

Cytotoxic and antimigration effects of different parts of *Oroxylum indicum* extract on human breast cancer MCF 7 cells

Benjaporn Buranrat, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20495831&lokasi=lokal>

Abstrak

ABSTRAK

The objective of this research was to investigate the effects of *Oroxylum indicum* extracts on breast cancer MCF 7 cell proliferation and migration. Four parts of *O. indicum*, including leaf, bark, pod, and seed, were used. The total phenolic and flavonoid contents were determined to be at high concentrations in the four parts of *O. indicum* with the seed extract showing the highest levels. For MCF 7 cell death and proliferation, all *O. indicum* extracts caused stimulating cancer cell death and inhibiting cancer cell proliferation in dose and time dependent manners, surprisingly, the seed extract had the highest effects to inhibit cell proliferation. The IC₅₀ values of cell viability of *O. indicum* extracts were demonstrated as 161.2 8.63, 286.73 33.01, 149.03 8.81, and 107.06 5.66 mg/mL for leaf, pod, bark, and seed, respectively. Cell counts by crystal violet staining showed that the seed extract stimulated cell death at the lowest concentration. Moreover, all of the *O. indicum* extracts decreased MCF 7 cell colony formation. Finally, we found that *O. indicum* extracts could inhibit cancer cell migration in a dose dependent manner. In conclusion, our results showed that the seed extract of *O. indicum* showed the highest cytotoxic and anti-migratory activity, which was more than in the leaf, pod, and bark, on breast MCF 7 cell cancer and *O. indicum* can be an anticancer agent for breast cancer patients.