

## Evaluation of in vitro cytotoxic effect of *Trichosanthes dioica* root

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### ABSTRACT

**Background** *Trichosanthes dioica* Roxb. (Cucurbitaceae), called pointed gourd in English is a dioecious climber grown in India and used traditionally for various medicinal purposes. **Methods** Present study was aimed to evaluate in vitro cytotoxic effect of dichloromethane (DCTD), methanol (METD), and aqueous (AQTD) extracts of *T. dioica* root using *Allium cepa* root meristems by keeping them in different concentrations of each test extract under specific experimental conditions followed by determination of root growth inhibition (root length and number) and mitotic index. **Results** All the extracts significantly demonstrated concentration-dependent inhibition of root length and number and reduction in mitotic index, indicating antimitotic activity demonstrating cytotoxicity and genotoxicity. DCTD was found to be the most potent (EC<sub>50</sub>: 2.8 mg/ml), followed by METD and AQTD. **Conclusion** The present study therefore, establishes promising in vitro cytotoxic and genotoxic property of *T. dioica* root against the test system.

### KEYWORDS

*Allium cepa* . antimitotic . cytotoxic . root

### REFERENCES

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