



**Figure S2: Genetic segregation patterns are consistent with lack of pairing partner preference in tetraploids heterozygous for a chromosomal rearrangement.**

**A.** Table indicating the proportions of progeny of the indicated genotypes that would be expected following self-fertilization in hermaphrodites carrying the indicated numbers of the *mIn1* balancer chromosome, based on the assumption of random pairing followed by independent assortment during the meiotic divisions. **B.** Scatterplot showing quantitation of the frequencies of non-GFP worms in the self progeny of worms carrying different numbers of copies of the *mIn1* balancer. *mIn1* heterozygous L4 hermaphrodites were plated individually, and the fraction of their descendants lacking the GFP transgene was quantified. The observed proportions of non-GFP progeny clustered around three discrete values: 23%, 3%, and 0%, which we infer to represent the situations in which the parent had one, two, or three, copies of the balancer, respectively; means and standard deviations are indicated. The dashed vertical lines represent the proportions of non-GFP progeny expected under the assumption of random pairing followed by independent assortment in animals with one (blue), two (red) or three (black) copies of *mIn1*, as explained in panel A.

\*The relative frequencies of the different maternal genotypes scored in this assay are dependent upon the genotypes of the worm(s) that founded the populations on the plates from which they were derived. Since the worms whose broods were scored were derived from several different plates, no inferences can be drawn from the "overall" distribution of worms among the three categories.