

EDIQO EDITING SAMPLE: PLUS PACKAGE

The EDIQO Plus Package includes English language editing and journal-specific copy editing and formatting. English language editing includes proofreading; all orthographic corrections, such as spelling, grammar, punctuation, capitalization and emphasis; and stylistic improvements, linguistic clarifications & improvement of sentence structures.

Additionally, will copy edit and correct the style and format of your manuscript according to the specifications of your target journal. Alternatively, you may provide your own specifications to the copy editor. Typically, copy editing includes formatting the manuscript according to a journal's template, standardizing the writing in American or British English, and standardizing units according to the metric or imperial system.

Each manuscript is double-checked by a second editor and you will receive a personalized editing certificate for your document upon completion of the editing.

Contact us for more editing samples or to trial our service: we edit the first page of your manuscript free of charge and without obligation to purchase. Send your manuscript to trial@edigo.com.

Purification, eCharacterization and *In Vitro* Anti-Tumor Activity of Polypeptides from *Arca subcrenata* Lischke

Formatted: Font: Italic

Formatted: Font: Italic

Liyan Song^{1,2}, Shengfang Ren², Rongmin Yu^{2,*}, Chunyan Yan², Tingfei Li² and Yu Zhao^{1,*}

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

⁽¹⁾ College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China

Formatted: Superscript

⁽²⁾ College of Pharmacy, Jinan University, Guangzhou 510632, China

Formatted: Superscript

* Author to whom correspondence should be addressed.

Abstract: Two purified polypeptides, G-6 and G-4-2, were obtained from *Arca subcrenata*

Formatted: Font: Italic

Lischke using ~~the following techniques: the techniques of~~ homogenization, salting-out with ammonium sulfate, ion-exchange chromatography and gel filtration chromatography. The purity of G-6 and G-4-2 ~~exceeded was over~~ 96 % as measured by RP-HPLC. G-6 and G-4-2 were given by SDS-PAGE and IEF-PAGE with molecular weights of 8.2 kDa and 16.0 kDa, and isoelectric points of 6.6 and 6.1, respectively. ~~The a~~Amino acid constituents of G-6 and G-4-2 were also detected. The existence of saccharides in G-6 was demonstrated by ~~the~~ phenol-sulfuric acid method. G-6 and G-4-2 inhibited the proliferation of human tumor cells in vitro. ~~Using~~By an MTT assay, the IC₅₀ values of G-4-2 were ~~found to be~~ 22.9 ~~µg/mL~~, 46.1 ~~µg/mL~~ and 57.7 ~~µg/mL~~ against HeLa, HL-60 and KB cell lines, respectively, and the IC₅₀ value of G-6 against HL-60 cell line was ~~found to be~~ ~~measured~~ ~~to be~~ 123.2 ~~µg/mL~~.

Formatted: Subscript

Formatted: Subscript

Keywords: *Arca subcrenata* Lischke; polypeptide; purification; *in vitro* anti-tumor activity

Formatted: Font: Italic

Formatted: Font: Italic

1. Introduction

In recent years, ~~an increasing number of more~~ researchers have come to the realization that marine organisms as a source of novel molecules and new ~~—~~ anticancer agents hold immense potential. Because of their longer evolutionary history, marine organisms likely possess a greater molecular ~~—~~ diversity than do their terrestrial counterparts [1–2]. Over the past two decades, a global collaborative effort ~~towards~~ ~~—has been raised that aims at~~ the discovery of novel and clinically useful anti-tumor agents derived from marine organisms ~~has been made~~ [3–7]. According to existing literature, more than ~~10~~ new experimental anti-tumor ~~—~~ agents derived from marine sources have entered ~~the~~ clinical trials [8],

including bryostatin-1, aplidine, ecteinascidin-743 (ET-743) [2], Kahalalide F [10], as well as the derivatives of dolastatin such as TZT-1027 [9] and LU 103793 [11].

Commented [CE1]: (The order of the references in the reference list is updated accordingly.)

Arca subcrenata Lischke, a marine animal native to the seas around China, has been utilized for centuries in the treatments of tumor, anemia and inflammation for centuries in Chinese Traditional Medicines [12]. The concentrations of protein and saccharide, the proportions of amino acids, and ultraviolet spectrum analysis and trace element analysis of *A. subcrenata* have been previously reported [13]. Its hydrolysate was found to possess demonstrate hypoglycemic activity on mice with alloxan-induced hyperglycemia, as well as hypolipidic activity on experimental mouse models of hyperlipidemia [14], as well as and a protective effect in liver injuries in mice [15]. More recently, the polysaccharide from *A. subcrenata* was demonstrated shown to induce proliferation of spleen lymphocyte in vitro [16]. However, no information is currently available on its anti-tumor activity, both in vivo and in vitro. During the course of our extensive screening program on marine traditional marine Chinese medicines for in vitro anti-tumor activities, *A. subcrenata* was selected because of its widespread geographic distribution in China and its unique reputation in the folklore medicine.

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

In the present study, the purification and characterization of the polypeptide components of *A. subcrenata* were investigated. Their in vitro anti-tumor activity was also evaluated by examining their cytotoxicities against seven human tumor cell lines.

Formatted: Font: Italic

Formatted: Font: Italic

Main document changes and comments

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

c

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

C

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

i

Page 1: Formatted	Copy-Editor	21.05.2016 12:16:00
-------------------	-------------	---------------------

Font: Italic

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

I

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

v

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

V

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

a

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

A

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

t

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

T

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

a

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

A

Page 1: Deleted	Copy-Editor	21.05.2016 12:16:00
-----------------	-------------	---------------------

P

Page 1: Inserted	Copy-Editor	21.05.2016 12:16:00
------------------	-------------	---------------------

P

Page 1: Formatted	Copy-Editor	21.05.2016 12:14:00
-------------------	-------------	---------------------

Font: Italic

Page 1: Formatted	Copy-Editor	21.05.2016 12:16:00
-------------------	-------------	---------------------

Not Superscript/ Subscript

Page 1: Formatted	Copy-Editor	21.05.2016 12:17:00
-------------------	-------------	---------------------

Not Superscript/ Subscript

Page 1: Deleted	Copy-Editor	21.05.2016 12:23:00
-----------------	-------------	---------------------

(

Page 1: Formatted	Copy-Editor	21.05.2016 12:23:00
-------------------	-------------	---------------------

Superscript

Page 1: Deleted	Copy-Editor	21.05.2016 12:23:00
-----------------	-------------	---------------------

)

Page 1: Inserted	Copy-Editor	21.05.2016 12:23:00
------------------	-------------	---------------------

Page 1: Deleted	Copy-Editor	21.05.2016 12:23:00
-----------------	-------------	---------------------

(

Page 1: Formatted	Copy-Editor	21.05.2016 12:23:00
-------------------	-------------	---------------------

Superscript

Page 1: Deleted	Copy-Editor	21.05.2016 12:23:00
-----------------	-------------	---------------------

)

Page 1: Inserted	Copy-Editor	21.05.2016 12:23:00
------------------	-------------	---------------------

Page 1: Inserted	Copy-Editor	21.05.2016 12:23:00
------------------	-------------	---------------------

S

Page 1: Inserted	English Editor	20.05.2016 14:54:00
------------------	----------------	---------------------

,

Page 1: Inserted	English Editor	20.05.2016 14:54:00
------------------	----------------	---------------------

,

Page 1: Formatted	Copy-Editor	21.05.2016 12:14:00
-------------------	-------------	---------------------

Font: Italic

Page 2: Inserted	English Editor	20.05.2016 14:56:00
------------------	----------------	---------------------

the following techniques:

Page 2: Deleted	English Editor	20.05.2016 14:54:00
-----------------	----------------	---------------------

the techniques of

Page 2: Inserted	English Editor	20.05.2016 14:55:00
------------------	----------------	---------------------

exceeded

Page 2: Deleted	English Editor	20.05.2016 14:55:00
-----------------	----------------	---------------------

was over

Page 2: Inserted	English Editor	20.05.2016 15:05:00
------------------	----------------	---------------------

The a

Page 2: Deleted	English Editor	20.05.2016 15:05:00
-----------------	----------------	---------------------

A

Page 2: Inserted	English Editor	20.05.2016 14:55:00
------------------	----------------	---------------------

the p

Page 2: Deleted	English Editor	20.05.2016 14:55:00
-----------------	----------------	---------------------

P

Page 2: Inserted	English Editor	20.05.2016 14:55:00
------------------	----------------	---------------------

-

Page 2: Deleted	English Editor	20.05.2016 14:55:00
-----------------	----------------	---------------------

-

Page 2: Inserted	English Editor	20.05.2016 14:55:00
------------------	----------------	---------------------

Using

Page 2: Deleted	English Editor	20.05.2016 14:55:00
-----------------	----------------	---------------------

By

Page 2: Inserted	English Editor	20.05.2016 15:09:00
------------------	----------------	---------------------

an

Page 2: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Subscript

Page 2: Inserted	English Editor	20.05.2016 15:09:00
------------------	----------------	---------------------

found to be

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

u

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

μ

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

L

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

l

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

u

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

μ

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

L

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

l

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

u

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

μ

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

L

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

l

Page 2: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Subscript

Page 2: Inserted	English Editor	20.05.2016 14:56:00
------------------	----------------	---------------------

found to be

Page 2: Deleted	Copy-Editor	21.05.2016 12:19:00
-----------------	-------------	---------------------

Page 2: Inserted	Copy-Editor	21.05.2016 12:19:00
------------------	-------------	---------------------

Page 2: Deleted	English Editor	20.05.2016 14:56:00
-----------------	----------------	---------------------

measured to be

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

u

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

μ

Page 2: Inserted	Copy-Editor	21.05.2016 12:18:00
------------------	-------------	---------------------

L

Page 2: Deleted	Copy-Editor	21.05.2016 12:18:00
-----------------	-------------	---------------------

l

Page 2: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Font: Italic

Page 2: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Font: Italic

Page 2: Inserted	English Editor	20.05.2016 15:01:00
------------------	----------------	---------------------

an increasing number of

Page 2: Deleted	English Editor	20.05.2016 15:01:00
-----------------	----------------	---------------------

more

Page 2: Deleted	Copy-Editor	21.05.2016 12:19:00
-----------------	-------------	---------------------

Page 2: Inserted	Copy-Editor	21.05.2016 12:19:00
------------------	-------------	---------------------

Page 2: Deleted	English Editor	20.05.2016 15:06:00
-----------------	----------------	---------------------

er

Page 2: Deleted	Copy-Editor	21.05.2016 12:19:00
-----------------	-------------	---------------------

Page 2: Inserted	Copy-Editor	21.05.2016 12:19:00
------------------	-------------	---------------------

Page 2: Inserted	English Editor	20.05.2016 14:59:00
------------------	----------------	---------------------

—

Page 2: Deleted	English Editor	20.05.2016 14:59:00
-----------------	----------------	---------------------

-

Page 2: Inserted	English Editor	20.05.2016 14:59:00
towards		
Page 2: Deleted	English Editor	20.05.2016 14:59:00
has been raised that aims at		
Page 2: Inserted	English Editor	20.05.2016 15:00:00
has been made		
Page 2: Inserted	English Editor	20.05.2016 15:00:00
-		
Page 2: Deleted	English Editor	20.05.2016 15:00:00
-		
Page 2: Inserted	English Editor	20.05.2016 15:00:00
10		
Page 2: Deleted	English Editor	20.05.2016 15:00:00
ten		
Page 2: Deleted	Copy-Editor	21.05.2016 12:19:00
Page 2: Inserted	Copy-Editor	21.05.2016 12:19:00
Page 2: Deleted	English Editor	20.05.2016 15:00:00
the		
Page 2: Deleted	Copy-Editor	23.05.2016 09:38:00
10		
Page 2: Inserted	Copy-Editor	23.05.2016 09:38:00
9		
Page 2: Commented [CE1]	Copy-Editor	23.05.2016 09:38:00

(The order of the references in the reference list is updated accordingly.)

Page 2: Deleted	English Editor	20.05.2016 15:10:00
the		
Page 2: Deleted	Copy-Editor	23.05.2016 09:38:00
9		
Page 2: Inserted	Copy-Editor	23.05.2016 09:38:00
10		
Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
Font: Italic		
Page 3: Inserted	English Editor	20.05.2016 15:02:00
for centuries		
Page 3: Deleted	English Editor	20.05.2016 15:02:00
s		
Page 3: Deleted	English Editor	20.05.2016 15:02:00
for centuries		
Page 3: Inserted	English Editor	20.05.2016 15:01:00
t		
Page 3: Deleted	English Editor	20.05.2016 15:01:00
T		
Page 3: Inserted	English Editor	20.05.2016 15:01:00
m		
Page 3: Deleted	English Editor	20.05.2016 15:01:00
M		
Page 3: Deleted	English Editor	20.05.2016 15:06:00
s		
Page 3: Inserted	English Editor	20.05.2016 15:03:00

s

Page 3: Inserted	English Editor	20.05.2016 15:03:00
------------------	----------------	---------------------

the

Page 3: Inserted	English Editor	20.05.2016 15:07:00
------------------	----------------	---------------------

s

Page 3: Inserted	English Editor	20.05.2016 15:03:00
------------------	----------------	---------------------

and

Page 3: Deleted	English Editor	20.05.2016 15:03:00
-----------------	----------------	---------------------

analysis

Page 3: Inserted	English Editor	20.05.2016 15:03:00
------------------	----------------	---------------------

e

Page 3: Deleted	English Editor	20.05.2016 15:03:00
-----------------	----------------	---------------------

i

Page 3: Inserted	English Editor	20.05.2016 15:03:00
------------------	----------------	---------------------

ve

Page 3: Deleted	English Editor	20.05.2016 15:03:00
-----------------	----------------	---------------------

d

Page 3: Deleted	Copy-Editor	23.05.2016 09:40:00
-----------------	-------------	---------------------

15

Page 3: Inserted	Copy-Editor	23.05.2016 09:40:00
------------------	-------------	---------------------

13

Page 3: Deleted	English Editor	20.05.2016 15:03:00
-----------------	----------------	---------------------

possess

Page 3: Inserted	English Editor	20.05.2016 15:03:00
------------------	----------------	---------------------

demonstrate

Page 3: Deleted	Copy-Editor	21.05.2016 12:19:00
Page 3: Inserted	Copy-Editor	21.05.2016 12:19:00
Page 3: Inserted as well as	English Editor	20.05.2016 15:03:00
Page 3: Inserted s	English Editor	20.05.2016 15:03:00
Page 3: Deleted 13	Copy-Editor	23.05.2016 09:40:00
Page 3: Inserted 14	Copy-Editor	23.05.2016 09:40:00
Page 3: Deleted as well as	English Editor	20.05.2016 15:03:00
Page 3: Inserted and a	English Editor	20.05.2016 15:03:00
Page 3: Inserted in	English Editor	20.05.2016 15:03:00
Page 3: Deleted on	English Editor	20.05.2016 15:03:00
Page 3: Deleted 16	Copy-Editor	23.05.2016 09:40:00
Page 3: Inserted 15	Copy-Editor	23.05.2016 09:40:00
Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00

Font: Italic

Page 3: Deleted	English Editor	20.05.2016 15:07:00
------------------------	-----------------------	----------------------------

demonstrated

Page 3: Inserted	English Editor	20.05.2016 15:07:00
-------------------------	-----------------------	----------------------------

shown

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
--------------------------	--------------------	----------------------------

Font: Italic

Page 3: Deleted	Copy-Editor	23.05.2016 09:40:00
------------------------	--------------------	----------------------------

14

Page 3: Inserted	Copy-Editor	23.05.2016 09:40:00
-------------------------	--------------------	----------------------------

16

Page 3: Deleted	Copy-Editor	21.05.2016 12:19:00
------------------------	--------------------	----------------------------

Page 3: Inserted	Copy-Editor	21.05.2016 12:19:00
-------------------------	--------------------	----------------------------

Page 3: Inserted	English Editor	20.05.2016 15:07:00
-------------------------	-----------------------	----------------------------

,

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
--------------------------	--------------------	----------------------------

Font: Italic

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
--------------------------	--------------------	----------------------------

Font: Italic

Page 3: Deleted	English Editor	20.05.2016 15:04:00
------------------------	-----------------------	----------------------------

marine

Page 3: Inserted	English Editor	20.05.2016 15:04:00
-------------------------	-----------------------	----------------------------

marine

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
--------------------------	--------------------	----------------------------

Font: Italic

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
--------------------------	--------------------	----------------------------

Font: Italic

Page 3: Deleted	Copy-Editor	21.05.2016 12:19:00
-----------------	-------------	---------------------

Page 3: Inserted	Copy-Editor	21.05.2016 12:19:00
------------------	-------------	---------------------

Page 3: Deleted	English Editor	20.05.2016 15:04:00
-----------------	----------------	---------------------

the

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Font: Italic

Page 3: Deleted	Copy-Editor	21.05.2016 12:19:00
-----------------	-------------	---------------------

Page 3: Inserted	Copy-Editor	21.05.2016 12:19:00
------------------	-------------	---------------------

Page 3: Formatted	Copy-Editor	21.05.2016 12:15:00
-------------------	-------------	---------------------

Font: Italic

Page 3: Inserted	English Editor	20.05.2016 15:04:00
------------------	----------------	---------------------

ir

Page 3: Inserted	English Editor	20.05.2016 15:07:00
------------------	----------------	---------------------

y

Page 3: Deleted	English Editor	20.05.2016 15:07:00
-----------------	----------------	---------------------

ies

Header and footer changes

Text Box changes

Header and footer text box changes

Footnote changes

Endnote changes