natureresearch

Corresponding author(s): Siyu Wang
☐ Initial submission ☐ Revised version ☐ Final submission
es related to research ethics and reproducibility. For further information, ust be answered.
ements of potential bias, Nature Research journals require authors to to the work described in the submitted manuscript. nancial interests as defined by Nature Research. by Nature Research
nt should provide the following information, where applicable: datasets
t accession codes are provided. be available before publication No data with mandated deposition
assembly to ensure that all panels are accurate (e.g. all labels are correct, no
and-whisker plots). and lower quartiles; whiskers, 1.5x interquartile range; points, outliers).
at individual data points are shown.
,

Editorial Policy Checklist

This form is used to ensure compliance with Nature Research editorial policies related to research ethics and reproducibility. For further information, please see our Authors & Referees site. All relevant questions on the form must be answered.

▶ Competing interests

Policy information about competing interests

Competing interests declaration

In the interest of transparency and to help readers form their own judgements of potential bias, Nature Research journals require authors to declare any competing financial and/or non-financial interest in relation to the work described in the submitted manuscript.

- No, I declare that the authors have no competing financial or non-financial interests as defined by Nature Research
- Yes, I declare that the authors have a competing interest as defined by Nature Research

Data availability

Policy information about availability of data

Data availability statement

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability
- A full data availability statement is included in the manuscript.

Mandated accession codes (where applicable)

Confirm that all relevant data are deposited into a public repository and that accession codes are provided.

All relevant accession codes are provided Accession codes will be available before publication No data with mandated deposition

Data presentation

Image integrity

Confirm that all images comply with our image integrity policy.

Unprocessed data must be provided upon request. Please double-check figure assembly to ensure that all panels are accurate (e.g. all labels are correct, no inadvertent duplications have occurred during preparation, etc.).

Data distribution

Present data in a format that shows data distribution (dot-plots or box-and-whisker plots)

Define all box-plot elements (e.g. center line, median; box limits, upper and lower quartiles; whiskers, 1.5x interquartile range; points, outliers). If using bar graphs, overlay the corresponding dot plots.

Confirm that all data presentation meets these requirements and that individual data points are shown

Specific policy considerations

Please indicate whether these apply to your study. If you are not certain, please read the appropriate section before	Some types of research require
apply to your study. If you are not certain, please read the appropriate section before	additional policy disclosures.
not certain, please read the appropriate section before	Please indicate whether these
appropriate section before	apply to your study. If you are
	not certain, please read the
selecting a response.	appropriate section before
	selecting a response.

Does not apply	Involved in the study
	☐ Custom software or computer code
\bowtie	Macromolecular structural data
\boxtimes	Research animals and/or animal-derived materials that require ethical approval
	Human research participants
	Clinical data

Code availability

Policy information about availability of computer code

Code availability statement

Typed signature

For all studies using custom code, the Methods section must include a statement under the heading "Code availability" describing how readers can access the code, including any access restrictions.

A full code availability statement is included in the manuscript

Human research p	articipants
------------------	-------------

Siyu Wang

Policy information about studies involving human research participants Ethical compliance Confirm that you have complied with all relevant ethical regulations and that a statement affirming this is included in the manuscript. Ethics committee Confirm that the manuscript states the name(s) of the board and/or institution that: Approved the study protocol Provided guidelines for study procedures (if protocol approval is not required) Informed consent Confirm that informed consent was obtained from all participants. Identifiable images For publication of identifiable images of research participants, confirm that consent to publish was obtained and is noted in the Methods. Authors must ensure that consent meets the conditions set out in the Nature Research participant release form. No identifiable images of human research participants I certify that all the above information is complete and correct.