Neoplasms are the main cause of death worldwide. Each year tumors are diagnosed in about 11 million people, ending with death in 7.6 million; the number forecasted for 2030 reaches 13.1 million. The major ways of cancer treatment are chemotherapy and radiotherapy, which unfortunately proved toxic to other living cells of the body. Therefore, numerous studies have focused on application of natural products to prevent and to treat cancer. Among bioactive compounds, an important group is that of triterpenes, which show cytotoxic properties against tumor cells at low activity toward normal cells.

Triterpenes are naturally occurring alkenes of vegetable, animal and also fungal origin, classified among an extensive and structurally diverse group of natural substances, referred to as triterpenoids. Their structure includes 30 elements of carbon and they are constituted by isoprene units. Taking into consideration the structure, triterpenes may be divided into linear ones-mainly derivatives of squalene, tetracyclic and pentacyclic, containing respectively four and five cycles, as well as two- and tricyclic ones. Representatives of those show anti-cancer properties as well as anti-inflammatory, anti-oxidative, anti-viral, anti-bacterial and anti-fungal ones. A good example could be the betulinic acid and its derivatives which have been investigated for their strong cytotoxic properties. Other important representatives are the compounds originating from squalene, dammarane, lanostane, oleane (e.g., oleanolic acid), lupane (e.g., lupeol), ursane (e.g., ursolic acid) or triterpenoid sapogenins, for example cycloartane, friedelane, filicane and cucurbitane triterpenoids.

I would suggest in the introduction to add information on the triterpenes as potentially cytotoxic compounds of 2015.

The manuscript is the first report from literatures on the mechanism of action of Pleiocarpa pycnantha and its triterpenes on induce apoptotic cell death in Caco-2 cells in vitro.
Is the question posed by the authors is good. The methods appropriate and well described OK.

The figures appear to be genuine, without evidence of manipulation.

The authors clearly acknowledge any work upon which they are building, both published and unpublished.

The title and abstract accurately convey what has been found. The article is interesting.