyrsoides*
1243 // N // chabrolin A // weakly cytotox. to P388 cell line. No AV activ. // From *N. chabrolii*

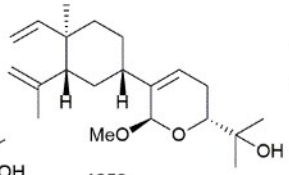
543 Cnidaria *Sinularia polydactyla* // Xisha Is., Hainan province, China // Xishacorenes A–C, diterpenes with bicyclo[3.3.1]nonane nucleus from the Xisha soft coral *Sinularia polydactyla*
1244 // N // xishacorene A // None or weak cytotox., promoted conA-induced lymphocyte proliferation // abs config by ECD TDDFT calcs.
1245 // N // xishacorene B // None or weak cytotox., promoted conA-induced lymphocyte proliferation // abs config by ECD TDDFT calcs.
1246 // N // xishacorene C // None or weak cytotox., promoted conA-induced lymphocyte proliferation // abs config by ECD TDDFT calcs.



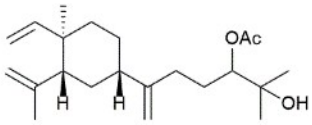
1247 X = H, ····OH
1248 X = H, ▬OH
1249 X = O



1250 R = H
1251 R = Me



1252



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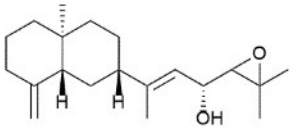

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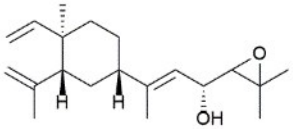

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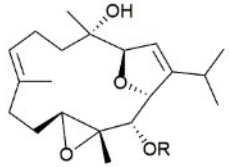
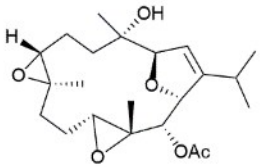


†**1256** R = H
†**1263** R = Ac



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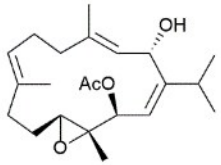

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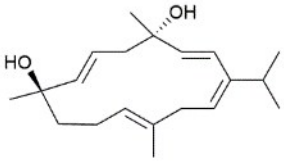

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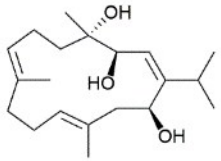

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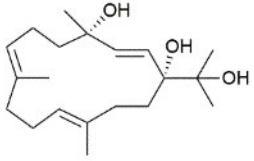

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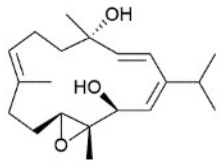

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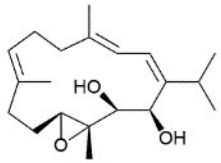
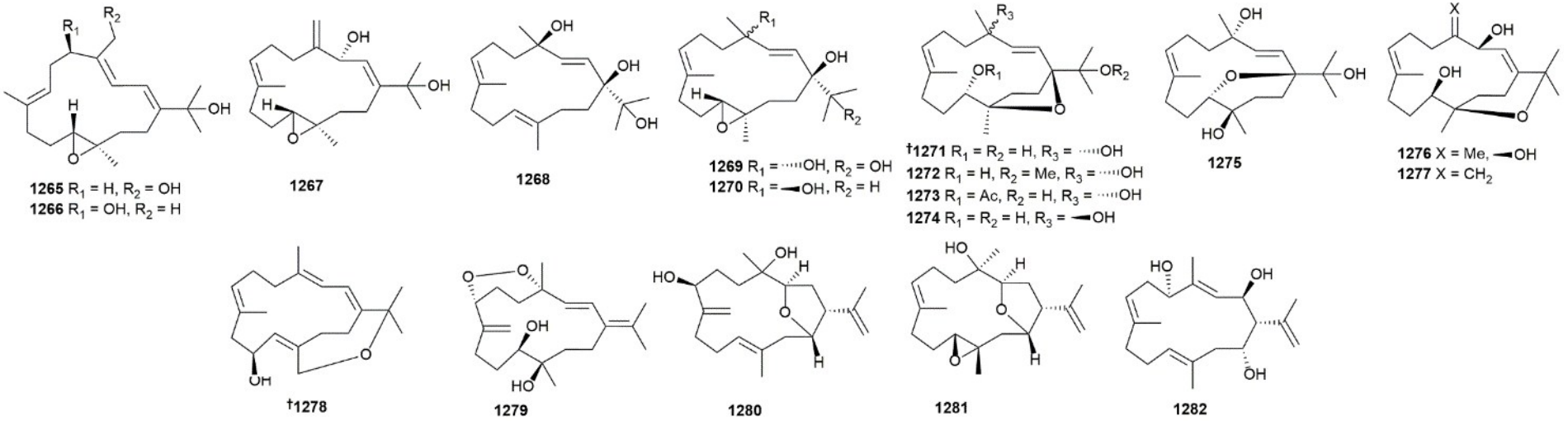


1264

544 Cnidaria *Euplexaura* sp // Weizhou Is. sea area, China // Cytotoxic serrulatane-type diterpenoids from the gorgonian *Euplexaura* sp. and their absolute configurations by vibrational circular dichroism
1247 // N // euplexaurene A // mod. cytotox. vs 1 HTCL // abs config of core via Moshers
1248 // N // euplexaurene B // mod. cytotox. vs 1 HTCL // *
1249 // N // euplexaurene C // mod. cytotox. vs 1 HTCL // *

545 Cnidaria *Lobophytum varium* // Jihui Fish Port, Taitung, Taiwan // Anti-inflammatory lobane and prenyleudesmane diterpenoids from the soft coral *Lobophytum varium*
1250 // N // lobovarol A // Not cyto vs 3 HTCLs // *
1251 // N // lobovarol B // mod. inhib prodn superoxide. Not cyto vs 3 HTCLs // *
1252 // N // lobovarol C // Not cyto vs 3 HTCLs // *
1253 // N // lobovarol D // Not cyto vs 3 HTCLs // *
1254 // N // lobovarol E // mod. inhib prodn superoxide and inhib release elastase. Not cyto vs 3 HTCLs // *
1255 // R // 17,18-epoxyloba-8,10,13(15)-trien-16-ol // mod. inhib prodn superoxide and inhib release elastase. Not cyto vs 3 HTCLs // Carbinol config by Moshers

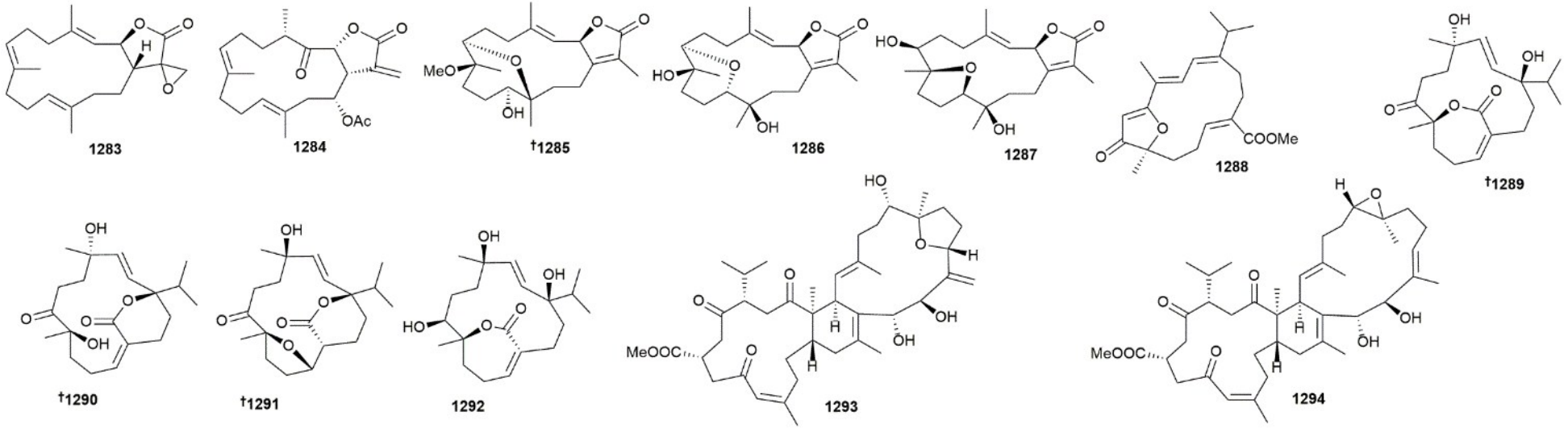
546 Cnidaria *Klyxum flaccidum* // Hsiao Liuchiu Is., Taiwan // Klyflaccicembranols A-I, new cembranoids from the soft coral *Klyxum flaccidum*
1256 // N // klyflaccicembranol A // Not cytotox. // abs config via Moshers and NOESY
1257 // N // klyflaccicembranol B // Mod cytotox. to 2 HTCLs // *
1258 // N // klyflaccicembranol C // Not cytotox. // *
1259 // N // klyflaccicembranol D // Mod cytotox. to 1 HTCL and mod. inhib NO prodn // *
1260 // N // klyflaccicembranol E // Not cytotox. and mod. inhib NO prodn // *
1261 // N // klyflaccicembranol F // Mod cytotox. to 1 HTCL and mod. inhib NO prodn // *
1262 // N // klyflaccicembranol G // * // *
1263 // N // klyflaccicembranol H // mod. cytotox. to 3 TCLs. // *
1264 // M // klyflaccicembranol I // mod. cytotox. to 2 TCLs and mod. inhib NO prodn. // Previously reported as hydrolysis product from flaccidoxide



547 Cnidaria *Sarcophyton trocheliophorum* // Yalong Bay, Hainan Province, P. R. China // Sarcophytrols G-L, novel minor metabolic components from South China Sea soft coral *Sarcophyton trocheliophorum* Marenzeller
1265 // N // sarcophytrol G // Didn't inhibit PTP1B. // *
1266 // N // sarcophytrol H // Didn't inhibit PTP1B. // *
1267 // N // sarcophytrol I // Didn't inhibit PTP1B. // *
1268 // N // sarcophytrol J // Didn't inhibit PTP1B. // *
1269 // N // sarcophytrol K // Didn't inhibit PTP1B. // *
1270 // N // sarcophytrol L // Didn't inhibit PTP1B. // *

548 Cnidaria *Sarcophyton trocheliophorum* // Yalong Bay, Hainan Province, China // New bicyclic cembranoids from the south China sea soft coral *Sarcophyton trocheliophorum*
1271 // N // sarcophytrol M // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // abs config by Moshers
1272 // N // sarcophytrol N // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1273 // N // sarcophytrol O // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1274 // N // sarcophytrol P // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1275 // N // sarcophytrol Q // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1276 // N // sarcophytrol R // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1277 // N // sarcophytrol S // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // *
1278 // N // sarcophytrol T // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* // abs config by Moshers
1279 // N // sarcophytrol U // IA vs PTP1B, 2 HTCLs and *P. aeruginosa* //

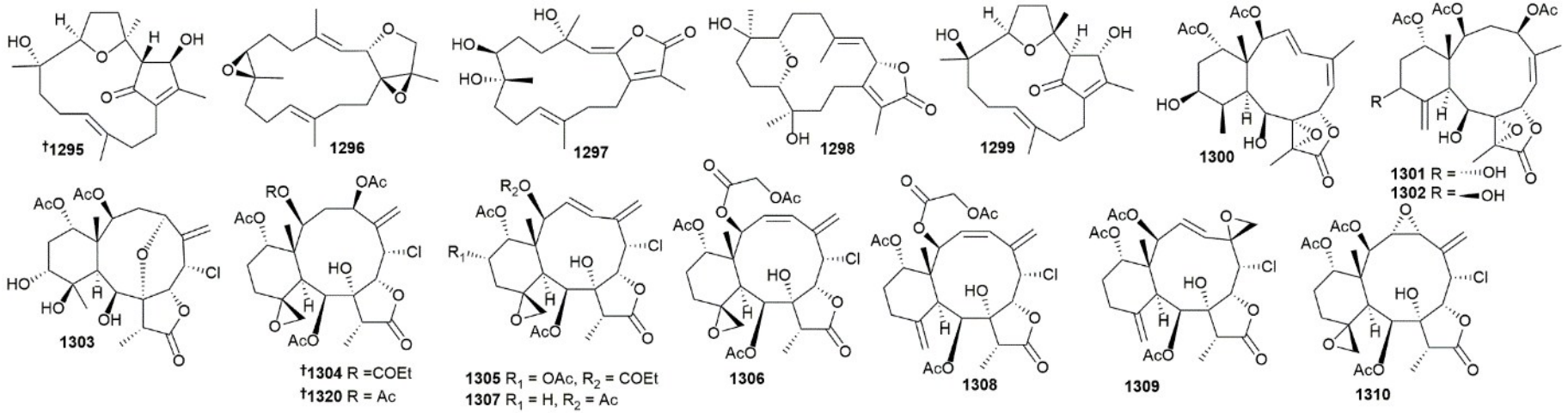
549 Cnidaria *Lobophytum crassum* // Dongsha Atoll, Taiwan // Lobophylins F-H: three new cembrene diterpenoids from soft coral *Lobophytum crassum*
1280 // N // lobophylin F // * // *
1281 // N // lobophylin G // * // *
1282 // N // lobophylin H // * // *



550 Cnidaria *Lobophytum crassum* // Pingtung, Taiwan // Anti-inflammatory cembranoids from the soft coral *Lobophytum crassum*
1283 // N // lobophyolide A // Potent inhib IL-12 release and NO prodn. // *
1284 // N // lobophyolide B // Potent inhib IL-12 release and NO prodn. // *

551 Cnidaria *Sarcophyton ehrenbergi* // Hurghada, Red Sea, Egypt // Cembrene diterpenoids with ether linkages from *Sarcophyton ehrenbergi*: an anti-proliferation and molecular-docking assessment
1285 // N // sarcoehrenbergilid A // mod. cytotox vs A549 and HepG2 // X-ray
1286 // N // sarcoehrenbergilid B // mod. cytotox vs A549 // *
1287 // N // sarcoehrenbergilid C // mod. cytotox vs A549 and HepG4 // *

552 Cnidaria *Sarcophyton elegans* // Xisha Is., S. China Sea // Biscembranoids and cembranoids from the soft coral *Sarcophyton elegans*
1288 // N // sarelengan C // mod. inhib NO prodn // *
1289 // N // sarelengan D // IA // abs config by X-ray
1290 // N // sarelengan E // IA // abs config by X-ray
1291 // N // sarelengan F // IA // abs config by X-ray
1292 // N // sarelengan G // IA // *
1293 // N // sarelengan A // IA // abs config by X-ray
1294 // N // sarelengan B // mod. inhib NO prodn // *

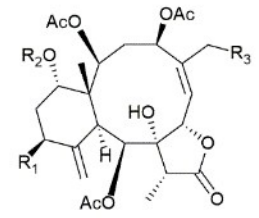


553 Cnidaria *Sarcophyton glaucum* // Jihui Fishing Port, Taitung county, Taiwan // Isoprenoids from the soft coral *Sarcophyton glaucum*
1295 // N // 3,4,8,16-tetra-epi-lobocrasol // IA vs 3 HTCLs. // *
1296 // N // 1,15β-epoxy-deoxysarcophine // IA vs 3 HTCLs. // *
1297 // N // 3,4-dihydro-4α,7β,8α-trihydroxy-Δ2-sarcophine // IA vs 3 HTCLs. // *
1298 // N // ent-sarcophyolide E // IA vs 3 HTCLs. // *
1299 // R // lobocrasol // IA vs 3 HTCLs. // Revised struct.

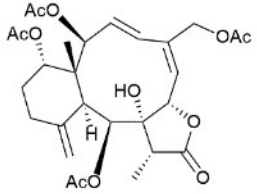
554 Cnidaria *Briareum excavata* // S. Taiwan // Briarenol B, a new polyoxygenated briarane from the octocoral *Briareum excavatum*
1300 // N // briarenol B // Enhances expression of COX-2 and iNOS. // *

554 Cnidaria *Briareum excavata* // S. Taiwan // Briarenols C-E, new polyoxygenated briaranes from the octocoral *Briareum excavatum*
1301 // N // briarenol C // IA // *
1302 // N // briarenol D // Inhib elastase release. // *
1303 // N // briarenol E // Inhib expression iNOS. // *

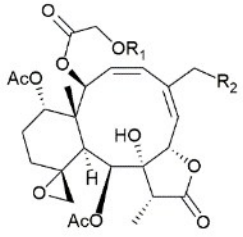
542 Cnidaria *Junceella fragilis* // Hainan Is., China // Fragilolides A-Q, norditerpenoid and briarane diterpenoids from the gorgonian coral *Junceella fragilis*
1304 // N // fragilolide B // IA vs 4 HTCLs. // *
1305 // N // fragilolide C // IA vs 4 HTCLs. // *
1306 // N // fragilolide E // IA vs 4 HTCLs. // *
1307 // N // fragilolide D // IA vs 4 HTCLs. // *
1308 // N // fragilolide F // IA vs 4 HTCLs. // *
1309 // N // fragilolide G // IA vs 4 HTCLs. // *
1310 // N // fragilolide H // IA vs 4 HTCLs. // *
1320 // R // frajunolide N // mod. inhib. of hepatitis B e antigen. // *



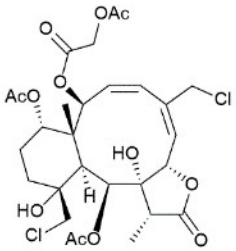
1311 R_1 = OAc, R_2 = Ac, R_3 = H
1312 R_1 = H, R_2 = *i*BuCO, R_3 = H
1313 R_1 = H, R_2 = Ac, R_3 = Cl



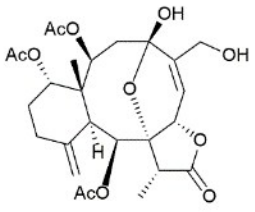
1314



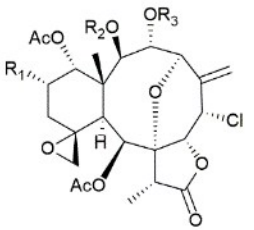
1315 R_1 = Ac, R_2 = OAc
1316 R_1 = *i*BuCO, R_2 = OAc
1317 R_1 = *i*BuCO, R_2 = Cl



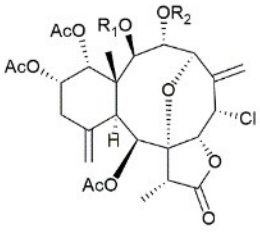
1318



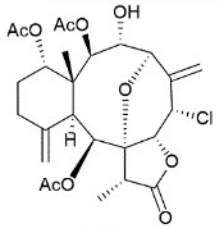
1319



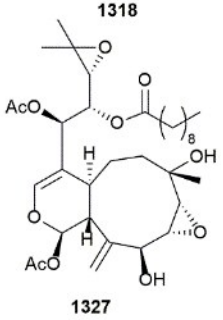
†**1321** R_1 = R_3 = H, R_2 = Ac
1322 R_1 = OAc, R_2 = Ac, R_3 = H
1323 R_1 = OAc, R_2 = H, R_3 = Ac



1324 R_1 = Ac, R_2 = H
1325 R_1 = H, R_2 = Ac



†**1326**



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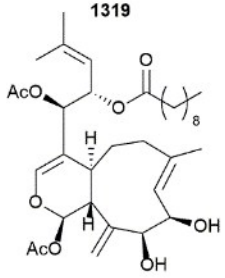
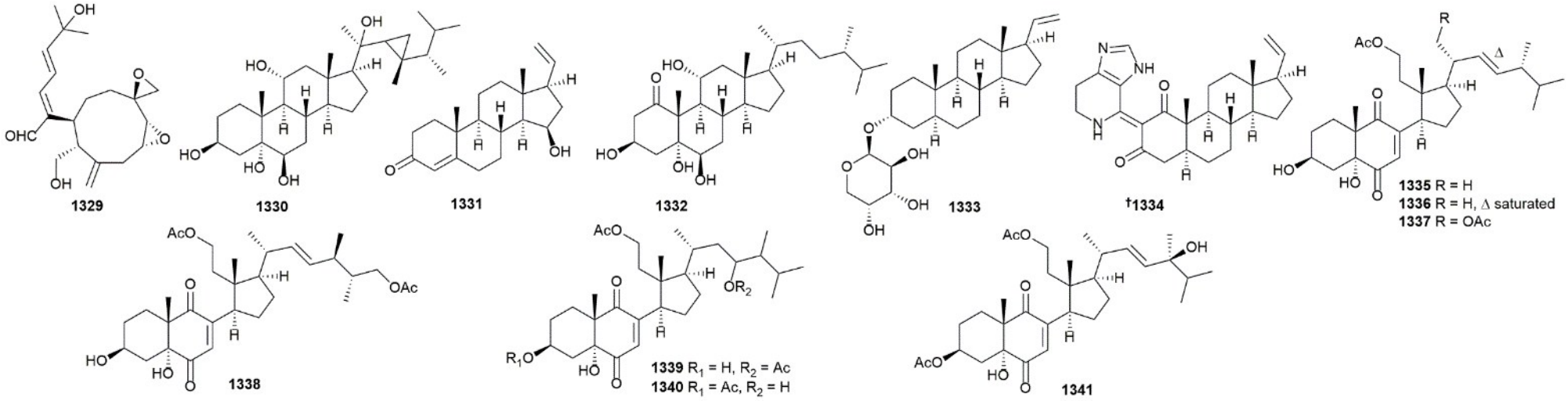


1328

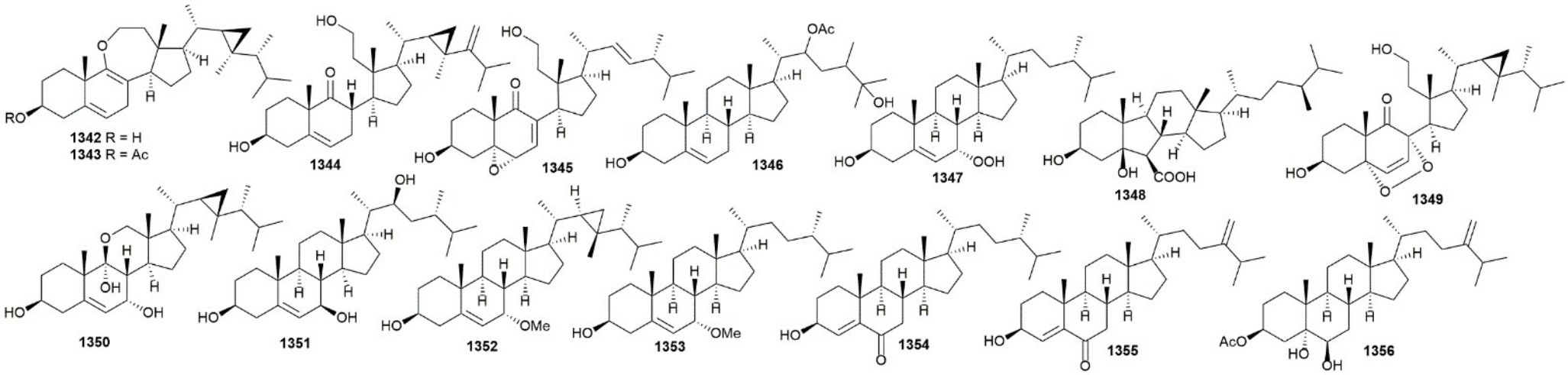
1311 // N // fragilolide I // IA vs 4 HTCLs. // *
1312 // N // fragilolide J // IA vs 4 HTCLs. // abs config by X-ray
1313 // N // fragilolide K // IA vs 4 HTCLs. // *
1314 // N // fragilolide L // IA vs 4 HTCLs. // *
1315 // N // fragilolide M // IA vs 4 HTCLs. // *
1316 // N // fragilolide N // IA vs 4 HTCLs. // *
1317 // N // fragilolide O // IA vs 4 HTCLs. // *
1318 // N // fragilolide P // IA vs 4 HTCLs. // *
1319 // N // fragilolide Q // IA vs 4 HTCLs. // *

556 Cnidaria *Junceella fragilis* // Hainan Is., P. R. China // Halogenated briarane diterpenes with acetyl migration from the gorgonian coral *Junceella fragilis*
1321 // N // 3-deacetylpraelolide // weak inhib NO prodn. // Acetylated to praelolide and abs config by X-ray
1322 // N // 13-α-acetoxy-3-deacetylpraelolide // weak inhib NO prodn. // Interchanged with /2b in NMR tube
1323 // N // 13-α-acetoxyl-2-deacetylpraelolide // weak inhib NO prodn. // Interchanged with /2a in NMR tube
1324 // N // 13-α-acetoxyl-3-deacetyljunceellin // weak inhib NO prodn. // Interchanged with /3b in NMR tube
1325 // N // 13-α-acetoxy-2-deacetyljunceellin // weak inhib NO prodn. // Interchanged with /3a in NMR tube
1326 // N // 3-deacetyljunceelin // * // struct. confirmed and abs config assigned by X-ray.

557 Cnidaria *Protodendron repens* // Okuza Is., Tanzania // Protoxenicins A and B, cytotoxic long-chain acylated xenicanes from the soft coral *Protodendron repens*
1327 // N // protoxenicin A // mod. to strongly cytotox. to 3 HTCLs. // Core abs config via Moshers
1328 // N // protoxenicin B // mod. to strongly cytotox. to 3 HTCLs. // Pair are first egs of xenicin acylated with long chain FA



558 Cnidaria *Xenia umbellata* // Red Sea Coast, Jeddah, Saudi Arabia // Isolation, antimicrobial and antitumor activities of a new polyhydroxysteroid and a new diterpenoid from the soft coral *Xenia umbellata*
1329 // N // xeniumbellal // mod. AB and AF activities and cytotox. // *
1330 // N // 3β-,5α-,6β-,11α-,20β-pentahydroxygorgosterol // mod. AB and AF activities // *
559 Cnidaria *Carijoa riisei* // Hon Me, Thanh Hoa, Vietnam // Pregnane steroids from the Vietnamese octocoral *Carijoa riisei*
1331 // N // 15β-hydroxypregna-4,20-dien-3-one // IA vs 8 HTCLs. // *
560 Cnidaria *Sinularia brassica* // Con Co Is., Quangtri province, Vietnam // Cytotoxic steroid derivatives from the Vietnamese soft coral *Sinularia brassica*
1332 // N // sinubrassione // mod. cytotox. to 2 HTCLs. // *
1333 // N // sinubrassioside // IA to 3 HTCLs. // *
561 Cnidaria *Scleronephthya* sp // * // An unusual spinaceamine-bearing pregnane from a soft coral *Scleronephthya* sp. inhibits the migration of tumor cells
1334 // N // scleronine // Inhib cancer cell migration, reduced mRNA levels of 3 cytokines // abs config by X-ray
562 Cnidaria *Pinnigorgia* sp // Green Is., Taiwan // Pinnisterols D-J, new 11-acetoxy-9,11-secosterols with a 1,4-quinone moiety from Formosan gorgonian coral *Pinnigorgia* sp. (Gorgoniidae)
1335 // N // pinnisterol D // Inhib viability of hepatic stellate cells. // *
1336 // N // pinnisterol E // Inhib elastase release. // *
1337 // N // pinnisterol F // Inhib prodn superoxide. // *
1338 // N // pinnisterol G // IA // *
1339 // N // pinnisterol H // Inhib elastase release and inhib prodn superoxide. // *
1340 // N // pinnisterol I // IA // *
1341 // N // pinnisterol J // Inhib elastase release and inhib prodn superoxide. // *



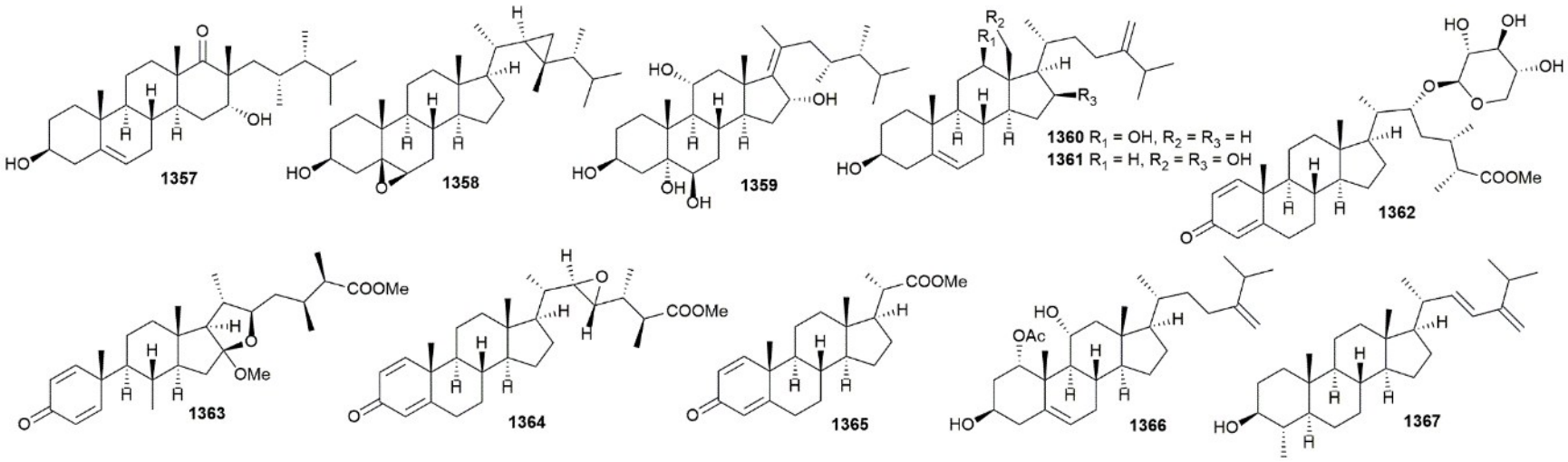
563 Cnidaria *Pseudopterogorgia americana* // Great Abaco Is., The Bahamas // Cyclized 9,11-secosterol enol-ethers from the gorgonian *Pseudopterogorgia americana*
1342 // N // ameristerenol A // IA to 3 HTCLs. // *
1343 // N // ameristerenol B // IA to 3 HTCLs. // *
1344 // N // ameristerol A // IA to 3 HTCLs. // *

564 Cnidaria *Pinnigorgia* sp // Green Is., Taiwan // New marine sterols from a gorgonian *Pinnigorgia* sp.
1345 // N // 5α,6α-epoxy-(22E,24R)-3β,11-dihydroxy-9,11-secoergosta-7-en-9-one // mod. inhib superoxide prodn and elastase release. // *
1346 // N // (22R)-acetoxy-(24Î¾)-ergosta-5-en-3β,25-diol // IA // *

565 Cnidaria *Palythoa caribaeorum, P. variabilis* // Paracuru beach, Ceará State, Brazil // Steroids from the Brazilian zoanthids *Palythoa caribaeorum* and *Palythoa variabilis*
1347 // N // 24(R)-7α-hydroperoxy-ergost-5-en-3β-ol // mod. cytotox. to HCT-116 cells. // From *P. caribaeorum.*
1348 // N // 6β-carboxyl-24(R)-(8â†'6)-abeo-ergostan-3β,5β-diol // * // From *P. variabilis.*

566 Cnidaria *Klyxum flaccidum* // Taiwan // Klyflaccisteroids K-M, bioactive steroidal derivatives from a soft coral *Klyxum flaccidum*
1349 // N // klyflaccisteroid K // weak cytotox. to 4 HTCLs and strong inhib prodn superoxide and elastase release. // *
1350 // N // klyflaccisteroid L // IA // *
1351 // N // klyflaccisteroid M // weak cytotox. to 2 HTCLs and inhib elastase release. // *

567 Cnidaria *Sinularia conferta* // Con Co Is., Quangtri, Vietnam // Cytotoxic steroids from the Vietnamese soft coral *Sinularia conferta*
1352 // N // 7α-methoxygorgosterol // IA to 3 HTCLs. // *
1353 // N // 7α-methoxy-ergosta-5-ene-3β-ol // IA to 3 HTCLs. // *
1354 // N // 3β-hydroxyergosta-4-ene-6-one // IA to 3 HTCLs. // *
1355 // N // 3β-hydroxyergosta-4,24(28)-diene-6-one // IA to 3 HTCLs. // *
1356 // N // ergosta-24(28)-ene-3β,5α,6β-triol-3-acetate // IA to 3 HTCLs. // *



568 Cnidaria *Sinularia leptoclados* // Con Co Is., Quangtri, Vietnam // Cytotoxic steroids from the Vietnamese soft coral *Sinularia leptoclados*
1357 // N // leptosteroid // mod cytotox. to 8 HTCLs. // *
1358 // N // 5,6β-epoxygorgosterol // IA // *

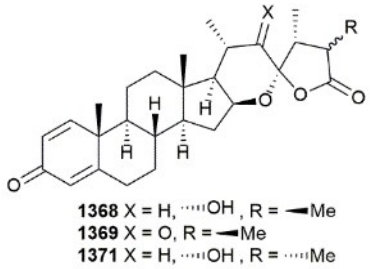
553 Cnidaria *Sarcophyton glaucum* // Jihui Fishing Port, Taitung county, Taiwan // Isoprenoids from the soft coral *Sarcophyton glaucum*
1359 // N // 16-deacetyl-halicrasterol B // IA vs 3 HTCLs. // *

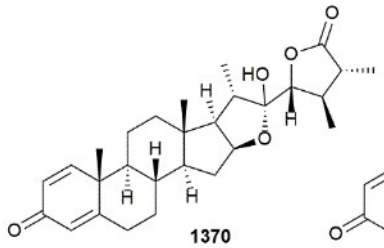
569 Cnidaria *Nephthea columnaris* // S. Taiwan // Sterols from the octocoral *Nephthea columnaris*
1360 // N // columnaristerol B // IA vs superoxide prodn or elastase release. // *
1361 // N // columnaristerol C // IA vs superoxide prodn or elastase release. // *

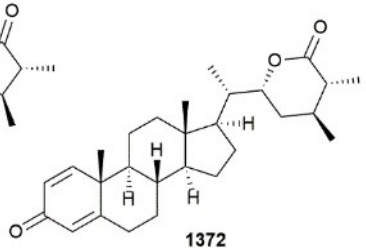
570 Cnidaria *Sinularia brassica* // * // Bioactive steroids with methyl ester group in the side chain from a reef soft coral *Sinularia brassica* cultured in a tank
1362 // N // sinubrasone A // weak cytotox. to 2 TCLs. // *
1363 // N // sinubrasone B // mod cytotox. to 4 TCLs. // *
1364 // N // sinubrasone C // mod cytotox. to 4 TCLs and mod. inhib elastase release. // *
1365 // N // sinubrasone D // mod. cytotox. to 4 TCLs and mod. inhib superoxide prodn and elastase release. // *

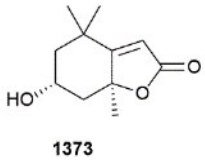
571 Cnidaria *Lobophytum crassum* // Hurghada, Egypt // Polyhydroxy sterols isolated from the Red Sea soft coral *Lobophytum crassum* and their cytotoxic activity
1366 // N // 24-methylenecholest-5-ene-1α,3β,11α-triol 1-acetate // mod cytotox. to 3 HTCLs. // *

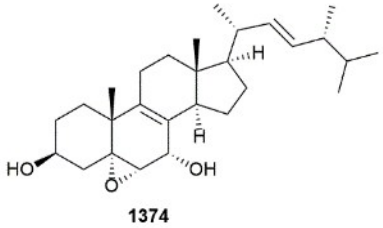
572 Cnidaria *Nephthea columnaris* // S. Taiwan // 4 alpha-Methylergosta-22(E),24(28)-dien-3 beta-ol, a new marine sterol from the octocoral *Nephthea columnaris*
1367 // M // 4 alpha-methylergosta-22(E),24(28)-dien-3 beta-ol // * // S-trans diene config. Previously reported synth. cmpd.



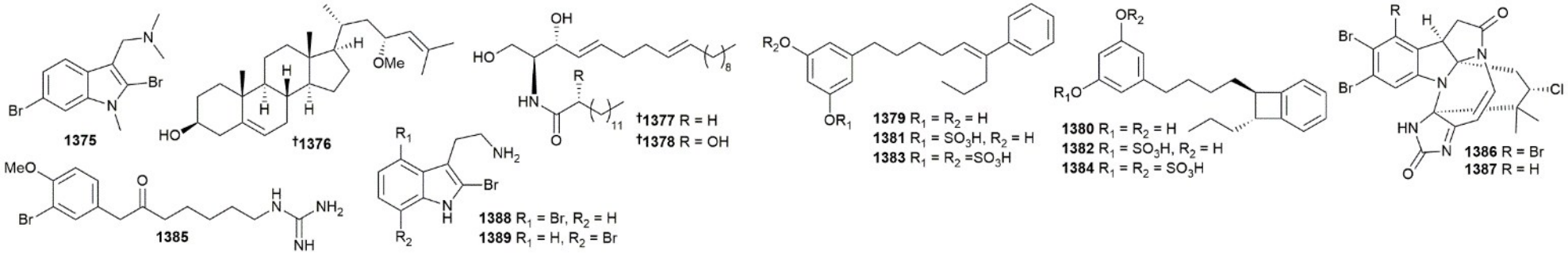








573 Cnidaria *Sinularia brassica* // * // Bioactive new withanolides from the cultured soft coral *Sinularia brassica*
1368 // N // sinubrasolide H // mod. cytotox. to 4 TCLs. // *
1369 // N // sinubrasolide I // Not cytotox. // *
1370 // N // sinubrasolide J // mod. cytotox. to 4 TCLs. // *
1371 // N // sinubrasolide K // mod. cytotox. to 4 TCLs. // *
1372 // N // sinubrasolide L // Not cytotox. // *
564 Cnidaria *Pinnigorgia* sp // Green Is., Taiwan // New marine sterols from a gorgonian *Pinnigorgia* sp.
1373 // R // pubinernoid A/(+)-loliolide // * // Pubinernoid A revised to (+)-loliolide
574 Cnidaria *Pinnigorgia* sp // * // Structure revision of 5β,6β-epoxy-(22E)-ergosta-8,22-diene-3β,7β-diol from the gorgonian Pinnigorgia sp.
1374 // R // 5α,6α-epoxy-(22E)-ergosta-8,22-diene-3β,7α-diol // * // Revised NMR data interpretation.



611 Bryozoa *Amathia verticillata* // Porto Belo, Santa Catarina and Cabo Frio, Rio de Janeiro, Brazil and Little Jim and Peacock's Pocket, Florida, USA // Evaluation of chemical defense and chemical diversity in the exotic bryozoan *Amathia verticillata*
1375 // N // 2,6-dibromo-N-methylgramine // IA in anifeedant assay (fish) // *

612 Bryozoa *Cryptosula pallasiana* // Huang Is., Qingdao City, Shandong Province, China // New cytotoxic secondary metabolites from marine bryozoan *Cryptosula pallasiana*
1376 // N // (23R)-methoxycholest-5,24-dien-3β-ol // weak cytotox. vs 3 HTCLs // *
1377 // N // (2S,3R,4E,8E)-2-(tetradecanoylamino)-4,8-octadecadien-1,3-diol // weak cytotox. vs 3 HTCLs // *
1378 // N // (2S,3R,20R,4E,8E)-2-(tetradecanoylamino)- 4,8-octadecadien-1,3,20 -triol // weak cytotox. vs 3 HTCLs // *

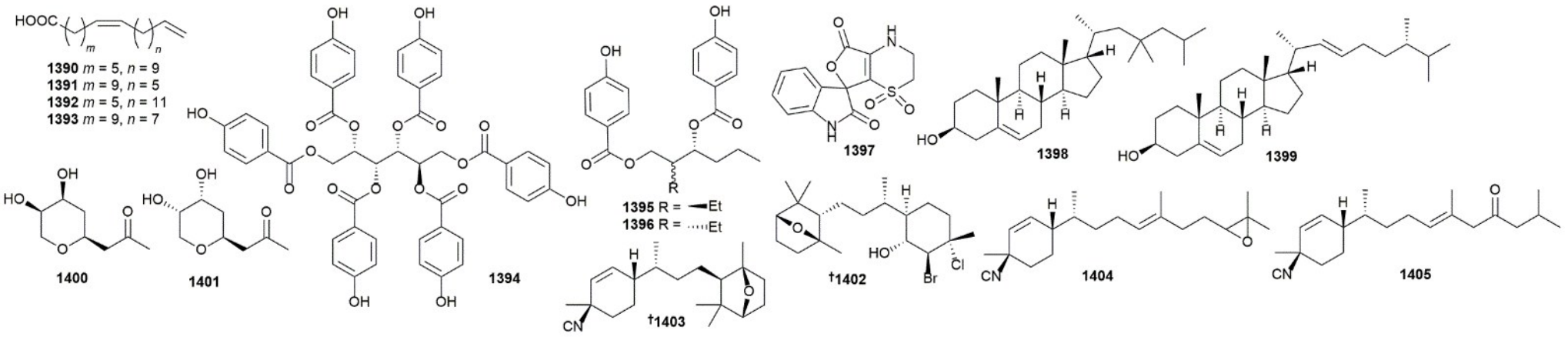
613 Bryozoa *Schizomavella mamillata* // Cadiz, Spain // 5-Alkylresorcinol derivatives from the bryozoan *Schizomavella mamillata*: isolation, synthesis, and antioxidant activity
1379 // N // schizol A // strong AO (ABTS assay) // *
1380 // N // schizol B // strong AO (ABTS assay) // *
1381 // N // schizol C // mod. AO (ABTS assay) // *
1382 // N // schizol D // mod. AO (ABTS assay) // *
1383 // N // schizol E // IA // *
1384 // N // schizol F // IA // *

614 Bryozoa *Securiflustra securifrons* // West Spitzbergern // A novel brominated alkaloid securidine A, isolated from the marine bryozoan *Securiflustra securifrons*
1385 // N // securidine A // IA vs 3 HTCLs, 5 strains bact., anti-dIAbetic (PTP-1B) and biofilm inhib. // *

615 Bryozoa *Securiflustra securifrons* // * // Securamine derivatives from the Arctic bryozoan *Securiflustra securifrons*
1386 // N // securamine H // signif. cytotox. vs 3 HTCLs and 1 norm. hum. cell line // *
1387 // N // securamine I // signif. cytotox. vs 3 HTCLs and 1 norm. hum. cell line // *

616 Bryozoa *Terminoflustra membranaceatruncata* // White Sea // Novel brominated metabolites from Bryozoa: a functional analysis
1388 // N // terminoflustrindole B // * // *
1389 // N // terminoflustrindole C // * // *

617 Mollusca *Cellana toreuma* // Kirikiri, Iwate Prefecture, northeastern Japan // Novel odd-chain fatty acids with a terminal double bond in ovaries of the limpet *Cellana toreuma*
1390 // N // 7,18-nonadecadienoic (19:2Δ7,18) acid // * // synth. reported in ref 617
1391 // N // 11,18-nonadecadienoic (19:2Δ11,18) acid // * // *
1392 // N // 7,20-heneicosadienoic (21:2Δ7,20) acid // * // synth. reported in ref 617
1393 // N // 11,20-heneicosadienoic (21:2Δ11,20) acid // * // *



619 Mollusca *Scutus antipodes* // * // Isolation and total synthesis of two novel metabolites from the fissurellid mollusc *Scutus antipodes*
1394 // N // scutinin A // mod. AM activ. // synth.
1395 // N // (2S,3R)-scutinin B // Mod. AM activ. // synth.
1396 // N // (2R,3R)-scutinin B // * // synth.

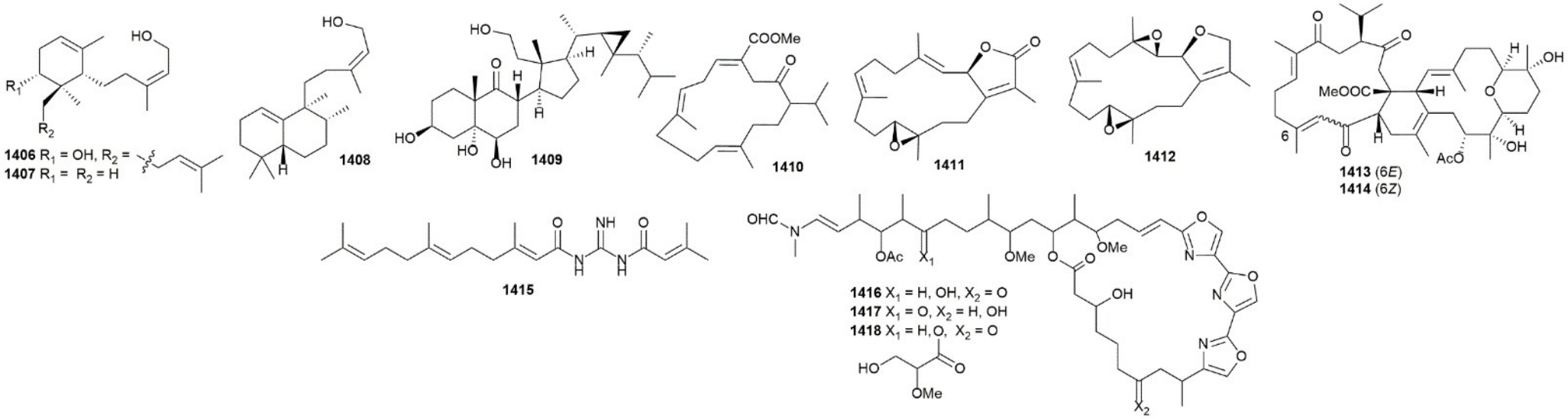
620 Mollusca *Codakia orbicularis* // Guadeloupe // Orbicularisine: a spiro-indolothiazine isolated from gills of the tropical bivalve *Codakia orbicularis*
1397 // N // orbicularisine // IA in wide range of bioassays. // *

621 Mollusca *Protapes gallus* // Ashtamudi Lake, India // New sterols with anti-inflammatory potentials against cyclooxygenase-2 and 5-lipoxygenase from *Paphia malabarica*
1398 // N // 23-gem-dimethylcholesta-5-en-3β-ol // IA in a variety of bioassays. // *
1399 // N // (22E)-241,242-methyldihomocholest-5,22-dien-3β-ol // IA in a variety of bioassays. // *

622 Mollusca *Monodonta labio* // Cat Ba Is., Vietnam // Cytotoxic constituents of the Vietnamese sea snail *Monodonta labio* (Linnaeus, 1758)
1400 // N // monodontin A // Not cytotox. to 3 HTCLs. // *
1401 // N // monodontin B // Mod to weak cytotox. to 2 HTCLs. // *

623 Mollusca *Dolabella auricularia* // Amakusa Is., Japan // Dolabellol A, a new halogenated diterpene isolated from the opisthobranch *Dolabella auricularia*
1402 // N // dolabellol A // Not cytotox. to 2 TCLs. // abs config by X-ray.

624 Mollusca *Phyllidiella pustulosa* // Gneerings Reef, Queensland, Australia // Catalyst-controlled stereoselective synthesis secures the structure of the antimalarial isocyanoterpene pustulosaisonitrile-1
1403 // N // pustulosaisonitrile-1 // mod. antimal. activ. // abs config by TDDFT ECD calcs and synth..
1404 // N // pustulosaisonitrile-2 // * // *
1405 // N // pustulosaisonitrile-3 // * // *

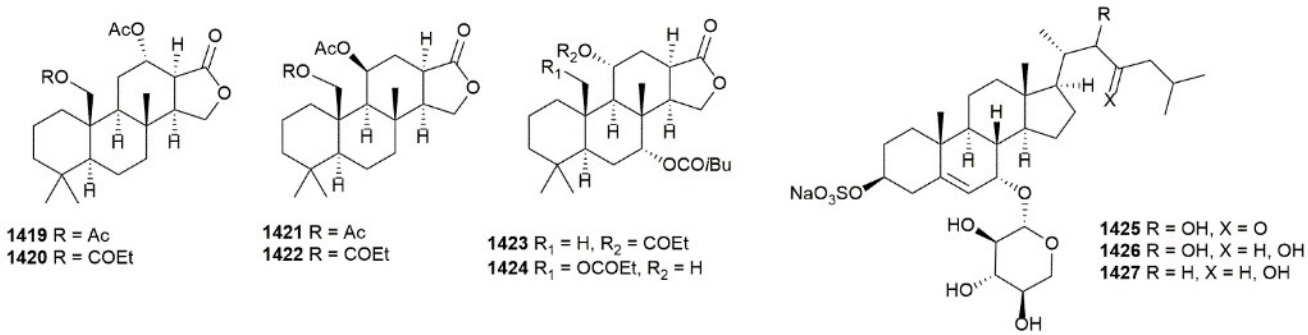


625 Mollusca *Spurilla neapolitana, Spurilla* sp. // Bay of Naples, Italy and Patagonia, Argentina // Chemistry of two distinct aeolid *Spurilla* species: ecological implications.
1406 // N // spurillin A // * // *
1407 // M // (-)-cis-γ-monocyclofarnesol // * // *
1408 // N // spurillin B // * // *

626 Mollusca *Phyllodesmium longicirrum* // Lizard Is., Great Barrier Reef, Australia // Secondary metabolome and its defensive role in the aeolidoidean *Phyllodesmium longicirrum*, (Gastropoda, Heterobranchia, Nudibranchia)
1409 // N // (3β,5α,6β)-trihydroxy-9-oxo-9,11-secogorgostan-11-ol // * // *
1410 // N // 6,13-bisdesoxomethyl sarcoate // * // *
1411 // N // (2R,11R,12R)-isosarcophine // * // *
1412 // N // (2S,3R,4R,11R,12R)-isosarcophytobisepoxide // Fish feeding deterrent activ. // *
1413 // N // isobisglaucumlide B // * // *
1414 // N // isobisglaucumlide C // * // *

627 Mollusca *Actinocyclus papillatus* // Wei Zhou Is., China // Marine terpenoid diacylguanidines: structure, synthesis, and biological evaluation of naturally occurring actinofide and synthetic analogues
1415 // N // actinofide // mod cytotox. to 6 HTCLs. // synth

628 Mollusca *Hexabranchus sanguineus* // West shore of O'ahu at Electric Beach, Hawaii, USA // Ulapualides C-E isolated from a Hawaiian *Hexabranchus sanguineus* egg mass
1416 // N // ulapualide C // mod cytotox. to 4 HTCLs. // Obtained from egg mass.
1417 // N // ulapualide D // * // Obtained from egg mass.
1418 // N // ulapualide E // * // Obtained from egg mass.



629 Mollusca *Goniobranchus collingwoodi* // Great Barrier Reef, North Queensland, Australia // Spongian-16-one diterpenes and their anatomical distribution in the Australian nudibranch *Goniobranchus collingwoodi*

1419 // N // (+)-12α,20-diacetoxyspongian-16-one // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

1420 // N // (-)-12α-acetoxy-20-oxyspongian-16-one propionate // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

1421 // N // (+)-11β,20-diacetoxyspongian-16-one // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

1422 // N // (-)-11β-acetoxy-20-oxyspongian-16-one propionate // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

1423 // N // (-)-7α,11α-dioxyspongian-16-one-7α-isopentanoate-11α-propionate // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

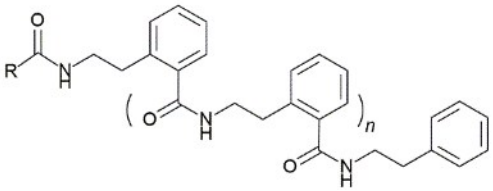
1424 // N // (-)-11β-hydroxy-7α,20-dioxyspongian-16-one-7α-isopentanoate-20-propionate // Not cytotox. to 3 HTCLs. // Present in mantle tissue, not in the viscera.

644 Mollusca *Conus pulicarius* // Kosrae, Federated States of Micronesia // Three new cytotoxic steroidal glycosides isolated from *Conus pulicarius* collected in Kosrae, Micronesia

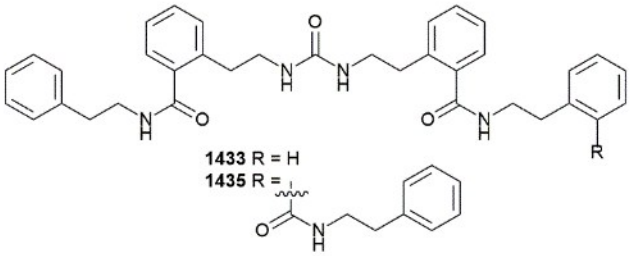
1425 // N // conusaponin A // Strong cytotox. to K562 cell line. // *

1426 // N // conusaponin B // Strong cytotox. to K562 cell line. // *

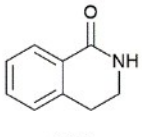
1427 // N // conusaponin C // Strong cytotox. to K562 cell line. // *



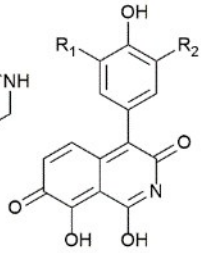
1428 *n* = 0, R = OMe
1429 *n* = 1, R = OMe
1430 *n* = 2, R = OMe
1431 *n* = 3, R = OMe
1432 *n* = 1, R = $NHCH_2CH_2Ph$
1434 *n* = 2, R = $NHCH_2CH_2Ph$



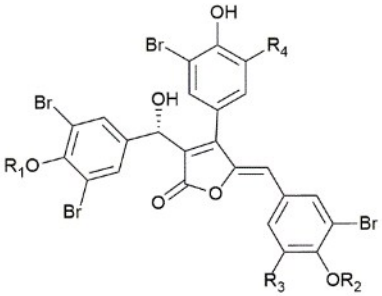
1433 R = H
1435 R =



1436



1437 $R_1 = R_2$ = H
1438 R_1 = I, R_2 = H
1439 $R_1 = R_2$ = I

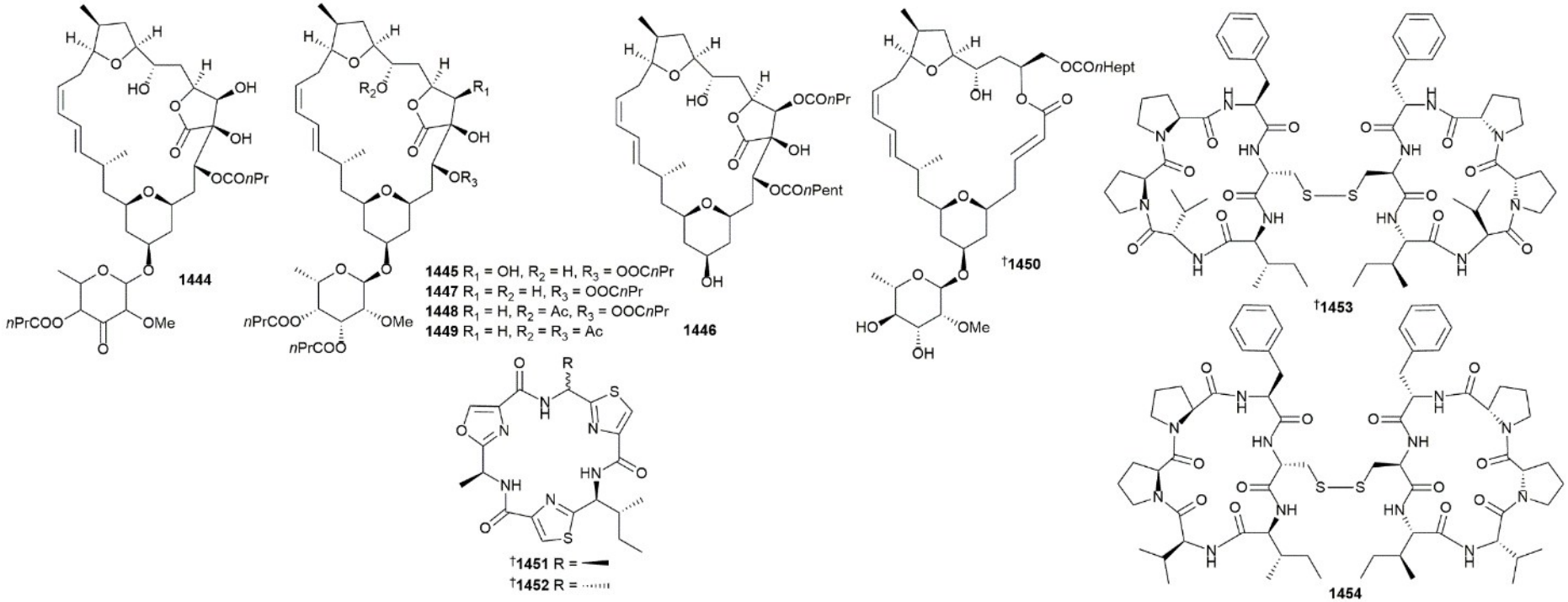


†**1440** $R_1 = R_2$ = Me, R_3 = H, R_4 = Br
1441 R_1 = Me, $R_2 = R_3$ = H, R_4 = Br
1442 R_1 = Me, R_2 = H, R_3 = Br, R_4 = H
1443 $R_1 = R_2$ = H, $R_3 = R_4$ = Br

656 Chordata *Didemnum molle* // Mayotte, Madagascar // Mollecarbamates, molleureas, and molledihydroisoquinolone, o-carboxyphenethylamide metabolites of the ascidian *Didemnum molle* collected in Madagascar
1428 // N // mollecarbamate A // weak anti-HIV, no AB activ. // *
1429 // N // mollecarbamate B // weak anti-HIV, no AB activ. // *
1430 // N // mollecarbamate C // weak anti-HIV, no AB activ. // *
1431 // N // mollecarbamate D // weak anti-HIV, no AB activ. // *
1432 // N // molleurea B // weak anti-HIV, no AB activ. // *
1433 // N // molleurea C // weak anti-HIV, no AB activ. // *
1434 // N // molleurea D // weak anti-HIV, no AB activ. // *
1435 // N // molleurea E // weak anti-HIV, no AB activ. // *
1436 // N // molledihydroisoquinolone // No AB activ. // *

657 Chordata *Ascidia virginea* // Korsfjord, Bergen, Norway // 3,7-Isoquinoline quinones from the ascidian tunicate *Ascidia virginea*
1437 // N // ascidine A // * // *
1438 // N // ascidine B // * // *
1439 // N // ascidine C // * // *

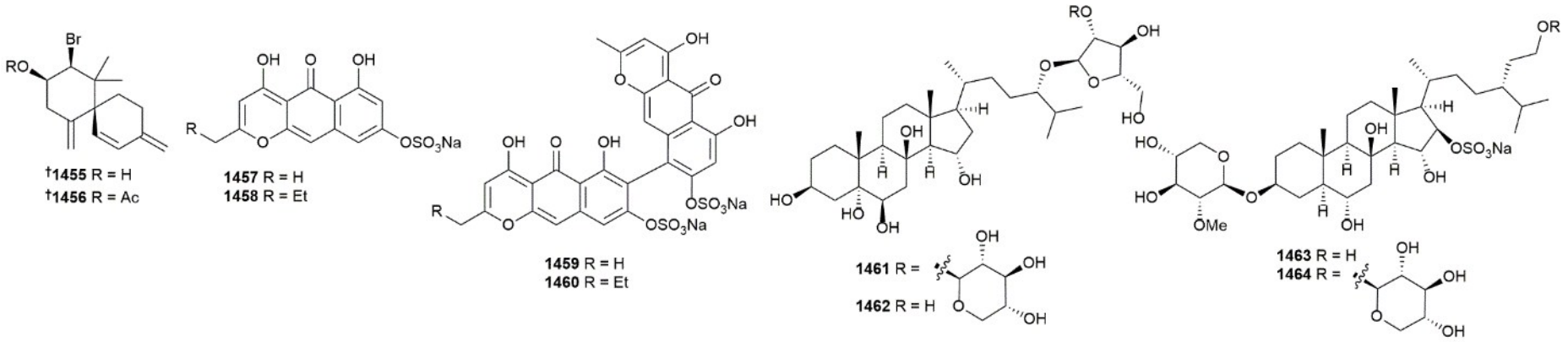
658 Chordata *Pseudodistoma antinboja* // Tong-Yeong City, Korea // Cadiolides J-M, antibacterial polyphenyl butenolides from the Korean tunicate *Pseudodistoma antinboja*
1440 // N // cadiolide J // Act vs *S. aureus*, not Gram (-) bact. // abs by ECD, Moshers and X-ray of related MNP.
1441 // N // cadiolide K // Act vs *S. aureus*, not Gram (-) bact. // *
1442 // N // cadiolide L // Act vs *S. aureus*, not Gram (-) bact. // *
1443 // N // cadiolide M // Act vs *S. aureus*, not Gram (-) bact. // *



659 Chordata *Lissoclinum mandelai* // White Sands Reef, Algoa Bay, Eastern Cape Province, S. Africa // New mandelalides expand a macrolide series of mitochondrial inhibitors
1444 // N // mandelalide F // cytotox. to HTCL panel. // *
1445 // N // mandelalide G // IA // *
1446 // N // mandelalide H // cytotox. to HTCL panel. // *
1447 // N // mandelalide I // cytotox. to HTCL panel. // *
1448 // N // mandelalide J // cytotox. to HTCL panel. // *
1449 // N // mandelalide K // weak cytotox. // *
1450 // N // mandelalide L // cytotox. to HTCL panel. // *

660 Chordata *Lissoclinum bistratum* // Raja Ampat, Papua Bar, Indonesia // Bistratamides M and N, oxazole-thiazole containing cyclic hexapeptides isolated from *Lissoclinum bistratum* interaction of zinc (II) with bistratamide K
1451 // N // bistratamide M // mod. GI_{50} to 4 HTCLs. // abs config by ozonolysis, hydrolysis and Marfey's.
1452 // N // bistratamide N // mod. GI_{50} to 4 HTCLs. // abs config by ozonolysis, hydrolysis and Marfey's.

661 Chordata *Didemnum molle* // Ant Atoll, Pohnpei, Federated States of Micronesia // Cyclic hexapeptide dimers, antatollamides A and B, from the ascidian *Didemnum molle*. A tryptophan-derived auxiliary for L- and D-amino acid assignments
1453 // N // antatollamide A // IA to CLL cell line. // abs config using novel variant of Marfey's reagent.
1454 // N // antatollamide B // * // *

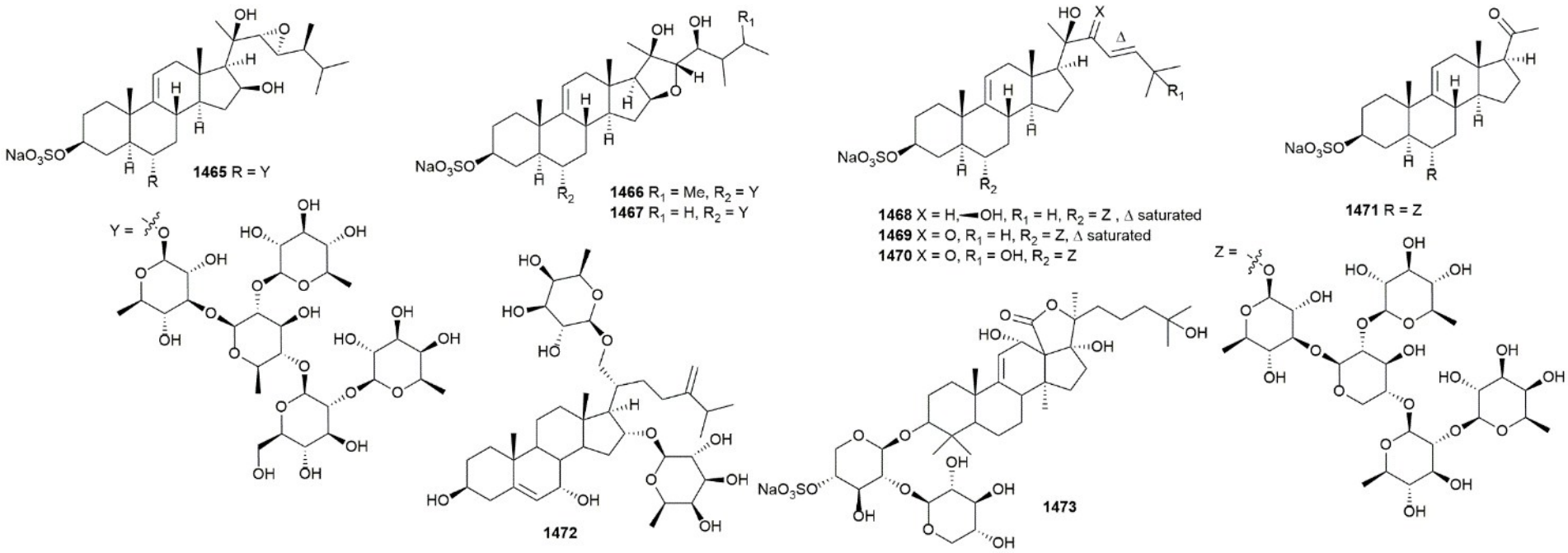


692 Echinodermata *Ophionereis reticulata* // Paracuru beach, Ceará State, Brazil // Isolation of chamigrene sesquiterpenes and absolute configuration of isoobtusadiene from the brittle star *Ophionereis reticulata*
1455 // R // isoobtusadiene // * // abs config by Moshers and TDDFT ECD calcs.
1456 // N // acetyl isoobtusadiene // * // Identical to acetylated AC31440/1

693 Echinodermata *Alloeocomatella polycladia* // Mizugama, Okinawa, Japan // Four aromatic sulfates with an inhibitory effect against HCV NS3 helicase from the crinoid *Alloeocomatella polycladia*
1457 // N // C14H9NaO8S // weak inhib. of HCV NS3 helicase. // *
1458 // N // C16H13NaO8S // weak inhib. of HCV NS3 helicase. // *
1459 // N // C28H16Na2O16S2 // mod. inhib. of HCV NS3 helicase. // Negative CE in ECD.
1460 // N // C30H20Na2O16S2 // mod. inhib. of HCV NS3 helicase. // Negative CE in ECD.

694 Echinodermata *Pentaceraster gracilis* // Bac Van, Co To, Quangninh, Vietnam // Steroid glycosides from the starfish *Pentaceraster gracilis*
1461 // N // pentaceroside A // Not cytotox. to panel of 5 HTCLs. // *
1462 // N // pentaceroside B // Not cytotox. to panel of 5 HTCLs. // *

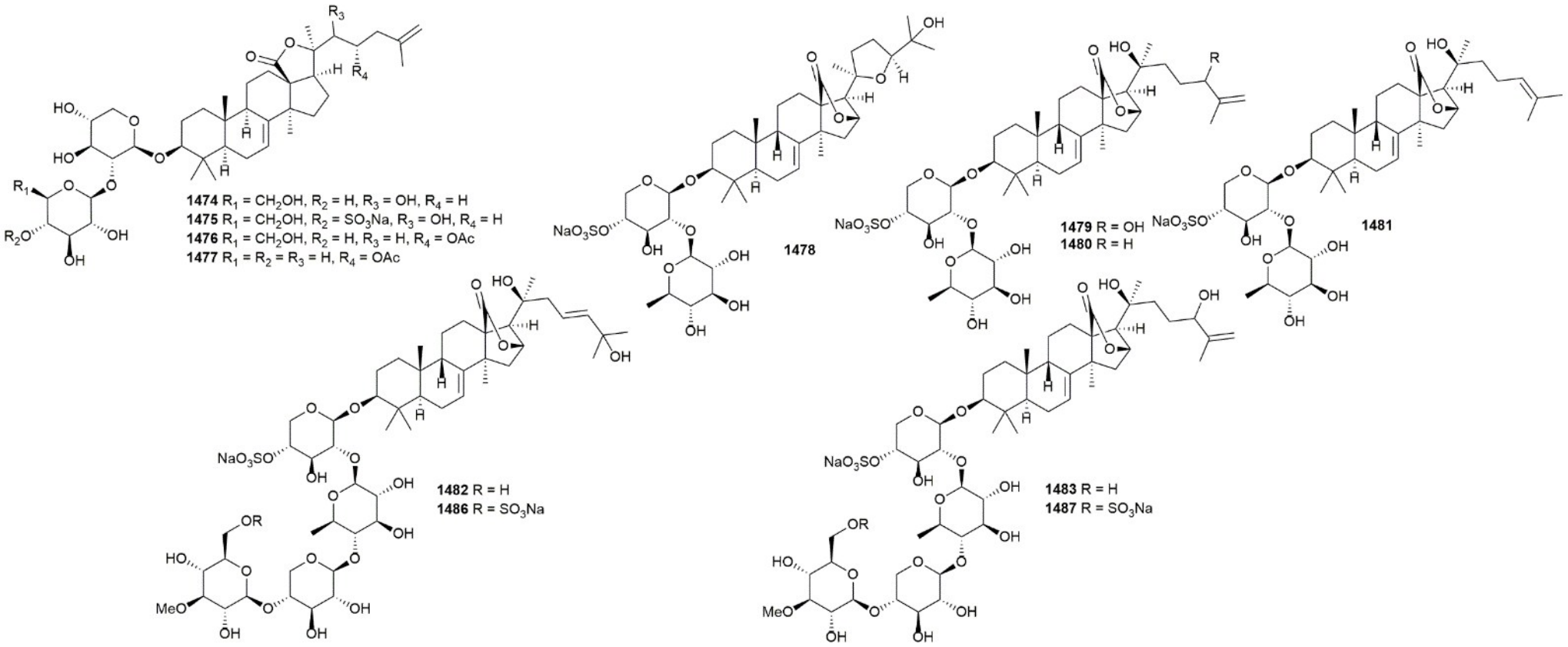
695 Echinodermata *Pentaceraster regulus* // Cham Is., Vietnam // Sulfated steroidal glycosides, regulusosides S1 and S2, from the tropical starfish *Pentaceraster regulus*
1463 // N // regulusoside S1 // * // *
1464 // N // regulusoside S2 // * // *



696 Echinodermata *Pentaceraster regulus* // Cham Is., Vietnam // Furostane series asterosaponins and other unusual steroid oligoglycosides from the tropical starfish *Pentaceraster regulus*
1465 // N // pentareguloside A // weakly cytotox. to RAW 264.7 cell line. // *
1466 // N // pentareguloside B // Not cytotox. // *
1467 // N // pentareguloside C // Not cytotox. and reduced ROS levels in LPS stimulated RAW 264.7 cells // *
1468 // N // pentareguloside D // Not cytotox. and reduced ROS levels in LPS stimulated RAW 264.7 cells // *
1469 // N // pentareguloside E // Not cytotox. and reduced ROS levels in LPS stimulated RAW 264.7 cells // *
1470 // N // pentareguloside F // Not cytotox. // *
1471 // N // pentareguloside G // Not cytotox. // *

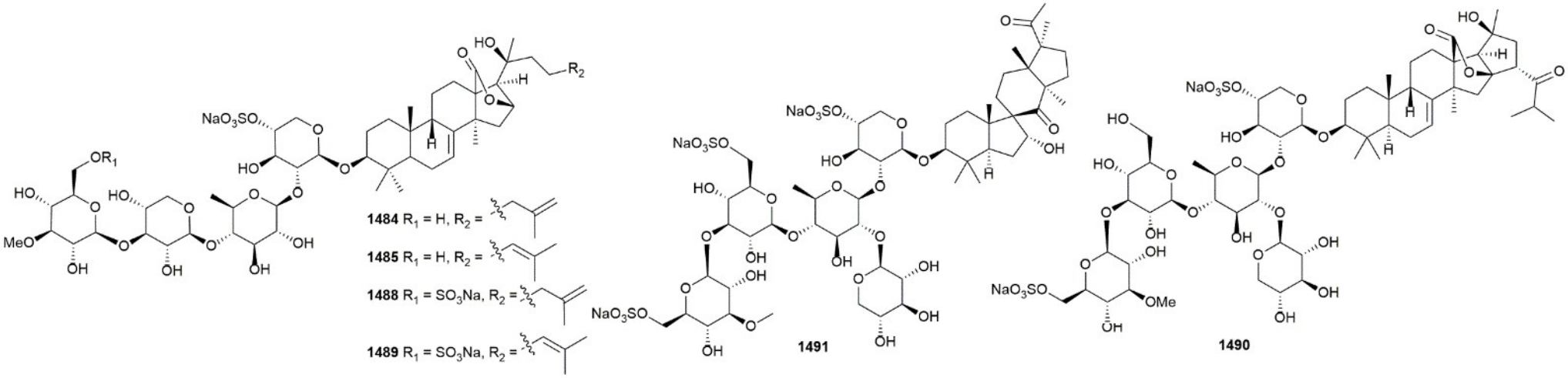
697 Echinodermata *Choriaster granulatus* // Van Phong Bay, Vietnam // A new steroidal glycoside granulatoside C from the starfish *Choriaster granulatus*, unexpectedly combining structural features of polar steroids from several different marine invertebrate phyla
1472 // N // granulatoside C // * // D-config of pyranoses by cleavage and derivatisation.

698 Echinodermata *Holothuria nobilis* // Fujian Dongshan Ocean // A novel antitumor compound nobiliside D isolated from sea cucumber (*Holothuria nobilis* Selenka)
1473 // N // nobiliside D // cytotox. and apoptotic to HTCLs. // *



699 Echinodermata *Stichopus horrens* // Hai Van - Son Cha, Hue, Vietnam // Cytotoxic triterpene diglycosides from the sea cucumber *Stichopus horrens*
1474 // N // stichorrenoside A // Mod cytotox. towards 5 HTCLs. // *
1475 // N // stichorrenoside B // Mod cytotox. towards 5 HTCLs. // *
1476 // N // stichorrenoside C // mod. to mod. cytotox. towards 5 HTCLs. // *
1477 // N // stichorrenoside D // mod. to mod. cytotox. towards 5 HTCLs. // *

700 Echinodermata *Neothyonidium magnum* // Nha Trang bay, Vietnam // Nine new triterpene glycosides, magnumosides A1–A4, B1, B2, C1, C2 and C4, from the Vietnamese sea cucumber *Neothyonidium* (=*Massinium*) *magnum*: structures and activities against tumor cells independently and in synergy with radioactive irradiation
1478 // N // magnumoside A1 // weak haemolytic. // *
1479 // N // magnumoside A2 // Haemolytic and cytotox. // *
1480 // N // magnumoside A3 // Haemolytic and cytotox. and enhances radiolytic cytotox. // *



1481 // N // magnumoside A4 // Haemolytic and cytotox. // *
1482 // N // magnumoside B1 // weak haemolytic. // *
1483 // N // magnumoside B2 // weak haemolytic. // *

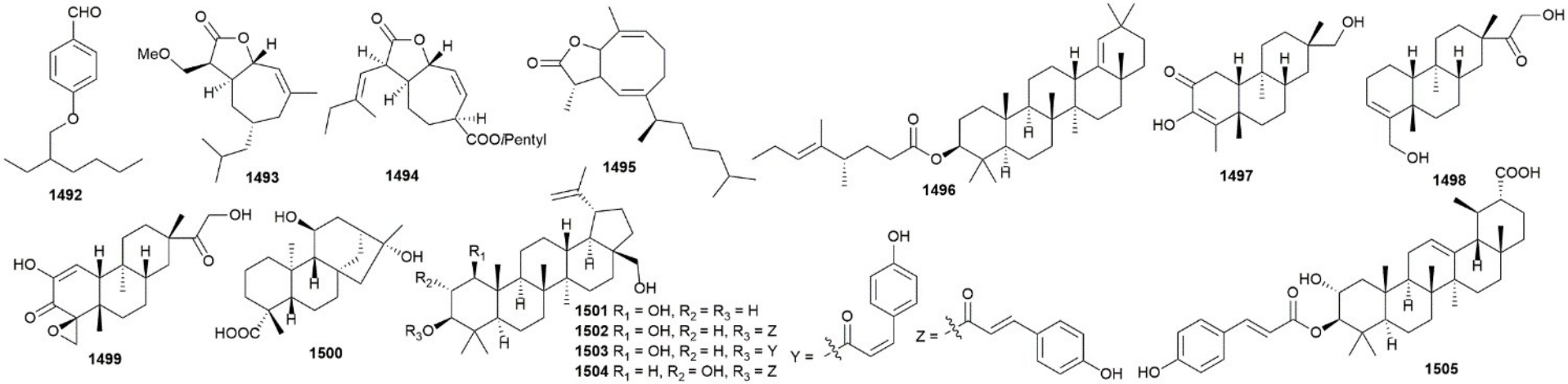
701 Echinodermata *Massinium magnum* // Nha Trang bay, Tam Is., Vietnam // Magnumosides B3, B4 and C3, mono- and disulfated triterpene tetraosides from the Vietnamese sea cucumber *Neothyonidium* (= *Massinium*) *magnum*
1484 // N // magnumoside B3 // Haemolytic and cytotox. // *
1485 // N // magnumoside B4 // Haemolytic and cytotox. // *

700 Echinodermata *Neothyonidium magnum* // Nha Trang bay, Vietnam // Nine new triterpene glycosides, magnumosides A1–A4, B1, B2, C1, C2 and C4, from the Vietnamese sea cucumber *Neothyonidium* (=*Massinium*) *magnum*: structures and activities against tumor cells independently and in synergy with radioactive irradiation
1486 // N // magnumoside C1 // Haemolytic and cytotox. and enhances radiolytic cytotox. // *
1487 // N // magnumoside C2 // Haemolytic and cytotox. and enhances radiolytic cytotox. // *

701 Echinodermata *Massinium magnum* // Nha Trang bay, Tam Is., Vietnam // Magnumosides B3, B4 and C3, mono- and disulfated triterpene tetraosides from the Vietnamese sea cucumber *Neothyonidium* (= *Massinium*) *magnum*
1488 // N // magnumoside C3 // Haemolytic and cytotox. // *

700 Echinodermata *Neothyonidium magnum* // Nha Trang bay, Vietnam // Nine new triterpene glycosides, magnumosides A1–A4, B1, B2, C1, C2 and C4, from the Vietnamese sea cucumber *Neothyonidium* (=*Massinium*) *magnum*: structures and activities against tumor cells independently and in synergy with radioactive irradiation
1489 // N // magnumoside C4 // Haemolytic and cytotox. and enhances radiolytic cytotox. // *

702 Echinodermata *Cucumaria fallax* // // Fallaxosides B1 and D3 , triterpene glycosides with novel skeleton types of aglycones from the sea cucumber Cucumaria fallax
1490 // N // fallaxoside B1 // * // *
1491 // N // fallaxoside D3 // * // *



719 Tracheophyta *Rhizophora mangle* // Reserva Biológica e Antropológica de Guaratiba, Rio de Janeiro, Brazil // Diterpenes and a new benzaldehyde from the mangrove plant *Rhizophora* mangle
1492 // N // p-oxy-2-ethylhexyl benzaldehyde // * // *

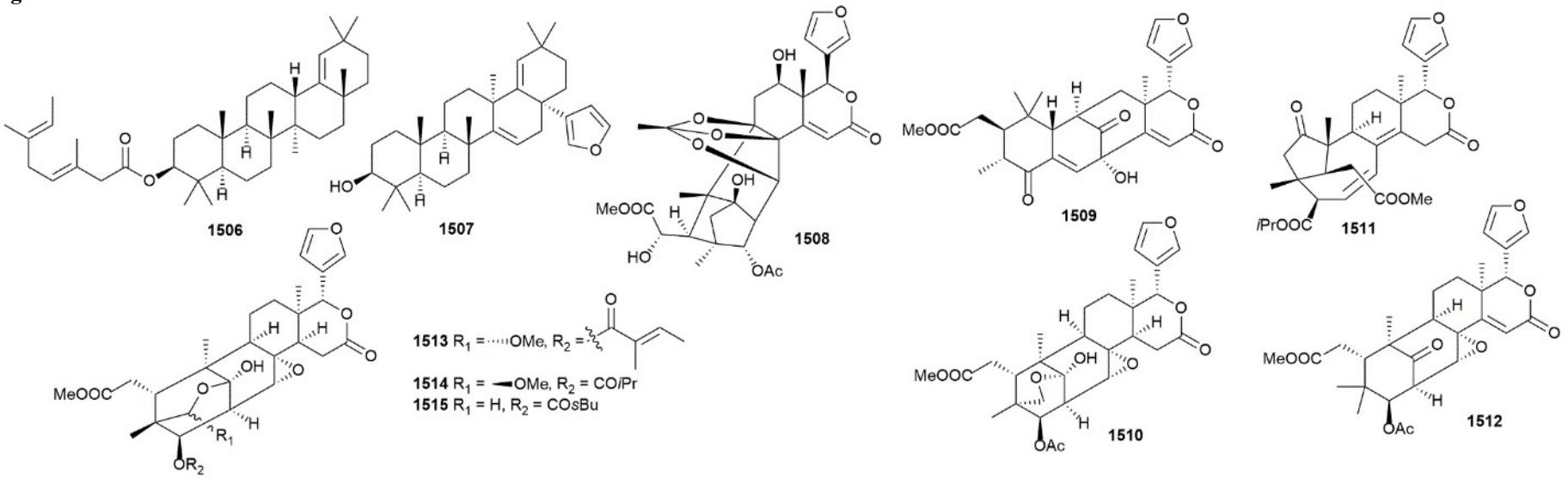
720 Tracheophyta *Rhizophora annamalayana* // Pichavaram, India // Biogenic guaianolide-type sesquiterpene lactones with antioxidative and anti-inflammatory properties from natural mangrove hybrid *Rhizophora annamalayana*
1493 // N // (Z)-3α,4,5,6-tetrahydro-5α-isobutyl-2β-(methoxymethyl)-7-methyl-3H-cyclohepta[b]carbolactone // weak AI // *
1494 // N // (7Z)-isopentyl 3α,4,5,6,7,8-hexahydro-2β-((E)-11-methylbut-10-enyl)-1-oxo-2H-cyclohepta[b]furan-6-carboxylate // weak AI // *

721 Tracheophyta *Rhizophora mucronata* // Vallarpadam area of Kochi, India // Two rare antioxidative prenylated terpenoids from loop-root Asiatic mangrove *Rhizophora mucronata* (Family Rhizophoraceae) and their activity against pro-inflammatory cyclooxygenases and lipoxidase
1495 // N // (4E,8Z)-3,3a,6,7-tetrahydro-3,9-dimethyl-5-(6-methylheptan-2-yl)cycloocta[b]furan-2(9aH)-one // weak AI // *
1496 // N // (35E)-1,2,3,5,6,6-icosahydro-4,4,8b,10,14,17,20,20-octamethylpicen-3-yl-34,35-dimethyloct-31-enoate // weak AI // *

722 Tracheophyta *Ceriops tagal* // Hainan Is., P. R. China // Three new dolabrane diterpenes from the Chinese mangrove plant of *Ceriops tagal*
1497 // N // tagalene G // * // *
1498 // N // tagalene H // * // *
1499 // N // tagalene I // * // *

723 Tracheophyta *Wedelia prostata* // Lang-Qi Is., Fujian Province, P. R. China // Diterpenoids from *Wedelia prostrata* and their derivatives and cytotoxic activities
1500 // N // 11β,16α-dihydroxy-ent-kauran-19-oic acid // Not cytotox. to 3 HTCLs. // *

724 Tracheophyta *Sonneratia paracaseolaris* // Wenchang, Hainan Province, China // Cytotoxic and antiviral triterpenoids from the mangrove plant *Sonneratia paracaseolaris*
1501 // N // paracaseolin A // AV (H1N1) and not cytotox. to 4 TCLs. // *
1502 // N // paracaseolin B // weak cytotox. to P388 cell line. // *
1503 // N // paracaseolin C // weak cytotox. to 3 TCLs. // *
1504 // N // paracaseolin D // weak to mod. cytotox. to 3 TCLs. // *
1505 // N // paracaseolin E // weak cytotox. to HeLa cell line. // *

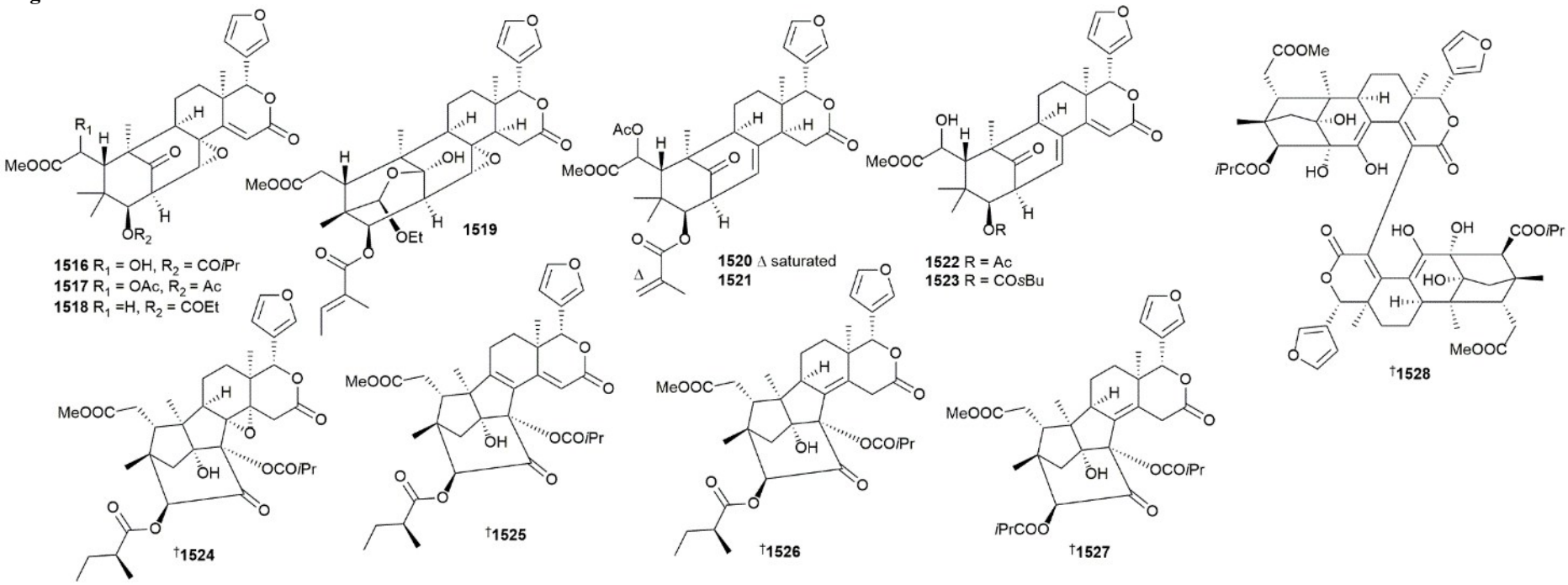


725 Tracheophyta *Rhizophora mucronata* // Vallarpadam, Ernakulam, Kerala State, India // Two rare antioxidant and anti-inflammatory oleanenes from loop root Asiatic mangrove *Rhizophora mucronata*
1506 // N // olean-18(19)-en-3β-yl-(3,6-dimethyl-3E,6Z-dienoate) // AO and weak AI // *
1507 // N // (13α) 27-frido-olean-14(15)-en-(17α)-furanyl-3β-ol // AO and weak AI // *

726 Tracheophyta *Xylocarpus granatum* // Hainan Is., S. China // Granaxylocartin A, new limonoid from the seeds of *Xylocarpus granatum*
1508 // N // granaxylocartin A // * // isol. from seeds.

727 Tracheophyta *Xylocarpus granatum* // Hainan Is., P. R. China // Xylomexicanins I and J: limonoids with unusual B/C rings from *Xylocarpus granatum*
1509 // N // xylomexicanin I // * // isol. from seeds.
1510 // N // xylomexicanin J // * // isol. from seeds.

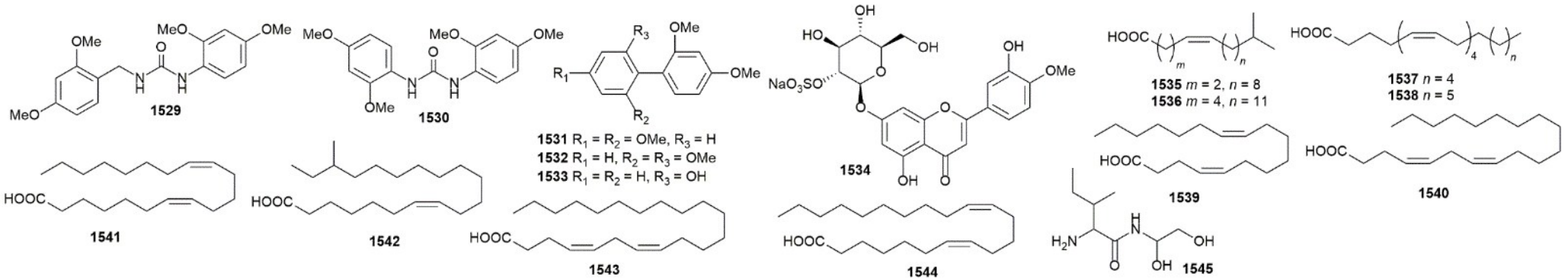
728 Tracheophyta *Xylocarpus granatum* // Jharkhali Is., Sundarbans, West Bengal, India // Sundarbanxylogranins A-E, five new limonoids from the Sundarban mangrove, *Xylocarpus granatum*
1511 // N // sundarbanxylogranin A // IA // isol. from seeds.
1512 // N // sundarbanxylogranin B // mod AV (HIV-1). // isol. from seeds.
1513 // N // sundarbanxylogranin C // IA // isol. from seeds.
1514 // N // sundarbanxylogranin D // IA // isol. from seeds.
1515 // N // sundarbanxylogranin E // IA // isol. from seeds.



729 Tracheophyta *Xylocarpus granatum* // Trang province, Thailand // Thaixylogranins A-H: eight new limonoids from the Thai mangrove, *Xylocarpus granatum*
1516 // N // thaixylogranin A // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1517 // N // thaixylogranin B // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1518 // N // thaixylogranin C // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1519 // N // thaixylogranin D // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1520 // N // thaixylogranin E // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1521 // N // thaixylogranin F // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1522 // N // thaixylogranin G // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.
1523 // N // thaixylogranin H // weak cytotox. to panel of 6 HTCLs. // isol. from seeds.

730 Tracheophyta *Xylocarpus moluccensis* // Krishna estuary, Andhra Pradesh, India // Krishnolides A-D: new 2-ketokhayanolides from the Krishna mangrove, *Xylocarpus moluccensis*
1524 // N // krishnolide A // Strongly AV (HIV-1). // From seeds. abs config by X-ray.
1525 // N // krishnolide B // IA // From seeds. abs config by compar. of ECD data.
1526 // N // krishnolide C // IA // From seeds. abs config by compar. of ECD data.
1527 // N // krishnolide D // IA // From seeds. abs config by compar. of ECD data.

731 Tracheophyta *Xylocarpus moluccensis* // Krishna mangrove swamps, India // Krishnadimer A, an axially chiral non-biaryl natural product: discovery and biomimetic synthesis
1528 // N // krishnadimer A // IA to panel of 8 HTCLs. // abs config by X-ray.



733 Ascomycota *Lichina pygmaea* // Northeastern Atlantic Ocean, Ireland // Isolation and synthesis of pygmanilines, phenylurea derivatives from the Northeastern Atlantic lichen *Lichina pygmaea*
1529 // N // pygmaniline A // AO // synth.ed.
1530 // N // pygmaniline B // AO // synth.ed.
1531 // M // 2,2',4,4'-tetramethoxybiphenyl // weak AO // Previously reported as synth. cmpd.
1532 // M // 2,2',4,6'-tetramethoxybiphenyl // IA // Previously reported degrad. product.
1533 // M // 2'-hydroxy-2,4-dimethoxybiphenyl // AO // Previously reported synth. cpd.

734 Tracheophyta *Thalassia hemprichii* // North Jeddah, Saudi Arabia // Thalassiolin D: a new flavone O-glucoside sulphate from the seagrass *Thalassia hemprichii*
1534 // N // thalassiolin D // *mod. inhib. of HCV NS3-N54A protease.* // *

735 Foraminifera *Bathysiphon lanosum* // Kuril Basin, Sea of Okhotsk // New and uncommon fatty acids in lipids of deep-sea Foraminifera
1535 // N // i-16:1(n-12) // * // *
1536 // N // i-21:1(n-14) // * // *
1537 // N // 22:4(n-8) // * // *
1538 // N // 23:4(n-9) // * // *
1539 // N // 18:2Δ4,11 // * // *
1540 // N // 20:2(n-13) // * // *
1541 // N // 20:2Δ7,12 // * // *
1542 // N // ai-21:1(n-14) // * // *
1543 // N // 21:2Δ4,7 // * // *
1544 // N // 22:2Δ7,12 // * // *

736 * // Hawaii // Pufferfish mortality associated with novel polar marine toxins in Hawaii
1545 // N // C8H18N2O3 // * // Very limited sample size so struct. speculative.

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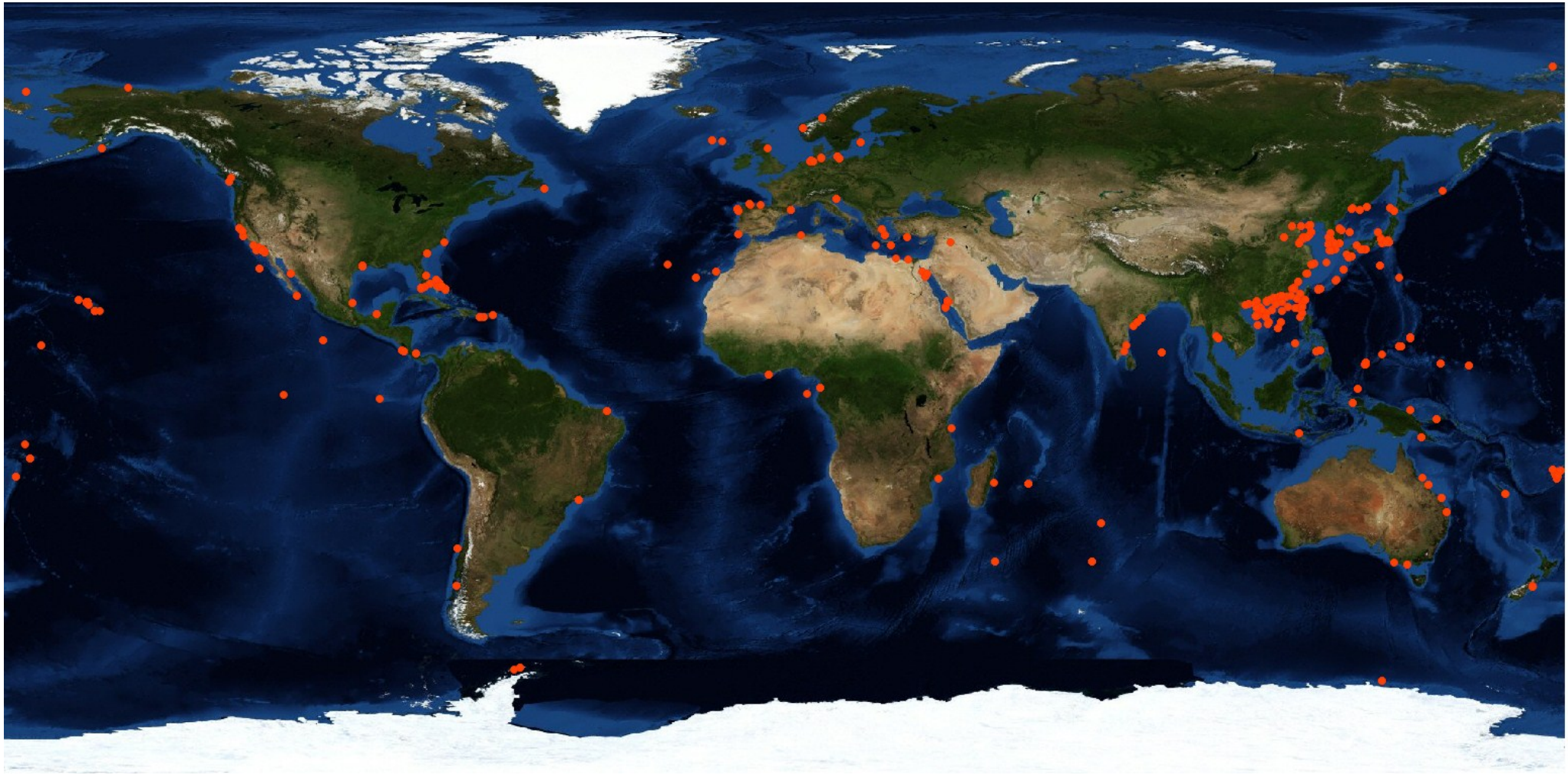
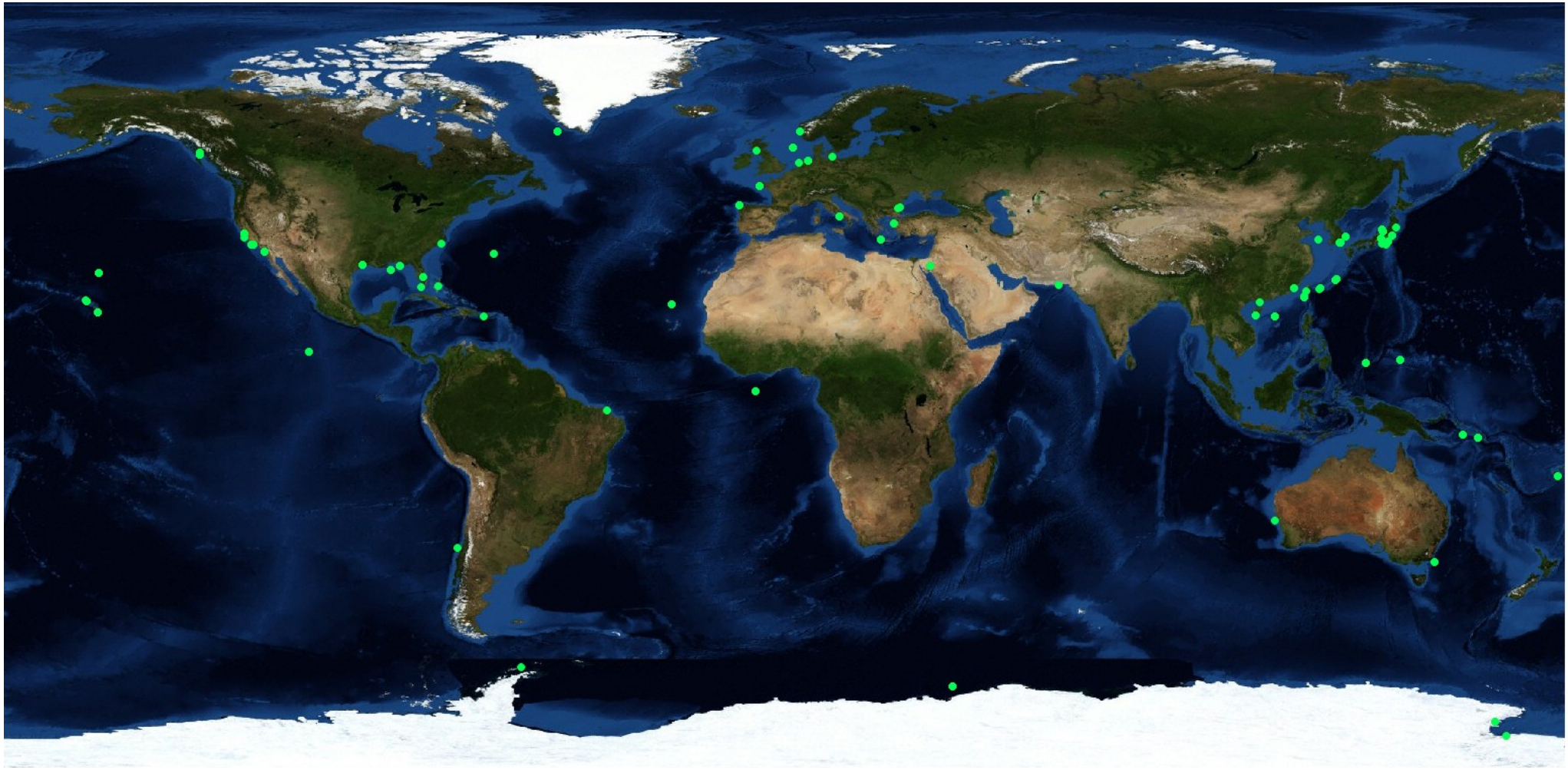
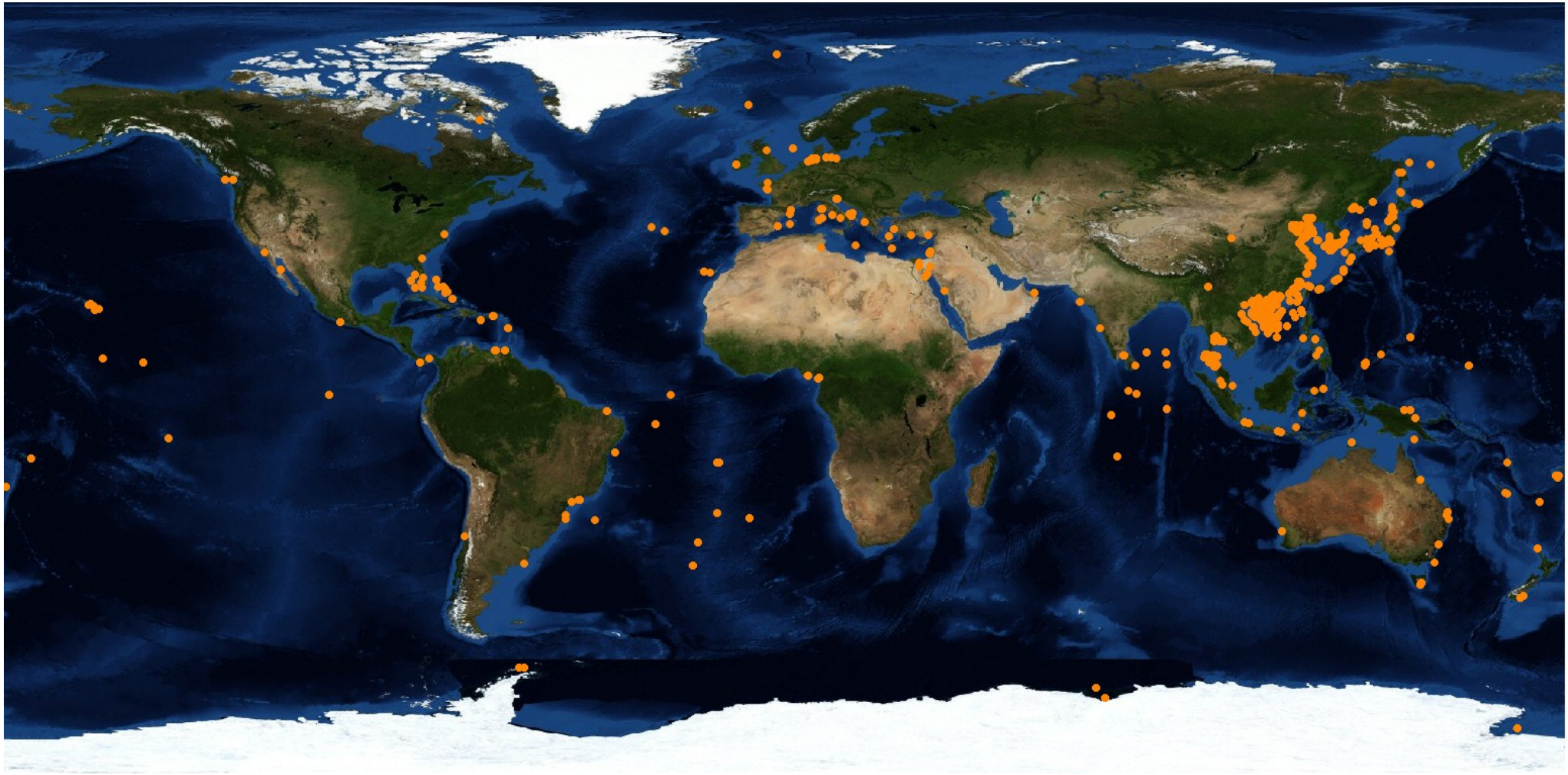


Actinobacteria MNP worldwide distribution

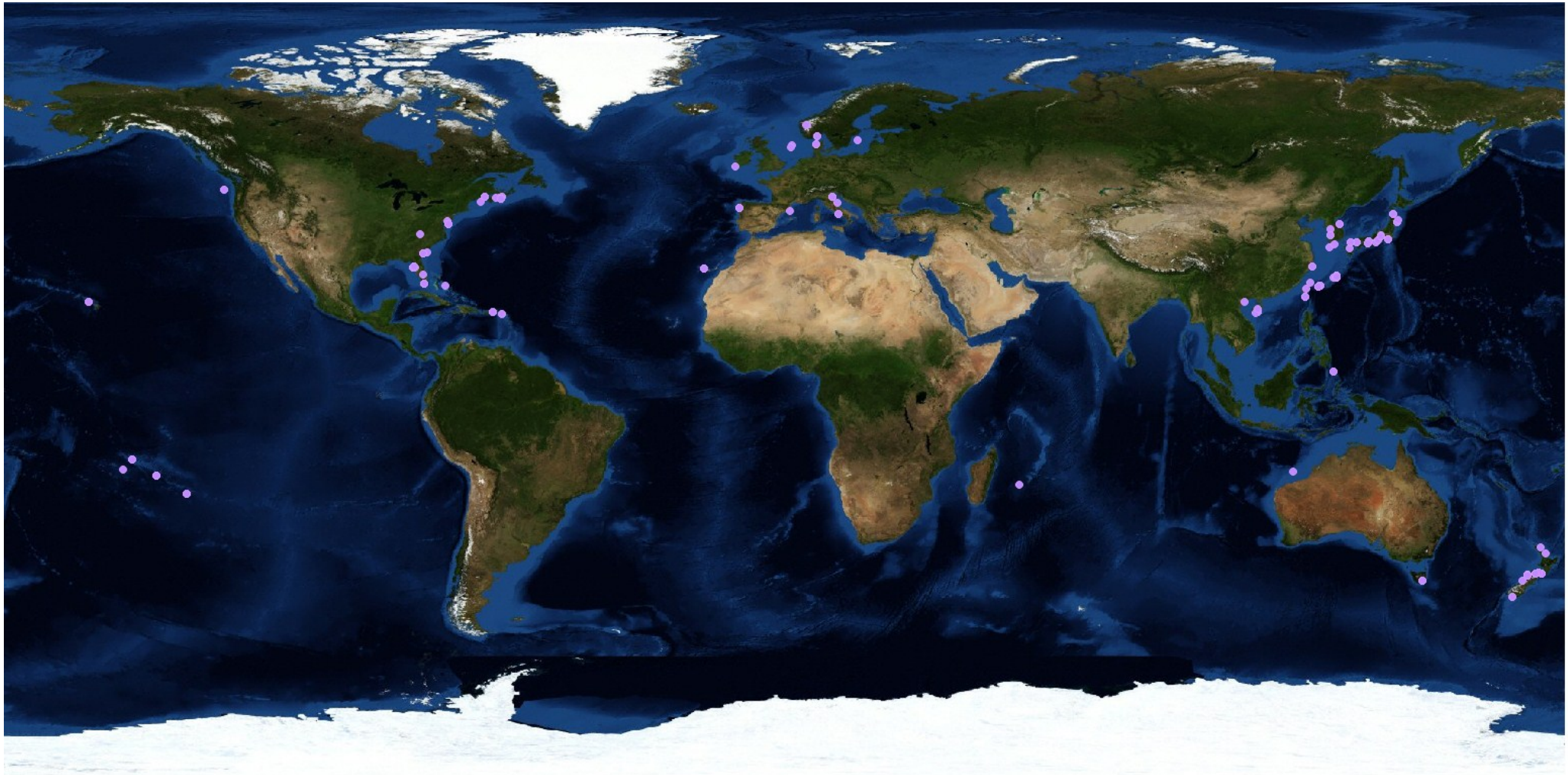


Proteobacteria MNP worldwide distribution

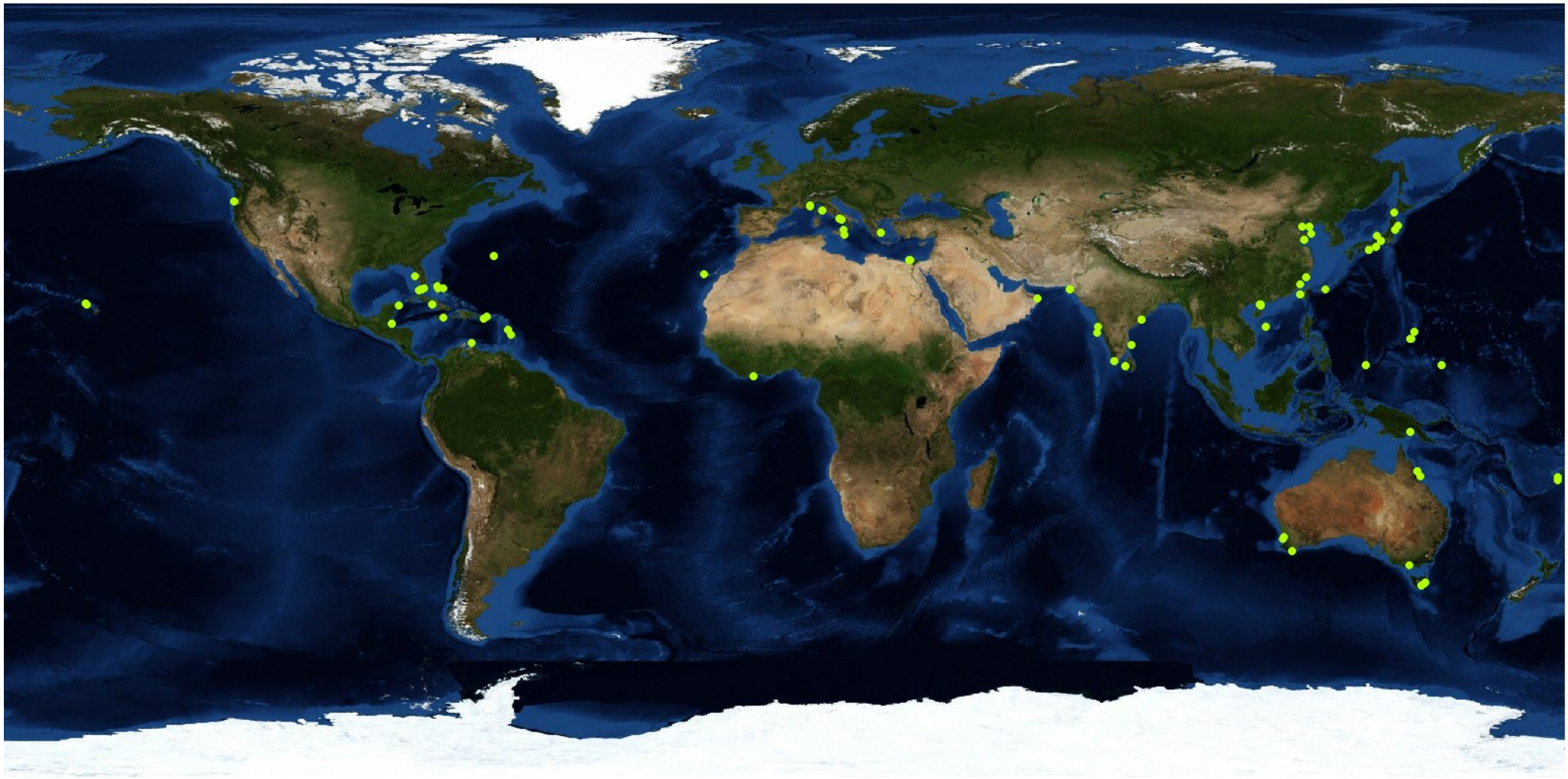
Cyanobacteria MNP worldwide distribution



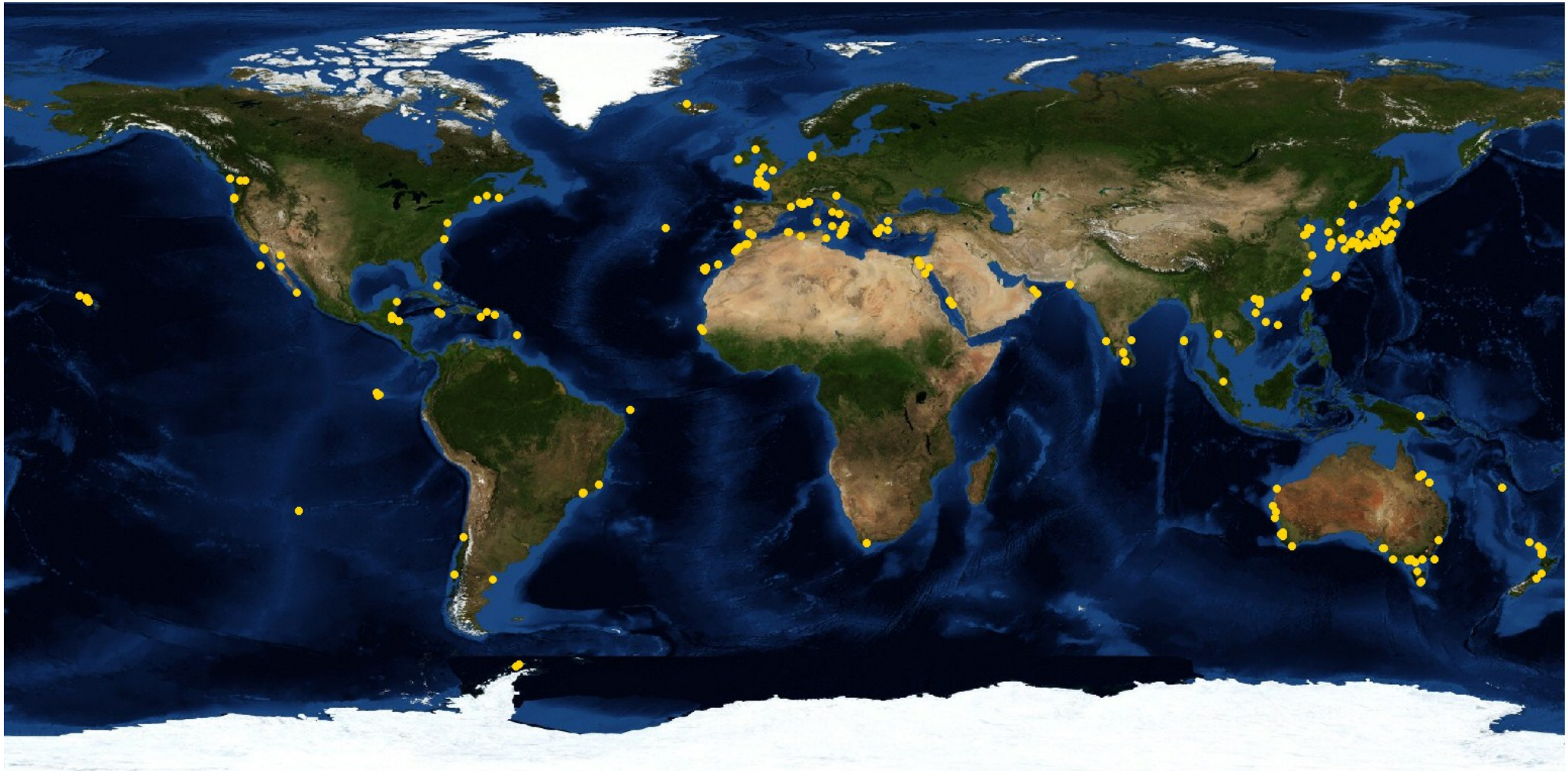
Ascomycota MNP worldwide distribution



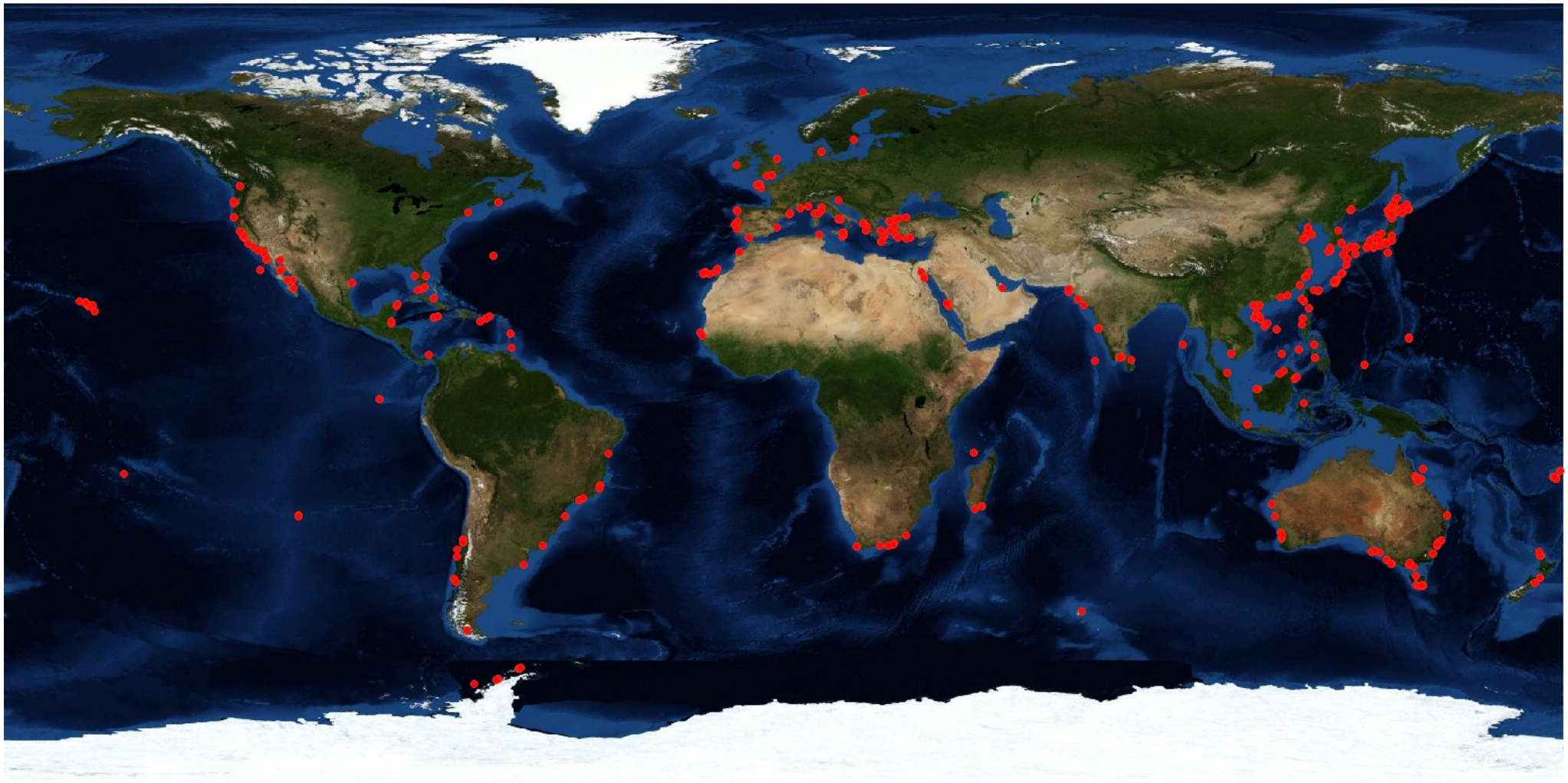
Dinoflagellate MNP worldwide distribution



Green algae MNP worldwide distribution

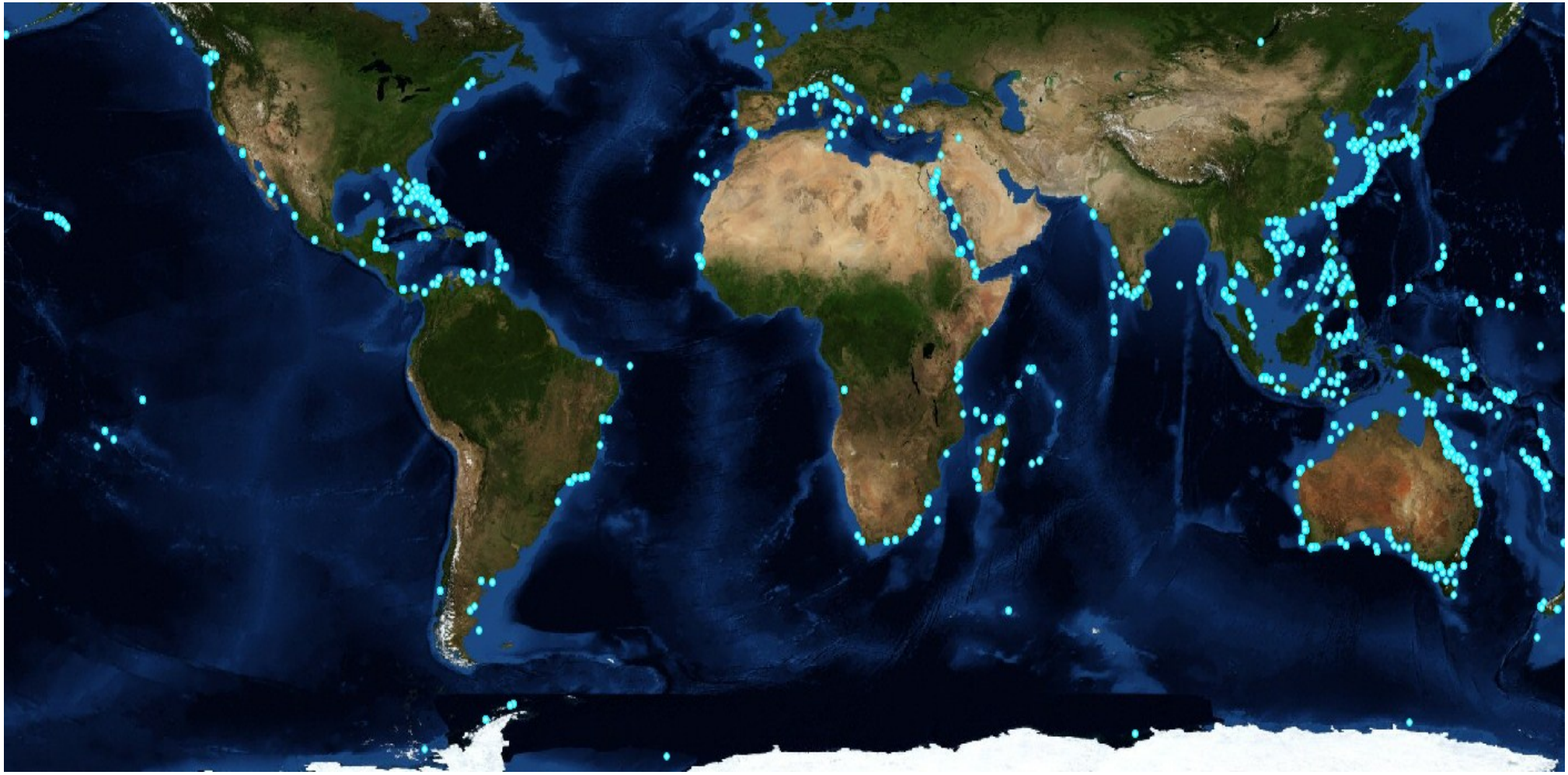


Brown algae MNP worldwide distribution

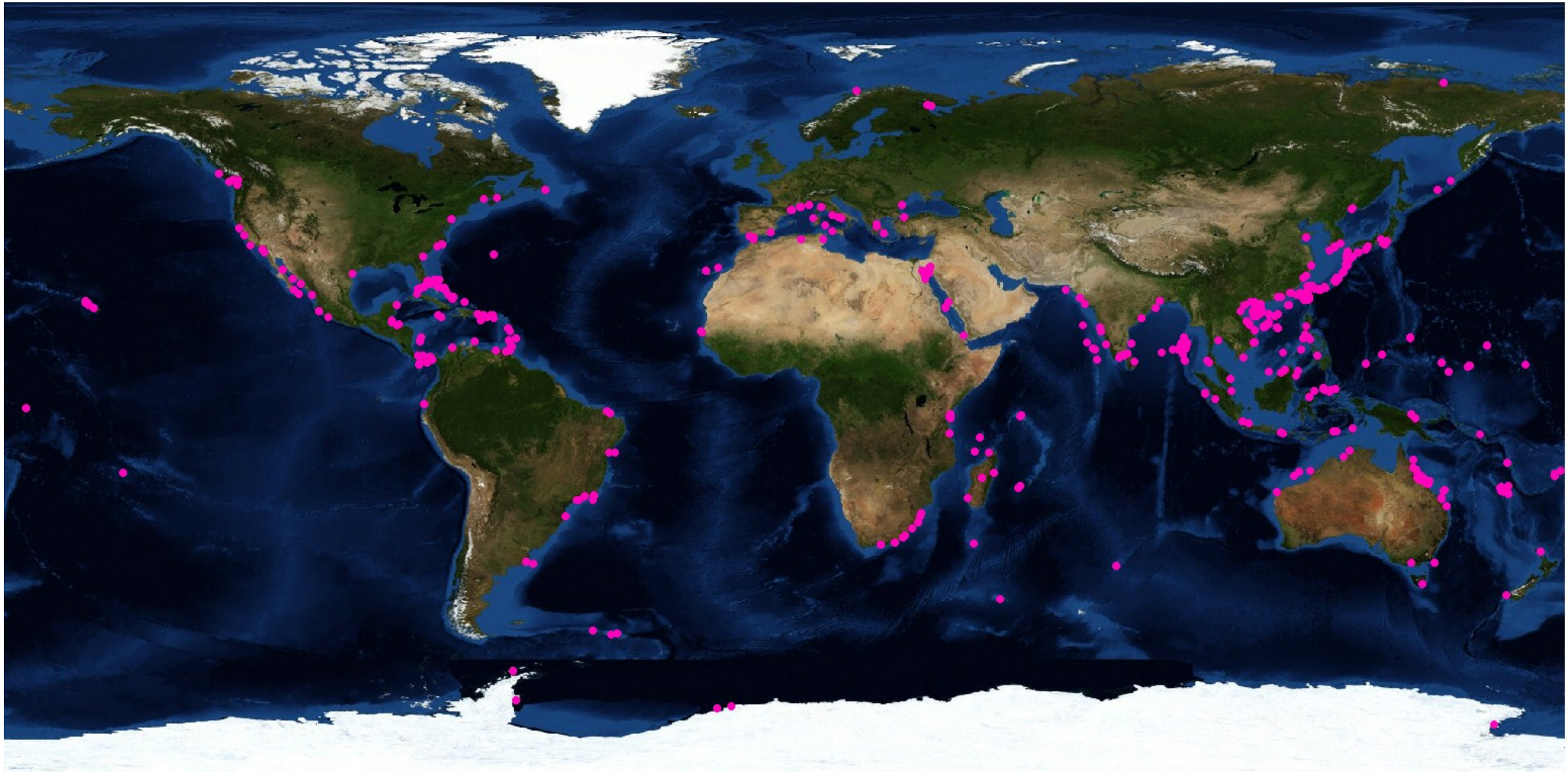


Red algae MNP worldwide distribution

16 Conclusion – MNP worldwide distributions

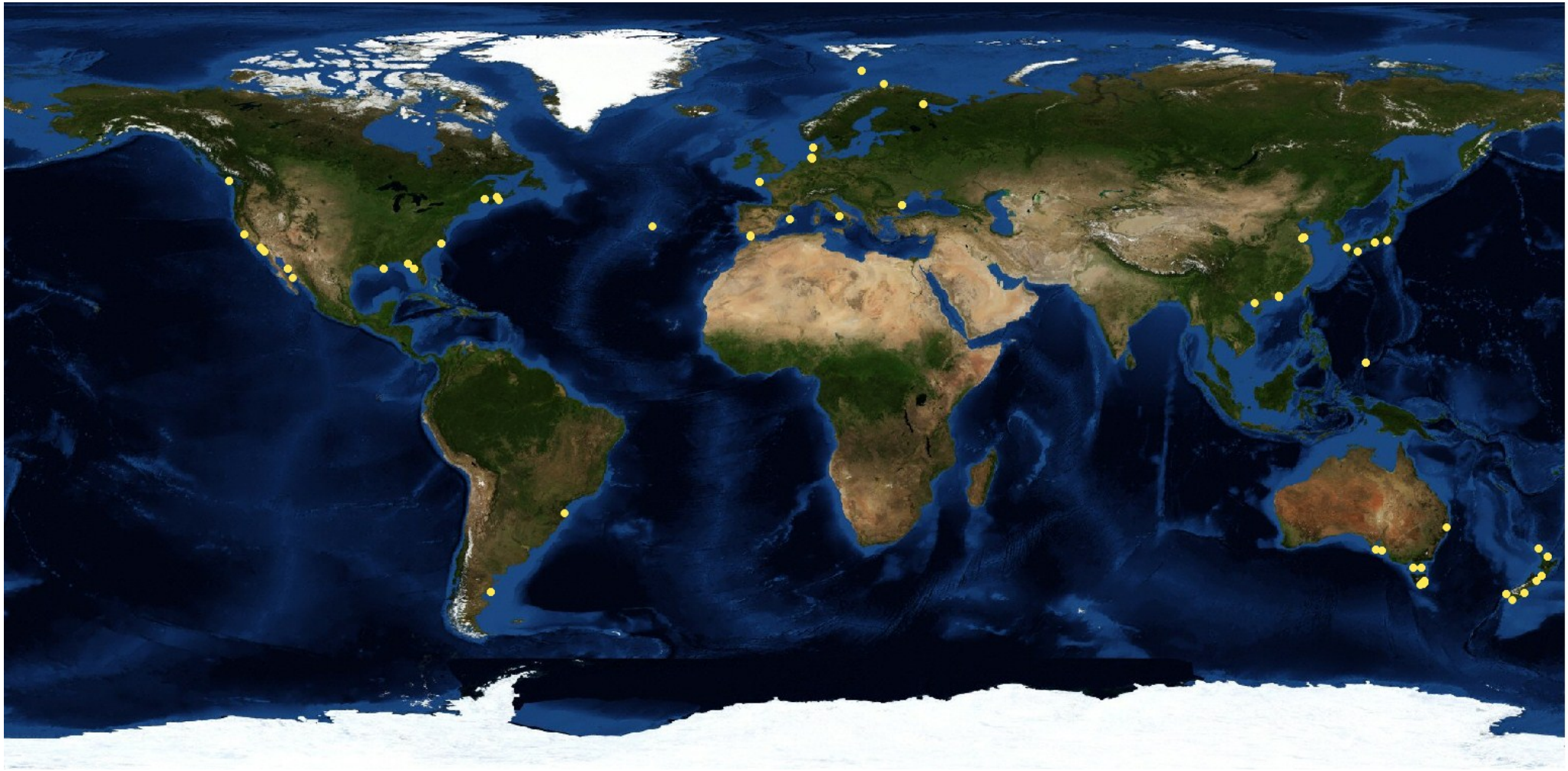


Sponge MNP worldwide distribution

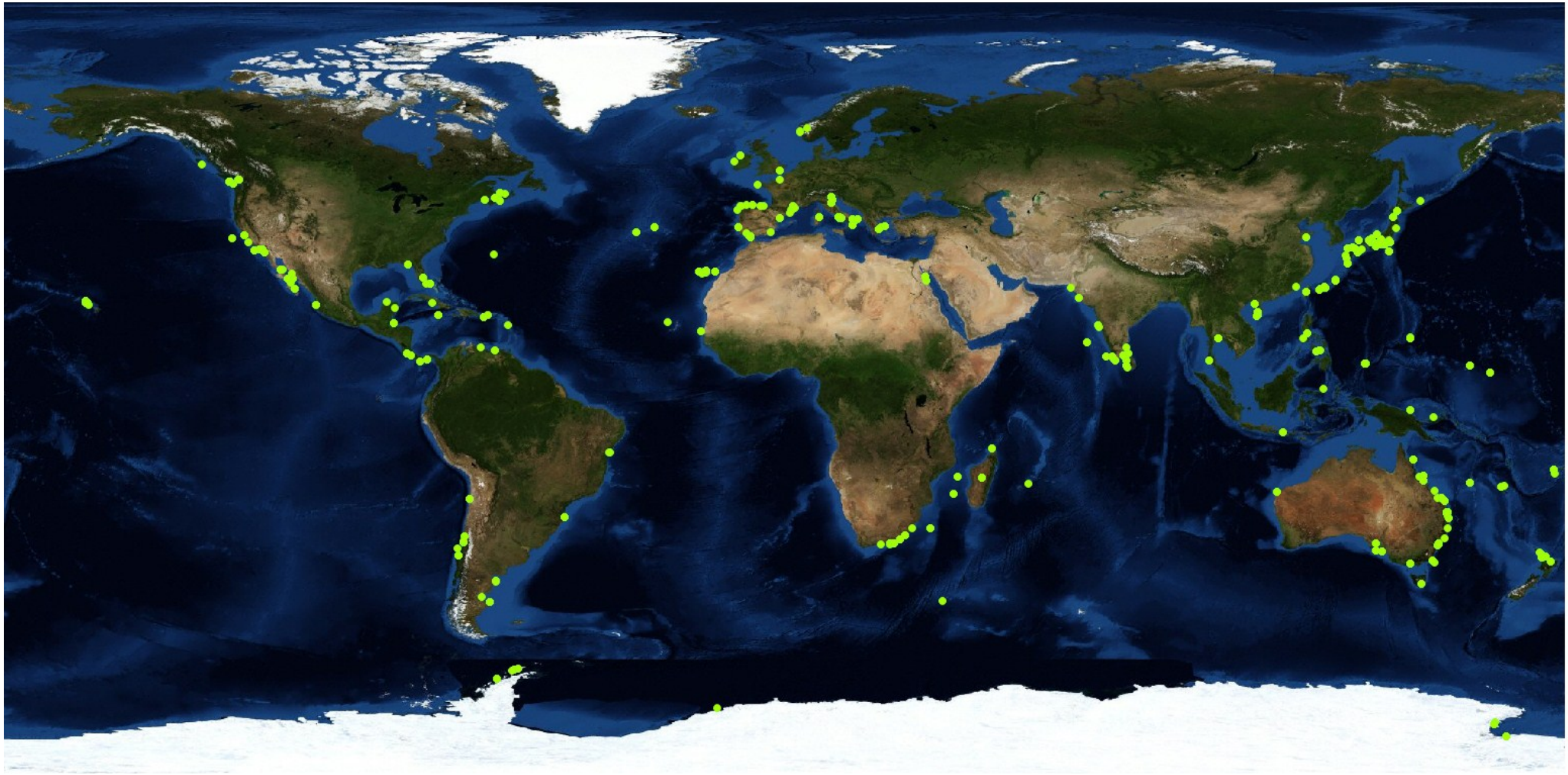


Cnidaria MNP worldwide distribution

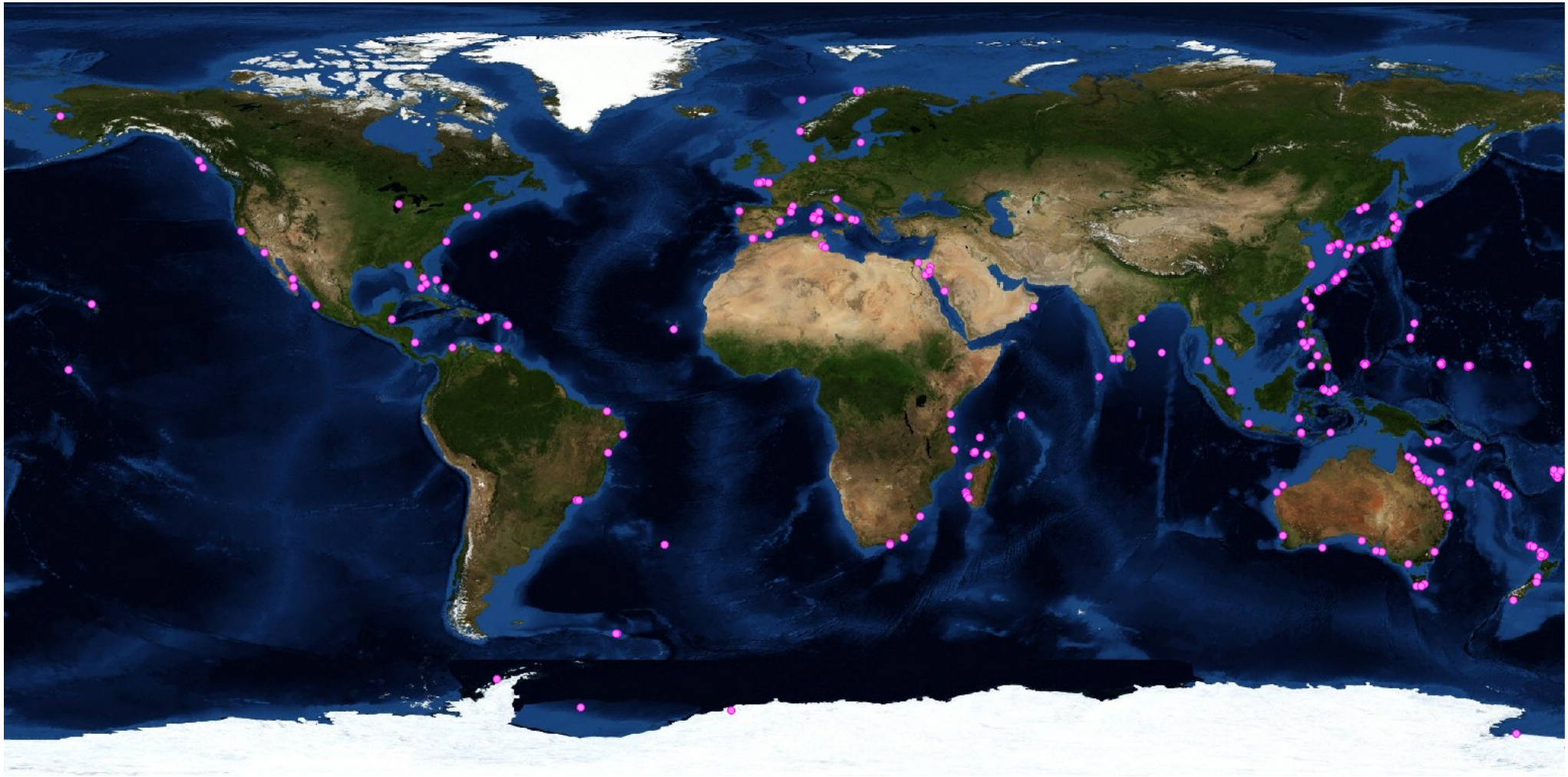
16 Conclusion – MNP worldwide distributions



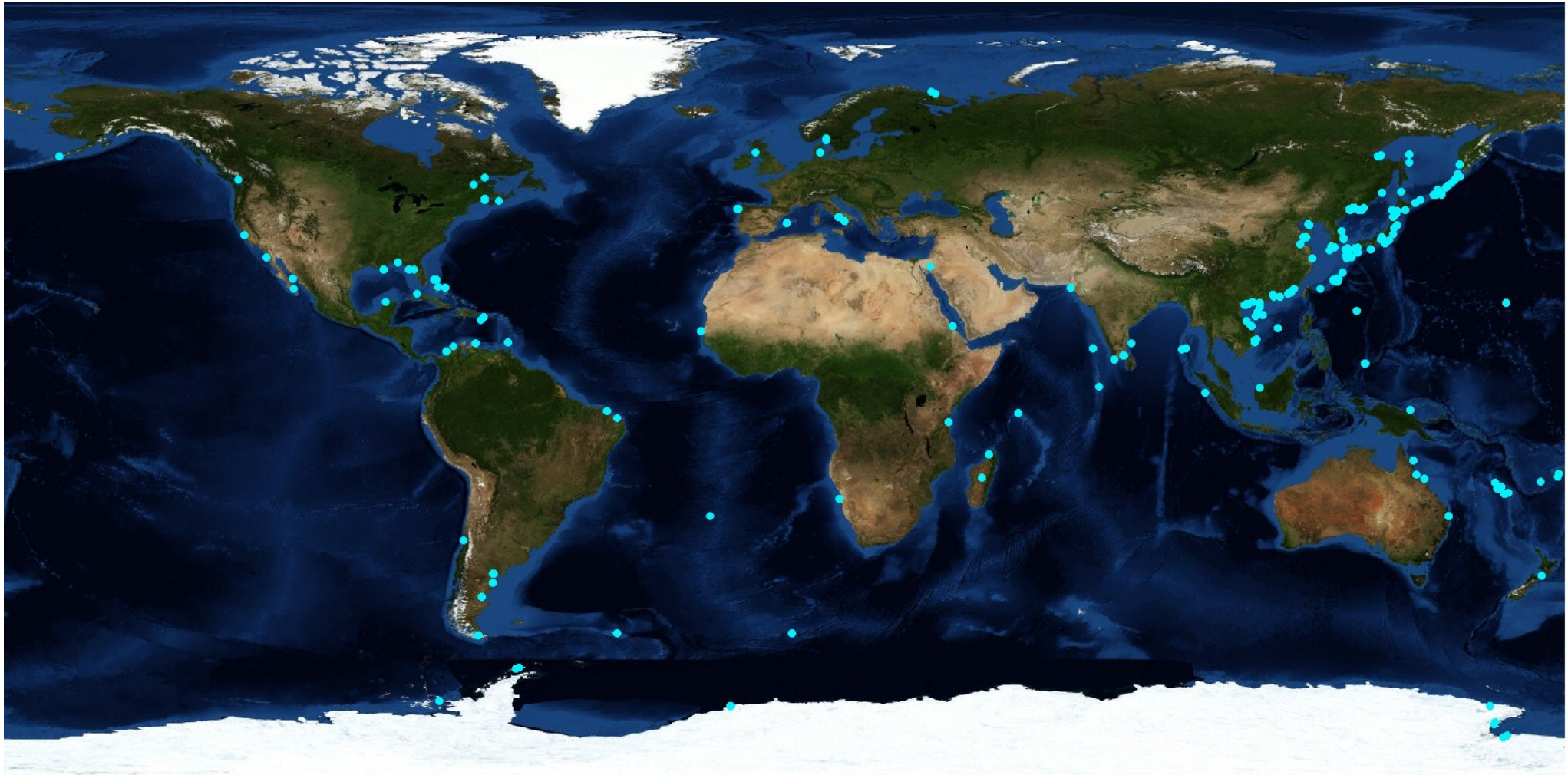
Bryozoan MNP worldwide distribution



Mollusc MNP worldwide distribution

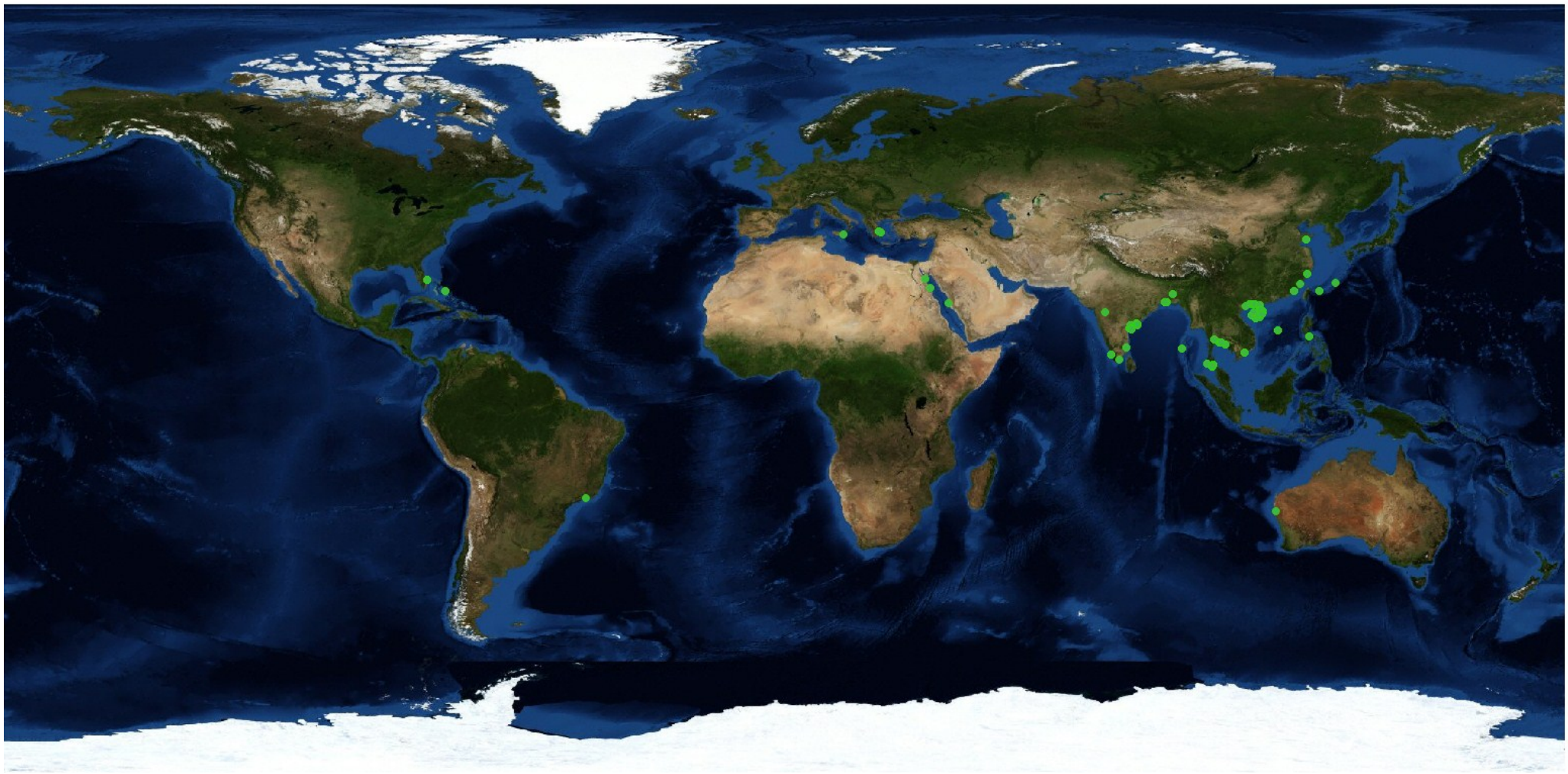


Tunicate (ascidian) MNP worldwide distribution



Echinoderm MNP worldwide distribution

16 Conclusion – MNP worldwide distributions



Mangrove MNP worldwide distribution