

**RESEARCH ARTICLE**

**Anticancer activity of leaves extracts of *Convolvulus pluricaulis* and *Mimosa rubicaulis* (Lam.) by Brine Shrimp Lethality Bioassay**

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**ABSTRACT:**

This study was subjected to investigate brine shrimp lethality bioassay of *Convolvulus pluricaulis* and *Mimosa rubicaulis* (Lam.) in different polarities of leaves extracts. Brine shrimp organisms were used to assess the cytotoxic activities of various polarities of leaves extracts while using brine shrimp lethality bioassay the cytotoxicity had been assessed and correlated with standard. Five concentrations (20, 50, 100, 200, 500 µg/ml) of each extract were used to find out the cytotoxicity. The *Artemia salina* lethality bioassay result was evaluated in terms of LC<sub>50</sub> (lethality concentration). In each plant extracts into three replicates concentration naupli were added. After 24 h the surviving *Artemia salina* larvae were counted and LC<sub>50</sub> was assessed. The cytotoxic activity of all polarities of extracts displayed activity within the value of LC<sub>50</sub> (132.10–266.76 µg/ml) for *Convolvulus pluricaulis* and (213.86–279.47 µg/ml) for *Mimosa rubicaulis* (Lam.) Results revealed that the ethyl acetate extracts of *Convolvulus pluricaulis* and ethanolic extracts of *Mimosa rubicaulis* (Lam.) elicit significant activity compared to other extracts it indicated biologically active components are present in ethyl acetate and ethanolic extracts that could be accounted for its pharmacological effects.

**KEYWORDS:** Brine shrimp lethality, *Convolvulus pluricaulis*, *Mimosa rubicaulis* (Lam.), LC<sub>50</sub>, Cytotoxicity.

**INTRODUCTION:**

Cancer is an incurable disease recently, its global burden and it's a serious impact on communities across the planet. It's a multiple disease involving abnormal cell growth and rapidly spread to the opposite parts of the physical body. (1) The main causes of cancer are tobacco, alcohol, obesity, poor diet, lack of physical exercise, radiation, environmental pollution, and different types of virus and bacterial infections. (2) People prefer plant derivative remedies to treat those irrepressible diseases with no side effect. Some of the Medicinal plants and ingredients showed the probable role against cancer treatment.

Therefore, the scientists are performing on the natural sources to seek out the cancer remedies to treat differing types of cancer. (3) Recently, tubulin was characterized from medicinal plants and it had been found to move against various sorts of cancers. This compound has various molecular mechanisms and inhibits the depolymerisation of microtubules and tubulin polymerization and hinders cell division and contributes to apoptosis. (4) Epidermal evidences suggest the importance of fibres within the treatment of cancer. (5) Plant nutrients and non-nutritive materials showed anticancer activity and has been proved in vitro methods. (6) In drug discovery, medicinal plants are considerably wont to isolate novel bioactive compounds against cancer. 75% of the anti-infective drugs and 60% of the FDA approved anticancer drugs are derived from medicinal plants. Polyphenols selected from various Medicinal plants revealed anti-cancer properties against various cell lines. (7) In present scenario, cancer is one of the dreadful diseases and its occurrence is increasing. (8) Furthermore, flavonoids derived from Medicinal plants revealed anti-cancer properties (9) when attempting to watch the medical development within the