

Proteomic Analysis of Immunized *Bombyx mori* Larvae

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Hemocytes play a major role in insect cellular immune response. In infected with foreign invaders, hematopoiesis was more actively occurred. The current study was performed to understand hemocyte differentiation patterns and expressed proteins of immunized *Bombyx mori* larvae. Heat-inactivated bacteria (*Bacillus megaterium*) was injected into *B. mori* 5th instar 4 day after ecdysis. After six hours, the THC were increased up to 905×10^3 in immune response. The DHC indicated that granulocytes were increased up to 816.6×10^3 and comprised half of THC in immunized larvae. Using two-dimensional polyacrylamide gel electrophoresis (2-D PAGE) and Q-TOF MS/MS, we identified proteins of hemolymph that differently expressed in immunized larvae. In hemocytes, five spots were up-regulated and six spots were down-regulated in immunized larvae. In plasma, three spots were up-regulated and five spots were down-regulated. Heat shock 70kDa protein (Hsp70) was one of the hemocyte up-regulated proteins and fibroin light chain precursor (Fib-L) was among the hemolymph up-regulated proteins. Up-regulation of Hsp70 was confirmed by western blotting assay. These results suggest that Hsp70 of hemocytes and Fib-L of plasma are associated with the regulation of THC and GR increasing in immune response.