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**Palermo, December 18, 2023**

Dear Editor,

I greatly appreciated your timely, rigorous, and thoughtful reviews of my editorial entitled “Use of priming strategies to advance the clinical application of MSC-based therapy” (Journal: *World Journal of Stem Cells*; NO: 89874). We have revised the manuscript, according to the comments and suggestions of reviewers, and answered the questions in a point-by-point fashion as listed below. The major changes were highlighted in the revised manuscript. We hope our responses have adequately addressed the concerns.

Once again, we express our appreciation for your work on our manuscript.

Sincerely,

**Vitale Miceli**

Research Department

IRCCS-ISMETT (Mediterranean Institute for Transplantation and Advanced Specialized Therapies)

Via Tricomi 5, 90127 Palermo, Italy

Phone number: +39 091 2192496

email: vmiceli@ismett.edu

## **Author's Response to Reviewers' Comments:**

### **Reviewers 1**

The authors reported about the full potential of MSCs therapy therapeutic capabilities. The authors describe in great detail everything from the fundamentals of MSCs to the potential MSCs-targeted treatments for MSCs-various diseases. #1. There was too few figures and tables. I recommended that the authors illustrate the relationship between MSCs and cytokines, the immune system, inflammation, angiogenesis, and the cancer microenvironment, and compile a table of reports on the role of MSCs in various diseases in the past.

**Response:** We thank the reviewer for carefully reading the manuscript and for these useful suggestions. As recommended by the reviewer, we added a new figure 1 (page 10) describing the role of priming in the production of functional factors, and the impact these factors have on the immune system, angiogenesis and cell proliferation, ultimately regulating tissue repair/regeneration and cancer. Moreover, we also added a new table 1 reporting the role of MSC-priming in various diseases (page 4-7).

### **SCIENCE EDITOR**

The editorial reveals the important role of mesenchymal stromal/stem cells in the field of regenerative medicine. The topic is discussed in detail, we suggest adding the conclusion section in the end of the manuscript.

**Response:** We appreciate the editor's interest in our work and taken the suggestion raised into consideration. We added a new conclusion section at the end of the manuscript (page 8)