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	uninvolved	

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,	uninvolved	
Primary cultures: Provide species, strain, sex of origin, genetic	uninvolved	

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	uninvolved	
Animal observed in or captured from the field: Provide species, sex and age where possible	uninvolved	
Model organisms: Provide Accession number in repository (where relevant)	uninvolved	

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	uninvolved	
Microbes: provide species and strain, unique accession number if available,	uninvolved	

Human research participants	Yes (indicate where provided:	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	The certificate no.:SH9H-2021-T67-2	
Provide statement confirming informed consent obtained from study participants.	uninvolved	
Report on age and sex for all study participants.	study participant 1: male,26years, study participant 1: female,58years	

Design

Study protocol	Yes (indicate where provided:	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in	uninvolved	

Laboratory protocol	Yes (indicate where provided:	n/a
Provide DOI or other citation details if detailed step-by-step protocols are	uninvolved	

Experimental study design (statistics	Yes (indicate where provided:	n/a
State whether and how the following have been done**, or** if they were not carried out.	uninvolved	
Sample size determination	uninvolved	
Randomisation	uninvolved	
Blinding	uninvolved	
Inclusion/exclusion criteria	uninvolved	

Sample definition and in-laboratory	Yes (indicate where provided:	n/a
State number of times the experiment was replicated in laboratory	uninvolved	
Define whether data describe technical or biological replicates	uninvolved	

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.	uninvolved	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	uninvolved	
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required,	The certificate no.:SH9H-2021-T67-2	

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	uninvolved	

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	uninvolved	

Statistics	Yes (indicate where provided:	n/a
Describe statistical tests used and justify choice of tests.	All datasets were tested for homogeneity of variance tests. When the variance was homogeneous, the LSD method was used, When the variance was uneven, the Kruskal-	

Data Availability	Yes (indicate where provided:	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.	uninvolved	
If data are publicly available, provide accession number in repository or DOI or	uninvolved	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	uninvolved	

Code Availability	Yes (indicate where provided:	n/a
For all newly generated code and software essential for replicating the main findings	uninvolved	
State whether the code or software is	uninvolved	
If code is publicly available, provide accession number in repository, or DOI or	uninvolved	

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.	-	

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