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)	
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	We provided the supplier names, catalogue number and RRID of antibodies in the Methods/paragraph 3 and supplementary table 1.	

Cell materials	(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	Cell lines were not used in this study.	n/a
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Primary cultures were not used in this study.	n/a

Experimental animals	(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	Laboratory animals were not used in this study.	n/a
Animal observed in or captured from the field: Provide species, sex and age where possible	Field animal were not used in this study.	n/a
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	Model organisms were not used in this study.	n/a

Plants and microbes	(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)	Plants were not used in this study.	n/a
Microbes: provide species and strain, unique accession number if available, and source	Microbes were not used in this study.	n/a

Human research participants	Yes (indicate where provided: section/paragraph)	
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Details of authority granting ethics approval and reference number for approval were described in "Ethical Statement" section.	
Provide statement confirming informed consent obtained from study participants.	Detail of statement confirming informed consent was described in "Ethical Statement" section.	
Report on age and sex for all study participants.	One male patient aged 50 and one female patient aged 63 participated in our research.	

Design

Study protocol	(indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	No clinical trials was involved.	n/a

Laboratory protocol	(indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	We provided the citation details in the Methods. However, no step-by-step protocols was provided.	

Experimental study design (statistics details)	Yes (indicate where provided: section/paragraph)	
State whether and how the following have been done**, or** if they were not carried out.		
Sample size determination	Sample size determination detail was described in "Methods-Statistics" section.	
Randomisation	Ransomisation detail was described in "Methods-Statistics" section.	
Blinding	Blinding detail was described in "Methods-Statistics"	
Inclusion/exclusion criteria	Inclusion/exclusion criteria detail was described in "Methods-Statistics" section.	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	
State number of times the experiment was replicated in laboratory	We provided the statement in the Figure legend 1 to 7.	
Define whether data describe technical or biological replicates	We provided the statement in the Figure legend 1 to 7.	

Ethics	(indicate where provided: section/paragraph)	
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Details of authority granting ethics approval and reference number for approval were described in "Ethical Statement" section.	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	No experimental animals were used in the study.	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.	We stated the details in the Methods/paragraph 3.	

Dual Use Research of Concern (DURC)	(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	Current study was not subject to dual use research concern.	n/a

Analysis

Attrition	(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.	No data point was excluded.	n/a

Statistics	Yes (indicate where provided: section/paragraph)	
Describe statistical tests used and justify choice of tests.	Statistical tests details were stated in the "Methods-Statistics" section.	

Data Availability	Yes (indicate where provided: section/paragraph)	
State whether newly created datasets are available, including protocols for access or restriction on access.	See Data Sharing Statement.	
If data are publicly available, provide accession number in repository or DOI or URL.	We provided the accession number in the Methods/paragraph 1 and Fig. 1.	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	We provided the accession number in the Methods/paragraph 1 and Fig. 1.	

Code Availability	Yes (indicate where provided: section/paragraph)	
For all newly generated code and software essential for replicating the main findings of the study:		
State whether the code or software is available.	We provided the statement in the Methods/paragraph 1.	
If code is publicly available, provide accession number in repository, or DOI or URL.	We provided the relevant information in Methods/paragraph 1.	

Reporting

Adherence to community standards	Yes (indicate where provided: section/paragraph)	
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 guidelines for publication.	

Article information: https://dx.doi.org/10.21037/atm-22-5351