# Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishesa 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 | n/a |
|---|---|---|
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | Yes (Methods/Paragraph1-10) | |

| Cell materials | Yes (indicate where | n/a |
|---|---|---|
| **Cell lines:** Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID | Yes(Methods/ Paragraph4) | |
| **Primary cultures:** Provide species, strain, sex of origin, genetic modification status. | / | No primary cultures used in this study. |

| Experimental animals | Yes (indicate where | 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 | / | No animals used in this study. |
| **Animal observed in or captured from the field:** Provide species, sex and age where possible | / | No animals used in this study. |
| **Model organisms:** Provide Accession number in repository (where relevant) **OR** RRID | / | No animals used in this study. |

| Plants and microbes | Yes (indicate where | n/a |
|---|---|---|
| **Plants:**provide species and strain, unique accession number if available, and source (including location for collected wild specimens) | / | No plants used in this study. |
| **Microbes:**provide species and strain, unique accession number if available, and source | / | No microbes used in this study. |

| Human research participants | Yes (indicate where | n/a |
|---|---|---|
| Identify authority granting ethics approval(IRB or equivalent committee(s), provide reference number for approval. | / | No human participants |
| Provide statement confirming informed consent obtained from study participants. | / | No human participants |
| Report on age and sex for all study participants. | / | No human participants |

## Design

| Studyprotocol | Yes (indicate where | n/a |
|---|---|---|
| For clinical trials, provide the trial registration number **OR**cite DOI in manuscript. | / | No clinical trials |

| Laboratoryprotocol | Yes (indicate where | n/a |
|---|---|---|
| Provide DOI or other citation details if detailed step-by-step protocols are available. | Yes(Methods/Paragraph1-10) | |

| Experimental study design (statistics details) | Yes (indicate where | n/a |
|---|---|---|
| State whether and how the following have been done**, or** if they were not carried out. | | |
| Sample size determination | / | No human participants |
| Randomisation | / | No human participants |
| Blinding | / | No human participants |
| Inclusion/exclusion criteria | / | No human participants |

| Sample definition and in-laboratory replication | Yes (indicate where | n/a |
|---|---|---|
| State number of times the experiment was replicated in laboratory | Yes(Methods/Paragraph1-10) | |
| Define whether data describe technical or biological replicates | Yes(Methods/Paragraph1-10) | |

| 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. | / | No human participants |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | / | No animal participants |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | Yes (Methods/Paragraph2) | |

| Dual Use Research of Concern (DURC) | Yes (indicate where | n/a |
|---|---|---|
| If study is subject to dual use research ofconcern, statethe authority granting approval and reference number for the regulatory approval | / | No dual use research of concern |

## Analysis

| Attrition | Yes (indicate where | 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 clinical study |

| Statistics | Yes (indicate where | n/a |
|---|---|---|
| Describestatistical tests used and justify choice of tests. | Yes(Methods/Paragraph11) | |

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

| Code Availability | Yes (indicate where | 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. | / | No code generated |
| If code is publicly available, provide accession number in repository, or DOI or URL. | / | No code generated |

## 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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