

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: | n/a |
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | in the supplementary table 1 | |
| 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, OR RRID | Human primary peripheral blood mononuclear cells(PBMNCs, normal human, ATCC PCS-800-011, American Type Culture Collection, MD, USA), materials and methods, 3rd paragraph; Human BMSCs and human SMCs were purchased from Lonza (BMSCs: PT-2501, SMCs: CC-2533, Lonza, Swiss), materials and methods, 3rd paragraph; HEK293 cell line (ATCC CRL-1573, MD, USA),materials and methods, 5th paragraph. | |
| Primary cultures: Provide species, strain, sex of origin, genetic modification status. | urine derived stem cells, human, male donor, health normal adults, materials and methods , 2nd paragraph | |
| 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 number, clone number, OR RRID | | not animal experiment |
| Animal observed in or captured from the field: Provide species, sex and age where possible | | |
| Model organisms: Provide Accession number in repository (where relevant) OR RRID | | |
| 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 specimens) | | not plants and microbes experiment |
| Microbes: provide species and strain, unique accession number if available, and source | | |
| Human research participants | Yes (indicate where provided: | n/a |
| Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | This study was approved by the Wake Forest University institutional review board(IRB00014033), materials and methods , 1st paragraph | |
| Provide statement confirming informed consent obtained from study participants. | materials and methods , 1st paragraph | |
| Report on age and sex for all study participants. | Fresh voiding urine samples were collected from three healthy male donors of 28, 35, and 41 year-old. materials and methods, , 2nd paragraph | |

Design

| | | |
|---|---|-----------------------|
| Study protocol | Yes (indicate where provided: | n/a |
| For clinical trials, provide the trial registration number OR cite DOI in manuscript. | | not clinic trial |
| Laboratory protocol | Yes (indicate where provided: | n/a |
| Provide DOI or other citation details if detailed step-by-step protocols are available. | materials and methods , 2 nd ~10 th paragraph | |
| 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. | materials and methods , 2 nd paragraph, 11 th paragraph Statistical analysis section | |
| Sample size determination | materials and methods , 2 nd paragraph | |
| Randomisation | | N/A |
| Blinding | | N/A |
| Inclusion/exclusion criteria | | N/A |
| Sample definition and in-laboratory replication | Yes (indicate where provided: | n/a |
| State number of times the experiment was replicated in laboratory | materials and methods , 2 nd ~10 th paragraph | |
| Define whether data describe technical or biological replicates | materials and methods , 2 nd ~10 th paragraph | |
| 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. | This study was approved by the Wake Forest University institutional review board(IRB00014033), materials and methods, 1st paragraph | |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | | Not animal experiment |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | Fresh voiding urine samples were collected from three healthy male donors of 28, 35, and 41 year-old. page 8, 2nd paragraph; approved by the Wake Forest University institutional review board(IRB00014033), materials and methods, 1st paragraph | |
| 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 | | |

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. | material and methods, 10th paragraph | |
| Statistics | Yes (indicate where provided: | n/a |
| Describe statistical tests used and justify choice of tests. | material and methods, 10th paragraph | |
| Data Availability | Yes (indicate where provided: | n/a |
| State whether newly created datasets are available, including protocols for access or restriction on access. | All data generated or analyzed during this study are included in this article. | No newly created datasets |
| If data are publicly available, provide accession number in repository or DOI or URL. | | |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | | |
| 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 newly software |
| State whether the code or software is available. | | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | | |

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. | footnote, 1st paragraph | |
| 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. | |

Article Information: <https://dx.doi.org/10.21037/tau-21-506>