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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology
ESPS manuscript NO: 16105
Title: Conjugation of TLOverall, this is an interesting study focused on the development of a vaccine against gastric cancer. However, although it shows some promising results, there are several issues (see below)that rise a concern that the results may be misinterpreted; these issues must be clarified, before the paper can be considered for publication. agonist to gastric cancer antigen MG7-Ag exerts antitumor effects
Reviewer's code: 03016877
Reviewer's country: Latvia
Science editor: Jing Yu
Date sent for review: 2014-12-27 15:02
Date reviewed: 2015-01-11 17:12

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[ ] Grade E: Poor		[Y] No	[Y] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

This study aims to develop a vaccine against gastric cancer by conjugating multi-repeated epitope of gastric cancer antigen MG7-Ag and TLR7 agonist. The authors demonstrate that this conjugate elicit specific humoural, NK and CTL responses in mice and can reduce (to some degree) the tumour burden in tumour challenge assays. Furthermore, these effects are somewhat stronger for the conjugate as compared with a mixture of the MG7-Ag epitopes and TLR7 agonist. Overall, this paper is clearly presented and well written. As such this paper is of potential interest and clinical relevance, however there are several problems with this study. (1) My main concern is about the identity of gastric cancer antigen MG7-Ag. Which gene encodes this antigen? What is the expression pattern of this gene in normal and cancerous tissues? As far as it can be judged from the provided references, this antigen was originally identified in human gastric cancer cells, yet the current study is based on

mouse cancer cells. What is the homology between the human and mouse gene encoding this antigen? A protein BLAST search for the provided MG7 epitope sequence results in multiple hits with bacterial (such as Olsenella, Streptomices, Bifidobacterium etc.) protein sequences. Is this a bacterial antigen? If so, some of the results are misinterpreted. This must be clarified, before this paper could be considered for publication. (2) To demonstrate that the observed effects are MG7-Ag specific, a cell line negative for the antigen expression should be included as a negative control. (3) In the cytokine release assays, the authors demonstrate that the MG7-Ag and TLR7 agonist conjugate elicit IFN-? and IL-12 production, when spleen lymphocytes from non-immunised mice are exposed to the vaccines in vitro. It has been demonstrated by multiple previous studies that the main target cells for TLR7 agonists are dendritic cells that upon activation with TLR7 agonists exhibit enhanced costimulatory and antigen-presenting capacity. How do the authors propose - what could be the mechanism of action of TLR7 agonist on pure spleen lymphocytes in this in vitro assay?