

**Non-Human Primates Exhibit Errors in Meiosis I<sup>†</sup>**

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Meiosis is a highly conserved and stringently regulated process amongst eukaryotic species, but it is also evident that meiotic errors are prevalent in human females. Between 20 and 60% of human eggs are aneuploid (having the wrong chromosome content), whereas less than 4% of human sperm exhibit such deficits. These errors emerge during the first meiotic division and manifest as chromosome segregation errors on the meiosis I spindle, but are thought to arise as a result of recombination errors during prophase I in the embryo. Thus, many years may separate the occurrence of the error from the resulting segregation defect. Recent preliminary studies in the Rhesus macaque reveal that oocytes obtained from adult females exhibit segregation defects at the metaphase-I spindle (shown here: DNA in pink;  $\beta$ -tubulin in green) similar to those seen in humans, indicating that unlike in mice, whose spindles morphology is consistent (background: DNA in blue;  $\beta$ -tubulin in green), other primate species may exhibit similar high rates of meiosis I errors.

