

# **Proteomic Analysis and Screening of the Proteins from Normal and Wounded *Gryllus bimaculatus***

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Innate response of insects is highly efficient. 1) Phagocytosis and encapsulation of invading microorganism is the cellular defense reaction. 2) The synthesis of antimicrobial peptides is a hallmark of the host defense reaction. 3) In the absence of harmful microorganism, wound healing is initiated by proteolytic cascades leading to localized blood clotting. In wound healing response, these innate responses could be occurred, too. The proteins of hemocyte, hemolymph, fat body, hemopoietic organ in normal and wounded *Gryllus bimaculatus* were separated by 2-D gel electrophoresis and compared the pattern depending on wounded object. Newly detected, up-regulated and down-regulated proteins in the four samples of the wounded group were detected by 2-D image analysis and screened by MALDI-TOF mass spectrometry analysis and total animal proteomic data base.