

Accepted Manuscript

Selenium deficiency impaired immune function of the immune organs in young grass carp (*Ctenopharyngodon idella*)

Lin Zheng, Lin Feng, Wei-Dan Jiang, Pei Wu, Ling Tang, Sheng-Yao Kuang, Yun-Yun Zeng, Xiao-Qiu Zhou, Yang Liu



PII: S1050-4648(18)30141-4

DOI: [10.1016/j.fsi.2018.03.024](https://doi.org/10.1016/j.fsi.2018.03.024)

Reference: YFSIM 5179

To appear in: *Fish and Shellfish Immunology*

Received Date: 5 January 2018

Revised Date: 14 March 2018

Accepted Date: 16 March 2018

Please cite this article as: Zheng L, Feng L, Jiang W-D, Wu P, Tang L, Kuang S-Y, Zeng Y-Y, Zhou X-Q, Liu Y, Selenium deficiency impaired immune function of the immune organs in young grass carp (*Ctenopharyngodon idella*), *Fish and Shellfish Immunology* (2018), doi: 10.1016/j.fsi.2018.03.024.

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.

1 **Selenium deficiency impaired immune function of the immune organs in young grass**
2 **carp (*Ctenopharyngodon idella*)**

ACCEPTED MANUSCRIPT

3
4 Lin Zheng ^{a,1}, Lin Feng ^{a,b,c,1}, Wei-Dan Jiang ^{a,b,c}, Pei Wu ^{a,b,c}, Ling Tang ^d, Sheng-Yao Kuang ^d, Yun-Yun
5 Zeng ^{a,b,c}, Xiao-Qiu Zhou ^{a,b,c*}, Yang Liu ^{a,b,c*}

6 ^a Animal Nutrition Institute, Sichuan Agricultural University, Sichuan, Chengdu 611130, China

7 ^b Fish Nutrition and Safety Production University Key Laboratory of Sichuan Province, Sichuan Agricultural
8 University, Sichuan, Chengdu 611130, China

9 ^c Key Laboratory for Animal Disease-Resistance Nutrition of China Ministry of Education, Sichuan
10 Agricultural University, Sichuan, Chengdu 611130, China

11 ^d Animal Nutrition Institute, Sichuan Academy of Animal Science, Chengdu 610066, China

12
13 * *Corresponding authors. Animal Nutrition Institute, Sichuan Agricultural University, Chengdu 611130,*
14 *Sichuan, China. Tel.: +86 835 2885157; fax: +86 835 2885968.*

15 *E-mail addresses: zhouxq@sicau.edu.cn, xqzhouqq@tom.com (X.-Q. Zhou); 11081@sicau.edu.cn (Y. Liu).*

16
17 ¹ These two authors contributed to this work equally

18

Download English Version:

<https://daneshyari.com/en/article/8498427>

Download Persian Version:

<https://daneshyari.com/article/8498427>

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