

*Malays. Appl. Biol. (December 2003) 32(2): 35-39*

**GENOTOXIC EFFECT OF FLAVONOID OF CARTHAMUS TINCTORIUS IN MITOTIC CELLS OF ALLIUM CEPA**

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## **ABSTRACT**

The cytological effects (induction of mitotic chromosome aberrations in root tip cells) of flavonoid from the flower of *C. tinctorius* on *Allium cepa* root meristems were studied. The flavonoid quercetin-3-glucoside, quercetin-3-rutinoside, kaempferol-3-glucoside and kaempferol-3-rutinoside were found to be mitodepressive and induced statistically significant chromosome aberrations in root cells. Abnormalities scored were stickiness, c-mitosis, clumping, micronuclei, lagging and bridges.

## **ABSTRAK**

Kajian telah dijalankan terhadap kesan sitologi (induksi aberasi terhadap kromosom mitotik di dalam sel-sel hujung akar) oleh flavonoid dari bunga *Carthamus tinctorius* ke atas meristem akar *Allium cepa*. Flavonoid kuersetin 3-glukosida, kuersetin 3-rutinosida, kaemferol 3-glukosida

dan kaemferol 3-rutinosida telah didapati sebagai perencat mitotic dar menginduksikan aberasi kromosom di dalam sel-sel akar dengan aras keertian statistic yang signifikan. Ketidaknormalan kromosom yang ditunjukkan adalah seperti kelekitan, pengelompokan, mikronukleus, bebatan dan jejambat.

Key words: *Carthamus tinctorius*, flavonoid glycosides, cytotoxicity.

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