Plain English Summary

Sucking pests of cotton (aphids and mirids) that are expected to become more significant as the use of synthetic chemical sprays is replaced by the deployment of transgenic cotton. The objective of this project was to characterise genes encoding proteins toxic for sucking pests of cotton. Eight lectins and extracts prepared from over 100 strains of bacteria from three different genera were tested by bioassay for their toxicity to three major sucking pests: the green mirid, cotton aphid and silverleaf whitefly. Extracts of several bacterial strains were found to be toxic for the sucking pests; no strain was most toxic for all three pests. One protein with toxicity for cotton aphid was purified.