

Practical design issues for microarray experiments

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As a statistical scientist in a medical research institute, I am called on regularly to advise on the design of microarray experiments. Carrying out a microarray experiment involves many steps, many of them quite challenging, and effort needs to be expended to control variability at many levels. This talk will discuss some of the issues that come up most frequently, with some advice and some solutions. Specific issues include choice of platform, number of replicates, biological vs technical replicates, pooling of RNA, avoiding unwelcome time effects and, where appropriate, choice of a common reference, as well as the assignment of RNA samples to microarray units.