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: section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	Yes, "2.2.2 Flow cytometry".	

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	This study does not involve Cell lines.	**n/a**
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	This study does not involve Primary cultures.	**n/a**

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	This study does not involve Laboratory animals.	**n/a**
Animal observed in or captured from the field: Provide species, sex and age where possible	This study does not involve Primary cultures.	**n/a**
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	This study does not involve Primary cultures.	**n/a**

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)	This study does not involve Plants.	**n/a**
Microbes: provide species and strain, unique accession number if available, and source	This study does not involve Microbes.	**n/a**

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.	Yes, "in the section 2.1 Study design and participants"	
Provide statement confirming informed consent obtained from study participants.	Yes, "in the section 2.1 Study design and participants"	
Report on age and sex for all study participants.	Yes, "in the section 2.1 Study design and participants"	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	This study does not involve clinical trials	n/a

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	This study does not involve special protocols.	n/a

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	Don't indicate the sample size determination in the paper. It could be found in study protocol.	**n/a**
Randomisation	Not involved.	**n/a**
Blinding	Not involved.	**n/a**
Inclusion/exclusion criteria	Yes, in the section 2.2 Inclusion criteria and 2.3 Exclusion criteria.	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	Experiment was not replicated.	**n/a**
Define whether data describe technical or biological replicates	This study does not involve data replicated.	**n/a**

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.	Yes, "in the section 2.1 Study design and participants"	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This study does not involve experimental animals.	**n/a**
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	Yes, "in the section 2.1 Study design and participants".	

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 does not involve dual use research of concern.	**n/a**

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.	There are some subjects excluded from the final analysis. Yes, the exclusion criteria were determined in study protocol in advance.	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Yes, please see section 2.5 Statistical analysis.	

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.	No, Datasets and protocol are not publicly available.	
If data are publicly available, provide accession number in repository or DOI or URL.	This study does not involve publicly available data.	n/a
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	This study does not involve reused data.	n/a

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.	This study does not involve code.	n/a
If code is publicly available, provide accession number in repository, or DOI or URL.	This study does not involve code.	n/a

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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