Reviewer’s report

Title: IL-1beta mediates MCP-1 induction by Wnt5a in gastric cancer cells

Version: 1 Date: 24 April 2014

Reviewer: Jong-Baeck Lim

Reviewer’s report:

Major Compulsory Revisions

Shengjun Li et al. analyzed involvement of Wnt5a in macrophage recruitment in gastric cancer.

In this study, authors showed that Wnt5a was overexpressed in 13 of 24 gastric cancer patients’ tissues and Wnt5a transfection induced MCP-1 expression mediated by IL-1β in two gastric cell lines (BGC-803 and HGC-27). Authors also showed that increased macrophage migration and cytoskeletal changes when conditioned medium from gastric cancer cells transfected with Wnt5a treated on the gastric cancer cell lines and this effect was suppressed by recombinant IL-1 receptor antagonist (rIL-1Ra).

Overall this is an informative and well-written paper with a very narrow experimental scope. References are mostly adequate. But study suffers from some limitation as follow.

1. Authors showed that MCP-1 and IL-1β were significantly increased after Wnt5a transfection or treatment of recombinant Wnt5a in Figure 2 and 3, respectively. Were MCP-1 and IL-1β decreased when Wnt5a was knock-down or blocked?

2. Why authors selected only IL-1β, IL-6 and TNF-α as the candidates which were responsible for the induction of MCP-1 after Wnt5a increase?

Although IL-1β, IL-6 and TNF-α is most important pro-inflammatory cytokines in inflammatory disease, other cytokines could involve the inflammatory response and this response is extremely complex. Thus, authors should present more screening data of cytokines/chemokines which could involve the induction of MCP-1 after Wnt5a increase.

3. Authors showed Wnt5a transfection induced MCP-1 expression mediated by IL-1β only in gastric cell lines. However, in the previous studies, the correlation between MCP-1 and IL-1β was unclear yet. Thus, to generalize this theory, authors have to demonstrate the correlation among Wnt5a, MCP-1 and IL-1β using comparable numbers of patients’ tissue or b

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

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 no competing interests'