

Chromatin thread in the lateral loops of lampbrush chromosomes is unwound and corresponds to "super-open" state of chromatin. This is demonstrated by simultaneous immunodetection of hyperacetylated histone H4 and elongating form of RNA-polymerase II on the spread of lampbrush chromosome isolated from chicken oocyte. The figure shows fragment of the lateral loop. Long regions of unpacked DNA axis covered by complexes of elongating (hyperphoshphorylated) form of RNA-polymerase II (green) alternate with the regions packed by nucleosomes, containing hyperacetylated histone H4 (red). Scale bar – 10 μ m.

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Reference: E. Gaginskaya, T. Kulikova, A. Krasikova. Avian lampbrush chromosomes: a powerful tool for exploration of genome expression. Cytogenetics and Genome Research, 2009; 124 (3 -4): p. 251-267.