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

| Category                      | Yes (indicate where provided: section/paragraph) | n/a |
|-------------------------------|-----------------------------------------------|-----|
| **Antibodies**                | Antibodies were not used in this study.       |     |
| For commercial reagents,      |                                               |     |
| provide supplier name,        |                                               |     |
| catalogue number and RRID,    |                                               |     |
| if available.                 |                                               |     |
| **Cell materials**            | Cell materials were not used in this study.   |     |
| **Cell lines**                |                                               |     |
| Provide species information,  |                                               |     |
| strain.                       |                                               |     |
| Provide accession number in   |                                               |     |
| repository OR supplier name,  |                                               |     |
| catalog number, clone number, |                                               |     |
| OR RRID.                      |                                               |     |
| **Primary cultures**          |                                               |     |
| Provide species, strain, sex  |                                               |     |
| of origin, genetic            |                                               |     |
| modification status.          |                                               |     |
| **Experimental animals**      | Experimental animals were not used in this    |     |
| **Laboratory animals**        |                                               |     |
| Provide species, strain, sex, |                                               |     |
| age, genetic modification     |                                               |     |
| status.                       |                                               |     |
| Provide accession number in   |                                               |     |
| repository OR supplier name,  |                                               |     |
| catalog number, clone number, |                                               |     |
| OR RRID.                      |                                               |     |
| **Animal observed in or       |                                               |     |
| captured from the field**     |                                               |     |
| Provide species, sex and age  |                                               |     |
| where possible.               |                                               |     |
| **Model organisms**           |                                               |     |
| Provide Accession number in   |                                               |     |
| repository (where relevant) OR |                                               |     |
| RRID.                         |                                               |     |
| **Plants and microbes**       | Plants and microbes were not used in this     |     |
| **Plants**                    |                                               |     |
| provide species and strain,   |                                               |     |
| unique accession number if    |                                               |     |
| available, and source (including |                                               |     |
| location for collected wild    |                                               |     |
| specimens)                    |                                               |     |
| **Microbes**                  |                                               |     |
| provide species and strain,   |                                               |     |
| unique accession number if    |                                               |     |
| available, and source         |                                               |     |
| **Human research participants**|                                               |     |
| Identify authority granting   | Yes (Materials and Methods/ line 93-97)        |     |
| ethics approval (IRB or        | (Page 3)                                      |     |
| equivalent committee(s),      |                                               |     |
| provide reference number for  |                                               |     |
| approval.                     |                                               |     |
| Provide statement confirming   | Yes (Materials and Methods/ line 97)          |     |
| informed consent obtained     | Page 3/                                        |     |
| from study participants.      |                                               |     |
| Report on age and sex for all | Yes (Table 1/ line 428)                      |     |
| study participants.           |                                               |     |
### 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 study is not a clinical trial. | |

| 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 study did not have laboratory protocol. | |

| 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 not a experimental study. | |
| Sample size determination | | |
| Randomisation | | |
| Blinding | | |
| Inclusion/exclusion criteria | | |

| 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 not a in-laboratory study. | |
| Define whether data describe technical or biological replicates | | |

| 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. | Yes (Materials and Methods/ line 93-97 and Footnote / line340-351) Page 3/-line93 |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | This study did not involve experimental animals. |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | This study did not involve specimen and field samples. |

| 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 | This study did not include dual use 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. | Yes (Material and method / line 153-195) | |

| Statistics | Yes (indicate where provided: section/paragraph) | n/a |
|------------|-------------------------------------------------|-----|
| Describe statistical tests used and justify choice of tests. | Yes (Material and method / line 153-195) | |

| 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. | The data are not availability since this study is not finished. | |
| If data are publicly available, provide accession number in repository or DOI or URL. | The data are not available since this study is not finished. | |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | The data are not available since this study is not finished. | |

| 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: | The newly generated code is not available since this study is not finished. | |
| State whether the code or software is available. | The newly generated code is not available since this study is not finished. | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | The newly generated code is not available since this study is not finished. | |

## 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. | Yes (Footnote / line 341) | Page11/line341 |
| State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript. | Yes (Materials and methods / line 93-95 and Footnote / line 344-346) | Page3/line 93-95 |
| ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication. | | |

Article information: http://dx.doi.org/10.21037/atm-20-6082