



Figure 3. Shift in median expression caused by selective up-regulation of X-linked genes. Measurement of the expression of large numbers of genes on either the X chromosome (blue) or autosomes (red) by microarrays or RNA sequencing shows that transcript levels are normally distributed with a range of expression levels spread over several orders of magnitude. If expression of genes on the single male X (or the single active X in females) is not compensated, then the X:autosome ratio of median expression levels should be 0.5, reflecting the difference in (active) copies (*left* panel). Alternatively, if expression of X-linked genes is up-regulated twofold to compensate for dosage differences, then the ratio of medians should be close to 1.0 (*right* panel).