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

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Author's response to reviews: see over
Dear Dr. Magdalena Morawska:

Attached please find our manuscript entitled "The NF-KB polymorphism (rs4648068) is associated with the cell proliferation and motility in gastric cancer", which we wish to submit to *BMC gastroenterology* for publication.

Hyperactivation of nuclear factor-κB (NF-κB) is associated with various types of tumors. We have demonstrated previously that NF-KB SNP rs4648068 GG homozygote was associated with the increased risk of gastric cancer in Chinese Han population. In this study, we constructed the recombinant plasmid pGL3-GG and pGL3-AA and investigated the function of rs4648068 by cell biology experiments. The section of NF-KB1 promoter containing this site were obtained by PCR technique and subcloned into the vector pGL3-Basic. We found the transcription activity of rs4648068 (A>G) by dual-Luciferase reporter assay suggested that the luciferase activity of mutation group (pGL3-GG) was greater than that of the control (pGL3-AA), especially at the stimulation of LPS. The interaction between C/EBPβ and NFKB promoter DNA was regulated by the functional SNP rs4648068 in the SGC-7901 cell. Our data indicated that the mutation of SNP rs4648068 strengthened the transcriptional activity of NF-KB1 and C/EBPβ expression levels. Correspondingly, the transduction of pGL3 recombinant plasmid pGL3-GG improved the proliferation and invasion ability of gastric cancer cells. We believe that our manuscript is appropriate for the general audience of *BMC gastroenterology*. Additionally, line and page numbers were included in this manuscript, Email addresses of all co-authors were also provided in the title page. The undersigned authors transfer all copyright ownership of this manuscript to the publisher in event the paper is published.

Thank you very much for your consideration!

Sincerely Yours,

Lin GUO

Oct 8, 2014