

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 55000

Title: Human hair follicle-derived mesenchymal stem cells: Isolation, expansion, and differentiation

Reviewer's code: 02566952

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Chief Doctor, Senior Researcher, Surgeon

Reviewer's Country/Territory: Romania

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Ruo-Yu Ma

Reviewer accepted review: 2020-04-27 05:44

Reviewer performed review: 2020-04-27 06:27

Review time: 1 Hour

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 Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input 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 checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

A well organized well composed manuscript dedicated to review methods of procurement, characterization and current roles of hair follicle derived MSCs. Comments Introduction is well written and composed. A small verb repetition in the phrase “ in a pioneering study.. demonstrated described “ . the phrase “subsequent studies is too long and leaves open the statement about MSCs (“ represent an emerging MSC” ?) Probably source or similar needs to be added . Regarding isolation methods from the technical description offered is not extremely clear if a skin biopsy is needed. If so, please mention as such. Collagenase digestion of the skin tissue biopsy, I suppose. Maybe it will be good to briefly define what means intact/complete hair follicle. Do the second method (basically tissue explant) generate pure populations? Fromm the description it sounds possible that some wells are populated with both keratinocytes and dermal papilla fibroblast? Relatively to in vitro expansion, are there data about number of passages before senescence occurs in expanded cells? What is the average number of cells that can be derived from one hair follicle in simple 2D witout signs of senescence? This would be an useful information if available. Please provide reference to the statement SMC plays a critical role in cell therapy [..]. It is to be kept in mind that very few actual clinical therapy has been clinically approved for such purposes altheough there are indeed, clinical trials going on . Refernece will help understanding what authros are reffering to. If it is about preclinical research, state so, if it is about clinical studies please provide source. In the phrase “in addition Gao et al perhaps the decellularized umbilical arteries were filled with cells and not the other way round. In the conclusion chapter the authors describe the potential immunepriviledge of hair follicle MSCs. This aspect has not been discussed within the review. It is good to either introduce at least a subchapter or give up this statement in the conclusion. Cell therapy

is seen as a part of regenerative medicine. In my opinion it is not correct to formulate RM AND cell therapy because the former included the later. If one wants to detail can formulate regenerative medicine (cell therapy and tissue engineering) for example or similar.