**Abstract**

Aneuploidy is the phenomenon in which an organism contains a number of chromosomes that is not a multiple of the haploid state. Some populations show tolerance for aneuploidy, including wild yeast isolates (Strope *et al.* 2015). Recently there has been much debate as to how these populations maintain aneuploidy. Some hypothesize that there is an innate mechanism of dosage compensation in yeast (James Hose 2015; Audrey P Gasch 2016). Others rebut this argument, claiming there is no evidence for dosage compensation at the whole-chromosome level in yeast (Eduardo M Torres 2016). An alternative hypothesis is that the tolerance of aneuploidy is a transient adaptive state, as supported by studies of yeast on oxide-rich media and other selective environments (Kaya *et al.* 2015; Wakabayashi *et al.* 2017; Koo *et al.* 2018). In order to determine if there is an intrinsic mechanism of dosage compensation in yeast, we analyzed whole transcriptomes from 46 euploid and aneuploid *Saccharomyces cerevisiae* samples from two mutation accumulation studies with strains of different genetic backgrounds: one highly heterozygous hybrid of two wild strains, and one highly homozygous laboratory strain. We performed differential expression analysis and found that there is no evidence for dosage compensation at the whole-chromosome level, but some individual genes are differentially expressed. The environmental stress response was also initiated in the aneuploid samples. These findings add to our understanding of the evolution of dosage compensation mechanisms and help support the hypothesis that aneuploidy tolerance is likely a transient adaptive mechanism, not because of an innate dosage compensation response.