Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: doi:10.31222/osf.io/9sm4x.). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.

Materials

Antibodies	Yes (indicate where provided:	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	Yes (We strictly abide by this standard and describe it in detail	

Cell materials	Yes (indicate where provided:	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID	Yes (We provided the supplier name, catalog number, clone number in "Methods"section.)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		N/A Our study does not involve primary cultures.

Experimental animals	Yes (indicate where provided:	n/a
Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID		N/A Our study does not use Laboratory animals.
Animal observed in or captured from the field: Provide species, sex and age where possible		N/A Our study does not use Laboratory animals.
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		N/A Our study does not use model organisms.

Plants and microbes	Yes (indicate where provided:	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		N/A Our study does not involve plants
Microbes: provide species and strain, unique accession number if available, and source		N/A Our study does not involve microbes.

Human research participants	Yes (indicate where provided:	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Yes (We provided the authority granting ethics approval in the “Isolation and culture of HemSCs ” of the “Methods"section.)	
Provide statement confirming informed consent obtained from study participants.	Yes (We provided the authority granting ethics approval in the “Isolation and culture of HemSCs ” of the “Methods"section.)	
Report on age and sex for all study participants.		N/A Our study does not need analyze the age and gender data of human research.

Design

Study protocol	Yes (indicate where provided:	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		N/A Our study is not a clinical trial.

Laboratory protocol	Yes (indicate where provided:	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.		N/A Our experimental study does not require a laboratory protocol.

Experimental study design (statistics details)	Yes (indicate where provided:	n/a
State whether and how the following have been done**, or** if they were not carried out.		
Sample size determination	Yes (We strictly follow the standard and describe it in detail in the " Isolation and culture of HemSCs" paragraph of the "Methods" section.)	
Randomisation	Yes (We strictly follow the standard and describe it in detail in the " Isolation and culture of HemSCs" paragraph of the "Methods" section.)	
Blinding		N/A Our study does not need blinding.
Inclusion/exclusion criteria		N/A Our study does not need this.

Sample definition and in-laboratory replication	Yes (indicate where provided:	n/a
State number of times the experiment was replicated in laboratory	Yes (We strictly follow the standard and describe it in detail in the " Western blot analysis and qRT-PCR", "MTT assay" and "Tube formation assay" paragraph of the "Methods" section.)	
Define whether data describe technical or biological replicates		N/A Our study does not need this.

Ethics	Yes (indicate where provided:	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Yes (We provided the authority granting ethics approval in the "Isolation and culture of HemSCs" of the "Methods"section.)	

Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		N/A Our study does not use Laboratory animals.
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.		N/A Our study does not involve specimen and field samples.

Dual Use Research of Concern (DURC)	**Yes (indicate where provided:**	**n/a**
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval		N/A Our study is not subject to dual use research of concern.

Analysis

Attrition	**Yes (indicate where provided: section/paragraph)**	**n/a**
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance.		N/A Our study does not need this.

Statistics	**Yes (indicate where provided: section/paragraph)**	**n/a**
Describe statistical tests used and justify choice of tests.	Yes (We strictly follow the standard and describe it in detail in the " Statistical Analysis" paragraph of the "Methods" section.)	

Data Availability	**Yes (indicate where provided: section/paragraph)**	**n/a**
State whether newly created datasets are available, including protocols for access or restriction on access.	Yes (We strictly follow the standard and describe it in detail in the "Data Sharing Statement" section.)	
If data are publicly available, provide accession number in repository or DOI or URL.		N/A Not applicable to our study
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		N/A Not applicable to our study

Code Availability	**Yes (indicate where provided: section/paragraph)**	**n/a**
For all newly generated code and software essential for replicating the main findings of the study:		
State whether the code or software is available.		N/A Not applicable to our study

If code is publicly available, provide accession number in repository, or DOI or URL.		N/A Not applicable to our study

Reporting

Adherence to community standards	Yes (indicate where provided: section/paragraph)	n/a
MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR.		
State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

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