

GENETICS

ALLELIC SPECIFIC EXPRESSION

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This topic has fascinated me since I read the [Pastinen paper](#) from the Hudson group (with updates in [Science](#) and [Hum Mol Gen](#); the field probably started with the [Yan](#) paper). We had even written a DFG grant application that was not funded.

ASE uses a rather simple principle where the allelic ratio of a heterocygous SNP within a RNA transcript is taken as a measure of gene expression from the different chromosomes (that are carrying either the one or the other SNP allele). A ratio of 0.5 indicates equal expression and becomes distorted if a gene on one chromosome is imprinted or silenced by another way. The ratio can be rather easily determined by MALDI-TOF genotyping of cDNA by [pooling](#) protocols. I wonder why this hasn't been more used as it is probably a more precise measurement than the artificially "self-normalized" expression ratios in classical gene-expression profiling (as Fan pointed out [recently](#)).

ASE seems to be much more common than I thought: [53% of all genes](#) showed allele expression differences in at least one individual. Having such a screening instrument at hand, it could even help to clear our SNP genotyping lists. Yea, yea.