

Impact of Botanical Extracts on Histopathology of Midgut of CSR2 Race of Mulberry Silkworm (*Bombyx Mori L.*) Inoculated by *Staphylococcus Aureus*

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Abstract: *In the present study changes in midgut epithelium of 5th day of 5th instar silkworm race CSR2 infected with a gram-positive bacteria *Styphalococcus aureus* and plant extract treated group and control group were studied. Large numbers of newly developed cells appeared in the bacteria infected part of the midgut epithelium. After inoculation, and along with their development, the bacteria old columnar cells were discharged into the midgut lumen during development. On the other hand, in the uninfected portion of the midgut only a few cells developed, and no columnar cells were discharged. Similarly, the marked replacement of midgut epithelial cells during larval development were also observed in larvae treated by plant extract. In the larvae infected with *S.aureus*, the columnar cells lost their regenerative ability, and because of the exfoliation of infected columnar cells, the midgut epithelium consisted mainly of uninfected goblet cells at a late stage of infection. The degree of epithelial regeneration varied with the silkworm strain and the dosage of the bacteria.*

Keywords: Plant Extract, *Staphylococcus aureus*, Midgut, Goblet Cell, etc.

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