<u>Materials Design Analysis Reporting (MDAR)</u> 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: section/paragraph) | n/a |
|---|---|-------|
| For commercial reagents, provide supplier | | n/a |
| name, catalogue number and RRID, if available. | | |
| Cell materials | Yes (indicate where provided: section/paragraph) | n/a |
| Cell lines: Provide species information, strain. | · · · · (| n/a |
| Provide accession number in repository OR | | |
| supplier name, catalog number, clone number, | | |
| OR RRID | | |
| Primary cultures: Provide species, strain, sex of | | n/a |
| origin, genetic modification status. | | |
| Experimental animals | Yes (indicate where provided: section/paragraph) | n/a |
| Laboratory animals: Provide species, strain, sex, age, | | n/a |
| genetic modification status. Provide accession | | , |
| number in repository OR supplier name, catalog | | |
| number, clone number, OR RRID | | |
| Animal observed in or captured from the | | n/a |
| field: Provide species, sex and age where | | |
| possible | | |
| Model organisms: Provide Accession number | | n/a |
| in repository (where relevant) OR RRID | | |
| Plants and microbes | Yes (indicate where provided: section/paragraph) | n/a |
| Plants: provide species and strain, unique accession | | n/a |
| number if available, and source (including location | | |
| for collected wild specimens) | | |
| Microbes: provide species and strain, unique | | n/a |
| accession number if available, and source | | |
| Human research participants | Yes (indicate where provided: section/paragraph) | n/a |
| Identify authority granting ethics approval (IRB or | The study protocol was approved by the Ethics | 11/ a |
| equivalent committee(s), provide reference number | Committee of the University of Hong Kong and Hong | |
| for approval. | Kong Hospital Authority Hong Kong West Cluster | |
| | Institutional Review Board (IRB Reference Number UW | |
| | 16-104). | |
| | P.6, Ln 72 of revised manuscript. | |
| Provide statement confirming informed consent | P.5, Ln 65 of revised manuscript | |
| obtained from study participants. | | |
| Report on age and sex for all study participants. | Table 1 of revised manuscript | |

Design

| Study protocol | Yes (indicate where provided: section/paragraph) | n/a |
|--|---|------------|
| For clinical trials, provide the trial registration | | n/a |
| number OR cite DOI in manuscript. | | |
| Laboratory protocol | Yes (indicate where provided: section/paragraph) | n/a |
| Provide DOI or other citation details if detailed step- | | n/a |
| by-step protocols are available. | | |
| 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 | Eligible consecutive patients were recruited. | |
| Randomisation | | n/a |
| Blinding | | n/a |
| Inclusion/exclusion criteria | P.5, Ln 61 of revised manuscript | |
| Sample definition and in-laboratory replication | Yes (indicate where provided: section/paragraph) | n/a |
| State number of times the experiment was | | n/a |
| replicated in laboratory | | |
| Define whether data describe technical or biological | | n/a |
| replicates | | |
| Ethics | Yes (indicate where provided: section/paragraph) | n/a |
| Studies involving human participants: State details of | The study protocol was approved by the Ethics | |
| authority granting ethics approval (IRB or equivalent | Committee of the University of Hong Kong and Hong | |
| committee(s), provide reference number for | Kong Hospital Authority Hong Kong West Cluster | |
| approval. | Institutional Review Board (IRB Reference Number | |
| | UW 16-104). | |
| | P.6, Ln 72 of revised manuscript. | |
| Studies involving experimental animals: State details | | n/a |
| of authority granting ethics approval (IRB or | | , . |
| equivalent committee(s), provide reference number | | |
| for approval. | | |
| Studies involving specimen and field samples: State if | | n/a |
| relevant permits obtained, provide details of | | , . |
| | | |
| authority approving study; if none were required, | | |
| authority approving study; if none were required, explain why. | | |
| explain why. | Yes (indicate where provided: section/paragraph) | n/a |
| explain why. Dual Use Research of Concern (DURC) | Yes (indicate where provided: section/paragraph) | n/a |
| explain why. | Yes (indicate where provided: section/paragraph) | n/a n/a |

<u>Analysis</u>

| Attrition | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|-------|
| State if sample or data point from the analysis is | res (indicate where provided, section, paragraph) | n/a |
| excluded, and whether the criteria for exclusion were | | 11/ 0 |
| determined and specified in advance. | | |
| | | |
| Statistics | Yes (indicate where provided: section/paragraph) | n/a |
| Describe statistical tests used and justify choice of | P.7, Ln 100 of revised manuscript. | |
| tests. | | |
| | | |
| Data Availability | Yes (indicate where provided: section/paragraph) | n/a |
| State whether newly created datasets are available, | | n/a |
| including protocols for access or restriction on | | |
| access. | | |
| If data are publicly available, provide accession | | n/a |
| number in repository or DOI or URL. | | |
| If publicly available data are reused, provide | | n/a |
| accession number in repository or DOI or URL, where | | - |
| possible. | | |
| Code Ausilability | | |
| Code Availability | Yes (indicate where provided: section/paragraph) | n/a |
| For all newly generated code and software essential | | n/a |
| for replicating the main findings of the study: | | |
| State whether the code or software is available. | | n/a |
| If code is publicly available, provide accession | | n/a |
| 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 | | n/a |
| 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, | ICMJE guidelines were followed, as the journal follows | |
| ARRIVE) have been followed, and whether a checklist | ICMJE recommendations for publication. | |
| (eg., CONSORT, PRISMA, ARRIVE) is provided with | | |
| the manuscript. | | |

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