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Mad meiosis

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William Wells

Email: wells@biotext.com

Mad2p is a budding yeast protein that helps to delay progression through mitosis until errors in chromosome attachment to the mitotic spindle are corrected. In the 14 July *Science* Shonn *et al.* find that this spindle checkpoint is also required during meiosis (*Science* 2000, **289**:300-303). Cells without Mad2p show increased chromosome segregation errors during budding yeast meiosis I, when homologs separate, but appear normal during meiosis II, when sister chromatids separate. Meiosis I may fare less well because of the more flexible connection between homologs, which may make it easier for both homologs to attach to the same spindle pole. Defects in the checkpoint may cause chromosome nondisjunction diseases such as Down syndrome.

References

1. Feedback control of mitosis in budding yeast.
2. Science magazine, [<http://www.sciencemag.org/>]
3. Mutations of mitotic checkpoint genes in human cancers.