

## **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**

<b>Antibodies</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	Yes, we provided these information in the methods and materials section.	
<b>Cell materials</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
<b>Cell lines:</b> Provide species information, strain. Provide accession number in repository <b>OR</b> supplier name, catalog number, clone number, <b>OR</b> RRID	Yes, we provided these information in the methods and materials section.	
<b>Primary cultures:</b> Provide species, strain, sex of origin, genetic modification status.		n/a, we didn't perform primary cultures.
<b>Experimental animals</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
<b>Laboratory animals:</b> Provide species, strain, sex, age, genetic modification status. Provide accession number in repository <b>OR</b> supplier name, catalog number, clone number, <b>OR</b> RRID		n/a, we didn't use laboratory animals.
<b>Animal observed in or captured from the field:</b> Provide species, sex and age where possible		n/a, we didn't use animals observed in or captured from the field.
<b>Model organisms:</b> Provide Accession number in repository (where relevant) <b>OR</b> RRID		n/a, we didn't use model organisms.
<b>Plants and microbes</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
<b>Plants:</b> provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		n/a, we didn't use any plants.
<b>Microbes:</b> provide species and strain, unique accession number if available, and source		n/a, we didn't use any microbes.
<b>Human research participants</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		n/a, we didn't perform human research in this study.
Provide statement confirming informed consent obtained from study participants.		n/a, we didn't perform human research in this study.
Report on age and sex for all study participants.		n/a, we didn't perform human research in this study.

**Design**

<b>Study protocol</b>	<b>Yes (indicate where</b>	<b>n/a</b>
For clinical trials, provide the trial registration number <b>OR</b> cite DOI in manuscript.		n/a, our study didn't contain clinical trials.
<b>Laboratory protocol</b>	<b>Yes (indicate where</b>	<b>n/a</b>
Provide DOI or other citation details if detailed step-by-step protocols are available.	Yes, we provided these information in the methods and materials section.	
<b>Experimental study design (statistics details)</b>	<b>Yes (indicate where</b>	<b>n/a</b>
State whether and how the following have been done, <b>or</b> if they were not carried out.		n/a, they were not carried out.
Sample size determination		n/a, they were not carried
Randomisation		n/a, they were not carried
Blinding		n/a, they were not carried
Inclusion/exclusion criteria		n/a, they were not carried
<b>Sample definition and in-laboratory replication</b>	<b>Yes (indicate where</b>	<b>n/a</b>
State number of times the experiment was replicated in laboratory	Yes, we provided these information in the methods and materials section.	
Define whether data describe technical or biological replicates	Yes, we provided these information in the methods and materials section.	
<b>Ethics</b>	<b>Yes (indicate where</b>	<b>n/a</b>
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		<b>n/a, our study didn't involve human participants.</b>
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		<b>n/a, our study didn't involve experimental animals.</b>
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.		<b>n/a, our study didn't involve specimen and field samples.</b>
<b>Dual Use Research of Concern (DURC)</b>	<b>Yes (indicate where</b>	<b>n/a</b>
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**

<b>Attrition</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
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, sample or data point from the analysis isn't excluded in this study.
<b>Statistics</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
Describe statistical tests used and justify choice of tests.	Yes, we provided these information in the methods and materials section.	
<b>Data Availability</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
State whether newly created datasets are available, including protocols for access or restriction on access.	Yes, we provided these information in the methods and materials section.	
If data are publicly available, provide accession number in repository or DOI or URL.	Yes, we provided these information in the methods and materials section.	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	Yes, we provided these information in the methods and materials section.	
<b>Code Availability</b>	<b>Yes (indicate where provided:</b>	<b>n/a</b>
For all newly generated code and software essential for replicating the main findings of the study:		n/a, we didn't use newly generated code.
State whether the code or software is available.	Yes, we provided these information in the methods and materials section.	
If code is publicly available, provide accession number in repository, or DOI or URL.	Yes, we provided these information in the methods and materials section.	

**Reporting**

<b>Adherence to community standards</b>	<b>Yes (indicate where provided: section/paragraph)</b>	<b>n/a</b>
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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