

Summer array

Summer has come, and it's time to fire up the barbecue grill. This summer's fare of new technology has a distinct microarray aroma, with arrayers, scanners and support systems to whet the appetite for large-scale expression analysis.

In summer, one doesn't usually worry about getting caught in an Avalanche™, but the new microarray scanner and analysis system by the same name from Molecular Dynamics might make you wish for colder climes. Consisting of a scanner, a Windows™ NT workstation and Molecular Dynamics's analytical software, this integrated package enables fluorescent scanning optimized for everyday glass microscope slides. It features confocal optics and rapid image acquisition, as well as the capability for outputting images in TIFF format.

Genetic Microsystems™, Inc. has entered the benchtop microarray market with its release of the GMS™ Microarray Analysis System. The system consists of two modules: the GMS 417 Arrayer and the GMS 418 Array Scanner. The Arrayer uses 'pin-and-ring' technology to spot a broad range of fluids of varying viscosity from microplates to the microarray substrate, achieving—according to the manufacturer—consistent size and shape. The GM 418 Scanner captures two-colour, high-resolution images of microarrays using the 'flying objective' optical system; it also offers a choice of either a filter or slide array substrate. The system comes with a workstation and analytical software using the Windows™ 98 interface, and the output is in TIFF format.

'Consistency' and 'reproducibility' are ever-present concerns to those dabbling in microarrays. SurModics, Inc.

now claims to address these issues with the release of 3D-Link Activated Slides designed specifically for microarray spotting. The slides are coated with a propri-

etary three-dimensional matrix, consisting of hydrophilic, long-chain polymers that covalently bind amine-terminated DNA and hold it at a distance from the surface. This makes the target DNA more readily available for hybridization and lowers non-specific background hybridization to the substrate. The slides can be used with any

arraying system designed to hold 1" × 3" glass slides.

If a prefabricated microarray is more to your taste, Incyte offers UniGEM V Human and Mouse GEM 1 Microarrays, each featuring sequence-verified cDNA and/or EST clones, the sequences of which are available in public databases. UniGEM V arrays contain over 7,000 human cDNAs from Incyte's collection that are catalogued in National Center for Biotechnology Information's UniGene database. Mouse GEM1 arrays contain thousands of full-length transcripts from The Institute for Genomic Research's databases, as well as ESTs from GenBank, all of which have also been indexed in UniGene.

Endless rooms of orbital shakers got you down? GeneMachines™ claims to have the cure: the HiGro™ orbital

shaker for bacterial and phage growth. The HiGro shaker features four 'growth' cylinders, each of which can hold up to 14 shallow-well, 7 medium-well or 4 deep-well microtitre plates. The growth cylinders can be independently oxygenated, heated and humidified, but all must shake at the same speed (for obvious reasons). The HiGro accommodates shaking speeds of 650 rpm (in an orbit of only 8 mm) and temperatures of up to 50 °C. It occupies a space of 24 inches squared, making it useful for high-throughput bacterial and phage growth on the benchtop.

Schleicher & Schuell present the latest in a long line of Nytran™ charged nylon blotting membranes: Nytran™ SuPerCharge. The manufacturer claims these membranes have a higher charge per unit area, lower non-specific binding of probe and more uniform membrane morphology compared with other membranes—and bind up to three times as much negatively charged dye. Its performance is apparently due to the elimination of surface micro-

voids, irregularities beneath the membrane surface that trap air and prevent fluid movement during blotting, as well as improved membrane symmetry and more consistent pore size.

Tired of waiting hours for the results from gel electrophoresis? The NucleoScan™ 2000 DNA fragment analyser from NucleoTech runs samples in an hour or less, using real-time gel electrophoresis with ultra-thin gels and Peltier-controlled temperature regulation. Applications of the NucleoScan™ 2000 include microsatellite and mutation analyses, both of

which can be completed in less than 30 minutes, SSCP analysis (less than an hour) and DNA sequencing. Gels are reusable and can be run with a variety of fluorescent labels, including ethidium bromide. The results are collected and analysed by means of the accompanying GelExpert™ software package for Windows™ 98 and NT.



Create and scan microarrays on a benchtop with the GMS™ Microarray Analysis System from Genetic Microsystems™, Inc.



The NucleoScan™ 2000 uses ultra-thin gels and precise temperature control to run gels rapidly



Shake, rattle and grow bacterial and phage cultures with GeneMachines' HiGro™ orbital shaker

Notes compiled by Michael Ronemus

For more information, call:

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