

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.

For all that apply, please note where in the manuscript the required information is provided.

Materials:

Newly created materials	indicate where provided: page no/section/legend)	n/a
The manuscript includes a dedicated "materials availability statement" providing transparent disclosure about availability of newly created materials including details on how materials can be accessed and describing any restrictions on access.	Newly created materials were not included in this research.	n/a
Antibodies	indicate where provided: page no/section/legend)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID , if available.	Antibodies were not included in this research.	
DNA and RNA sequences	indicate where provided: page no/section/legend)	n/a
Short novel DNA or RNA including primers, probes: Sequences should be included or deposited in a public repository.	DNA and RNA sequences were not included in this research.	n/a
Cell materials	indicate where provided: page no/section/legend)	n/a
Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalogue number, clone number, OR RRID.	Cell lines were not included in this research.	n/a
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Primary cultures were not included in this research.	n/a
Experimental animals	indicate where provided: page no/section/legend)	n/a
Laboratory animals or Model organisms: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository OR supplier name, catalogue number, clone number, OR RRID.	Experimental animals were not included in this research.	n/a
Animal observed in or captured from the field: Provide species, sex, and age where possible.	Experimental animals were not included in this research.	n/a
Plants and microbes	indicate where provided: page no/section/legend)	n/a
Plants: provide species and strain, ecotype and cultivar where relevant, unique accession number if available, and source (including location for collected wild specimens).	Plants were not included in this research.	n/a
Microbes: provide species and strain, unique accession number if available, and source.	Microbes were not included in this research.	n/a
Human research participants	indicate where provided: page no/section/legend) or state if these demographics were not collected	n/a
If collected and within the bounds of privacy constraints report on age, sex and gender or ethnicity for all study participants.	The study followed the guidelines of the Declaration of Helsinki for research on human participants, and the study protocols were approved by the Institutional Review Board at Beijing Normal University (ICBIR_A_0098_006). Written informed consent was obtained from the parents of all participants. Page 4/ line 82-85/ Materials and Methods	

Design:

Study protocol	indicate where provided: page no/section/legend)	n/a
If study protocol has been pre-registered, provide DOI. For clinical trials, provide the trial registration number OR cite DOI.	Clinical trials were not included in this research.	n/a
Laboratory protocol	indicate where provided: page no/section/legend)	n/a
Provide DOI OR other citation details if detailed step-by-step protocols are available.	The detailed step-by-step protocols are available, on page 4-8 /Line 87-156/ Materials and Methods	
Experimental study design (statistics details)		
For in vivo studies: State whether and how the following have been done	indicate where provided: page no/section/legend. If it could have been done, but was not, write not done	n/a
Sample size determination	Page 4/ line 78-80/Materials and Methods	
Randomisation	Page 8/ line 171-179/Results and discussion	
Blinding	Blinding was not possible as the author who performed the experiments also analyzed the data.	n/a
Inclusion/exclusion criteria	Page 4/ line 78-82/Materials and Methods	
Sample definition and in-laboratory replication	indicate where provided: page no/section/legend	n/a
State number of times the experiment was replicated in laboratory.	This is the first experiment in our laboratory. Page 13/line265-273/Results and discussion	
Define whether data describe technical or biological replicates.	Page 6/ line 125/Materials and Methods	
Ethics	indicate where provided: page no/section/legend	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Page 4/ line 82-85/Materials and Methods	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Experimental animals were not included in this research.	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.	Page 4/ line77-88/Materials and Methods	
Dual Use Research of Concern (DURC)	indicate where provided: page no/section/legend	n/a
If study is subject to dual use research of concern regulations, state the authority granting approval and reference number for the regulatory approval.	Concern regulations were not included in this research.	n/a

Analysis:

Attrition	indicate where provided: page no/section/legend	n/a
Describe whether exclusion criteria were preestablished. Report if sample or data points were omitted from analysis. If yes report if this was due to attrition or intentional exclusion and provide justification.	The 95% of the quantile of CV value of the QC was 0.51, and proteins with CV > 0.51 were considered outliers and were removed. A total of 1511 proteins with the CV below 0.51 were for subsequent analysis. Page 8/ line 163-166/Results and discussion	

Statistics	indicate where provided: page no/section/legend	n/a
Describe statistical tests used and justify choice of tests.	A comparison of proteins between autistic and non-autistic group was conducted using independent samples t-test. Group differences resulting in P-value <0.05 were considered statistically significant. Differential proteins were screened with the following criteria: fold change in increasing group ≥ 1.5 and in decreasing group ≤ 0.67 , P <0.01. Page 7/ line 145-151/ Materials and Methods	

Data availability	indicate where provided: page no/section/legend	n/a
For newly created and reused datasets, the manuscript includes a data availability statement that provides details for access or notes restrictions on access.	Page 14/ line 299/Footnote	
If newly created datasets are publicly available, provide accession number in repository OR DOI OR URL and licensing details where available.	Page 14/ line 299/Footnote	
If reused data is publicly available provide accession number in repository OR DOI OR URL, OR citation.	The publicly available data were not included in this research.	n/a

Code availability	indicate where provided: page no/section/legend	n/a
For all newly generated custom computer code/software/mathematical algorithm or re-used code essential for replicating the main findings of the study, the manuscript includes a data availability statement that provides details for access or notes restrictions.	Proteome Discoverer (Version 2.1, Thermo, USA) software and Spectronaut Pulsar X (Biognosys AG, Switzerland) software were included in this research. These software are commercially available.	
If newly generated code is publicly available, provide accession number in repository, OR DOI OR URL and licensing details where available. State any restrictions on code availability or accessibility.	Newly generated code was not included in this research.	n/a
If reused code is publicly available provide accession number in repository OR DOI OR URL, OR citation.	Reused code was not included in this research.	n/a

Reporting

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.

Adherence to community standards	indicate where provided: page no/section/legend	n/a
State if relevant guidelines (e.g., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (e.g., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

Article information: <https://dx.doi.org/10.21037/tp-21-193>