

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

| | | |
|---|--|------------|
| Antibodies | Yes (indicate where provided: section/paragraph) | n/a |
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | line 122,page 7; line133-135, page 7; line 146,page 8; line 156-167, page 9; line 171-179, page 9; line 194, page 10; line 214, page 11. | |
| 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 | line 133-134, page 7 | |
| Primary cultures: Provide species, strain, sex of origin, genetic modification status. | we did not use primary cultures in our current 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 | we did not use animals in our current study. | |
| Animal observed in or captured from the field: Provide species, sex and age where possible | we did not use animals in our current study. | |
| Model organisms: Provide Accession number in repository (where relevant) OR RRID | we did not use animals in our current 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) | we did not use plants in our current study. | |
| Microbes: provide species and strain, unique accession number if available, and source | we did not use microbes in our current 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. | line 113, page 6 | |
| Provide statement confirming informed consent obtained from study participants. | line 113, page 6 | |
| Report on age and sex for all study participants. | Table 2, all the participants in our study are femal. | |

Design

| | | |
|---|---|------------|
| Study protocol | Yes (indicate where provided: section/paragraph) | n/a |
| For clinical trials, provide the trial registration number OR cite DOI in manuscript. | our current is not a clinical trial. | |
| Laboratory protocol | Yes (indicate where provided: section/paragraph) | n/a |
| Provide DOI or other citation details if detailed step-by-step protocols are available. | all the protocols in our study are commonly used. | |
| 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 | it is a retrospective study, samples between January 2014 and December 2015 were collected. | |
| Randomisation | all the cytology experiments were grouped randomly. | |
| Blinding | line 128, page 7 | |
| Inclusion/exclusion criteria | line 107, page 6 | |
| Sample definition and in-laboratory replication | Yes (indicate where provided: section/paragraph) | n/a |
| State number of times the experiment was replicated in laboratory | line 222, page 12 | |
| Define whether data describe technical or biological replicates | line 575, 583, 592, 597, page 29-30 | |
| 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. | line 112, page 6 | |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | we did not use animals in our current study. | |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | line 112, page 6 | |
| 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 | our study will not be subject to dual use research of concern | |

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. | all the samples and data point from the analysis is included in our study. | |
| Statistics | Yes (indicate where provided: section/paragraph) | n/a |
| Describe statistical tests used and justify choice of tests. | line 218-222, page 11-12 | |
| 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 newly created datasets in our study. The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request. | |
| If data are publicly available, provide accession number in repository or DOI or URL. | the data in our study in not publicly available | |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | the data in our study in not publicly available | |
| 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. | our study did not include any code or software. | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | our study did not include any code or software. | |

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. | the MDAR checklist has been provided. | |

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