Cite this as: Hai-sheng XU, Sun-jian LYU, Jie-hao XU, Bin-jie LU, Jing ZHAO, Song LI, Yi-qun LI, Yu-yin CHEN, 2015. Effect of lipopolysaccharide on the hemocyte apoptosis of *Eriocheir sinensis*. *Journal of Zhejiang University-Science B (Biomedicine & Biotechnology)*, **16**(12):971-979. [doi:10.1631/jzus.B1500098]

Effect of lipopolysaccharide on the hemocyte apoptosis of *Eriocheir sinensis*

Key words: Hemocytes, *Eriocheir sinensis*, Lipopolysaccharides, Apoptosis, Reactive oxygen species

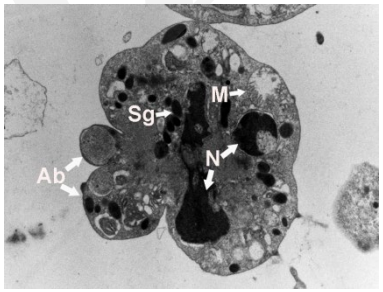
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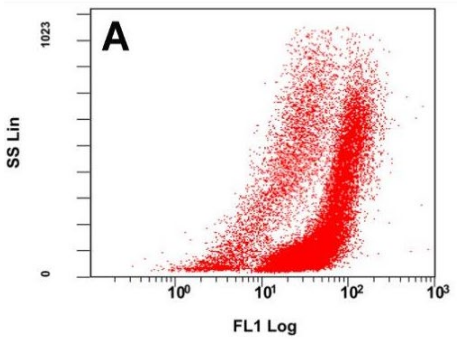
Research Summary

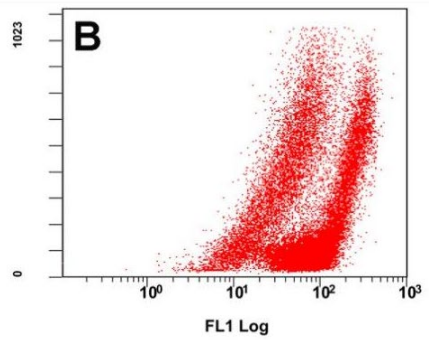
This study mainly focused on the toxicity mechanism of lipopolysaccharide (LPS) in *Eriocheir sinensis* hemocytes, and summarized the key roles it played in the following aspects:

- **Morphological change**
- **DNA-cleaved products with ladder patterns**
- **Apoptotic cell ratio**
- **Production of reactive oxygen species**









Innovation points

A series of comprehensive figures were generated to show this research.

Fig. 2 | Observation of LPS-induced hemocytes of E. sinensis by fluorescence microscopy with DAPI staining.

Fig. 3 | Morphological observation of LPS-induced hemocytes from *E. sinensis* under TEM .

Fig. 4 | Assay of DNA fragmentation of saline- and LPS-induced hemocytes by 2% agarose gel electrophoresis.

Fig. 5 | Annexin V-FITC/PI assay of hemocytes from E. sinensis by flow cytometry after 0-h , 1-h, and 2-h exposure to 10 μg·mL^{-1} LPS.

Fig. 6 | Analysis of cellular ROS production of hemocytes treated with 10 μg·mL^{-1} LPS by flow cytometry.

Fig. 7 | Outburst of ROS production in LPS-induced hemocytes marked with DCFH-DA and detected by laser confocal microscopy.

Conclusion

- The study showed that the stimulation of LPS caused obvious apoptosis and ROS overproduction in hemocytes of *E. sinensis*, and overproduction of ROS was an important induction factor for hemocyte apoptosis.

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