

## Abstract

The activity of aqueous and ethanol extracts of *Ricinus communis* was tested on *Leishmania* promastigotes in cell-free culture media. Serial dilutions of the extracts ranging from 500 µg/ml, 250 µg/ml and 62.5 µg/ml were prepared in triplicate using Schneiders *Drosophila* medium supplemented with 20% fetal bovine serum in the absence of antibiotics and the growth of approximately  $1 \times 10^6$  parasites monitored every two days for a period of 8 days. Parasite density was estimated every two days using the Neubauer counting chamber. At the end of the 8-day period cell morphology was observed and photographed. Significant growth inhibitory effect was observed on the promastigotes by the aqueous and ethanol extracts especially at high concentrations. However, there was an enhanced growth effect initially thereafter leading to a rapid decline in promastigote cell population. Flagellar motility was also greatly affected at high concentration and it appeared that there was a linear relationship between flagellar motilities and the level of concentrations. Parasite morphology was affected severely. Most of the cultures observed appeared to have abnormal round morphology. Rosetting was also evident in the extract treated cultures. The aqueous leaf extract interfered with parasite morphology but this was dose dependent. The importance of *R. communis* plant as a potential source for chemotypes with antileishmanial activity is discussed.