



Identification of chicken chromosome 4 in the lampbrush form and in the metaphase stage by chromosome painting technique. Chromosome painting probe (red) specific for macrochromosome 4 was applied to both mitotic and lampbrush chromosomes of the chicken (*Gallus gallus domesticus*) that are shown at the same magnification. Chromosome painting of lampbrush chromosomes was performed without RNase treatment allowing to reveal nascent transcripts on lateral loops of target lampbrush chromosome. Chromosomes are counterstained with DAPI. Scale bar – 10 μm . Note that avian meiotic chromosomes in the lampbrush form are at least 30 times longer than corresponding mitotic metaphase chromosomes. Because of the giant size, usage of diplotene chromosomes in their lampbrush form significantly increases the resolution of cytogenetic analysis.

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Reference: Derjusheva S., Kurganova A., Krasikova A., Saifitdinova A., Habermann F.A., Gaginskaya E. Precise identification of chicken chromosomes in the lampbrush form using chromosome painting probes. *Chromosome Research*, 2003, 11, p. 749–757.