

P025 Crossover and non-crossover pathways in mouse meiosis
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During meiosis, recombination between homologous chromosomes generates crossover (CR) and noncrossover (NCR) products. CRs establish connections between homologs whereas intermediates leading to NCRs have been proposed to participate in homologous pairing. How these events are differentiated and regulated remains to be determined. We have developed a strategy to detect, quantify and map NCRs in parallel to CRs, at the *Psmb9* meiotic recombination hot spot, in male and female mouse germ lines. We will report direct molecular evidence for distinct CR and NCR pathways of DNA double-strand break (DSB) repair in mouse meiosis through the analysis of recombination events in mouse mutants, comparison of the CR distribution between male and female meiosis, and identification of cis and trans acting factors regulating *Psmb9* hotspot activity.