**Abstract**

The methanolic leaf extract of Artemisia parviflora (APLE) tested against Anopheles stephensi larvae and pupae and recorded the mortality rate, LC50 and LC90 values. This investigation revealed that this leaf extract possess higher toxicity against Anopheles stephensi. The biological activity of the plant extract might be due to the presence of active compounds â- Caryophyllene, germacrene D, Camphor, artemisia ketone, 1-8 Cineole, D-Copaene and Sabinyl acetae. These are all compounds are very toxic against the mosquito. The LC50 value for first instar larvae is 45.61 and it is increased in the IV instar larvae as 59.60. According our experimental view this plant can effectively play the biopesticide role and may contribute to an effective vector control tool. This new agent should preferentially to be applied in mosquito control strategies to reduce the mosquito populations and prevent the malaria.