Stable kinetochore-microtubule attachments restrict MTOC position and spindle elongation in oocytes

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Review Timeline:

| Event                        | Date       |
|------------------------------|------------|
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(Note: With the exception of the correction of typographical or spelling errors that could be a source of ambiguity, letters and reports are not edited. Depending on transfer agreements, referee reports obtained elsewhere may or may not be included in this compilation. Referee reports are anonymous unless the Referee chooses to sign their reports.)
Any descriptions too long for the figure legend should be included in the methods section and/or with the source data.

This checklist is used to ensure good reporting standards and to improve the reproducibility of published results. These guidelines are consistent with the Principles and Guidelines for Reporting Preclinical Research issued by the NIH in 2014. Please follow the journal’s authorship guidelines in preparing your manuscript.

**A- Figures**

**1. Data**

The data shown in figures should satisfy the following conditions:

- The data were obtained and processed according to the field's best practice and are presented to reflect the results of the experiments in an accurate and unbiased manner.
- Figures include only data points, measurements or observations that can be compared to each other in a scientifically meaningful way.
- Graphs include clearly labeled error bars for independent experiments and sample sizes. Unless justified, error bars should not be shown for technical replicates.
- If n=5, the individual data points from each experiment should be plotted and any statistical test employed should be justified.
- Source Data should be included to report the data underlying graphs. Please follow the guidelines set out in the author ship guidelines on Data Presentation.

**2. Captions**

Each figure caption should contain the following information, for each panel where they are relevant:

- A specification of the experimental system investigated (e.g. cell line, species name).
- The assay(s) and method(s) used to carry out the reported observations and measurements.
- A statement of how many times the experiment shown was independently replicated in the laboratory.
- Definitions of statistical methods and measures:
  - Common terms, such as n= and p= (please specify whether paired vs. unpaired), simple t tests, Wilcoxon and Mann-Whitney tests, can be unambiguously identified by name only, but more complex techniques should be described in the methods section.
  - Are tests one-sided or two-sided?
  - Are there adjustments for multiple comparisons?
  - Exact statistical test results, e.g., P values = x but not P values < x;
  - Definition of 'center values' as median or average;
  - Definition of error bars as s.d. or s.e.m.

Any descriptions too long for the figure legend should be included in the methods section and/or with the source data.

If the pink boxes below, please ensure that the answers to the following questions are reported in the manuscript itself. Every question should be answered. If the question is not relevant to your research, please write NA (non applicable).

We encourage you to include specific subsections in the methods section for statistics, reagents, animal models and human subjects.

**B- Statistics and general methods**

Please fill out these boxes (Do not worry if you cannot see all your text once you press return)

| Question | Answer |
|----------|--------|
| 1a. How was the sample size chosen to ensure adequate power to detect a pre-specified effect size? | Sample size (number of samples) was chosen based on the number of fully grown oocytes obtained from one or two mice per experiment. The number of mice used in each experiment was limited to one or two. This limitation was set in order to carry out the procedures of oocyte collection within 30 minutes, which was required for ensuring the reproducibility of the results. |
| 1b. For animal studies, include a statement about sample size estimate even if no statistical methods were used. | Sample size estimate was not performed. |
| 2. Describe inclusion/exclusion criteria if samples or animals were excluded from the analysis. Were the criteria pre-established? | All oocytes were included for the analysis. |
| 3. Were any steps taken to minimize the effects of subjective bias when allocating animals/samples to treatment (e.g. randomization procedure)? If yes, please describe. | All samples were randomly allocated into different experimental groups. |
| 4a. Were any steps taken to minimize the effects of subjective bias during group allocation or/and when assessing results (e.g. blinding of the investigator)? If yes please describe. | No randomization was used. |
| 4b. For animal studies, include a statement about blinding even if no blinding was done. | No blinding was done. |
| 5. For every figure, are statistical tests justified as appropriate? | Yes. |
| Do the data meet the assumptions of the test (e.g., normal distribution)? Describe any methods used to assess it. | Where t-test was used, the data followed normal distribution. |
Is there an estimate of variation within each group of data?

No.

Is the variance similar between the groups that are being statistically compared?

Yes.

C - Reagents

8. To show that antibodies were profiled for use in the system under study (assay and species), provide a citation, catalog number and/or clone number, Supplementary information or reference to an antibody validation profile. e.g., Antibodypedia (see link list at top right), 12ng/mL (see link list at top right).

The primary antibodies used were anti-pericentrin (mouse, B11B3F, BD Transduction Laboratories, 1:500), alpha-Tubulin (rat, 512, MCA77G, Bio-Rad, 1:2000 (Figure 5) or 1:10000 (other figures)); or mouse, DM1A, T6199, Sigma, 1:3005 and ACA (human, 1:20); Antibodies (incorporated), 1:200 (Fig 5) or 1:1000 (other figures). Secondary antibodies used were Alexa Fluor 488 goat anti-mouse IgG (H+L) (A11008); goat anti-rat IgG (H+L) (A11109); Alexa Fluor 555 goat anti-mouse IgG (H+L) (A21430); goat anti-human IgG (H+L) (A21433); Alexa Fluor 647 donkey anti-mouse IgG (H+L) (A54173) (Molecular Probes, 1:2000 (Figure 5) or 1:200 (other figures)).

9. Identify the source of cell lines and report if they were recently authenticated (e.g., by STR profiling) and tested for mycoplasma contamination.

Yes.

D - Animal Models

10. We recommend consulting the ARRIVE guidelines (see link list at top right) (Johnston, J.I., et al., 2010) to ensure that other relevant aspects of animal studies are adequately reported. See author guidelines, under 'Reporting Guidelines'. See also: NV (see link list at top right) and MRC (see link list at top right) recommendations. Please confirm compliance.

Confirmed.

E - Human Subjects

11. Identify the committee(s) approving the study protocol.

NA

12. Include a statement confirming that informed consent was obtained from all subjects and that the experiments conformed to the principles set out in the WMA Declaration of Helsinki and the Department of Health and Human Services Belmont Report.

NA

13. For publication of patient photos, include a statement confirming that consent to publish was obtained.

NA

14. Report any restrictions on the availability (and/or on the use of) human data or samples.

NA

15. Report the clinical trial registration number (at ClinicalTrials.gov or equivalent), where applicable.

NA

16. For phase I and III randomized controlled trials, please refer to the CONSORT flow diagram (see link list at top right) and submit the CONSORT checklist (see link list at top right) with your submission. See author guidelines, under 'Reporting Guidelines'. Please confirm you have submitted this list.

NA

17. For tumor marker prognostic studies, we recommend that you follow REMARK reporting guidelines (see link list at top right). See author guidelines, under 'Reporting Guidelines'. Please confirm you have followed these guidelines.

NA

F - Data Accessibility

18. Provide a "Data Availability" section at the end of the Materials & Methods, listing the accession codes for data generated in this study and deposited in a public database (e.g. RNA-Seq data: Gene Expression Omnibus GSE101662, Proteomics data: PRIDE PRED003206 etc.). Please refer to our author guidelines for 'Data Deposition'.

No data were deposited in a public database.

19. Deposits is strongly recommended for all datasets that are central and integral to the study. Please consider the journal's data policy. If no structured public repository exists for a given data type, we encourage the provision of datasets in the manuscript as a Supplementary Document (see author guidelines under 'Expanded View' or in unstructured journal’s data policy. If no structured public repository exists for a given data type, we encourage the provision of datasets in the manuscript as a Supplementary Document (see link list at top right).

All the data supporting the findings of this study are available within the article and its supplementary materials/source files.

20. Computational models that are central and integral to a study should be shared without restrictions and provided in a machine-readable form. The relevant accession numbers or links should be provided. When possible, standardized format (SBML, CellML) should be used instead of scripts (e.g. MATLAB). Authors are strongly encouraged to follow the MIRIAM machine-readable form. The relevant accession numbers or links should be provided. When possible, standardized format (SBML, CellML) should be used instead of scripts (e.g. MATLAB).

NA

G - Dual use research of concern

21. Could your study fall under dual use research restrictions? Please check biosecurity documents (see link list at top right) and list select agents and toxins (APS/CDC). According to our biosecurity guidelines, provide a statement only if it could.

No.