



Lampbrush chromosomes are characterized by massive transcription of satellite DNA sequences on extended lateral loops. Two microchromosomes in the lampbrush form that were manually isolated from Japanese quail oocyte are shown. Immunodetection of elongating form of RNA polymerase II with hyperphosphorylated C-terminal domain (green signal) in the axes of loops containing *Bg/II*-repeat RNA (red signal on middle and right panels); centromere positions detected by immunostaining with an antibody against STAG2 (red signal on left panel). Scale bar – 10 μm . Lampbrush chromosomes provide a unique possibility for visualizing non-coding RNA synthesis and co-transcriptional processing at the cytological level. Massive transcription of satellite DNA on lampbrush chromosomes is getting very intriguing in the view of modern data about the role of non-coding RNA in the regulation of eukaryotic genomes.

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Reference: Deryusheva S., Krasikova A., Kulikova T., Gaginskaya E. Tandem 41-bp repeats in chicken and Japanese quail genomes: FISH mapping and transcription analysis on lampbrush chromosomes. *Chromosoma*, 2007, 116 (6), p. 519-530.