ANTIMICROBIAL ACTIVITY OF SECRETORY MATERIALS OF SOME SCALE INSECTS.

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The antimicrobial activity of the secretory materials associated with the test or wax covers of five scale insects was tested for Gram-positive and Gram-negative bacteria. The scale insects studied were the margarodid Icerya aegyptiaca (Douglas), the soft wax scale Ceroplastes rusci (Linnaeus) and three hard scales: Aonidiella aurantii (Maskell), Lepidosaphes beckiiNerwman and Parlatoria zyziphi (Lucas).

The Gram-positive bacteria found included Staphylococcus aureus and Streptococcus agalactia, while the Gram-negative bacteria included Escherichia coli, Pseudomonas aeruginosa and Corynebacterium pseudotuberculosis.

The results of these observations revealed that there was some highly significant antimicrobial activity associated the secretory materials of the diaspidids A. aurantii, L. beckii and P. zyziphus. The antimicrobial activity observed varied according to type of the pathogenic bacteria it was used against. Thus, the activity from all three species was effective against Staphylococcus aureus, but that of A. aurantii and P. zyziphus was less effective against Corynebacterium pseudotuberculosis.