

**Vaccines targeting the primary amino acid sequence and conformational epitope of A $\beta$  had distinct effects on neuropathology and cognitive deficits in EAE/AD mice**

*Running title:* EAE/AD mouse model can show the potential side effects of AD vaccines

Xiao-Lin Yu, Jie Zhu, Xiang-meng Liu, Peng-xin Xu, Yue Zhang, Rui-tian Liu \*

State Key Laboratory of Biochemical Engineering, Institute of Process Engineering,  
Chinese Academy of Sciences, Beijing 100190, China

\*Corresponding author

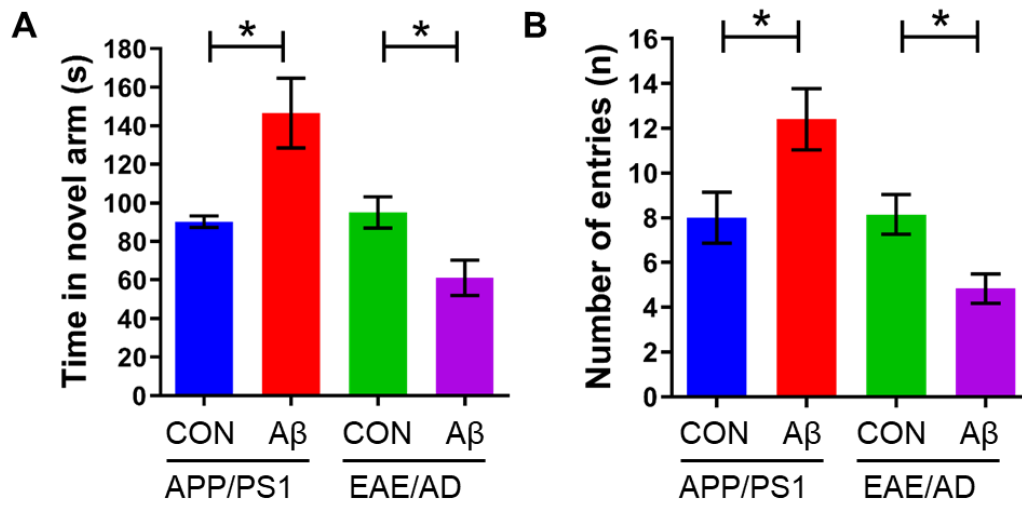
Rui-tian Liu

State Key Laboratory of Biochemical Engineering, Institute of Process Engineering,  
Chinese Academy of Sciences, Beijing 100190, China

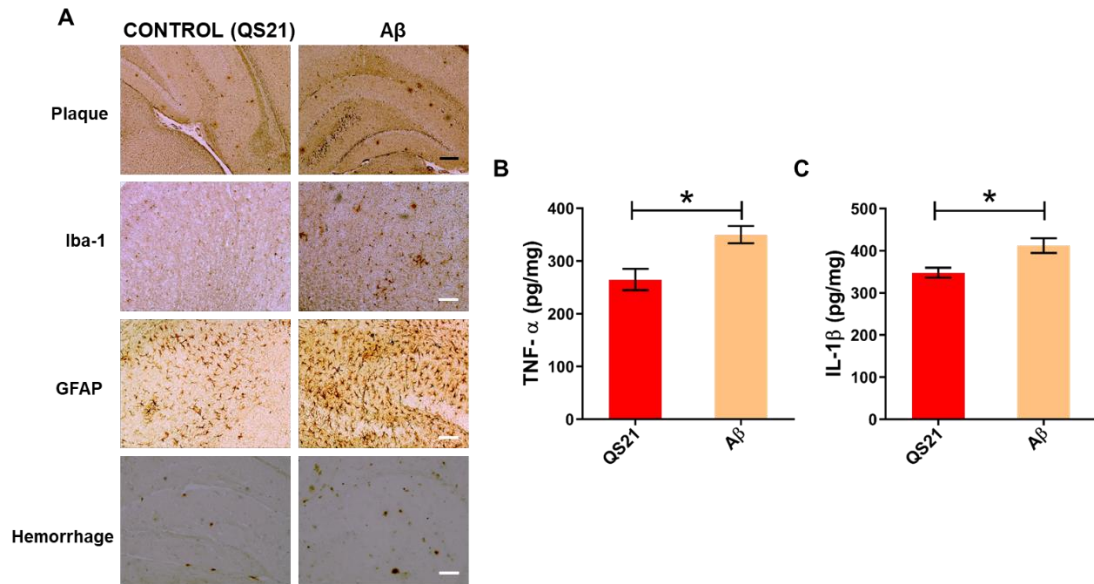
Email: [rtlou@ipe.ac.cn](mailto:rtlou@ipe.ac.cn);

Tel: +86-10-82545017;

Fax: +86-10-82545075



**Fig. S1.** A $\beta$ 42 immunization rescued cognitive deficits in APP/PS1 but not EAE/AD mouse model. The short-term working memory of APP/PS1 and EAE/AD mice immunized with A $\beta$ 42 or adjuvant was evaluated by Y-maze, the time spent in the novel arm (A) and the number of entries to the novel arm (B) were measured. n = 8 mice/group. Data represent means  $\pm$  SEM. \*P < 0.05.



**Fig. S2.** A $\beta$ 42 immunization in the presence of QS-21 adjuvant enhanced neuropathology in EAE/AD mouse model. (A) 6E10 immunostaining for plaques, Iba-1 and GFAP immunostaining for gliosis, and hemosiderin staining for microhemorrhages in the brains of EAE/AD mice immunized with A $\beta$ 42 plus QS-21 or QS-21 alone. Scale bars: black, 200  $\mu$ m; white, 100  $\mu$ m. (B-C) The levels of TNF- $\alpha$  (B) and IL-1 $\beta$  (C) in the brain lysates of EAE/AD mice immunized with A $\beta$ 42 plus QS-21 or QS-21 alone were detected by ELISA. n = 8 mice/group. Data represent means  $\pm$  SEM. \*P < 0.05.