

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](https://doi.org/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:section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	<i>Page6/ Methods/Western blot</i>	
Cell materials	Yes (indicate where provided:section/paragraph)	n/a
Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID	<i>Page5/ Methods/MSC and macrophage co-cultures/</i> Rat macrophages (RMa-bm, R1920) were purchased from ZhongQiao Xin Zhou Biotechnology (Shanghai, China)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	<i>Page4/Methods/Isolation, in vitro culture, and labeling of MSCs</i>	
Experimental animals	Yes (indicate where provided:section/paragraph)	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	<i>Page4/Methods/Isolation, in vitro culture, and labeling of MSCs</i>	
Animal observed in or captured from the field: Provide species, sex and age where possible	<i>Page4/Methods/Isolation, in vitro culture, and labeling of MSCs/Wistar rats</i> (male, 2-week-old)	
Model organisms: Provide Accession number in repository (where relevant) OR RRID	There were no model organisms in this manuscript.	✓
Plants and microbes	Yes (indicate where provided: section/paragraph)	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)	There were no plants involved in this manuscript.	✓
Microbes: provide species and strain, unique accession number if available, and source	There were no microbes involved in this manuscript.	✓
Human research participants	Yes (indicate where provided:section/paragraph)	n/a
Identify authority granting ethics approval(IRB or equivalent committee(s), provide reference number for approval.	There were no human research participants involved in this manuscript.	✓
Provide statement confirming informed consent obtained from study participants.	There were no human research participants involved in this manuscript.	✓
Report on age and sex for all study participants.	There were no human research participants involved in this manuscript.	✓

Design

Study protocol	Yes (indicate where provided:section/paragraph)	n/a
For clinical trials, provide the trial registration number ORciteDOI in manuscript.	There were no clinical trails involved in this manuscript.	✓
Laboratory protocol	Yes (indicate where provided:section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	We obeyed the laboratory protocol of our laboratory.	✓
Experimental study design (statistics details)	Yes (indicate where provided:section/paragraph)	n/a
State whether and how the following have been done, or if they were not carried out.		
Sample size determination	There were no sample size determination involved in this manuscript.	✓
Randomisation	There were no random experiment involved in this manuscript.	✓
Blinding	There were no blinding experiment involved in this manuscript.	✓
Inclusion/exclusion criteria	There were no inclusion/exclusion criteria involved in this manuscript.	✓
Sample definition and in-laboratory replication	Yes (indicate where provided:section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	<i>Page8/methods/Statistical analysis</i>	
Define whether data describe technical or biological replicates	<i>Page8/methods/Statistical analysis</i>	
Ethics	Yes (indicate where provided: section/paragraph)	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	There were no human participants involved in this manuscript.	✓
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Page15/Ethical statement	
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	There were no specimen and field samples involved in this manuscript.	✓
Dual Use Research of Concern (DURC)	Yes (indicate where provided:section/paragraph)	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval	This study was not a 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.	yes	
Statistics	Yes (indicate where provided:section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	<i>Page 8/methods/Statistical analysis</i>	
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	
If data are publicly available, provide accession number in repository or DOI or URL.	yes	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	yes	
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.	yes	
If code is publicly available, provide accession number in repository, or DOI or URL.	yes	

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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