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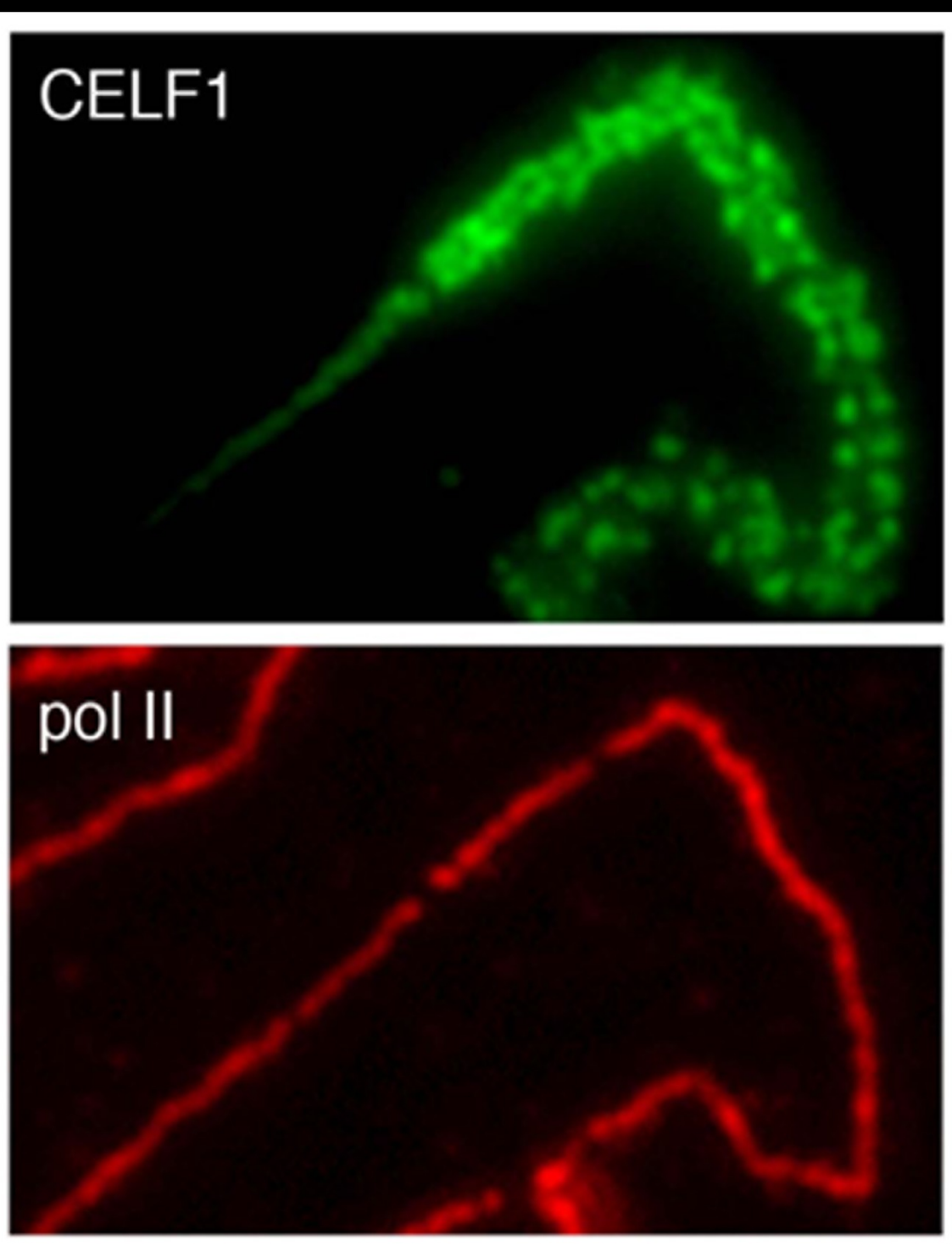
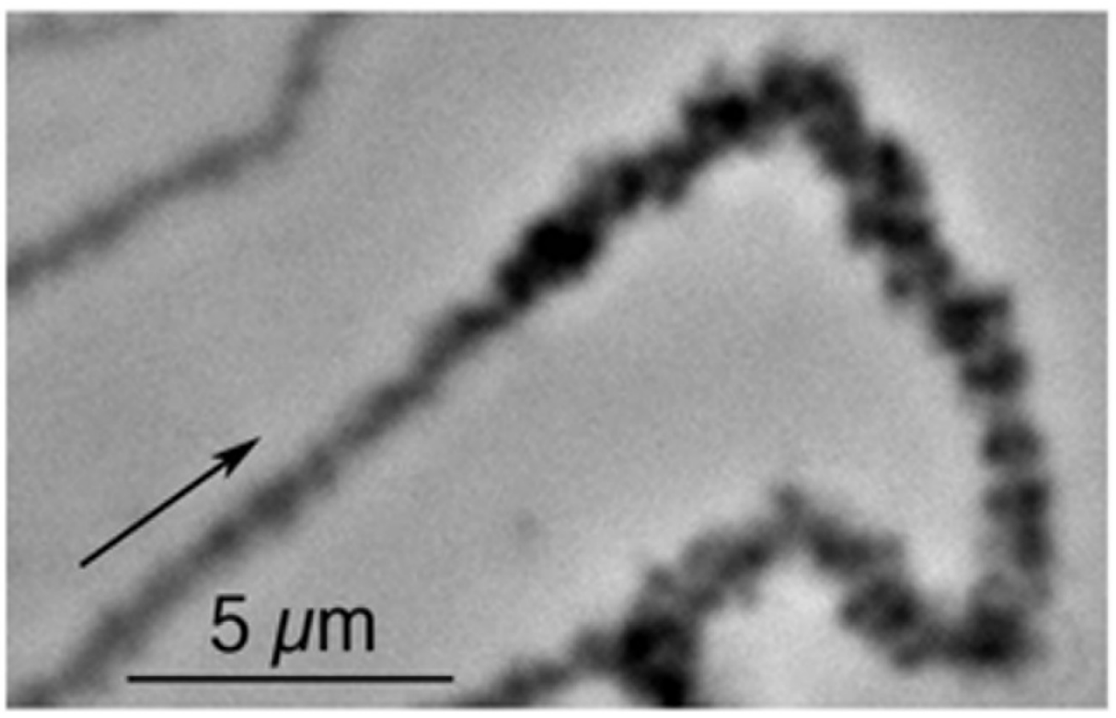
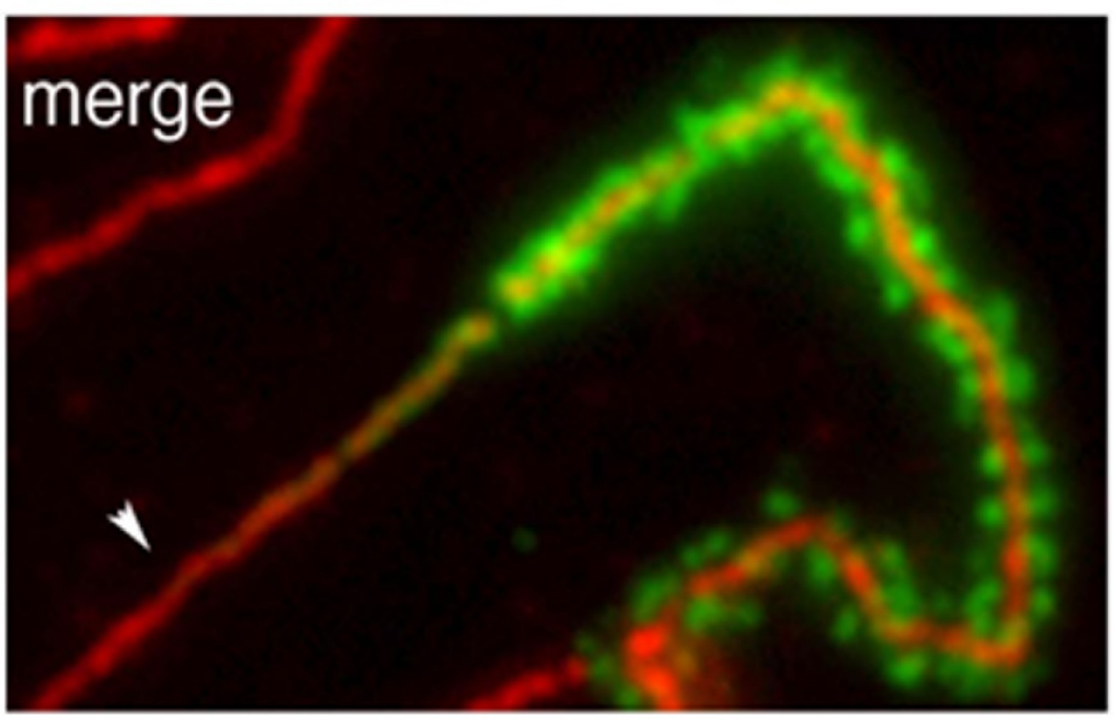
What's where in lampbrush loop transcription







The opportunity to examine the internal workings of active genes using the light microscope is an immensely valuable and unique attribute of lampbrush chromosomes. In this example part of an active gene in a loop from the lampbrush chromosomes of the newt, *Triturus vulgaris* is shown. Using fluorescent antibodies the localized distribution of a particular transcript-binding protein (a splicing factor called CELF1 and shown in green) can be detected in the RNA surrounding the loop DNA. In contrast to this distribution pattern, the continuous presence of RNA polymerase II along the DNA is shown by another antibody (red). In the phase contrast image (top right) the increase in thickness of the loop reflects the increasing growth of the RNA chains as they move along the loop assembly line in the direction indicated by the arrow. In the bottom right is shown an overlay of both fluorescent images to show that at the point at which CELF1 is first detectable (arrowhead) it is bound to RNA close to the DNA whereas in more down-stream regions of the gene it has moved further away on the growing RNA chains (arrows).

Morgan, G.T. 2007. Localised co-transcriptional recruitment of the multifunctional RNA-binding protein CELF1 by lampbrush chromosomes. **Chromosome Research** 15: 985-1000 garry.morgan@nottingham.ac.uk