Reviewer’s report

Title: The induction of activating transcription factor 3 (ATF3) contributes to anti-cancer activity of Abeliophyllum distichum Nakai in human colorectal cancer cells

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Reviewer: NEERAJ SAXENA

Reviewer’s report:

In the present manuscript entitled "The induction of activating transcription factor 3 (ATF3) contributes to anticancer activity of Abeliophyllum distichum Nakai in human colorectal cancer cells"; Park and colleagues have evaluated “in vitro”, anticancer activity of Abeliophyllum distichum against various cancer cell-lines. Authors implicated activating transcription factor 3 (ATF3) as target for an extract from Abeliophyllum distichum--branch in colorectal cancer cells.

Major comments:

Seems results shown in Figure 4C and 4D are not going with the results reported. Authors are reporting that GSK3B inhibition by SB216763 ameliorates the increased level of ATF3, whereas the western blot shows quite opposite and ATF remains same as in DMSO. Authors also report that effect of EAFAD on ATF3 fails to get affected by p38MAPK-inhibitor while western blot doesn’t clearly show that. In figure 4A and B, authors show that ERK1/2 is not involved in ATF transcriptional activation as ERK1/2 inhibitor; PD98059 doesn’t affect ATF activation, whereas in Figure 4E, they show EAFAD increases ERK1/2.

The data shown for liver cancer (HepG2) as well as breast cancer (MCF-7 and 231), shows pro-apoptotic effect of EAFAD and it seems ATF-3 is not involved, as ATF-3 has been shown to be pro-proliferating molecule in liver and breast. Authors need to comment on that and discuss.

Pro-apoptotic role of ATF3 in colorectal cancer and a therapeutic target, has been shown and is not a novel finding except a target for EAFAD.

Minor comments:

The manuscript has some grammatical and syntactical errors.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

No conflict of interest