<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 name,	This research is not a basic research and no antibodies were	N/A
catalogue number and RRID, if available.	used	

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	This research is not a basic research and no cell lines were used	N/A
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	This research is not a basic research and no cell lines were used	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	This research is not a basic research and no animals were used	N/A
Animal observed in or captured from the field: Provide species, sex and age where possible	This research is not a basic research and no animals were used	N/A
Model organisms: Provide Accession number in repository (where relevant) OR RRID	This research is not a basic research and no animals were used	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)	This research is not a basic research and no plants were used	N/A
Microbes: provide species and strain, unique accession number if available, and source	This research is not a basic research and no microbes were used	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.	Included in section"2.1 Study participant", last sentence of this paragraph.	
Provide statement confirming informed consent obtained from study participants.	Included in section" 2.1 Study participant", last sentence of this paragraph.	
Report on age and sex for all study participants.	Included in section"2.1 Study participant", first sentence of this paragraph.	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number OR cite DOI in manuscript.	This is a small-scale retrospective study with no clinical trial registration number	N/A

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 is a small-scale retrospective study with no Laboratory protocol	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.	This is a small-scale retrospective study with no statistics details	N/A
Sample size determination	This is a small-scale retrospective study with no statistics details	N/A
Randomisation	This is a small-scale retrospective study	N/A
Blinding	This is a small-scale retrospective study	N/A
Inclusion/exclusion criteria	Included in section"2.1 Study participant"	

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 is a small-scale retrospective study with no laboratory replication	N/A
Define whether data describe technical or biological replicates	This is a small-scale retrospective study with no laboratory replication	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.	Included in section"2.1 Study participant", last sentence of this paragraph.	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This research is not a basic research and no animals were used	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.	This is a small-scale retrospective study with no specimen and field samples involved	N/A

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	This is a small-scale retrospective study with no dual use	N/A
the authority granting approval and reference number for the regulatory approval	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.	In this study, there is no data form analysis is excluded. Criteria for exclusion included in section "2.1 Study participants"	N/A

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Included in section" 2.5 Statistical analyses"	

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.	There is no newly created datasets	N/A
If data are publicly available, provide accession number in repository or DOI or URL.	Data are not publicly available in this study	N/A
If publicly available data are reused, provide accession	Data are not publicly available in this study	N/A

number in repository or DOI or UKL, where possible.	

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:	This is a small-scale retrospective study with no generated code and software for replicating the main findings of the study	N/A
State whether the code or software is available.	This is a small-scale retrospective study with no generated code and software for replicating the main findings of the study	N/A
If code is publicly available, provide accession number in repository, or DOI or URL.	This is a small-scale retrospective study with no generated code and software for replicating the main findings of the study	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.	

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