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Research article

Comparative antigenotoxic effects of aqueous leaf extracts of different cultivars of *Chrysanthemum morifolium* R. against genotoxicity induced by mercuric chloride using *Allium cepa* L. root chromosomal aberration assay

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Key words: Chromosomal aberrations, *Allium cepa*, *Chrysanthemum morifolium*, antigenotoxicity.

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Abstract

Plant bioassays are simple, inexpensive, accurate and direct methods to test the effect of a substance on the living systems and are considered important in the development of new drugs. One such bioassay is *Allium cepa* root chromosomal aberration assay. The present investigation was carried out to test the antigenotoxic potential of aqueous leaf extracts of different cultivars of *Chrysanthemum morifolium* against the genotoxicity induced by mercuric chloride. Simultaneous treatment of onion root tips with mercuric chloride and different concentrations of aqueous leaf extracts of different cultivars of chrysanthemum resulted in dose dependent decrease in frequency of chromosomal aberrations as compared to those induced by treatment with mercuric chloride alone. Maximum genoprotective potential was shown by Yellow coin cultivar, while minimum was shown by Cameo cultivar, against mercuric chloride induced genotoxicity.