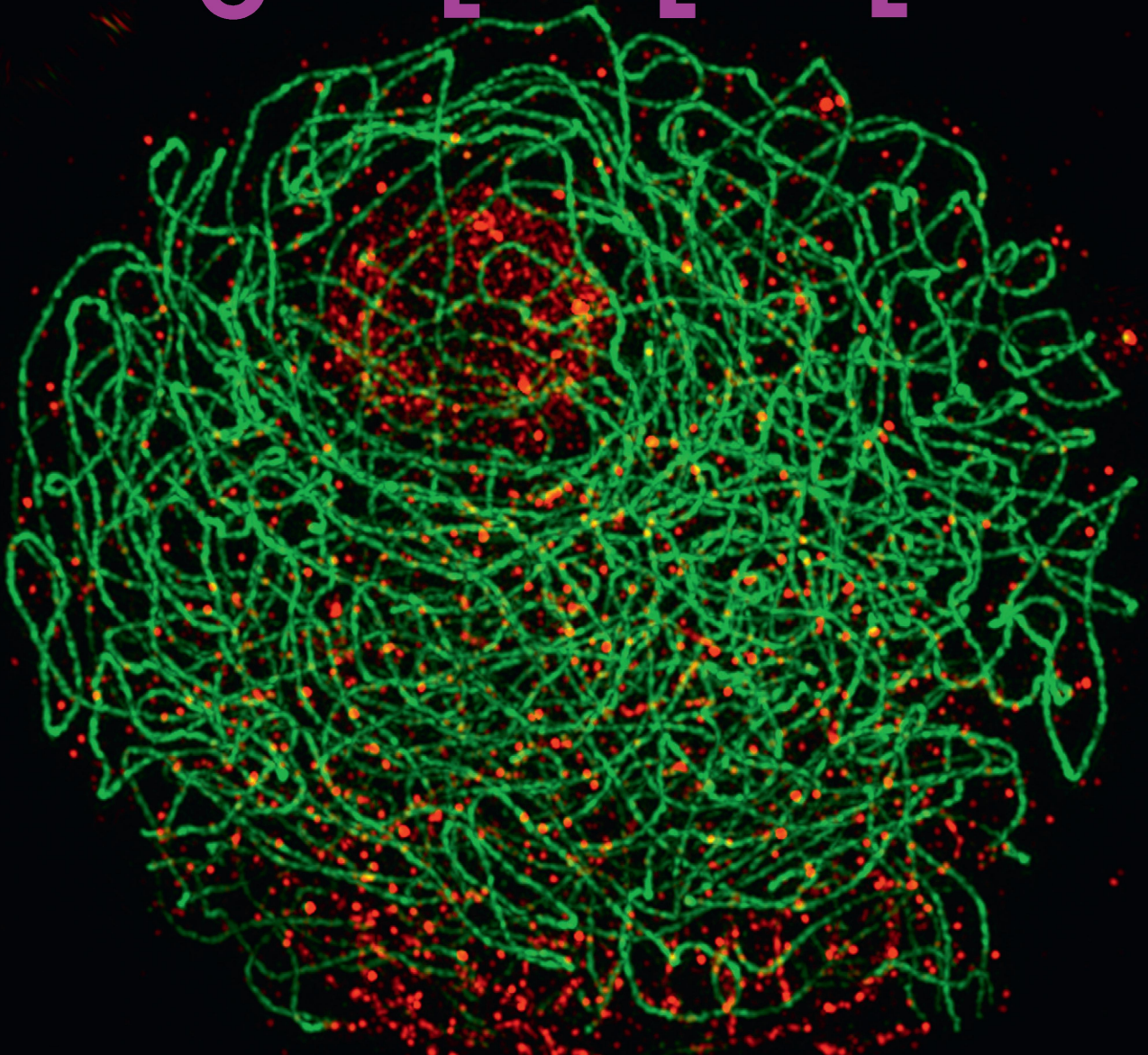


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BARLEY ZYP1 FUNCTION IN MEIOTIC CROSSOVERS

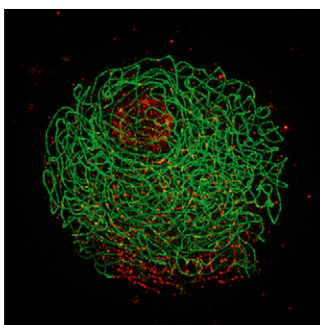
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ON THE COVER



During meiosis, physical connections between homologous chromosomes stabilize homolog pairing and the exchange of genetic information at crossovers. Barakate et al. (pages 729–740) show that the number of genetic crossovers during meiosis, and the potential for creating novel variation, is influenced by the synaptonemal complex protein ZYP1 in barley. The cover image shows initiation of synapsis in a barley meiocyte, when chromosomes are brought together at one side of the nucleus for homology recognition and pairing prior to full alignment and crossover formation. ASY1 (green) labels the axial element of the synaptonemal complex, a proteinaceous axis that is formed along pairs of sister chromatids. The ZYP1 protein (red) polymerizes to create the transverse filaments of the synaptonemal complex that “zips” homologous chromosomes together. The image was taken on the Dundee OMX super-resolution microscope.

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^CSome figures in this article are displayed in color online but in black and white in the print edition.

^WOnline version contains Web-only data.

^OArticles can be viewed online without a subscription.



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