

## Cytotoxic effect of *Agrostemma githago* on human umbilical vein endothelial cell line (HUVECs)

### Abstract:

**Introduction & Objective:** Angiogenesis has a vital role in both physiological and pathological situations. Recently, herbal medicine is targeted by many trial investigations to develop new strategies for angiogenesis related diseases such as cancers and atroscolrosis. At the present study, we evaluated the effect of extract of *Agrostemma githago* seed on viability of HUVECs.

**Material & Methods:** We first examined the viability of HUVECs following treatment with different concentration of *Agrostemma githago* extract using MTT assay and IC50 was determined. The activity of caspase 3 and 7 was measured via Caspase-Glo® 3/7 assay kit.

**Results:** Our results showed that *Agrostemma githago* could inhibit HUVECs viability. IC50 were calculated as 10.78 and 10.33 µg/ml for 48 and 72 hours of *Agrostemma* treatment, respectively. Moreover, the level of caspase 3 and 7 activites were significantly increased compared to control group.

**Conclusion:** Although more studies are needed, the cytotoxicity of the extract on endothelial cells and the induction of apoptosis may considered *Agrostemma githago* as a plant with anti-angiogenic properties.

**Keyword:** Angiogenesis, *Agrostemma githago*, Apoptosis, HUVECs