

Accepted Manuscript

Title: Structural Analysis and Biological Activity of a Highly Regular Glycosaminoglycan from *Achatina fulica*

Authors: Jie Liu, Lutan Zhou, Zhicheng He, Na Gao, Feineng Shang, Jianping Xu, Zi Li, Zengming Yang, Mingyi Wu, Jinhua Zhao



PII: S0144-8617(17)31255-9
DOI: <https://doi.org/10.1016/j.carbpol.2017.10.091>
Reference: CARP 12940

To appear in:

Received date: 3-5-2017
Revised date: 16-10-2017
Accepted date: 26-10-2017

Please cite this article as: Liu, Jie., Zhou, Lutan., He, Zhicheng., Gao, Na., Shang, Feineng., Xu, Jianping., Li, Zi., Yang, Zengming., Wu, Mingyi., & Zhao, Jinhua., Structural Analysis and Biological Activity of a Highly Regular Glycosaminoglycan from *Achatina fulica*. *Carbohydrate Polymers* <https://doi.org/10.1016/j.carbpol.2017.10.091>

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 review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Structural Analysis and Biological Activity of a Highly Regular Glycosaminoglycan from *Achatina fulica*

Jie Liu ^{a, b}, Lutan Zhou ^{a, c}, Zhicheng He ^{a, c}, Na Gao ^a, Feineng Shang ^a, Jianping Xu ^a,
Zi Li ^a, Zengming Yang ^{b, d*}, Mingyi Wu ^{a,*}, Jinhua Zhao ^{a,*}

^a State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming
Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China

^b School of Pharmacy, Yunnan University of TCM, Kunming 650500, China

^c University of Chinese Academy of Sciences, Beijing 100049, China

^d Yunnan Institute of Materia Medica, Kunming 650500, China

* Corresponding author. Tel.: +86 871 65226278; fax: +86 871 65226278.

E-mail address: yzm85676@ynby-yimm.com (Zengming Yang); mingyiwu_tju@yahoo.com

(Mingyi Wu); zhao.jinhua@yahoo.com (Jinhua Zhao).

Highlights

- A unique glycosaminoglycan (AF-GAG) was purified from *Achatina fulica*
- Uronic acid unit in the glycosaminoglycan is the fully epimerized and 2-O-sulfated
- The sequence of AF-GAG is highly regular $\rightarrow 4$)- α -D-GlcNAc (1 \rightarrow 4)- α -L-IdoA2S (1 \rightarrow
- The GAG exhibits no anticoagulant activities differing from heparin-like compounds

Abstract

Edible snails have been widely used as a health food and medicine in many countries. A unique glycosaminoglycan (AF-GAG) was purified from *Achatina fulica*. Its structure was analyzed and characterized by chemical and instrumental methods, such as Fourier transform infrared spectroscopy, analysis of monosaccharide composition, and 1D/2D nuclear magnetic

Download English Version:

<https://daneshyari.com/en/article/7784584>

Download Persian Version:

<https://daneshyari.com/article/7784584>

[Daneshyari.com](https://daneshyari.com)