



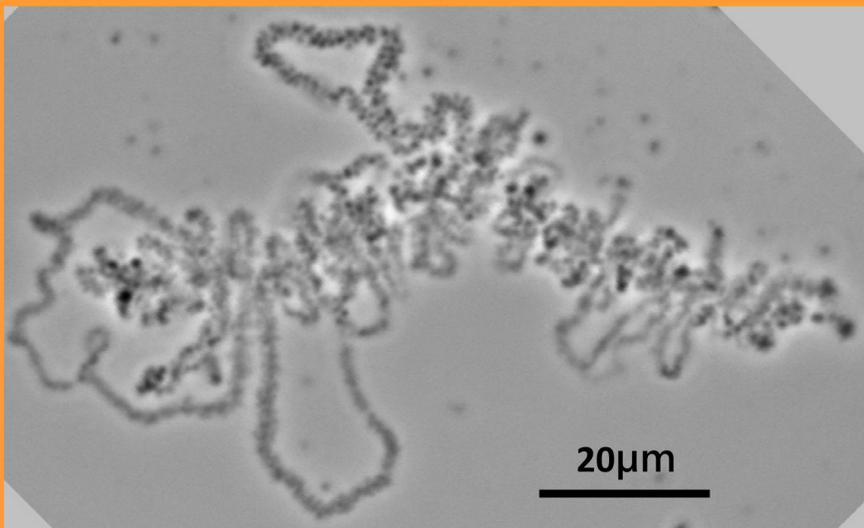
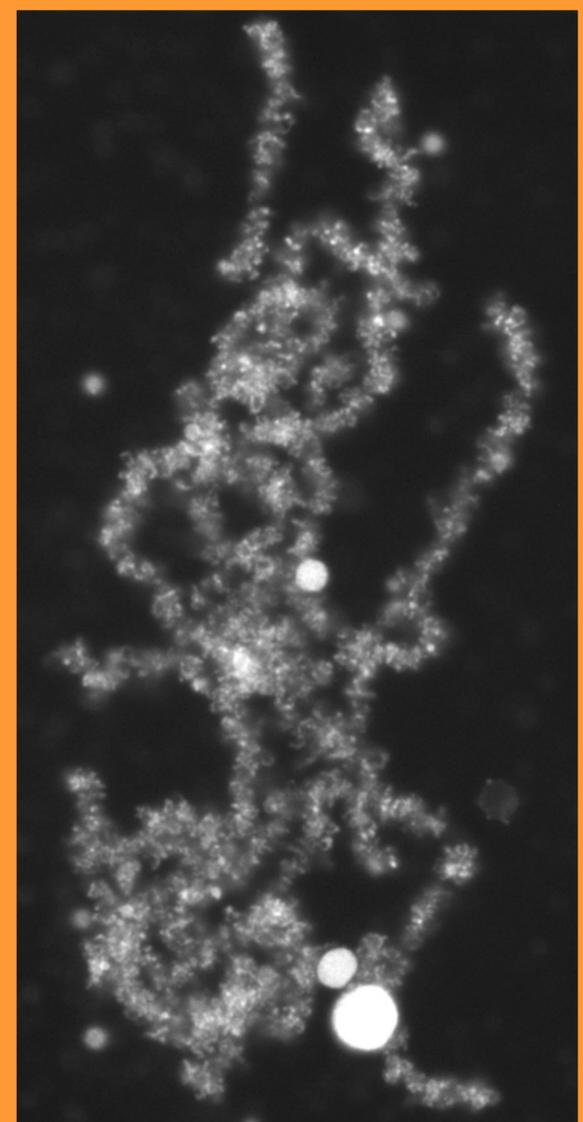
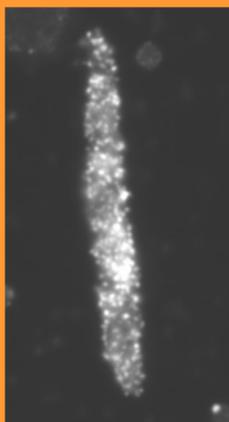
Mature sperm heads placed in an oocyte nucleus transform into fully functional lampbrush chromosomes in just a few hours

to this — in 20 hours

From this



to this



*Xenopus* sperm heads injected into *Xenopus* oocyte nuclei swell immediately and within hours begin to stain with an antibody against RNA polymerase II. Each sperm head becomes a loose mass of chromosome like threads, which by 24–48 h resolve into individually recognizable lampbrush chromosomes. Although lampbrush chromosomes derived from sperm are unreplicated single chromatids, their morphology and immunofluorescent staining properties are strikingly similar to those of the endogenous lampbrush bivalents. They display typical transcriptionally active loops extending from an axis of condensed chromomeres, as well as locus-specific “landmarks.” The figure at the lower left shows one such sperm-derived lampbrush chromosome.