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:	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	Paragraph 2.4(in the section of *Materials and Methods*)	

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	Paragraph 2.1 (in the section of *Materials and Methods*)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Paragraph 2.1 (in the section of *Materials and Methods*)	

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		We didn't use animals in our study
Animal observed in or captured from the field: Provide species, sex and age where possible		We didn't use animals in our study
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		We didn't use model organisms in our study

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)		We didn't use plants in our study
Microbes: provide species and strain, unique accession number if available, and source		We didn't use microbes in our study

Human research participants	Yes (indicate where provided:	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	paragraph 2.6.1(in the section of *Materials and Methods*) The study did not require ethical approval as it did not contain any research on	
Provide statement confirming informed consent obtained from study participants.		No patients were involved in our study
Report on age and sex for all study participants.		No patients were involved in our study

Design

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

Laboratory protocol	Yes (indicate where provided:	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	Stable FTH-silenced cell lines were generated by LV-shFTH (https://doi.org/10.1007/s10637-018-0709-3)	

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.	All in the section of *Materials and Methods*.	
Sample size determination	All in the section of *Materials and Methods*.	
Randomisation	All in the section of *Materials and Methods*.	
Blinding	All in the section of *Materials and Methods*.	
Inclusion/exclusion criteria	All in the section of *Materials and Methods*.	

Sample definition and in-laboratory replication	Yes (indicate where provided:	n/a
State number of times the experiment was replicated in laboratory	All in the section of *Materials and Methods*.	
Define whether data describe technical or biological replicates	All in the section of *Materials and Methods*.	

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.	Paragraph 2.6.1(in the section of *Materials and Methods*)	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Paragraph 2.6.1(in the section of *Materials and Methods*)	
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	Paragraph 2.6.1(in the section of *Materials and Methods*)	

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		No study material that can be harmful outside the laboratory context was used in our research

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.	Paragraph 3.2	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Paragraph 2.5(in the section of *Materials and Methods*)	

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.	All data results are in the *results* section	
If data are publicly available, provide accession number in repository or DOI or URL.	All data results are in the *results* section	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	All data results are in the *results* section	

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:	Paragraph 2.5(in the section of *Materials and Methods*)	
State whether the code or software is available.	Paragraph 2.5(in the section of *Materials and Methods*)	
If code is publicly available, provide accession number in repository, or DOI or URL.	Paragraph 2.5(in the section of *Materials and Methods*)	

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.	This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: https://creativecommons.org/licenses/by-nc-nd/4.0/.	
State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	We followed the ICMJE guidelines and The writing style of the manuscript refers to the ARRIVE Guidelines.	

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