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## Sex and asymmetry in yeast

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The fission yeast *Schizosaccharomyces pombe* is able to switch sex - from M to P mating-type and back again. Two generations of asymmetric cell division are required to allow one of the four 'granddaughter' cells to switch. Arcangioli describes in the 15th August issue of *EMBO Reports* (*EMBO Reports* 2000, **1**:145-150) the use of classic density gradient centrifugation techniques developed by Meselson-Stahl forty years ago (*Proc Natl Acad Sci* 1958, **44**:671-682) to follow the fate of DNA strands at the mating-type locus during mitotic division. The study shows that one quarter of the DNA at the mating locus results from *de novo* synthesis of both strands, supporting a gene-conversion model in which a site- and strand-specific DNA break marks one of the sister chromatids, leading to asymmetry in the chromatids inherited by the two daughters and allowing cells to change sex at the subsequent mitosis.

## References

1. Life Cycle of fission yeast *Schizosaccharomyces pombe*, [<http://www.bio.uva.nl/pombe/cycle/lifegraph.html>]
2. EMBO Reports, [<http://www.embo-reports.oupjournals.org/>]