

Effects of indole alkaloids from gramineae on aphids

Corcuera, Luis J.

The indole bases N[?]-methyltryptamine, 5-methoxy-N, N-dimethyltryptamine, 3-N,N-dimethylaminomethylindole (gramine) and 5-methoxytryptamine decreased survival of nymphs of *Rhopalosiphum maidis* with LD50 of 3.8, 3.5, 2.9 and 2.3 mM, respectively, after 48 hr of feeding with a synthetic diet. Gramine also decreased survival of *Schizaphis graminum* with an LD50 of 0.7 mM after 48 hr of feeding. The four compounds tested showed feeding deterrent activity on the aphids at concentrations as low as 0.5 mM. In addition, gramine showed toxic effects on *S. graminum*. Since the deleterious effects of gramine and related compounds in synthetic diets are observed at concentrations similar to those found in plants, it is possible that these molecules may have a role in protecting the plant against aphids. © 1984.