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.	Not experimental study	

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	Not experimental study	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Not experimental study	

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	Not experimental study	
Animal observed in or captured from the field: Provide species, sex and age where possible	Not experimental study	
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	Not experimental study	

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)	Not experimental study	
Microbes: provide species and strain, unique accession number if available, and source	Not experimental study	

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.	Page 7, Line 95; Section Materials and methods, Paragraph 1	
Provide statement confirming informed consent obtained from study participants.	Page 7, Line 96; Section Materials and methods, Paragraph 1	
Report on age and sex for all study participants.	Page 22, Line 356; Table 1	

Design

Study protocol	Yes (indicate where provided:	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	Page 7, Line 97; Section Methods, Paragraph 1	

Laboratory protocol	Yes (indicate where provided:	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.		Not laboratory study

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.		Not experimental study
Sample size determination		Not experimental
Randomisation		Not experimental
Blinding		Not experimental
Inclusion/exclusion criteria		Not experimental

Sample definition and in-laboratory replication	Yes (indicate where provided:	n/a
State number of times the experiment was replicated in laboratory		Not experimental study
Define whether data describe technical or biological replicates		Not experimental study

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.	Page 7, Line 95 Section Methods, Paragraph 1	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		Not experimental study
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.		Not experimental study

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		Not dual use research of concern

Analysis

Attrition	Yes (indicate where provided:	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.		No sample excluded

Statistics	Yes (indicate where provided:	n/a
Describe statistical tests used and justify choice of tests.	Page 9, line 146 Section Methods, Paragraph 3	

Data Availability	Yes (indicate where provided:	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.		No newly created datasets
If data are publicly available, provide accession number in repository or DOI or URL.		No publicly available data
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		No publicly available data

Code Availability	Yes (indicate where provided:	n/a
For all newly generated code and software essential for replicating the main findings of the study:		No code available
State whether the code or software is available.		No code available
If code is publicly available, provide accession number in repository, or DOI or URL.		Not publicly available

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.		No followed guidelines
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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