



## To study Antimitotic Activity of Momordica Dioica Fruits on Allium Cepa Root Meristamatic cells

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### Abstract

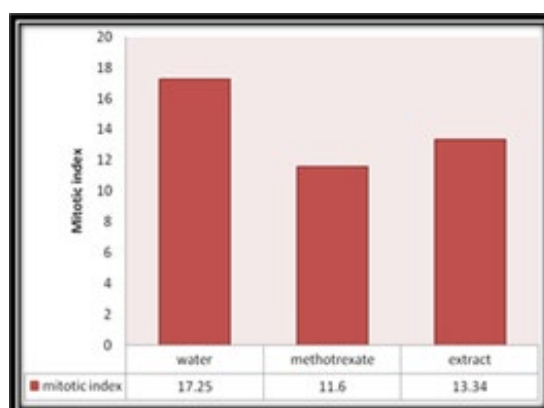
**Objective:** Various parts of Momordica dioica commonly known as spiny gourd used for treatments of various diseases in today's world. Natural occurring phenolic compounds play an important role in cancer prevention and shows antimitotic activity. Number of active constituents like phenolic acid, curcuminoids, coumarins, lignans, quinones, etc. is showing antimitotic activity of Momordica dioica. The present work is on phytochemical investigation and examines antimitotic activity of aqueous extract of fruits Momordica dioica on Allium cepa root meristamatic cells.

**Methods:** The fruits are air dried and extracted with solvents like water by maceration method. The evaluation of antimitotic activity is done by using Allium cepa root meristamatic cells parameters where methotrexate was used as a standard drug.

**Result and discussion:** In Allium assay, aqueous extract of fruits of Momordica dioica (15 mg/ml) and methotrexate act against cells of allium roots and lesser the growth of root and mitotic index when compared with distilled water as control group. The result indicated that cytotoxic property is due to presence of phenolic, alkaloids and flavonoids compounds in 15 mg/ml concentration of Momordica dioica fruits extract.

**Conclusion:** On the basis of result, we concluded that, 15 mg/ml concentration of Momordica dioica fruits shows good antimitotic activity on the Allium cepa root tip assay.

**Keywords:** Momordica dioica, Allium cepa, antimitotic, maceration and methotrexate



Graph No: 1 Mitotic index of water (control), methotrexate and aqueous extracts of fruits Momordica dioica

### Biography

Rajesh A. Ahirrao has nearly 14 years of Industrial, Research and Teaching experience at U.G levels. He did his Ph.D at JJT University, Rajasthan. He did his M-Pharm. from KLE S's COP, Belgaum, Karnataka in 2007. He has guided more than 40 undergraduate students for their Projects. He has 04 book is published to his credit. He has 38 research and review papers published in reputed national and international journals. About 21 research abstracts has been presented by him in various proceeding of national and international conference. He has Received "Best Researcher Award" in 2nd International Scientist Awards on Engineering, Science and Medicine which is held on 16&17-November 2019 in Visakhapatnam, India by VDGOD Professional Association. He has been participated as resource person at different national seminar, workshop and school level. He is working as member of editorial board and reviewer in 4 reputed journals. Presently he is working as Principal in Prof. Ravindra Nikam College of pharmacy, Gondur, Dist- Dhule, Maharashtra, affiliated to KBC North Maharashtra University, Jalgaon. His Research interest is herbal extraction and anticancer activity of different plants extract.

International Conference on Clinical Research and Case Reports  
Paris, France | June 15-16, 2020

**Citation:** Rajesh A. Ahirrao, *To study Antimitotic Activity of Momordica Dioica Fruits on Allium Cepa Root Meristamatic cells*, Clinical Research 2020, International Conference on Clinical Research and Case Reports, Paris, France | June 15-16, 2020, 03:04