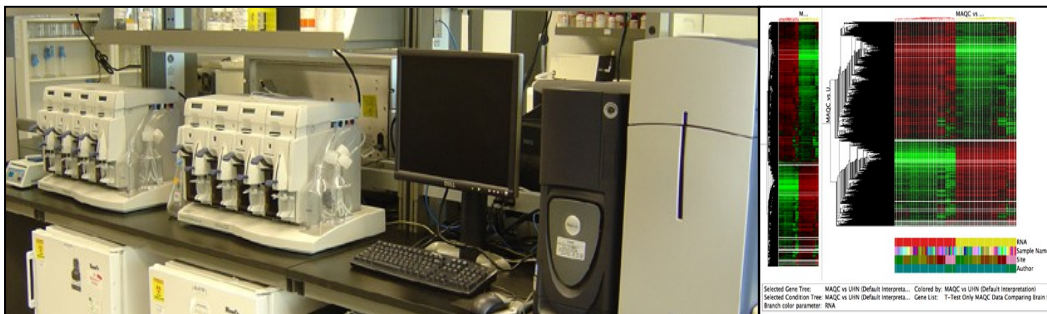
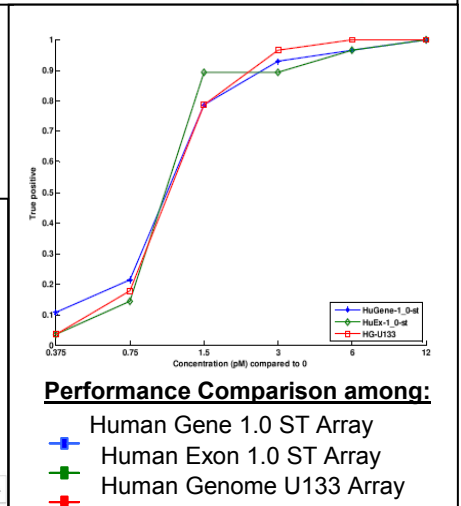
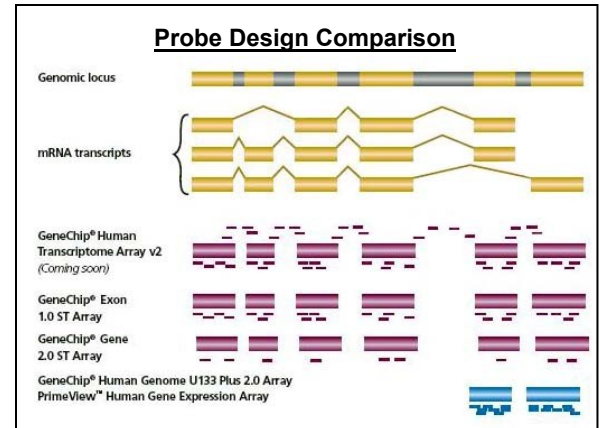


# Affymetrix Services

## Authorized Service Provider

- GeneChip® Technology for whole genome discovery
- Gene expression profiling at the gene, exon, whole-genome and lncRNA levels
- Alternative splicing and transcriptome analysis
- Flexible labelling methods for various samples types
  - From FAC-sorted cells and LCM/FFPE tissues
  - Degraded RNA (RIN score: 2-6)
  - Limited amount (500pg to 50 ng range)
- CustomExpress® array solutions
- Genome-Wide Human SNP arrays
- Copy Number Analysis and Tiling arrays
- Value-added services
  - Experimental design and bioinformatics consultation
  - Customized project and protocol development
  - Quality check to ensure successful results



## Comparison of Human Gene Expression Arrays

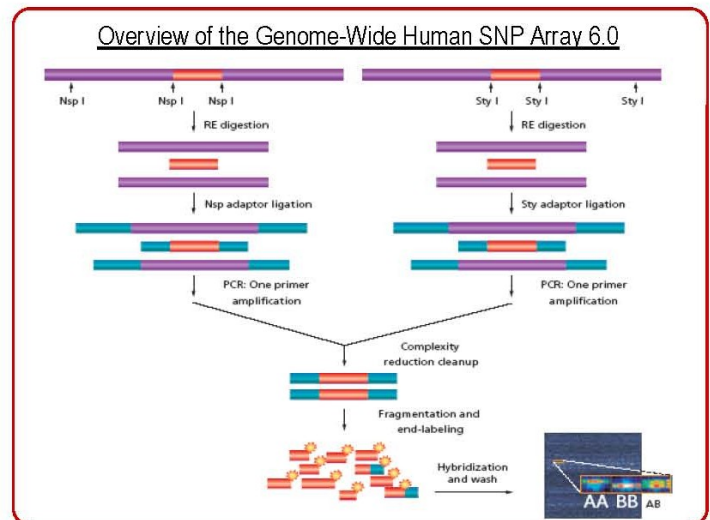
	U133 Plus 2.0 Arrays	PrimeView™ Arrays	Exon 1.0 ST Arrays	Gene 2.0 ST Arrays
Probe per array	~ 1.3M	~ 530K	~ 5.4M (~40 probes/gene)	~ 1.3M (~21 probes/gene)
Labelling method	Oligo-T7 priming from 3'-end	Oligo-T7 priming from 3'-end	Random priming	Random priming
Target orientation	Anti-sense target	Anti-sense target	Sense target	Sense target
Hybridisation	cRNA	cRNA	cDNA	cDNA
Background detection	Perfect and mismatch probes	Perfect match probes only	Surrogate probes	Perfect match probes only
Probe location	Biased at 3'-end of transcript	Biased at 3'-end of transcript	Over entire transcript length	Over entire transcript length
Design Build	UniGene Build 133, 2001	RefSeq v36, UniGene 219, 2011	UCSC hg 16 (build 34), 2003	RefSeq v51, Ensembl v65, lncRNA db, 2011

# Affymetrix Services

## Genome-Wide Analysis

### Human SNP 6.0 Array

- Affymetrix GeneChip® Technology enabling whole genome discovery
- Genome-wide Association Studies
- More than 906K SNPs
  - Unbiased selection of 482K SNPs
  - Selection of additional 424K SNPs
    - Tag SNPs
    - SNPs from chromosomes X and Y
    - Mitochondrial SNPs
    - New SNPs added to the dbSNP database
    - SNPs in recombination hotspots
- More than 946K copy number probes
  - 202,000 probes targeting 5,677 CNV regions
  - 744,000 probes, evenly spaced along the genome
  - Detected 10 times more copy number changes than other SNP/CNV platforms
  - Three times more coverage of CNPs; only platform with non-polymorphic probes
  - Analysis software leverages new, high-resolution reference map and CNP calling algorithm



### GeneChip® Tiling Arrays

- High resolution tiling arrays for mapping of
- Protein/DNA interactions and novel transcript discovery
- Selection of coverage over human whole genome
- Or selected chromosomes
  - Human Promoter and Tiling Arrays
  - Mouse Promoter and Tiling Arrays
  - ENCODE Array
  - Human Chromosome 21/22 2.0R Array
- Tiling Arrays for other organisms
  - Arabidopsis, *C. elegans*, *Drosophila*, *S. cerevisiae*, *S. pombe*

