Reviewer’s report

Title: Rosiglitazone synergizes anticancer activity of cisplatin and reduces its nephrotoxicity in 7, 12-dimethyl benz(a)anthracene (DMBA) induced breast cancer rats

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Reviewer: José Pedraza-Chaverrí

Reviewer’s report:

Tikoo et al. showed that rosiglitazone ameliorates cisplatin-induced nephrotoxicity and enhances the anticancer activity of this platinum compound in rats with 7,12-dimethyl benz(a)anthracene induced breast cancer. Nephrotoxicity was evaluated by histological and biochemical (creatine, BUN and serum albumin) analyses. They also evaluated the anticancer activity of the drugs by histological analysis and by measuring tumor volume and % of tumor inhibition. With the above markers they found that rosiglitazone indeed ameliorates cisplatin-induced nephrotoxicity as well as enhances its antitumoral activity in this experimental model. The protective effect of rosiglitazone was associated with a decrease in cisplatin-induced circulating TNF alpha levels. In addition, they showed in the tumor tissue that rosiglitazone enhances p38 and PPARgamma expression as well as a decrease in the acetylation, phosphorylation and methylation of histone H3.

This is a well performed and conducted study presenting novel data

Major Compulsory Revisions.

The authors have to explore the possibility that the rosiglitazone decreases cisplatin renal accumulation. This may be the reason why rosiglitazone decreases cisplatin-induced nephrotoxicity.

They have to present quantitative data of the histological studies in bith kidney and tumor tissue.

It would be advisable that the authors measure markers of inflammation and of oxidant and nitrant stress in kidney. ¿what is the effect of rosiglitazone on the renal expression of antioxidant enzymes?

Minor Essential Revisions

The labels in figures 2 and 3 are hardly seen.

They discuss data about glomerular thickening but figure 2 shows only renal tubuli.

The abbreviations in the legend to figure 1 are not necessary. They do not
Level of interest: An article of outstanding merit and interest in its field

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