DNA on the slide

Microarray readers, tissue microarrays and high-throughput screening.

Immobilizer

Flowgen www.flowgen.co.uk

Spot the difference

The Immobilizer is an open, 'read-to-spot' polymer microarray slide with a transparent spotting area made of anthraquinone photo probes to enable one-step coupling (spotting) of amino-linked DNA/RNA, -LNA or -PCR. Between the spots there is low, nonspecific binding of DNA and fluorochrome labelled proteins. The device eliminates the need for activation steps, blocking, baking or UV cross-linking. Applications include clone mapping, linkage analysis, highly multiplexed mutation detection, gene expression monitoring and high-throughput screening.

DNAscope AT

Biomedical Photometrics Inc./ Clondiag Gmbh www.genefocus.com

All in order

Up to six Clondiag ArrayTubes can be read automatically in sequence with the DNAscope confocal fluorescence reader. It contains two lasers housed in a small case that sits on the laboratory bench. Reading time is less than a minute per tube. The ArrayTube system allows direct implementation of high-quality DNA arrays into a standard micro-reaction tube.

Sirius HT and Discovery HT-R

MWG Biotech www.THE-MWG.com

Reading aids

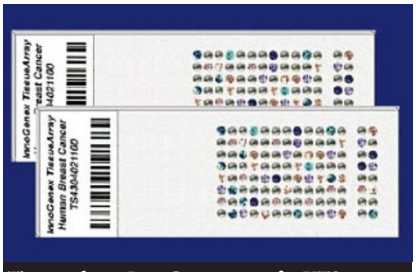
MWG has introduced two microplate readers, each with KC4 data analysis and reduction software making them suitable for integration with laboratory automation systems. The dual optics Sirius HT microplate reader features fluorescence/time-resolved fluorescence/luminescence readings as well as absorption readings without filters. The Discovery HT-R with monochromator is an eight-channel spectrophotometer with a reading time of 5 seconds per 96-well plate and 11 seconds per 384-well plate.

Tissue microarrays

InnoGenex www.innogenex.com

For high-throughput screening

InnoGenex supplies tissue microarrays for high-throughput screening of *in situ* gene expression in target validation studies. Microarrays from diseased and normal human tissues, mouse normal tissues and rat normal tissues are available. The histologically characterized slides can be used to determine the correlation of the gene and protein expression profile in normal and diseased tissues. Low-density arrays contain 20–50 elements per slide, while the high-density arrays have 100–200 elements per slide. Applications include rapid screening of differential expression of genes, identification of novel antibody markers and animal model studies.



Tissue culture: InnoGenex arrays for HTS.

Universal Reference RNA

BD Biosciences www.bdbiosciences.com

Control for microarray experiments

Universal Reference RNA from BD Biosciences is derived from whole-tissue sources and made by pooling the total RNA extracts from a collection of different human tissues, providing coverage of more than 92% of genes. The RNA can be used to compare microarray data that are generated on multiple days.

HybChamber Mica

GeneMachines www.genemachines.com

Under cover of darkness

The HybChamber Mica provides protection from ambient light degradation of fluorescent labels during hybridization. The darker, semi-transparent top plate also allows convenient visualization of microarray slides during all hybridization steps. The device holds two slides, has butterfly screws to allow easy tightening and loosening of the chambers, and can be used in temperatures of up to 70 °C.

PathwayFinder GEArrays

SuperArray Bioscience www.superarray.com

Guess not

This system groups pathway representative markers in a cDNA array. Because the expression of marker genes is associated with the activation/inactivation of well defined biological pathways, a rapid assessment of many pathways can be made in one hybridization experiment. Three PathwayFinder GEArrays are available, for signal transduction, cancer and cAMP/Ca^{2+}. Once the pathways have been identified, pathway-specific GEArrays can be used for characterization of individual signal transduction pathways of NfκB, MPK, NFAT, TGFβ, p53, G-protein coupled receptor, cAMPCa^{2+}, insulin, androgen and oestrogen signalling. The company also offers angiogenesis, metastasis, cell cycle, apoptosis, DNA damage and repair arrays for studies of cancer.

These notes are compiled in the Nature *office from information provided by the manufacturers.*