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.). 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.	No antibodies involved.	**n/a**

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	No cell materials involved.	**n/a**
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	No primary cultures involved.	**n/a**

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	No animals involved.	**n/a**
Animal observed in or captured from the field: Provide species, sex and age where possible	No animals involved.	**n/a**
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	No organisms involved.	**n/a**

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)	No plants involved.	**n/a**
Microbes: provide species and strain, unique accession number if available, and source	The microbes mentioned in this study were calculated by Monte Carlo simulations.	**n/a**

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.	Methods/Para2 Footnote/Para4	
Provide statement confirming informed consent obtained from study participants.	Methods/Para2 Footnote/Para4	
Report on age and sex for all study participants.	Results/Para1	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	Footnote/Para4	

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	This was a Phase I clinical study	**n/a**

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.		**n/a**
Sample size determination	Methods/Para1	
Randomisation	This was a single-center, open-label study.	**n/a**
Blinding	This was a single-center, open-label study.	**n/a**
Inclusion/exclusion criteria	Methods/Para1	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	This was a Phase I clinical study	**n/a**
Define whether data describe technical or biological replicates	This was a Phase I clinical study	**n/a**

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.	Methods/Para2 Footnote/Para4	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	No animals involved.	**n/a**
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	Methods/Para2 Footnote/Para4	

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	No dual use involved.	**n/a**

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.	Methods/Para4	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Methods/Para5	

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.	Footnote/Para2	
If data are publicly available, provide accession number in repository or DOI or URL.	Data in this study can be obtained from the corresponding author upon reasonable request.	**n/a**
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	Does not involve publicly available data.	**n/a**

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.	Footnote/Para2	
If code is publicly available, provide accession number in repository, or DOI or URL.	Code in this study can be obtained from the corresponding author upon reasonable request.	**n/a**

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.	

Article information: http://dx.doi.org/10.21037/atm-21-588