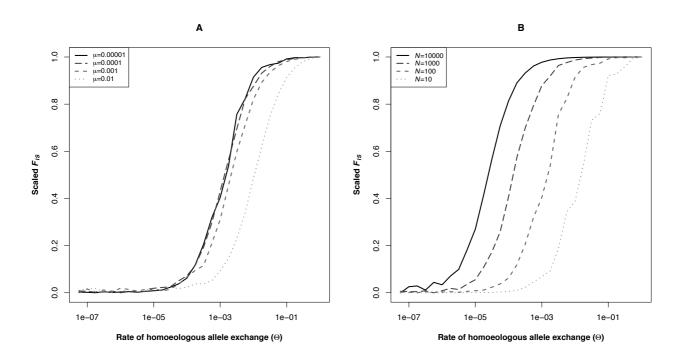
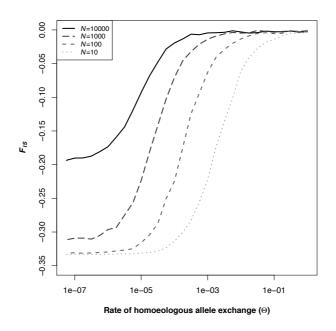
## **Online Supplementary material**

## The effects of inheritance in tetraploids on genetic diversity and population divergence

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*Fig. S1.* The effect of the rate of homoeologous allele exchange,  $\Theta$ , on the inbreeding coefficient *F*<sub>*IS*</sub>; A) for different values of the mutation rate, keeping the population size fixed at *N*=100; B) for different population sizes, keeping the mutation rate fixed at 0.00001. Other parameters: *m*=0, 1000 loci. Note that the values of *F*<sub>*IS*</sub> have been scaled from zero to one per series to ease comparison (see Fig. 3 for the unscaled versions).



*Fig. S2.* Coalescent simulations of the effect of the rate of tetrasomy on the inbreeding coefficient  $F_{IS}$  for different population sizes. Simulations were performed using the program MS (Hudson, 2002). A single tetraploid population consisting of two subgenomes was modelled in MS as two diploid populations; migration between the two diploid populations was then used as a proxy for tetrasomy events in the tetraploid population. Other parameters: m=0, 1000 loci,  $\mu=0.00001$ . See Fig. 3 for similar results from our own frequency-based simulation model.