Natural triterpenes from *Dillenia indica* L. and its antitumoral activity in OVCAR-3

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**Objectives:** The present study is an attempt to establish the cytotoxic activity of the steroid fraction of the fruit crude extract of *Dilienia indica* L and the anti-inflammatory activity of the flavonoid fraction on OVCAR-3 ovarian cell lines.

**Methods:** Peel and pulp from unripe and ripe fruits of *D*. indica were extracted with methanol. Fractions selected for the antitumoral activity were those containing flavonoid and triterpenes. The extracts were tested in the OVCAR-3 cell line and Vero cell, using vincristine as a control.

**Key findings:** The results showed good activity of the extracts in the OVCAR-3 cell line. The cell viability demonstrated that betulinic acid (BA) citotoxicity (CC 50: 58 µg/mL) is lower in the presence of flavonoids (CC50: 120 µg/mL) and terpenic fraction (CC50: 50 µg/mL). Apparently, the constituent responsible for the activity is the triterpenes fraction (IC50: 2.1 µg/mL) in special betulinic acid (IC50: 2.6 µg/mL). A synergic effect is observed in the presence of the flavonoid fraction (IC50: 1.4 µg/mL) and of others triterpenes (IC50: 2.1 µg/mL).

**Conclusions:** The present study indicated that both lupano terpenoids and flavonoids impaired tumor survival in the OVCAR-3. The flavonoid activity played an important role in contributing to the effect of reduced ovarian cancer cell survival.

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