Reviewer’s report

Title: The NFKB1 polymorphism (rs4648068) is associated with the cell proliferation and motility in gastric cancer

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Reviewer: Brian Poole

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The manuscript “The NFKB1 polymorphism (rs4648068) is associated with the cell proliferation and motility in gastric cancer” is a potentially important finding. The initial experiments, including the immunohistochemical staining and the luciferase activity assays, were well done and showed a connection between the polymorphism and NFkB expression. However, there are several aspects of the manuscript that are unclear, and need to be resolved before publication.

Major compulsory revisions

1. Lines 210-222, the section on C/EBP#, are unclear. I am unsure from reading them whether C/EBP# is binding to the NF-#B promoter and regulating it, or if NF-#B is binding to the C/EBP# and regulating it. Some clarity or perhaps a diagram would be useful here. I am having trouble believing that the presence of a promoter can bind up enough C/EBP# to “regulate” protein activity on other genes, which is what the authors seem to be saying. Alternately, they may be saying that C/EBP# binds better to the GG version of the NFkB promoter and enhances transcription of NFkB. This is a reasonable finding, but does not explain the effects seen in figure 5, as explained below in point 2.

2. I am unsure what the recombinant plasmid contains. Is it just the promoter region of NF-kappaB with the polymorphisms, or is it the entire gene, complete with NF-kappa B coding sequence? This needs to be better specified. If it is just the promoter region, how does this explain the effects seen, since endogenous NF-kappa B would still be regulated by its own promoter?

Minor essential revisions

1. There are a few missing words and minor mistakes throughout the manuscript.

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:

I declare that I have not competing interests