INTRODUCTION: The currently anticancer available therapy have shown high toxicity, nonspecific effect and cause multidrug resistance, highlighting the need to search for new pharmaceuticals alternatives. Several studies have characterized the antitumor activity of *P. edulis*. However, further preclinical studies are necessary to better characterize this effect. The aim of this work was evaluated the *in vivo* antitumor activity of hydroalcoholic (EtOH, 1:1) and supercritical (SFE, 300bar/40°C/5% ethanol) extracts of seed cake (residue) of *P. edulis f. flavicarpa* Degener (subspecies).

MATERIAL AND METHODS: *In vivo* antitumor activity of both extracts (50µl; 100mg/kg/day; 9 days; i.p) was evaluated through pro-apoptotic effect (Ethidium Bromide/Acridine Orange – EtBr/OA) and unviable cells/viable cells ratio (tripan stain) on Ehrlich ascites carcinoma cells bearing - Balb/c mice. Additionally, the body weight variation (g) and survival (Kaplan-Meier) was evaluated.

RESULTS AND DISCUSSION: Both extracts decreased the body weight in treated animals (EtOH = 7.07±2.25g; SFE = 7.66±3.81g) and increased the unviable cells (EtOH =0.017±0.01; SFE = 0.042±0.04), comparatively to Negative Control (11.42±2.55g; 0.01± 0.01). However, there is no statistical difference between EtOH and SFE relatively to body weight variation. Indeed, both extracts showed significant statistical difference from the unviable cells/viable cells ratio between them (p <0.01). This increase of unviable cells (dead cells) was related to apoptosis. The SFE had a pro-apoptotic potential greater than EtOH (EtOH =28.23%; SFE =35.7%). These results corroborate with the increased survival. SFE enhanced 12% of the probability of animals being alive at 25 days of observation time, compared with 15 and 13 days of EtOH and NC, respectively.

CONCLUSION: Both extracts have *in vivo* antitumor activity, highlighting that the SFE has such a more pronounced effect.

Keyword: Antitumor effect, *Passiflora edulis*, Survival

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