Reviewer's report

Title: Enhancement of Cetuximab-Induced Radiosensitization by JAK-1 Inhibition

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Reviewer: Mukesh K Nyati

Reviewer's report:

The Manuscript by Bonner et. al., describes the use of JAK1 inhibitor from calbiochem as enhancer of cetuximab (EGFR antagonist) radio-sensitizing potential.

The authors have previously published similar findings in 2011 (Radiotherapy Oncol, 99 (3) 339-43), in this manuscript the addition is instead directly targeting STAT3, JAK1, which is upstream of STAT3 is targeted. In 2012 Sen et. al., (Clinical Cancer Research, 18 (18) 4986-96) also presented in vivo data that targeting STAT3 can enhance the efficacy of cetuximab in head and neck cancers.

Therefore, I believe, that the concept that this study demonstrate is not new and has very limited scope as only in vitro data is shown.

This study will be meaningful if author can demonstrate data that JAK1i can sensitize Cetuximab resistant xenografts (or PDX) to ionizing radiation.

Other issues:

It is puzzling as to why authors decided to not include data to show the effect of cetuximab and JAK1i on EGFR, phospho-EGFR, JAK and phospho-JAK?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests