

# Meiosis with Labeled Parental Genomes

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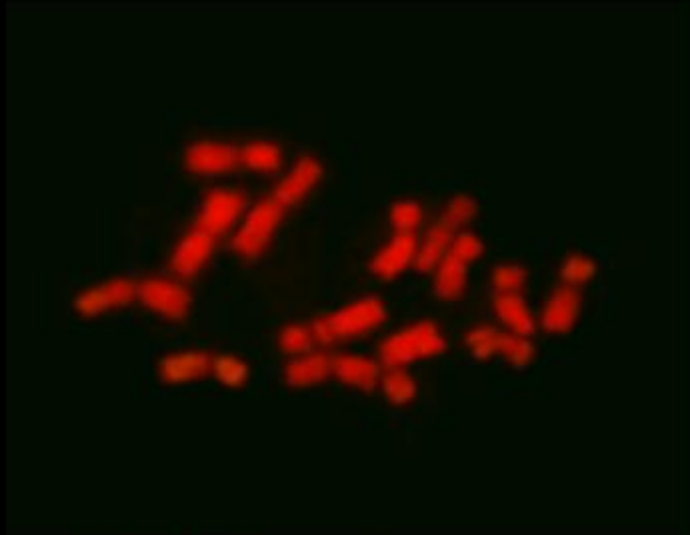
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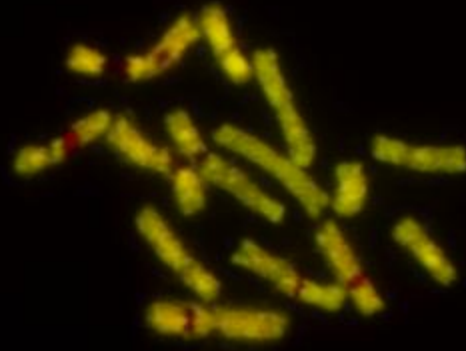
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## How it was done:

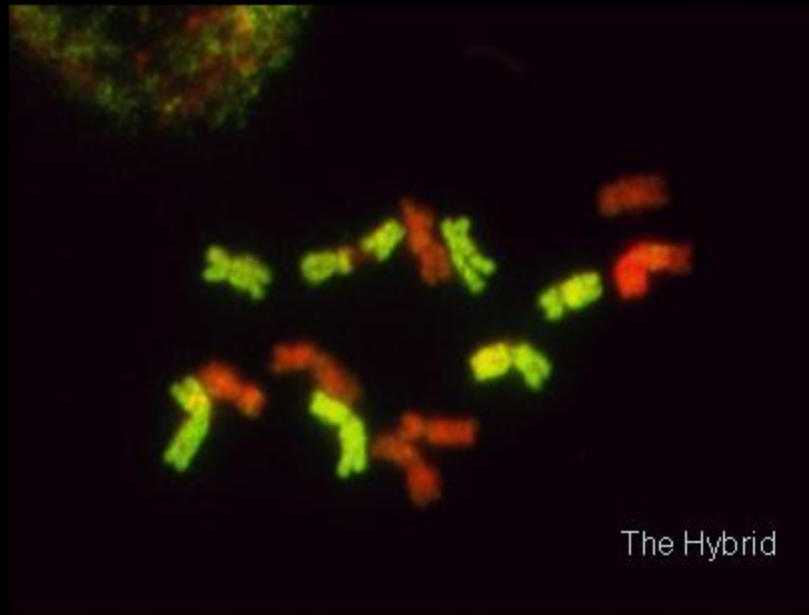
- Intergeneric F<sub>1</sub> hybrid, *Lolium multiflorum* (2n=14) x *Festuca pratensis* (2n=14)
- Anthers with desired stages of meiosis collected and fixed, preps made by squashing
- Total genomic DNA of *L. multiflorum* labeled with DIG-FITC (green) by nick translation and hybridized to chromosomes with total genomic DNA of *F. pratensis* as a block; all chromosomes counterstained with PI (important in interpretation)
- Selected cells photographed through green and red filters
- Individual photographs adjusted for brightness and contrast, and merged
- Imperfections, debris, etc retouched out of the pictures; pictures rotated and trimmed
- Pictures in each panel (stage) adjusted to similar contrast, brightness, tone
- Each slide has 2-3 pictures of the same stage, the earliest on left



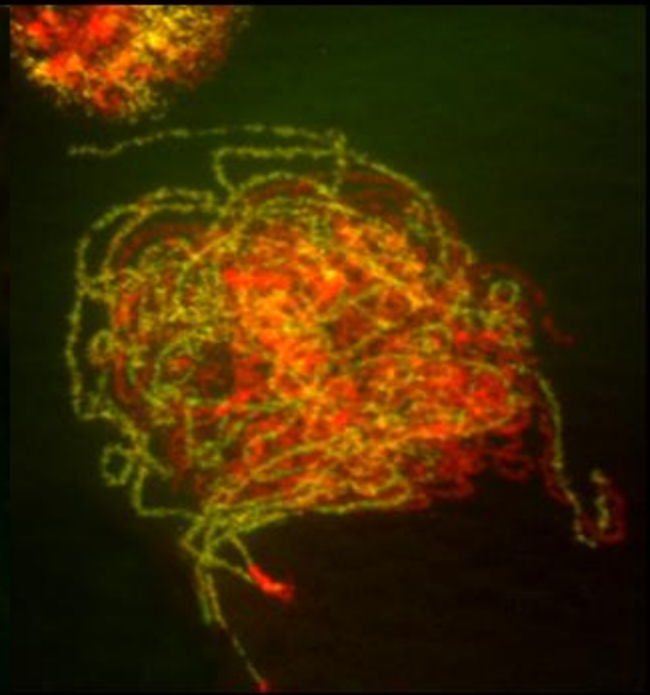
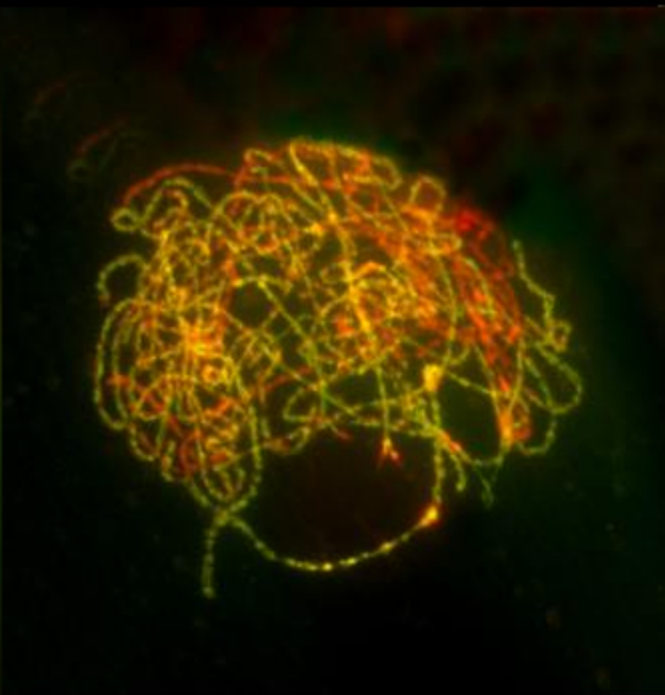
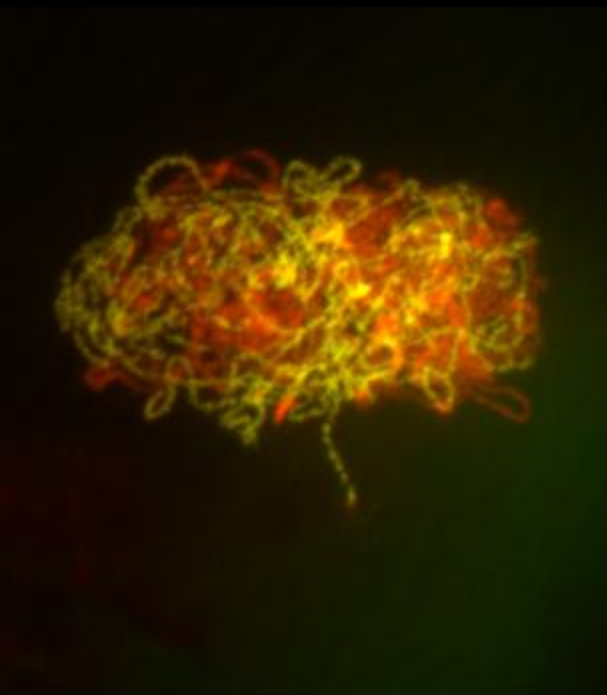
Parent Red



Parent Green

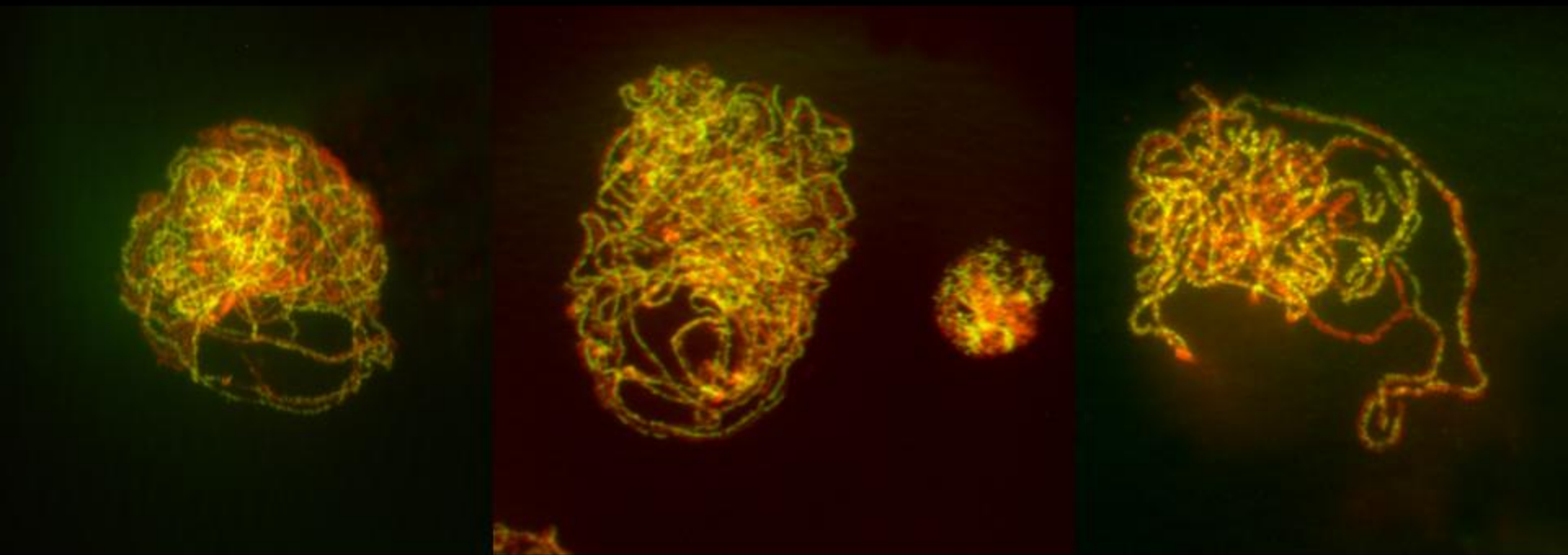


The Hybrid

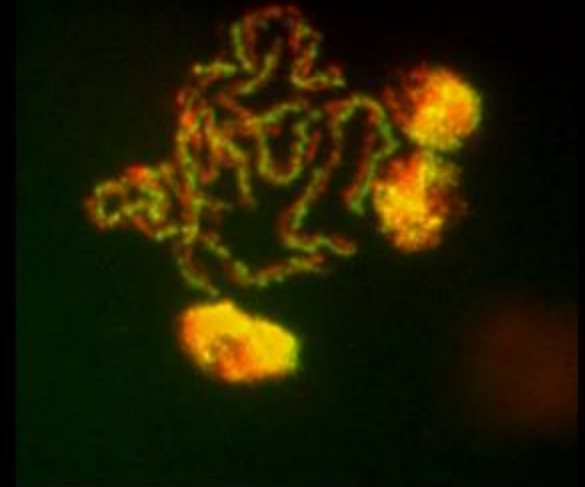
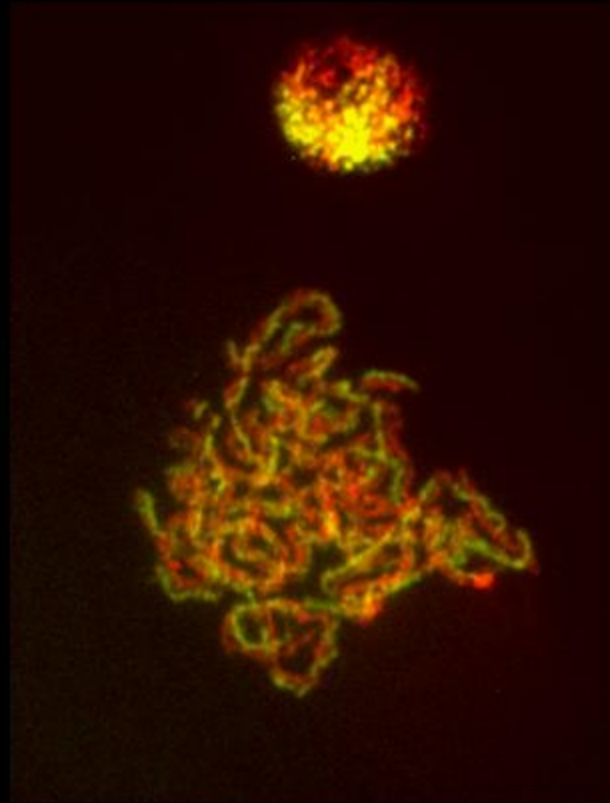
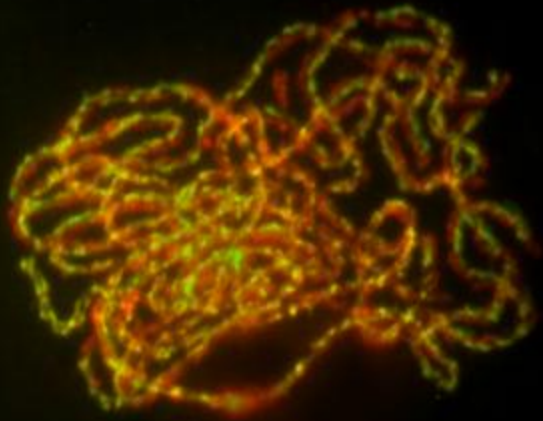


Leptotene



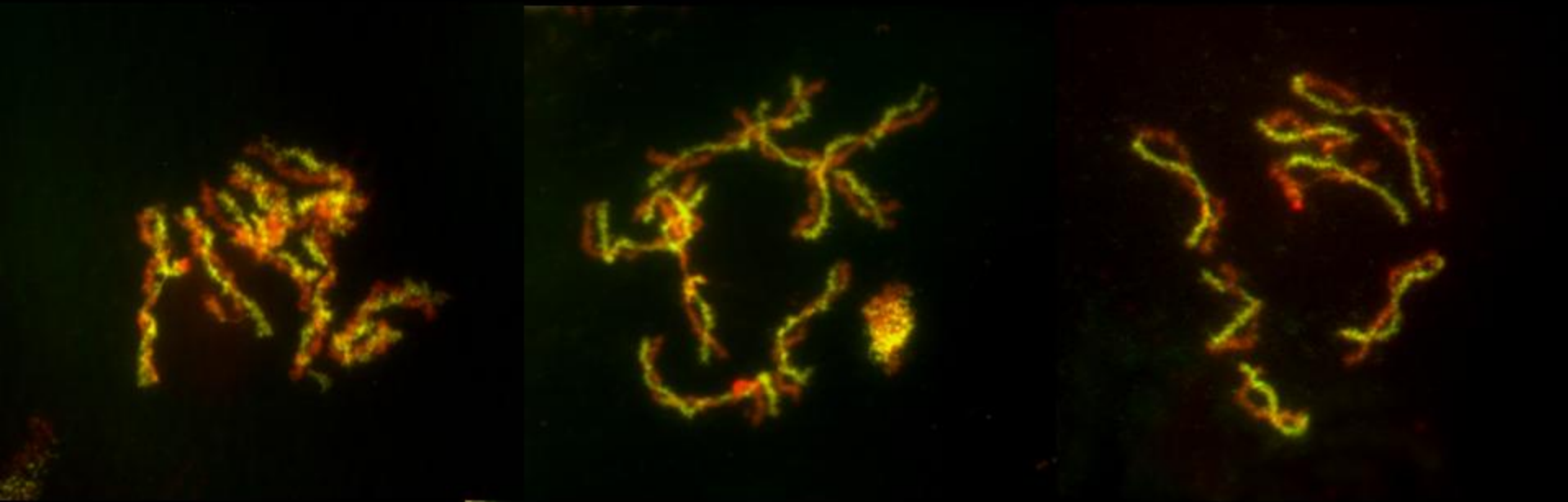


Zygotene

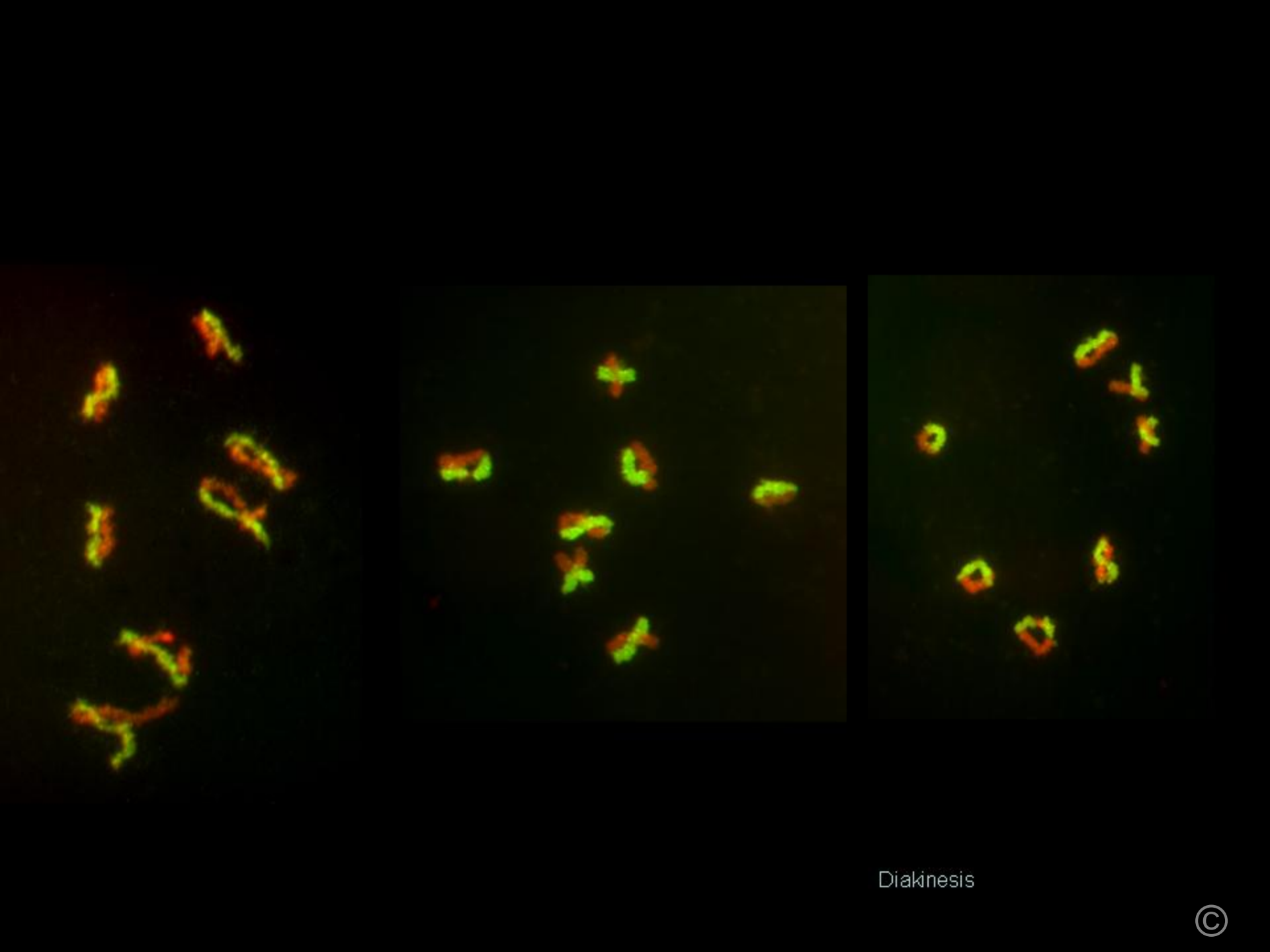


Pachytene



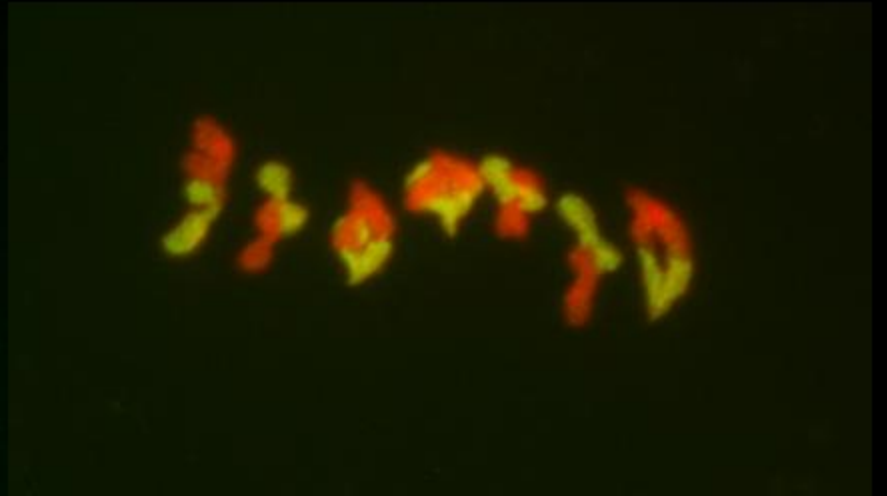
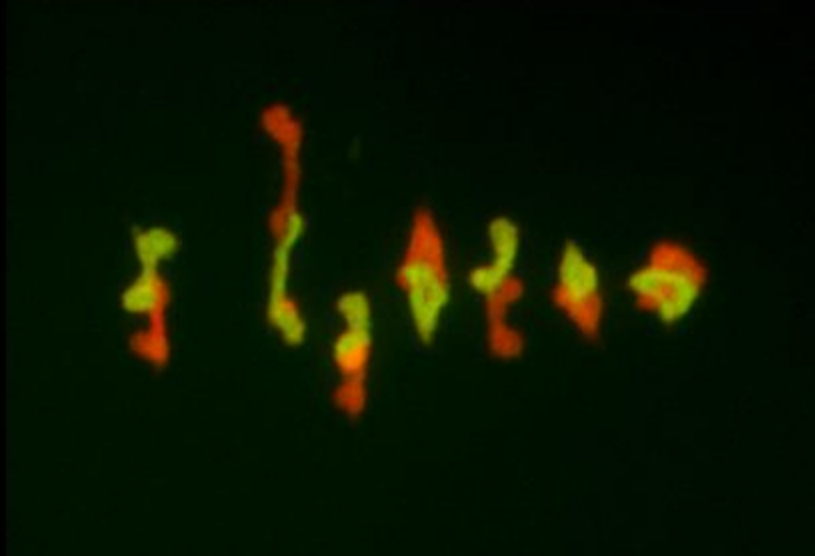


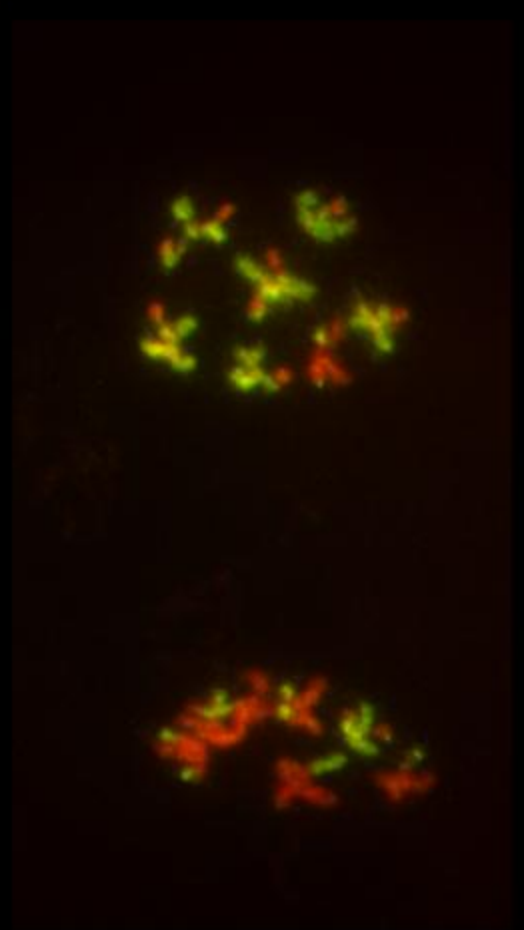
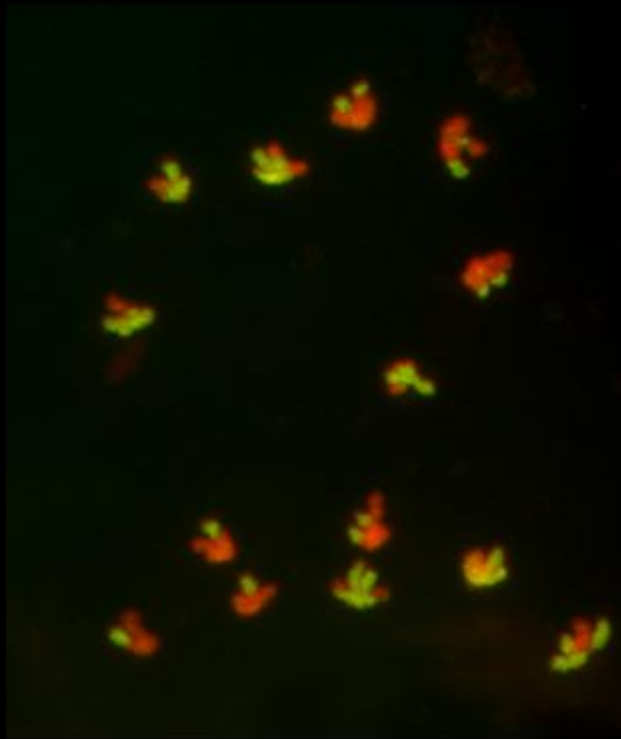
Diplotene



Diakinesis

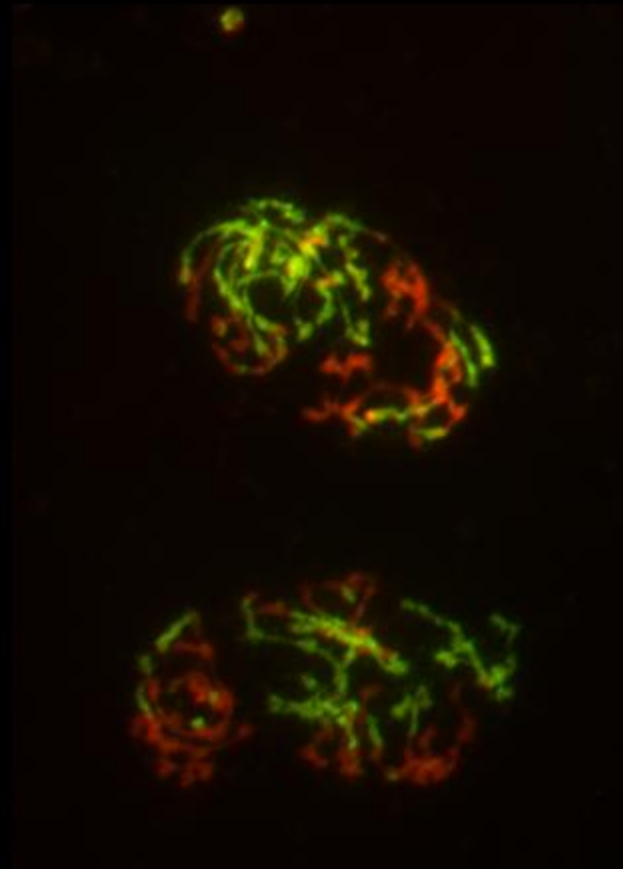
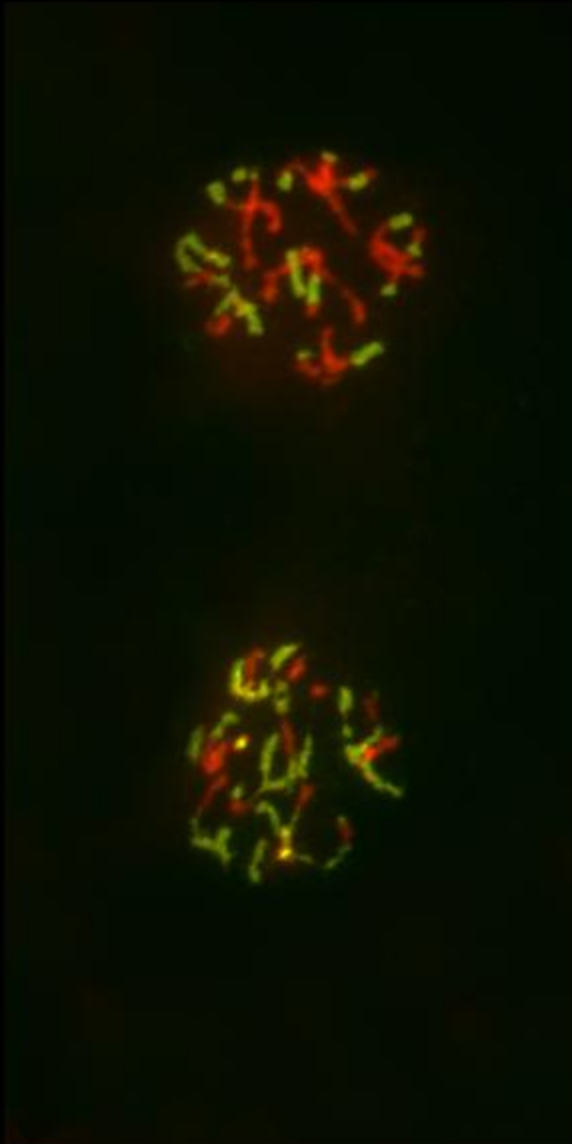




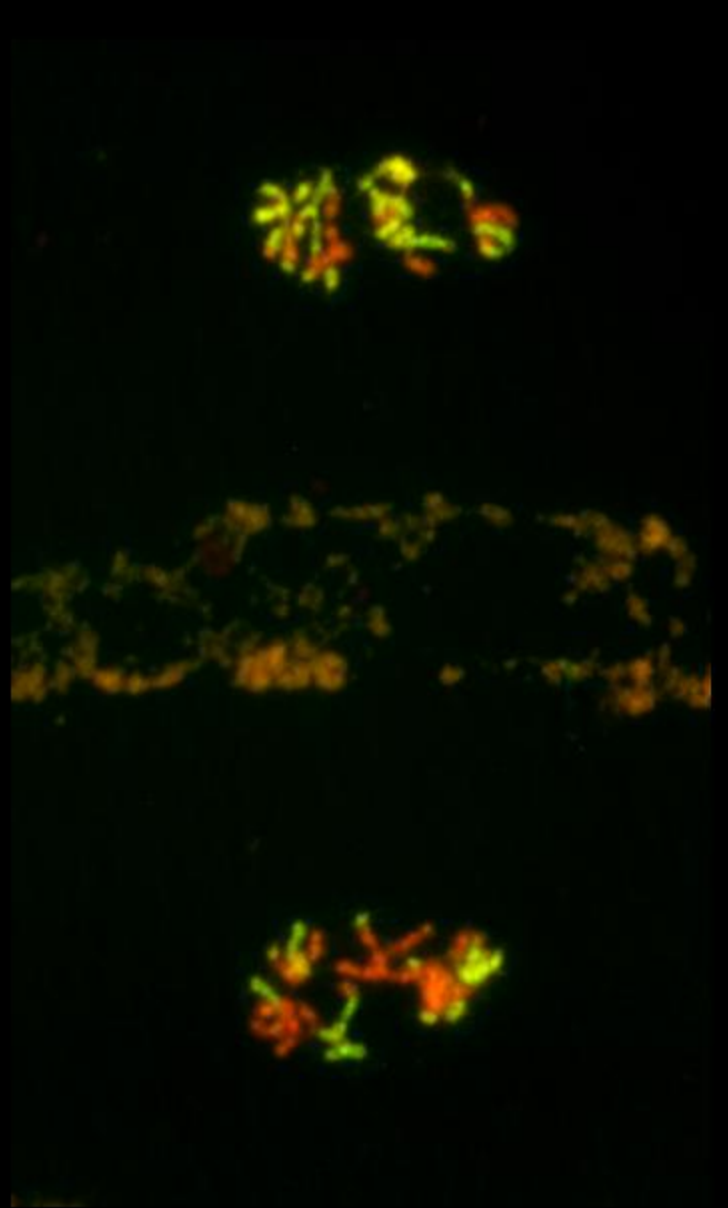
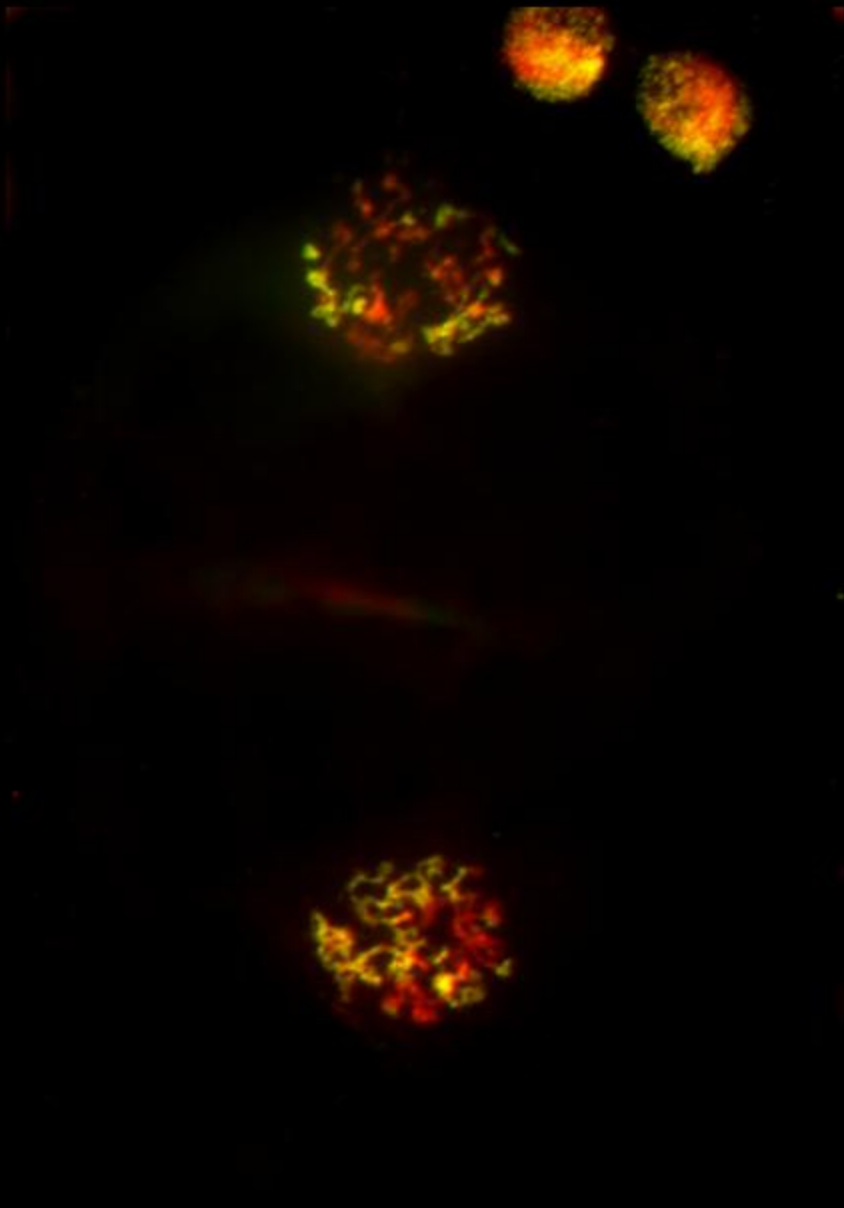


Anaphase I



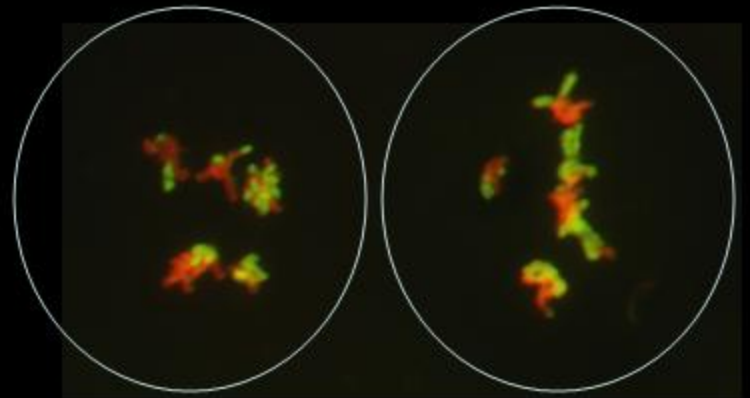
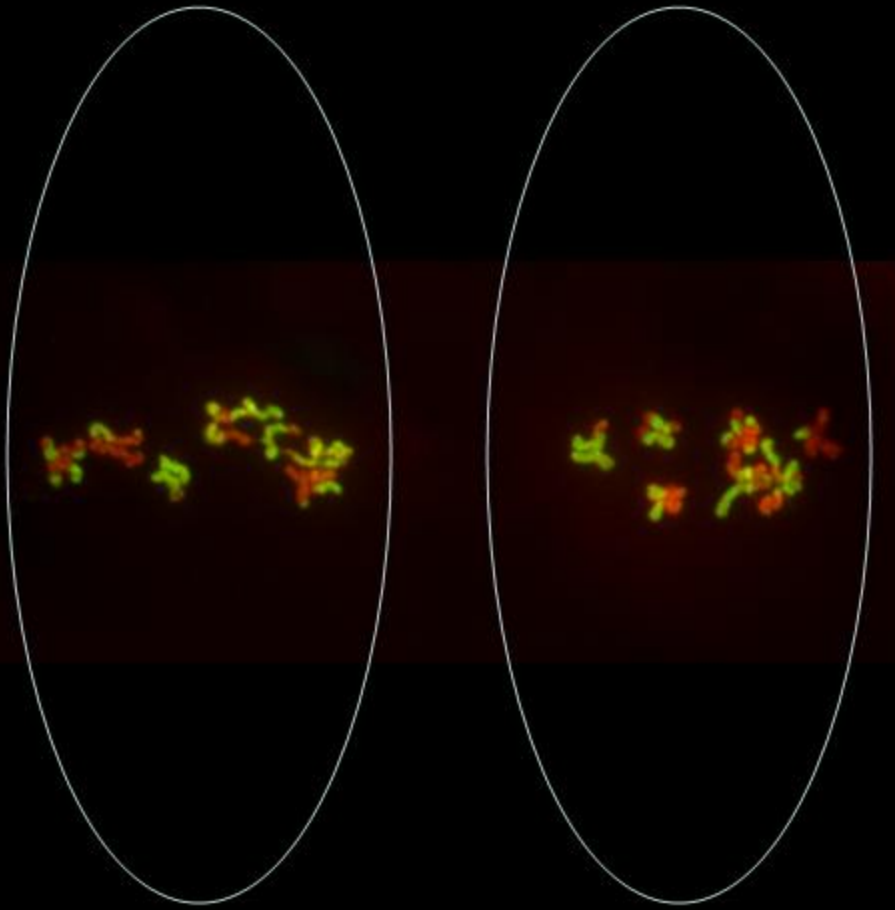


Telophase I

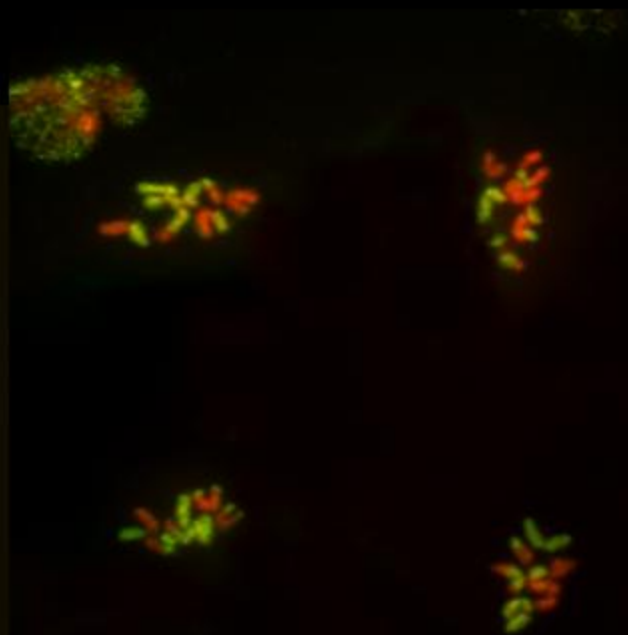
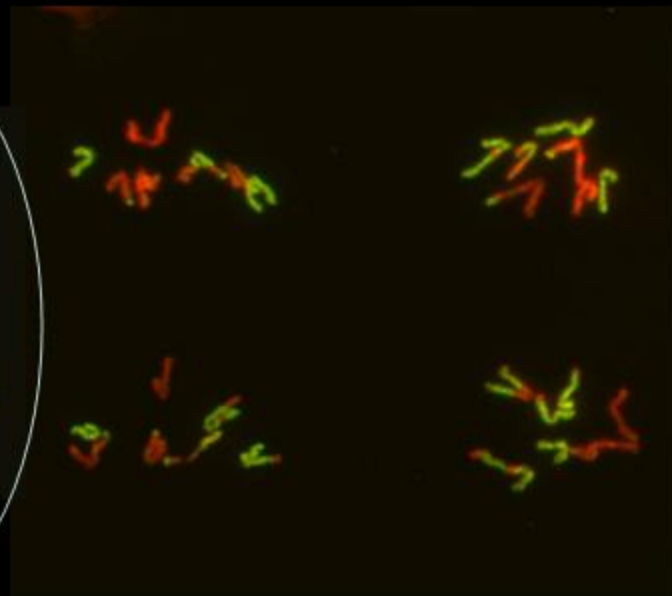
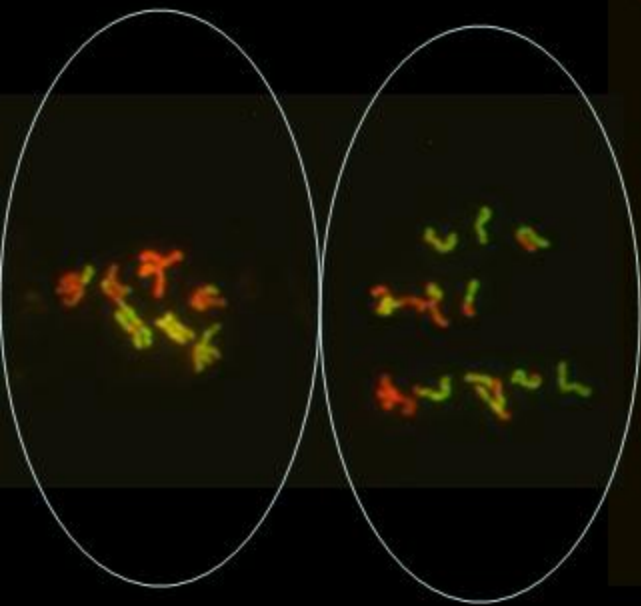


Prophase II



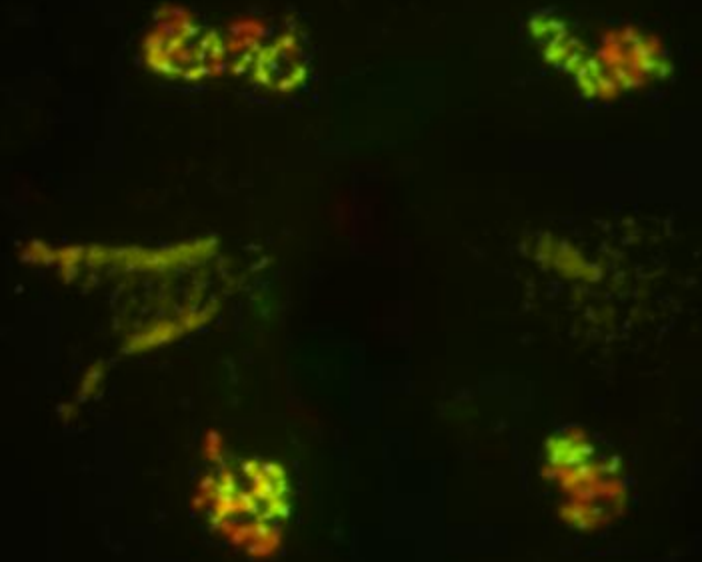
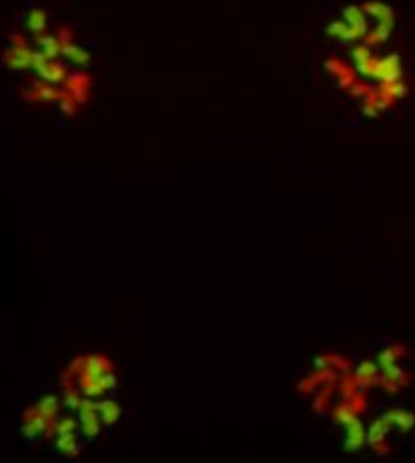


Metaphase II (equatorial; polar)

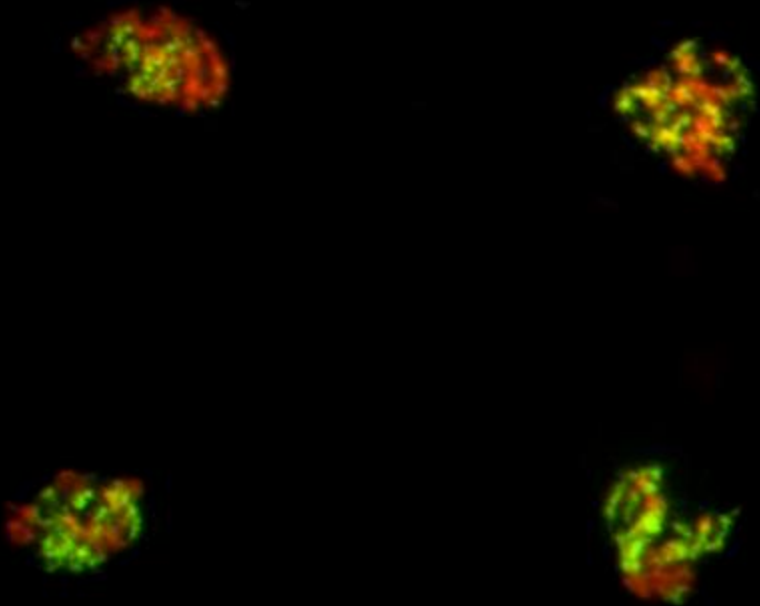
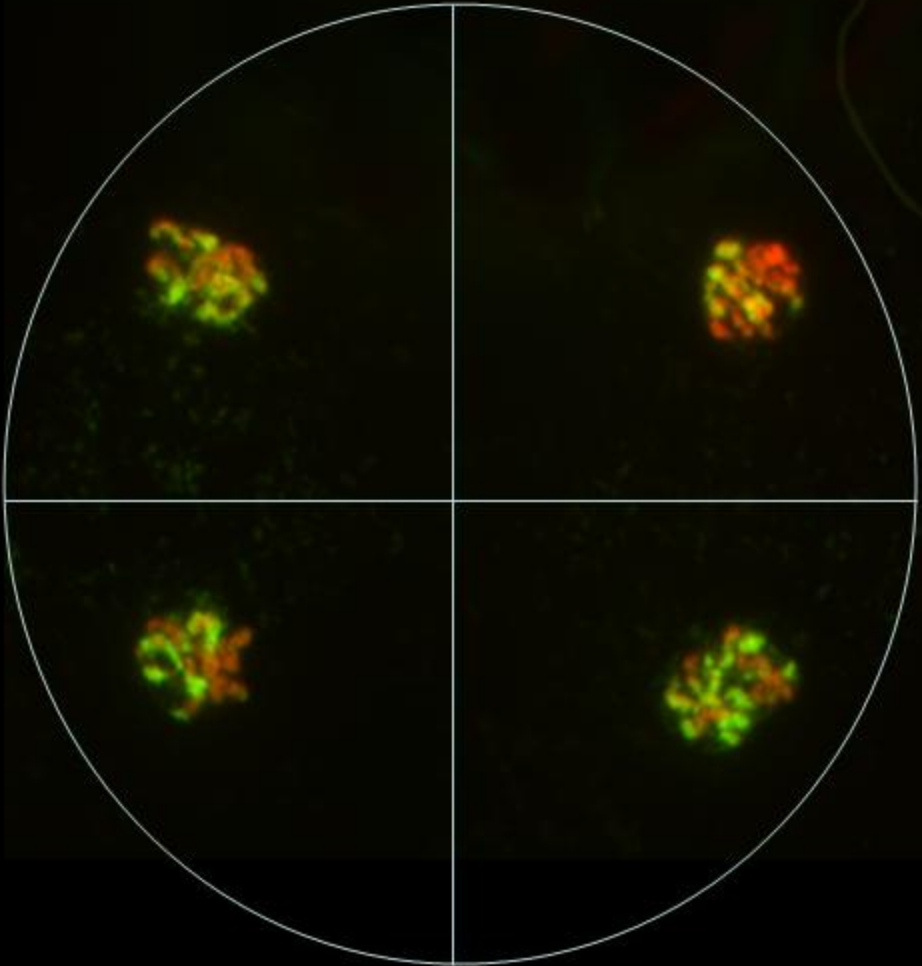


Anaphase II





Telophase II



Tetrads