



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 88575

Title: Exosome-mediated transfer of circRN 63 promoting hepatocellular carcinoma by targeting the microRN Y48a-3p/metal-regulatory transcription factor-1 pathway

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03372482

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Academic Research, Assistant Professor, Associate Professor

Reviewer's Country/Territory: Egypt

Author's Country/Territory: China

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-09-30 06:53

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



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

SPECIFIC COMMENTS TO AUTHORS

BACKGROUND Mesenchymal stem cells (MSCs) exert anti-oncogenic effects via exosomes containing non-coding RNA (ncRNA), which play important roles in tumor biology. Our preliminary study identified the interaction of the ncRNA hsa_circ_0000563 (circ563) and the circ563-associated miR-148a-3p in exosomes, as miR-148a-3p and its target metal-regulatory transcription factor-1 (MTF-1) are implicated in hepatocellular carcinoma (HCC) progression. **AIM** To identify the clinical significance, functional implications, and mechanisms of circ563 in HCC. **METHODS** Compared the expression levels of miR-148a-3p and MTF-1 in exosomes derived from MSC and HCC cells and assessed their tumor-suppressive effects on HCC cells. Using a dual-luciferase reporter assay, miR-148a-3p was identified as a circ563-associated miRNA, whose role in HCC regulation was assessed in vitro and in vivo. **RESULTS** Silencing of circ563 blocked HCC cell proliferation and invasion and induced apoptosis. Co-culturing HCC cells with MSC-derived exosomes following circ563 overexpression promoted cell proliferation and metastasis and elicited changes in miR-148a-3p and MTF-1 expression. Tumor-promoting effects of circ563 were partially suppressed by miR-148a-3p



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overexpression or MTF-1 depletion. Xenograft experiments in nude mice confirmed that circ563-enriched exosomes facilitated tumor growth by upregulating MTF-1. In HCC tissue, circ563 expression was negatively correlated with miR-148a-3p expression but positively correlated with MTF-1 levels. **CONCLUSION** MSCs may exhibit anti-HCC activity through exosomal circ563/miR-148a-3p/MTF-1 pathway, while exosomes can transmit circ563 to HCC cells and promote oncogenic behavior by competitively binding to miR-148a-3p to activate MTF-1. **In General:** it's a good paper and the subject of the manuscript is applicable and useful. **Title:** the title properly explains the purpose and objective of the article **Abstract:** abstract contains an appropriate summary for the article, the language used in the abstract is easy to read and understand, and there are no suggestions for improvement. **Introduction:** authors do provide adequate background on the topic and reason for this article and describe what the authors hoped to achieve. **MATERIALS AND METHODS:** - The variables selected for the study are described clearly and are appropriate, given the nature of the question asked. - The research design is described in detail. - The research design is appropriate and does not contain particular weaknesses. - The measurement instrument, including its psychometric qualities, is described clearly. - The population of interest and the sampling procedure are defined clearly. - The data collection procedure is clearly described. - The setting in which the study took place is described. - The data analysis procedures are stated in precise terms. - The data analysis procedures are appropriate. **Results:** the results are presented clearly, the authors provide accurate research results, and there is sufficient evidence for each result, Specific data accompany the result statement, and Tables and figures are used efficiently. **Conclusion:** in general: Good and the research provides sample data for the authors to make their conclusion. **Grammar:** There are a lot of grammatical errors. This must be taken care of and addressed. . (Check The Paper Comments). Finally, this was an attractive article. In its current state, it adds much new



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insightful information to the field.



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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Very well written paper A schematic diagram of microRNA148a-3p/metal-regulatory transcription factor-1 pathway is mandatory for the readers to understand the depth of the subject Language polishing is necessary