

NASC Affymetrix Service

- Process ~1000 arrays per year
- Full service – from total RNA to data
- All Arabidopsis data made public via NASCarrays database and GEO
- Analysis available using NASCarrays tools or Genespring workgroup
- Cost £350 / £450 (+VAT) per sample



The new Gene Titan system



- New high throughput system
- Plate based arrays
- Process 2 x 96 array plates in 2 days
- Reduced cost
- New Arabidopsis exon array available soon



The Brassica Exon array

- Initiated as part of a BBSRC funded project on Brassica biofortification (Nottingham, Warwick, Rothamsted Research, SCRI)
- Catalogue array
- 5 μm format
- 2.4 million probes
- Representing 135,201 gene models
- 15 probes per gene, distributed over exons



Array design (Chris Love)

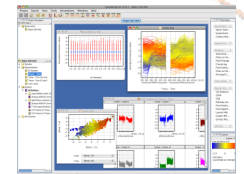
- Based on gene models and transcript data available in late 2009
- JCVI Unigene set (Trick et al) used to develop the Agilent 95k array
- Additional data from *B. rapa* Chiifu KBr BAC sequences, digital transcriptome of *B. napus* Tapidor and Ningyou7 (Trick et al), *B. oleracea* and other ESTs and Arabidopsis genes models not represented
- Data filtered using Affymetrix probe selection pipeline
- Standard Arabidopsis control and reporter sequences
- Probes selected based on 15 probes per gene

Initial Experiment

- Comparison of root and leaf samples (3 replicates per tissue)
- Same RNA samples hybridised to Agilent 95k oligo array (Warwick)
- Analysed at gene and exon level
- Data made publicly available via NASC

Brassica array available now from NASC

- Available as part of the standard service (<http://affymetrix.arabidopsis.info/>)
- £350 (+VAT) per sample
- Assistance with experimental design and data analysis
- All data will be made publicly available via NASCarrays / Genespring workgroup (subject to funding)



Acknowledgements

NASC

- Sean May

University of Nottingham

- Martin Broadley

SCRI

- Phil White

Warwick HRI

- John Hammond
- Helen Bowen

Rothamsted Research

- Graham King
- Chris Love



The University of
Nottingham

Scottish Crop
Research Institute

