Performance of the Agilent Microarray Platform for One-color Analysis of Gene Expression.

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Gene expression analysis can be performed by one-color (intensity-based) or two-color (ratio-based) microarray platforms depending on the specific applications and needs of the researcher. The traditional two-color approach is well founded from a historical and scientific standpoint, and the one-color approach, when paired with high quality microarrays and a robust workflow, offers additional flexibility in experimental design.

Two of the major requirements of any microarray platform are system reproducibility, which provides the means for high confidence experiments and accurate comparison across multiple samples; and high sensitivity, for the detection of significant gene expression changes, including small fold changes across multiple gene sets. Each of these requirements is fulfilled by the Agilent One-color Gene Expression Platform as illustrated by the data included in this study. As a result, researchers have the ability to take advantage of the enhanced performance and sensitivity of Agilent's 60-mer oligonucleotide microarrays, and experience the first commercial microarray platform compatible with both one- and two-color detection.