

An *in vitro* study of the antinematodal action of two groups of compounds which act on the receptor complex of the inhibitory neurotransmitter, Gamma-aminobutyric acid (GABA) in mammalian systems is described.

The compounds, Ivermectin and two benzodiazepines, Diazepam and a water soluble Midazolam were tested singly or in combination against two microfilarial parasites *Onchocerca lienalis* (closely related to *Onchocerca volvulus*) and *Brugia pahangi*.

The combination of ivermectin and diazepam at a concentration of 0.1 µg/ml and 33 µg/ml respectively achieved the same effect on microfilarial motility as when ivermectin was given at 1 µg/ml alone or diazepam at 66 µg/ml alone. Similarly, when the combination of ivermectin at 0.1 µg/ml and midazolam at 10 µg/ml was used it achieved the same effect as ivermectin at 1 µg/ml alone or midazolam at 33 µg/ml alone. This showed that both benzodiazepines had a synergistic effect on the activity of ivermectin.

The microfilariae of *B. pahangi* were insensitive to both groups of compounds at all concentrations used.