

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 87865

Title: Chemical components and protective effects of Atractylodes japonica Koidz. ex

Kitam against acetic acid-induced gastric ulcer in rats

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04091933

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Senior Researcher

Reviewer's Country/Territory: Russia

Author's Country/Territory: China

Manuscript submission date: 2023-08-30

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-09-15 09:30

Reviewer performed review: 2023-09-25 16:38

Review time: 10 Days and 7 Hours

	[] Grade A: Excellent [] Grade B: Very good [Y] Grade C:
Scientific quality	Good
	[] Grade D: Fair [] Grade E: Do not publish
Novelty of this manuscript	 [] Grade A: Excellent [Y] Grade B: Good [] Grade C: Fair [] Grade D: No novelty
Creativity or innovation of	[] Grade A: Excellent [Y] Grade B: Good [] Grade C: Fair
this manuscript	[] Grade D: No creativity or innovation



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Scientific significance of the conclusion in this manuscript	 [] Grade A: Excellent [Y] Grade B: Good [] Grade C: Fair [] Grade D: No scientific significance
Language quality	[] Grade A: Priority publishing [Y] Grade B: Minor language polishing [] Grade C: A great deal of language polishing [] Grade D: Rejection
Conclusion	 [] Accept (High priority) [] Accept (General priority) [Y] Minor revision [] Major revision [] Rejection
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The manuscript's topic is relevant because it reveals the mechanisms of a traditional Chinese plant's anti-inflammatory action in gastroenterological practice. The study is well designed, using the most appropriate materials and methods, including metabolomics. 10 endogenous metabolites were identified by the authors as potential biomarkers and metabolic pathway analysis was performed. The figures and tables are of good quality and reflect the study's main findings. References are relevant and recent references, without self-citation. However, there are some minor notes. Discussion of the role of the identified metabolites should not be as clear-cut as the authors have, since in different situations metabolites can have opposite effects. For example, glycochenodeoxycholic acid and glycocholic acid identified by the authors can play both a protective anti-inflammatory role and have pro-inflammatory effects and be positively associated with hepatocellular carcinoma and NAFLD (doi: 10.1002/ijc.33236; doi: 10.1038/s41366-019-0430-0). Anti-inflammatory and health-benefiting effects of eicosadienoic acid were also shown in some studies (doi: 10.1371/journal.pone.0088341; doi: 10.1007/s10620-018-5182-5). This dualism of metabolites should be reflected in the



Discussion to increase objectivity. The manuscript may be recommended for publication after minor revision.



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Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

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Reviewer's code: 03591294

Position: Peer Reviewer

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: India

Author's Country/Territory: China

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Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-09-30 01:56

Reviewer performed review: 2023-10-03 12:45

Review time: 3 Days and 10 Hours

	[] Grade A: Excellent [] Grade B: Very good [Y] Grade C:
Scientific quality	Good
	[] Grade D: Fair [] Grade E: Do not publish
Novelty of this manuscript	[] Grade A: Excellent [] Grade B: Good [Y] Grade C: Fair [] Grade D: No novelty
Creativity or innovation of this manuscript	[] Grade A: Excellent [] Grade B: Good [] Grade C: Fair [Y] Grade D: No creativity or innovation



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Conclusion	 [] Accept (High priority) [] Accept (General priority) [] Minor revision [Y] Major revision [] Rejection
Re-review	[]Yes [Y]No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The study's strengths lie in its use of a well-established ulcer model, comprehensive multi-dimensional analysis, identification of bioactive compounds, and exploration of metabolic pathways, all of which enhance its scientific rigor and value. But still it has few major shortcomings. 1. The study's focus on histological slides without detailed explanation of the underlying pathophysiological changes and the absence of an ulcer score calculation or macroscopic images of the stomach mucosa represent significant limitations in comprehensively assessing the therapeutic effects of A. japonica on gastric ulcers. Histological data alone may not provide a holistic understanding of ulcer severity, and macroscopic images could offer valuable insights into the extent and appearance of ulcers. Additionally, the lack of an ulcer score limits the quantitative evaluation of treatment outcomes. To enhance the scientific value of this research, the authors should consider incorporating macroscopic observations, providing a clear pathophysiological explanation, and utilizing an established ulcer scoring system to better characterize and quantify the ulcer-healing effects of A. japonica. 2. The absence of a bioavailability study to assess the active ingredients of A. japonica is a notable gap in this research.



Understanding the bioavailability of these compounds is crucial as it directly influences their efficacy and potential clinical applications. Bioavailability studies help determine how much of the administered substance reaches the bloodstream and target tissues, impacting its therapeutic effects. Without this data, it's challenging to ascertain the practical significance and dosage requirements for A. japonica as a treatment for gastric ulcers. To enhance this study's scientific value and practical relevance, the authors should consider conducting bioavailability experiments to provide a more comprehensive assessment of the herb's therapeutic potential. 3. The absence of a detailed investigation into the cellular signaling pathways involved in the therapeutic effects of A. japonica on gastric ulcers is a notable limitation of this study. Understanding the specific molecular mechanisms through which A. japonica exerts its effects could provide valuable insights for both basic science and potential clinical applications. It would have been beneficial if the authors had explored and elucidated the signaling pathways associated with anti-inflammatory, ulcer-healing, and gastroprotective responses triggered by A. japonica. Incorporating cellular signaling pathway studies could significantly elevate this research's scientific value and depth.