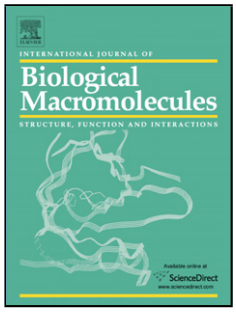

Title: Charaterization and immunomodulatory activities of polysaccharide isolated from *Pleurotus eryngii*

Author: Duoduo Xu Haiyang Wang Wei Zheng Yang Gao Mingxing Wang Yanqiu Zhang Qipin Gao

PII: S0141-8130(16)30739-5
DOI: http://dx.doi.org/doi:10.1016/j.ijbiomac.2016.07.016
Reference: BIOMAC 6290

To appear in: *International Journal of Biological Macromolecules*

Received date: 18-5-2016
Revised date: 3-7-2016
Accepted date: 4-7-2016

Please cite this article as: Duoduo Xu, Haiyang Wang, Wei Zheng, Yang Gao, Mingxing Wang, Yanqiu Zhang, Qipin Gao, Charaterization and immunomodulatory activities of polysaccharide isolated from Pleurotus eryngii, International Journal of Biological Macromolecules http://dx.doi.org/10.1016/j.ijbiomac.2016.07.016

<AT>Charaterization and immunomodulatory activities of polysaccharide isolated from *Pleurotus eryngii*

<AU>Duoduo Xu[ab], Haiyang Wang[ab], Wei Zheng[c], Yang Gao[ab], Mingxing Wang[db], Yanqiu Zhang[d], Qipin Gao[ab,*] ##Email##czxuduoduo@163.com##/Email##
<AU> ##Email##20241877@qq.com##/Email##
<AFF>aCenter of Research & Development, Changchun University of Chinese Medicine, Changchun, Jilin 130117, China
<AFF>bMacromolecule of Chinese Medicine Key Lab of Jilin Province, Changchun 130117, Jilin, China
<AFF>cDepartments of Ophthalmology, The Affiliated Hospital, Changchun University of Chinese Medicine, Changchun, Jilin 130021, China
<AFF>dPreparation center, The Affiliated Hospital, Changchun University of Chinese Medicine, Changchun, Jilin 130021, China

E-mail and postal address
Duoduo Xu E-mail: Postal address: No.1035, Boshuo Rd, Jingyue Econmic Development District, Changchun, Jilin, China. 130117.
Haiyang Wang E-mail:1204334211 @qq.com; Postal address: No.1035, Boshuo Rd, Jingyue Econmic Development District,Changchun, Jilin, China. 130117.
Wei Zheng E-mail:drzhengwei@163.com :Postal address: No. 1478, Gongnong Rd, Chaoyang District, Changchun, Jilin, China. 130021Yang Gao: E-mail:756287045 @qq.com Postal address: No.1035, Boshuo Rd, Jingyue Econmic Development District,Changchun, Jilin, China. 130117.
Mingxing Wang E-mail:578658688 @qq.com Postal address: No. 1478, Gongnong Rd, Chaoyang District, Changchun, Jilin, China. 130021 Yanqiu Zhang E-mail:45968162@qq.com Postal address: No. 1478, Gongnong Rd, Chaoyang District, Changchun, Jilin, China. 130021

<PA>Postal address: No.1035, Boshuo Rd, Jingyue Econmic Development District,Changchun, Jilin, China. 130117.Tel.: +86043186172070.
E-mail:

<ABS-HEAD>Highlights► •A polysaccharide (EPA-1) from *Pleurotus eryngii* was isolated and purified. ► •EPA-1 consists mainly of galactose, glucose and mannose. ► •One possible structure of EPA-1 was established by chemical methods and NMR spectroscopy. ► EPA-1 possessed good immunoregulatory activity in vivo, and stimulated the production of NO and cytokines by MAPK and NF-κB.

<ABS-HEAD>ABSTRACT

<ABS-P>A water-soluble polysaccharide (EPA-1) from *Pleurotus eryngii* was obtained using DEAE-52 and Sephadex G-50 columns. The properties, structure and immunomodulatory activity of EPA-1 were studied. The results demonstrated that EPA-1 was a homogeneous polysaccharide with the molecular weight of 9.97×10^4 Da. EPA-1 consisted of Man, Glc and Gal in a molar ratio of 2.2: 1.0: 3.2. The