psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro

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psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Request PDF on ResearchGate | Psammaplin A, a marine natural product, inhibits aminopeptidase N and suppresses angiogenesis in vitro | Psammaplin A (PsA) is a phenolic natural product isolated ...

Psammaplin A, a marine natural product, inhibits
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Abstract. Psammaplin A (PsA) is a phenolic natural product isolated from a marine sponge, which showed a potent cytotoxicity against several cancer cell lines. In present study, PsA was found to inhibit mammalian aminopeptidase N (APN) that plays a key role in tumor cell invasion and angiogenesis.

Psammaplin A, a marine natural product, inhibits
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Synthesis of the Marine Bromotyrosine Psammaplin F and Crystal Structure of a Psammaplin A Analogue Qianjiao Yang, Dan Liu, Deyang Sun, Sen Yang, Guodong Hu, Zuti Wu and Linxiang Zhao * Key Laboratory of Structure-Based Drug Design & Discovery of Ministry of Education, Shenyang Pharmaceutical University, Shenyang 110016, China

Synthesis of the Marine Bromotyrosine Psammaplin F and
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A, a chitinase inhibitor isolated from the Fijian marine sponge Aplysinella rhax Article in Bioorganic & Medicinal Chemistry 10(4):1123-8 Â· May 2002 with 15 Reads

Psammaplin A, a chitinase inhibitor isolated from the
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A (Bisprasin), CAS 110659-91-1, is a high purity chemical isolated from Psammaplysilla purpurea. Antibiotic, antifungal, anti-tumor, DNA methyltransferase inhibitor, HDAC inhibitor, Chitinase inhibitor.

Psammaplin A | CAS 110659-91-1 - Order from Adipogen
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A (11c) is a marine metabolite previously reported to be a potent inhibitor of two classes of epigenetic enzymes: histone deacetylases and DNA methyltransferases. The design and synthesis of a focused library based on the psammaplin A core has been carried out to probe the molecular features of this molecule responsible for its activity.

Defining the Mechanism of Action and Enzymatic Selectivity
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Recently, several derivatives of psammaplin (Psams) from a marine sponge have been known to inhibit the HDAC activity, but the molecular mechanism for the inhibition has not fully understood.

Psammaplin A is a natural prodrug that inhibits class I
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A, a chitinase inhibitor isolated from the fijian marine sponge Aplysinella rhax. Abstract.

Several brominated tyrosine derived compounds, psammaplins A (1), K (2) and L (3) as well as bisaprasin (4) were isolated from the Fijian marine sponge Aplysinella rhax during a bioassay guided isolation protocol.

Psammaplin A, a chitinase inhibitor isolated from the
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Abstract. The symmetrical disulfide psammaplin A from the marine sponge Pseudoceratina sp. was synthesized and structurally altered by replacement of one of the Î±- (hydroxyimino)acyl units by a fluorescent 4-coumarinacetyl moiety. Thus, the first fluorescent analogs of psammaplin A were obtained.

Fluorescent analogs of the marine natural product
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Halichondrin B, a Complex Polyether from Diverse Sponges. Some natural products, including many of those isolated from marine animals such as sponges, tunicates, and their various predators exhibit such structural complexity so as to be nearly unimaginable drug candidates. Examples include compounds such as palytoxin, maitotoxin,...

Marine natural products as anticancer drugs | Molecular
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro An improved synthesis of psammaplin A has been developed, making the compound more easily accessible for further biological evaluations. In this context, we ï¬•nd that psammaplin A is an eï¬€ective DNA methyltransferase inhib- itor in vitro but fails to alter genomic DNA methylation levels in treated human cancer cells. Ã“ 2006 Elsevier Ltd.

An improved synthesis of psammaplin A | Adam Karpf
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro 81 Thioester derivatives of the natural product psammaplin A as potent histone deacetylase inhibitors Matthiasâ,¬G.â,¬J.â,¬Baud1, Thomasâ,¬Leiser2, Vanessaâ,¬Petrucci3, Mekalaâ,¬Gunaratnam3, Stephenâ,¬Neidle3, Franz-Josefâ,¬Meyer-Almes2 andâ,¬Matthewâ,¬J.â,¬Fuchter*1 Letter Open Access Address:

Thioester derivatives of the natural product psammaplin A
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro PsammaplinA,aChitinaseInhibitorIsolatedfromtheFijian MarineSpongeAplysinella Rhax J.N.Tabudravu,aV.G.H.Eijsink,cG.W.Gooday,b,y M.Jaspars,a,*D.Komander,d M.Legg,eB ...

PsammaplinA,aChitinaseInhibitorIsolatedfromtheFijian
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Effects of psammaplin A, a natural marine product on Vibrio vulnificusâ€˜induced cytotoxicity in human epithelial cells. (A)-407 cells were INT infected with V. vulnificus for 3 h at an MOI of 10 in the presence or absence of 12 natural marine products (50 Âµg/ml), and cytotoxicity was determined using

In vitro and in vivo anti-Vibrio vulnificus activity of
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro The new metabolite psammaplin N (8) that contains a sulfoxide moiety has been isolated together with psammaplinsA (1), I (4a), and J (2) from a specimen of the marine sponge Aplysinella rhax (order Verongida family Aplysinidae) collected in South ... pdf. Psammaplin Metabolites New and Old: An NMR Study Involving Chiral Sulfur Chemistry ...

Psammaplin Metabolites New and Old: An NMR Study Involving
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A (PsA) is a phenolic natural product that has been isolated from marine sponges, and has been suggested to be a promising novel HDAC inhibitor. However, the precise mechanism of PsA as a HDAC inhibitor is poorly understood. This study investigated the anti-tumor effect of PsA on endometrial human

cancer cells.

A natural histone deacetylase inhibitor, Psammaplin A
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Effects of psammaplin A, a natural marine product on Vibrio vulnificus-induced cytotoxicity in human epithelial cells. (A) INT-407 cells were infected with V. vulnificus for 3 h at an MOI of 10 in the presence or absence of 12 natural marine products (50 Î¼g/ml), and cytotoxicity was determined using the lactase dehydrogenase release assay.

In vitro and in vivo anti-Vibrio vulnificus activity of
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A has no influence on the apparent K m value (0.4 mM) of NS3 ATPase activity, and acts as a non-competitive inhibitor. Additionally, it inhibits the binding of NS3 to single-stranded RNA in a dose-dependent manner.

Psammaplin A inhibits hepatitis C virus NS3 helicase
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro psammaplin F (Fig. 1C) is a selective histone deacetylase inhibitor, whereas psammaplin G (Fig. 1D) is a selective DNA methyl transferase inhibitor. Psammaplin A has also been reported to inhibit topoisomerase II (14) and amino-peptidase N with in vitro angiogenesis suppression (15). However, the physiologic instability of the psammaplin class

Minireview - Molecular Cancer Therapeutics
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro The high-throughput screening and drug discovery paradigm has necessitated a change in preparation of natural product samples for screening programs. In an attempt to improve the quality of marine natural products samples for screening, several fractionation strategies were investigated. The final ...

Fractionated Marine Invertebrate Extract Libraries for
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro fibrinolytic effects. Finally, 22 marine compounds were reported to act on a variety of molecular targets, and thus could potentially contribute to several pharmacological classes. Thus, during 1999 pharmacological research with marine chemicals continued to contribute potentially novel chemical leads in the ongoing global search for ...

Review Marine pharmacology in 1999: compounds with
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro A human 15-lipoxygenase (15-HLO) assay has been employed to discover new marine-sponge-derived bioactive compounds. Extracts from two different sponges, Jaspis splendens (order Choristida, family Jaspidae) and Suberea sp. (order Verongida, family Aplysinellidae), exhibited potent IC(50) values of 0.4 and 0.1 microg/mL, respectively.

Phillip Crews - Academia.edu
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Five bromotyrosine-derived marine sponge metabolites, four psammaplins (1 â€“ 4) and the psammaplin dimer, bisaprasin (5) were isolated from a lipid extract sample of the marine sponge Dendrilla lacunosa. Psammaplins act as histone deacetylase (HDAC) inhibitors that alter cellular gene expression. The D. lacunosa psammaplins activated the oxygen

PSAMMAPLINS SELECTIVELY TARGET TRIPLE-NEGATIVE METASTATIC
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Abstract. Activated chemical defense, i.e., the rapid conversion of precursor molecules to defensive compounds following tissue damage, has been well documented for terrestrial and marine plants; but

evidence for its presence in sessile marine invertebrates remains scarce.

Activated Chemical Defense in Marine Spongesâ€”a Case Study
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro An Update on the Biomedical Prospects 3 (a) (b) Figure 1.1 A snapshot of marine-derived natural products highlighting (a) clinical therapeutics (IrvalecÂ® (Elisidepsin, PM02734) and HalavenÂ® (Eribulin mesylate, E7389)) and (b) chemical probes (Jasplakinolide and Psammaplin A). encouraged to refer to the literature for additional perspective.

An Update on the Biomedical Prospects of Marine-derived
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Abstract Marine natural products have been promising sources for developing drugs to treat various human diseases. In our continuous efforts to search for anticancer agents from natural sources, Psammaplin A (PsA), isolated from marine sponges of the order Verongida, was found to be a potential candidate for cancer therapeutic agents.

Potential Anticancer Activity Of Psammaplin A Analogs
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin F, an unsymmetrical disulfide bromotyrosine, was isolated from the sponge Pseudoceratina purpurea in 2003. We reported here the first total synthesis of psammaplin F in 12% overall yield by employing Clelandâ€™s reagent reduction as key step. The longest linear synthetic sequence starting from 3-bromo-4-hydroxybenzaldehyde and hydantoin was seven steps.

Synthesis of the Marine Bromotyrosine Psammaplin F and
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A was found to moderately inhibit chitinase B from Serratia marcescens, the mode of inhibition being non-competitive. Crystallographic studies suggest that a disordered psammaplin A molecule is bound near the active site. Interestingly, psammaplin A was found to be a potent antifungal agent. # 2002 Elsevier Science Ltd.

Psammaplin A, a Chitinase Inhibitor Isolated from the
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Histone deacetylase (HDAC) inhibitors are promising new class of anticancer agents that act by inhibiting cell proliferation and inducing cell cycle arrest of various cancer cells. Psammaplin A (PsA) is a phenolic natural product that has been isolated from marine sponges, and has been suggested to be a promising novel HDAC inhibitor. However, the precise mechanism of PsA as a HDAC inhibitor ...

A natural histone deacetylase inhibitor, Psammaplin A
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A was found to moderately inhibit chitinase B from Serratia marcescens, the mode of inhibition being non-competitive. Crystallographic studies suggest that a disordered psammaplin A molecule is bound near the active site. Interestingly, psammaplin A was found to be a potent antifungal agent

Psammaplin A, a chitinase inhibitor isolated from - CORE
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro As described in the preceding article, utilizing a novel combinatorial disulfide exchange strategy, a library of psammaplin A (1) analogues was constructed and screened for antibacterial activity leading to the identification of a collection of diverse lead compounds.These combinatorial leads were subsequently refined, through parallel synthesis, to afford a series of highly potent ...

Optimization and Mechanistic Studies of Psammaplin A Type
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A (PsA) is a phenolic natural product that has been isolated from marine sponges, and has been

suggested to be a promising novel HDAC inhibitor. However, the precise mechanism of PsA as a HDAC inhibitor is poorly understood.

A natural histone deacetylase inhibitor, Psammaplin A
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Mortality in response to lower psammaplin A treatments displayed no concentration-dependent trends. This study provides the first report on delayed toxicity of chitinolytic enzyme inhibitors against eastern subterranean termites (order Isoptera) and toxicological data on pentoxifylline and psammaplin A over a range of concentrations.

Delayed Toxicity of Two Chitinolytic Enzyme Inhibitors
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro runs that psammaplin A can induce eukaryotic DNA replication arrest (apoptosis) through hindering some important replication proteins. Psammaplin A was found to primarily target polymerase a-primase and the scientists concluded more labs needed to be completed to understand the full capacity of psammaplin A. because its reactions

Lora Donaldson Mr. Wolgemuth Annotated Bibliography
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Psammaplin A is a symmetrical bromotyrosineâ€•derived disulfide natural product isolated from the Psammaplysilla sponge, which exhibits in vitro antibacterial activity against methicillinâ€•resistant Staphylococcus aureus (MRSA). Inspired by the structure of this marine natural product, a combinatorial scrambling strategy for the construction of heterodimeric disulfide analogues was developed ...

Combinatorial Synthesis through Disulfide Exchange
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Manzamine A is a Î²-carboline alkaloid isolated from the marine sponge Xestospongia ashmorica that acts as a GSK-3Î² inhibitor. The compound is reported to have activity against the gram-positive bacteria: Staphylococcus aureus and Bacillus subtilis.Malaria studies report Manzamine A to block the asexual erythrocytic stage of Plasmodium berghei. ...

Manzamine A | CAS 104196-68-1 | SCBT - Santa Cruz
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Among the myriad of previously reported HDAC inhibitors, psammaplin A (3, X = OH, Scheme 1, left) displays an intriguing structure.It is a symmetric, dimeric hydroxyiminotyrosine-based natural product, characterised in 1987, and represents the first example of a disulfide and oxime containing metabolite isolated from a marine sponge.

Thioester derivatives of the natural product psammaplin A
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Petrosamine B, Psammaplin A derived from marine sponges from literature [28]. The 3D structures of known 19 inhibitors were downloaded in .sdf format from pubchem compound database. They were later converted in .pdb format with the help of open babel [29] tool. Docking of ninteen antibacterial isolated from marine sponges

Marine sponge derived natural products as inhibitors of
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Fluorescent and photoactivatable derivatives of marine natural products Thomas Lindel TU Braunschweig, Institute of Organic Chemistry Workshop Design of chromophore systems with specific properties and applications in medicine as biomarkers and antitumoral agents TimiÈ™oara, April 18-19, 2013

Fluorescent and photoactivatable derivatives of marine
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro

marine snails were a source of blue and purple dyes to the Hebrews and Romans during biblical times. Given this ancient fund of knowledge, marine scientists have begun a new ï¬•eld of study called marine ecological anthropology, which seeks to uncover traditional environmental knowledge likely to yield insights into marine organisms with ...

CHAPTER Organic Products from the Sea: Pharmaceuticals

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro psammaplin (plural psammaplins) Any of a group of cytotoxic bromo tyrosine phenols (e.g. N,N''- ... -benzenepropanamide) found in some marine sponges. 2015 July 9, â€œPrevalence and Mechanisms of Dynamic Chemical Defenses in Tropical Spongesâ€•, ... Download as PDF; Printable version; This page was last edited on 20 February 2019, at 07:35. ...

psammaplin - Wiktionary

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro marine-sourced candidate structures have been selected as promising leads for extended preclinical assessment, including manzamine A (activity against malaria, tuberculosis, HIV, and others), lasonolides (antifungal activity) and psammaplin A (antibacterial activity). Potential secondary metabolite hymenialdisine was isolated from

a l o ing r n r u o gs Journal of Developing Drugs ISSN

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Review Marine pharmacology in 2005â€“2006: Antitumour and cytotoxic compounds Alejandro M.S. Mayera,*, Kirk R. Gustafsonb aDepartment of Pharmacology, Chicago College of Osteopathic Medicine, Midwestern University, 555 31st Street, Downers Grove, IL 60515, USA bMolecular Targets Development Program, Center for Cancer Research, NCI-Frederick, Building 1052, Room 121, Frederick,

Marine pharmacology in 2005â€“2006: Antitumour and cytotoxic

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and ... Psammaplin A, first isolated from marine sponge in 1987, has been found to have a wide ...

Synthesis, biological evaluation and molecular modeling

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Cytotoxicity of psammaplin A from a two-sponge association may correlate with the inhibition of DNA replication Yahong Jiang , 2 Eun-Young Ahn , 1 Seung Hee Ryu , 1 Dong-Kyoo Kim , 1 Jang-Su Park , 3 Hyun Joo Yoon , 4 Song You , 2 Burm-Jong Lee , 1 Dong Seok Lee , 5 and Jee H Jung 6

Cytotoxicity of psammaplin A from a two-sponge association

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro SV40 DNA replication system is a very useful tool to understand the mechanism of replication, which is a tightly regulated process. Many environmental and cellular factors can induce cell cycle arrest or apoptosis by inhibiting DNA replication. In the course of our search for bioactive metabolites from the marine sponges, psammaplin A was found to have some anticancer properties, the possible ...

Cytotoxicity of psammaplin A from a two-sponge association

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro Maximizing benefits from â€˜biodiscoveryâ€™: a Coastal State resource providers perspective John N.A. Hooper, Queensland Museum & Natural Products Discovery Griffith University, Brisbane

Maximizing benefits from â€˜biodiscoveryâ€™: a Coastal State

psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro The marine sponge Psammaplysilla is responsible for another group of bromotyrosine derivatives, the

psammaplins which are distinct from psammaplysenes. Since its discovery in 1987, psammaplin A is one of the most studied of this group.

Induction of apoptosis in endometrial cancer cells by
psammaplin a a marine natural product inhibits aminopeptidase n and suppresses angiogenesis in vitro
Psammaplin A (PsA) is a natural product isolated from marine sponges, which has been demonstrated to have anticancer activity against several human cancer cell lines via the induction of cell cycle arrest and apoptosis. New drugs that are less toxic and more effective against multidrug-resistant cancers are urgently needed.

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