

ORIGINAL RESEARCH

Li Feng et al.

## **The effect of size, dose, and administration route on zein nanoparticle immunogenicity in BALB/c mice**

Li Feng<sup>1</sup>, Chen Yan<sup>1,2</sup>, Liu Shubo<sup>1</sup>, Pan Xue<sup>1</sup>, Liu Yulan<sup>1</sup>, Zhao Huiting<sup>1</sup>, Yu Chunlin<sup>1</sup>, Yin Xiujing<sup>1</sup>, Kong Wei<sup>1,2</sup>, Zhang Yong<sup>1,2</sup>

<sup>1</sup> National Engineering Laboratory for AIDS Vaccine, School of Life Sciences, Jilin University, Changchun 130012, China; <sup>2</sup> Key Laboratory for Molecular Enzymology and Engineering, the Ministry of Education, School of Life Sciences, Jilin University, Changchun 130012, China

Correspondence: Zhang Yong

School of Life Sciences, Jilin University, Qianjin Street No. 2699, Changchun 130012, China

Tel: +86 431 85167751

Fax: +86 431 85167674

E-mail: zhangyongking1@gmail.com; zhypharm@jlu.edu.cn;

ORCID: 0000-0001-6577-5235

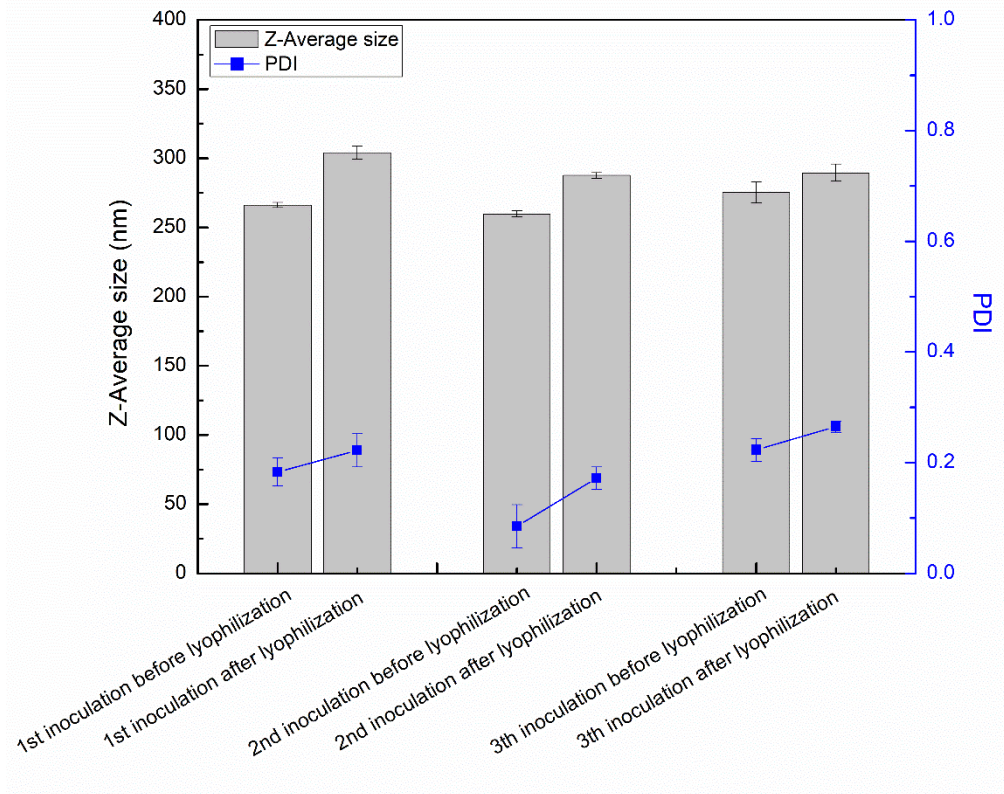


Figure S1. Size and size distribution of zein nanoparticles before and after lyophilization.

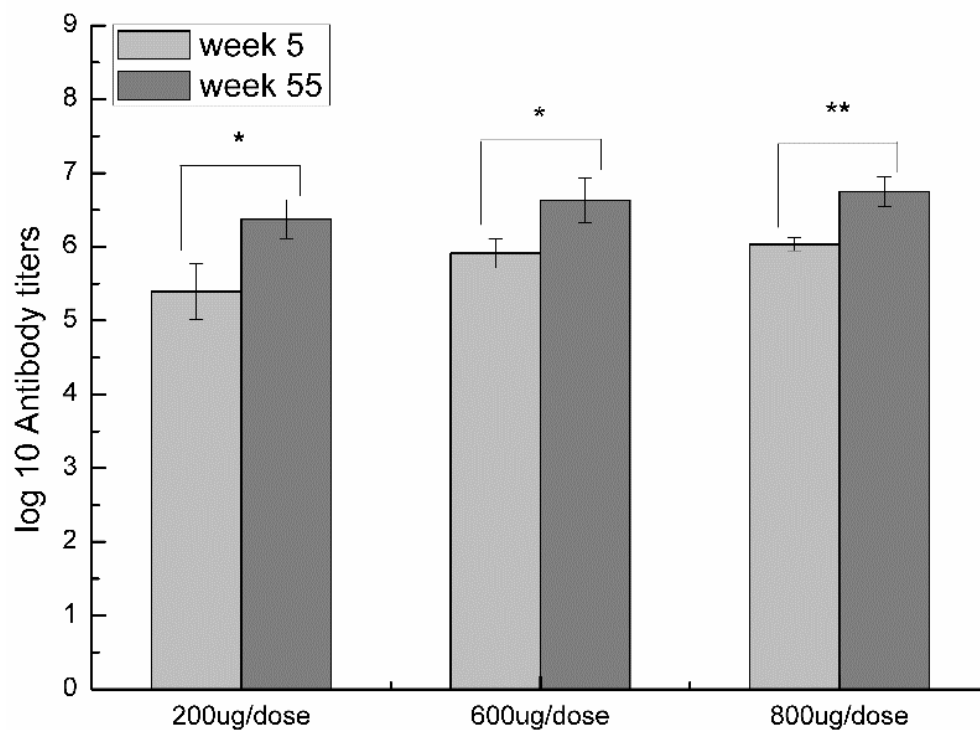


Figure S2. Comparison of the peak values of antibody level after three inoculations and the fourth challenge via intramuscular route. All p value calculations are based on the t-test of the two-sample equal variance hypothesis. \* and \*\* indicate  $p < 0.05$  and  $p < 0.01$ , respectively.

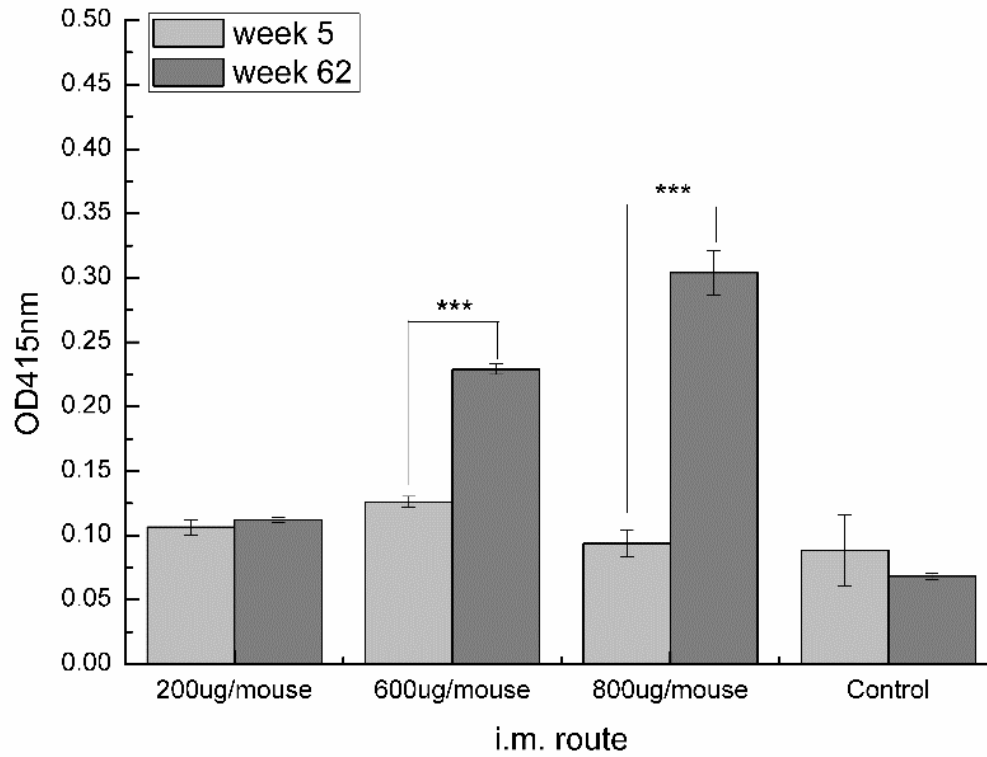


Figure S3. Comparison of highest IgG2a OD values during recall response with week 5 for intramuscular route. All p value calculations are based on the t-test of the two-sample equal variance hypothesis. \*\*\* indicates  $p < 0.001$ .