



370 Research paper

Antimicrobial Effect of *Zophobas morio* Hemolymph against Bovine Mastitis Pathogens

by Du, M., Liu, X., Xu, J., Li, S., Wang, S., Zhu, Y., and J.Wang

2020 Microorganisms 8: e1488-e1488

In **Significant Impact Groups:**

Specific alternatives \

Species targeted: Dairy;

Age: Adult;

Summary:

In the present study, we showed the protective effect of *Zophobas morio* (*Z. morio*) hemolymph on bovine mammary epithelial cells against bacterial infection. *Z. morio* hemolymph directly kills both Gram-positive and Gram-negative bacteria through membrane permeation and prevents the adhesion of *E. coli* or the clinically isolated *S. simulans* strain to bovine mammary epithelial (MAC-T) cells. In addition, *Z. morio* hemolymph downregulates the expression of nucleotide-binding oligomerization domain (NOD)-like receptor family member pyrin domain-containing protein 3 (NLRP3), caspase-1, and NLRP6, as well as inhibits the secretion of interleukin-1 beta (IL-1 beta) and IL-18, which attenuates *E. coli* or *S. simulans*-induced pyroptosis. Overall, our results suggest the potential role of *Z. morio* hemolymph as a novel therapeutic candidate for bovine mastitis.

370 Research paper - Du - 2020 - Antimicrobial Effect of *Zophobas morio* Hemolymph against Bovine Mastitis Pathogens

Where to find the original material:

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7601528/;](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7601528/)

<https://doi.org/10.3390/microorganisms8101488>

Country: CN