Toxicity of *Moringa oleifera* Flower Extract on *Artemia salina* Nauplii and *Biomphalaria glabrata* Embryos

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*Moringa oleifera* is a tropical cosmopolitan tree. *M. oleifera* flower extract has trypsin inhibitor and larvicidal activity on *Aedes aegypti*. This work evaluated the toxicity of flower extract on non-target aquatic organisms *Artemia salina* and *Biomphalaria glabrata*. Flowers (50 g) were homogenized with distilled water (100 mL) in a blender. After filtration and centrifugation (9,000 g, 15 min, 4 °C), the supernatant (extract) was collected and evaluated for trypsin inhibitor activity using bovine trypsin and N-α-benzoil-DL-arginine-ρ-nitroanilide (BApNA) as substrate. The eggs of *A. salina* (25 mg) were hatched in seawater under artificial light at 30 °C. After 24 h, 15 nauplii were collected and transferred to test tubes containing the extract (5 mL) at different concentrations (0.1–0.85 mg/mL); the concentration required to kill 50% of nauplii (LC₅₀) in 24 h was determined. *B. glabrata* egg masses recently spawned were exposed to the extract (0.01–0.1 mg/mL) for 24 h and examined for 7 days. Embryo death, abnormal development and the day of hatching were recorded. The extract inhibited bovine trypsin (98%) and showed low toxicity on *A. salina* (LC₅₀ of 0.2 mg/mL) since compounds with LC₅₀ between 0.1 and 1 mg/mL are slightly toxic. The survival and hatching of *B. glabrata* embryos were not significantly affected by extract. The concentration of 0.1 mg/mL of extract promoted delay in development of 52 embryos (17%). In conclusion, *M. oleifera* flower extract has low toxicity and thus may be an environmental friendly agent for *A. aegypti* control.
