Letter to the editor:

ANTICANCER ACTIVITY OF LUTEOLIN GLYCOSIDES

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Dear Editor,

Recently, Lee and colleagues published a study on cytostatic effects of luteolin glycosides in MDA-MB-231 breast cancer cells (Lee et al., 2019). Luteolin and its derivate have been shown to inhibit migration of several cell lines (Kim et al., 2012; 2018a, b; Park et al., 2013). In the present study, the authors focused on MDA-MB-231 cells, a HER2-negative, as well as estrogen and progesterone receptor negative cell line, because triple-negative cancer cells represent a challenge in breast cancer therapy (Callmann et al., 2020). The authors demonstrate that luteolin inhibited migration and invasion of MDA-MB-231 cells stimulated with the tumor promoter 12-O-tetradecanoylphorbol-3-acetate already at a non-cytotoxic concentration of 5 µM (Lee et al., 2019). At cytotoxic concentrations luteoline caused Fas-mediated apoptosis (Lee et al., 2019).

Improved treatment options of triple negative breast cancer are urgently needed (Wang et al., 2020; Moss et al., 2020). Factors responsible for prognosis and metastasis of breast cancer include the cellular and humoral immune system (Schmidt et al., 2012, 2018; Heimes et al., 2017a, b), cholin metabolism associated genes (Marchan et al., 2017; Lesjak et al., 2014; Stewart et al., 2012), antioxidative factors (Cadenas et al., 2014, 2019; Hellwig et al., 2016), actin associated proteins (Stock et al., 2015; Rommerswinkel et al., 2018), and many more. It will be interesting to learn in future if luteolin glycosides, which show promising effects in breast cancer cell lines in vitro will also be efficient in mouse tumor models.

Conflict of interest

The authors declare no conflict of interest.

REFERENCES


