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Flat C, 23/F., Lucky Plaza,  
315-321 Lockhart Road,  
Wan Chai, Hong Kong, China

## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 9861

**Title:** The interplay between intestinal alkaline phosphatase, diet and gut microbes in mucosal defense

**Reviewer code:** 02461109

**Science editor:** Ma, Ya-Juan

**Date sent for review:** 2014-03-02 19:05

**Date reviewed:** 2014-03-12 09:04

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

The authors reviewed the basic characteristics of IAP in the protection and maintenance of intestinal homeostasis, and recent clinical trials on exogenous IAP. This manuscript is well summarized with topics. However, some more information needs to be added.

- The authors described that IAP functions predominantly in alkaline conditions (optical pH=9.7) on page 3, lines 9-10. On the other hand, the authors described that oral administration of IAP during murine colitis significantly reduced colonic inflammation, page 6, lines 15-17. In general, inflammatory tissue is in acidic conditions. Is there any explanation that IAP could be able to improve colitis in such acidic conditions?
- The authors mentioned an IAP inhibitor on page 8, line 3. It will be informative for readers to add further information about an IAP inhibitor.
- The authors mentioned IAP potential as a therapeutic agent, pages 10-11. Is there any original idea to avoid digesting exogenous IAP in the intestine?



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 9861

**Title:** The interplay between intestinal alkaline phosphatase, diet and gut microbes in mucosal defense

**Reviewer code:** 02529197

**Science editor:** Ma, Ya-Juan

**Date sent for review:** 2014-03-02 19:05

**Date reviewed:** 2014-03-17 04:30

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

This manuscript discusses a significance of intestinal alkaline phosphatase in acute and chronic inflammation. The authors in an interesting way present a possibility of the influence of intestinal alkaline phosphatase on the ecology of the gut microbiota what might have an impact on the course of inflammatory bowel diseases. Manuscripts showing a reduced serum levels of pro-inflammatory cytokines after administration of intestinal alkaline phosphatase in rats have been presented. In order to show therapeutic significance of intestinal alkaline phosphatase, several clinical trials assessing efficacy of this substance in different inflammatory diseases have been shown in the Table 1.



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 9861

**Title:** The interplay between intestinal alkaline phosphatase, diet and gut microbes in mucosal defense

**Reviewer code:** 02447122

**Science editor:** Ma, Ya-Juan

**Date sent for review:** 2014-03-02 19:05

**Date reviewed:** 2014-03-18 01:49

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

This review article focuses on the significance of intestinal alkaline phosphatase (IAP) in intestinal homeostasis. The authors clearly described the role of IAP in protecting the host from sepsis during infection, acute inflammation and chronic inflammatory diseases. They presented recent critical findings that highlight the potential use of IAP as a therapeutic agent during infection and inflammation-related diseases, gathering very well these findings in Figure 1 and Table 1. Also, this work shows that research in this field needs to continue to unravel the precise mechanism by which exogenous IAP regulates infection and inflammation and, to confirm that oral IAP administration in humans could be an effective and safe approach. I have only minor comments: 1. In the Abstract, the abbreviation for “Inflammatory bowel disease” should be presented. 2. Revise format of references No. 8 and No. 24.



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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 9861

**Title:** The interplay between intestinal alkaline phosphatase, diet and gut microbes in mucosal defense

**Reviewer code:** 02462668

**Science editor:** Ma, Ya-Juan

**Date sent for review:** 2014-03-02 19:05

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

This manuscript reviews the role of intestinal alkaline phosphatase (IAP) in the maintenance of intestinal homeostasis and possible therapeutic usage of IAP for treatment of inflammatory and infectious diseases. The review is well written and summarizes the most important topics. I have only minor comments: 1. Participation of IAP in lipid absorption and intestinal surface pH (which is important in intestinal barrier function) should be briefly mentioned. 2. The authors mentioned impairment of IAP activity in rodents fed diet supplemented with omega-3 PUFA and increased expression of IAP when omega-6 was supplemented. In contrast, omega-6/omega-3 ratio seems to be important in the pathogenesis of IBDs. Moreover, activation of Chem R23 receptor by RvE1 (a product of omega-3 PUFA) increases expression and activity of IAP. This discrepancy should be more clarified.