

## **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](https://doi.org/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**

<b>Antibodies</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	-	n/a
<b>Cell materials</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
<b>Cell lines:</b> Provide species information, strain. Provide accession number in repository <b>OR</b> supplier name, catalog number, clone number, <b>OR</b> RRID	-	n/a
<b>Primary cultures:</b> Provide species, strain, sex of origin, genetic modification status.	Mesenchymal stem cells from four-week-old male Sprague-Dawley (SD) rats without genetic modification status.	-
<b>Experimental animals</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
<b>Laboratory animals:</b> Provide species, strain, sex, age, genetic modification status. Provide accession number in repository <b>OR</b> supplier name, catalog number, clone number, <b>OR</b> RRID	Four-week-old male Sprague-Dawley (SD) rats (160~200g) without genetic modification status were provided by Shanghai SLAC Laboratory Animal Co., Ltd. (NO.SCXK (Shanghai) 2012-0002).	
<b>Animal observed in or captured from the field:</b> Provide species, sex and age where possible	-	n/a
<b>Model organisms:</b> Provide Accession number in repository (where relevant) <b>OR</b> RRID	-	n/a
<b>Plants and microbes</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
<b>Plants:</b> provide species and strain, unique accession number if available, and source (including location for collected wild specimens)	Andrographolide was bought from Sigma-Aldrich (St. Louis, MO, USA).	-
<b>Microbes:</b> provide species and strain, unique accession number if available, and source	Staphylococcus epidermidis (American Type Culture Collection 35984) was provided by Lab of Medical Molecular Virology, Shanghai Medical College, Fudan University, Shanghai, China. And two clinical isolates, S. aureus 376 and S. epidermidis 389 were provided by Université du Littoral Côte D'Opale, Boulognesur-Mer, France.	-
<b>Human research participants</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
Identify authority granting ethics approval(IRB or equivalent committee(s), provide reference number for approval.	-	n/a
Provide statement confirming informed consent obtained from study participants.	-	n/a
Report on age and sex for all study participants.	-	n/a

**Design**

<b>Study protocol</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
For clinical trials, provide the trial registration number ORcite DOI in manuscript.	-	n/a
<b>Laboratory protocol</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
Provide DOI or other citation details if detailed step-by-step protocols are available.	-	n/a
<b>Experimental study design (statistics details)</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
State whether and how the following have been done, or if they were not carried out.		
Sample size determination	Yes	-
Randomisation	Not carried out	-
Blinding	Not carried out	-
Inclusion/exclusion criteria	smooth titanium of 99.5% density and andrographolide-loaded nanotubes of different diameters which were manufactured according to the standards in the paper	-
<b>Sample definition and in-laboratory replication</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
State number of times the experiment was replicated in laboratory	All the experiments involved in the paper were replicated more than 3 times	-
Define whether data describe technical or biological replicates	All experiments of replicates were technical.	-
<b>Ethics</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	-	n/a
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Experiments were performed under a project license (NO.SYXK (Fujian) 2009-0001) granted by the Experimental Animal Ethics Committee of Fujian University of Traditional Chinese Medicine.	-
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	-	n/a
<b>Dual Use Research of Concern (DURC)</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval	-	n/a

## Analysis

<b>Attrition</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance.	-	n/a
<b>Statistics</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
Describe statistical tests used and justify choice of tests.	The single assay of factor and least meaning variance post hoc checks were adopted to confirm the layer of meaning.	-
<b>Data Availability</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
State whether newly created datasets are available, including protocols for access or restriction on access.	-	n/a
If data are publicly available, provide accession number in repository or DOI or URL.	-	n/a
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	-	n/a
<b>Code Availability</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
For all newly generated code and software essential 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 number in repository, or DOI or URL.	-	n/a

## Reporting

<b>Adherence to community standards</b>	<b>Yes (indicate where provided: page no/section/legend)</b>	<b>n/a</b>
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 has been followed in paper and no suitable checklist is provided with the manuscript.	-

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