

ESPS PEER REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 14924

Title: In Vitro and In Vivo Bactericidal Activities of *Chenopodium Ambrosioides* L. against *Helicobacter Pylori*.

Reviewer code: 00061686

Science editor: Ya-Juan Ma

Date sent for review: 2014-10-31 11:31

Date reviewed: 2014-10-31 16:46

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 type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input checked="" 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	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> Existing	<input checked="" type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

YE Hui et al. reported experimental data showing the in vitro and in vivo bactericidal activities of *Chenopodium ambrosioides* L. against *Helicobacter pylori*. The in vivo data (gastric urease test, gastric H. pylori colonization and gastric inflammation) obtained in *Chenopodium ambrosioides* L.-treated H. pylori-infected mice are convincing since equaling the effect of the triple therapy (lansoprazole, metronidazole and clarithromycin). The in vitro data are less convincing since not appropriately defined experimentally and needed to be entirely revisited before publication. 1. The inhibitory activity of CAL against the growth of H. pylori was assessed using agar dilution method. This method determines a bacteriostatic effect. It is important that authors considered that H. pylori has a particular lifestyle in the presence of antagonistic molecules including antibiotics. Indeed, the curved H. pylori form starts rapidly a transformation in a U-shaped form followed by the establishment of a final coccoid form. It should be of interest that authors examined by transmission electron microscopy whether the *Chenopodium ambrosioides* L. treatment induces or not the appearance of these bacterial forms. 2. On the basis of the data obtained with the agar dilution method, authors established a minimal inhibitory concentration (MIC) for *Chenopodium ambrosioides* L. and used this MIC (1/2×MIC, 1×MIC, and 2×MIC) for the subsequent analysis of a *Chenopodium ambrosioides* L.-induced bactericidal effect against H. pylori. The MICs for bacteriostatic and bactericidal effects are generally very different. The data in Fig. 1 beings are

completed by the examination of the bactericidal effect of 1/16 MIC, 1/8 MIC, and 1/4 MIC in the objective to determine the specific MIC of the *Chenopodium ambrosioides* L. bactericidal effect. 3. The determination of the concentration-dependent in vitro anti-urease activity of *Chenopodium ambrosioides* L. is of interest in order to improve the manuscript. A triple comparison between the MICs of in vitro anti-urease, bacteriostatic and bactericidal effects are of interest. 4. Authors indicated that: "Jinghua Weikang Capsule (JWC), as a popular Chinese patent drug, consists of two ingredients, *Chenopodium Ambrosioides* L. (CAL) and *Adina Pilulifera* (AP)." and in the Discussion claimed that: "In our previous studies, CAL was confirmed to be active of inhibitory and bactericidal efficacy against various strains of *H.pylori* in vitro, while AP was negative." without adding reference(s) of publication(s). Please, authors add the references or include the in vitro and in vivo data obtained with AP in the manuscript. 5. What is the interest of the presence of AP in JWC (claimed by authors as a compound preparation, utilized for to treat gastritis and peptic ulcer) since AP is not active against *H. pylori*? 6. Authors claimed: "In our previous random clinical trials, the therapy containing JWC, PPI, amoxicillin and clarithromycin achieved higher eradicating ratio than triple therapy." Please authors give the References. This statement suggests that JWC improves the efficacy of triple therapy. This enhancing effect has been reported for several human intestinal microbiota probiotic *Lactobacillus* strains (*L. johnsonii* NCC533 or La1, and *L. acidophilus* LB strains). In order to improve their demonstration, it is of interest that authors conduct an in vitro (bactericidal effect) and in vivo (*H. pylori*-infected mice) experiments combining JWC + triple therapy. Dr. Alain L. Servin, PhD Research director at Inserm Faculty of Pharmacy. University Paris-Sud. France

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Title: In Vitro and In Vivo Bactericidal Activities of *Chenopodium Ambrosioides* L. against *Helicobacter Pylori*.

Reviewer code: 00183445

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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 checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input checked="" 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	BPG Search:	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

This study investigated in vitro and in vivo the bactericidal activities against *Helicobacter pylori* strains using Chinese patent drug containing the volatile oil of *Chenopodium Ambrosioides* L (CAL). Currently, there is interest in alternative treatments for *H. pylori* infection due to the high resistance to antibiotics used as the gold standard. It has been shown that CAL is effective of bactericidal activities against *H. pylori* both in vitro and in vivo. Although the work is interesting it requires some additional explanation. 1. Dose of CAL in mg/ml in in vitro studies and the dose in mg/kg body weight in in vivo studies using mice model requires explanation. The active substance of CAL is not known. In addition, CAL is the volatile oil. 2. The pretreatment of mice (*H. pylori* control group, CAL group and triple therapy group) with cyclophosphamide 200 mg/kg should be explained. 3. The assessment of gastric colonization with *H. pylori* and eradication was based on rapid urease test (RUT) and histological examination. In my opinion culture of bacteria should be included in this type of the study. 4. It is known that mice are naturally colonized by other *Helicobacters*. It should be mentioned.