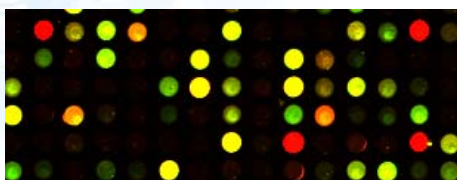
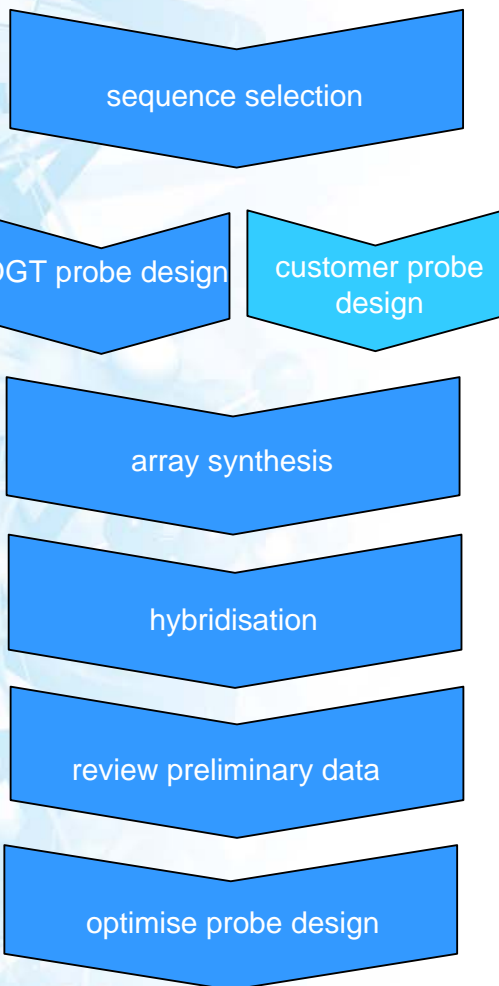


# OGT probe optimisation and array design



Flexible microarray and probe design gives you the ability to optimise probe design after reviewing preliminary data

## OGT probe optimisation design flow



### Design

You select the initial probe sequence designs or OGT will select and design them for you

### We provide flexible array design options:

- ❖ design a probe to each exon
- ❖ design a probe across exon boundaries
- ❖ design tiled oligos to specific regions

### Array

- ❖ multiple probes designed per gene
- ❖ probe design arrayed in triplicate
- ❖ choose from standard or bespoke array design formats

### Analysis

- ❖ review preliminary data
- ❖ 'best probe' selection using optimisation algorithms

### Benefits

- ❖ maximise target sequence discrimination to ensure high specificity
- ❖ sophisticated algorithms predict hybridisation behaviour to minimise cross-hybridisation
- ❖ reduce experimental design costs
- ❖ maximise signal strength
- ❖ generate quality data

# OGT probe optimisation and array design



## Case Study: University of Cambridge Veterinary School Professor Duncan Maskell and Dr Andrew Grant

**Title:** phenotypic and transcriptional investigation of the growth of *Campylobacter jejuni* NCTC 11168 in BHI medium

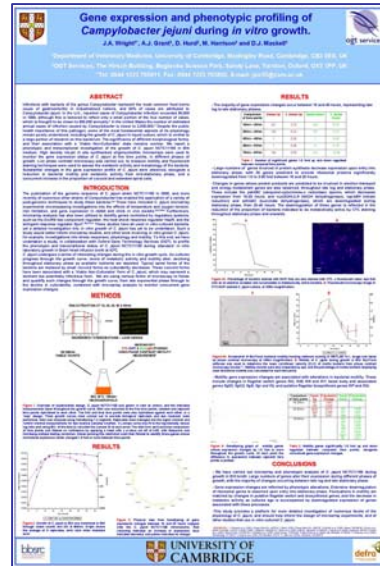
**Design objective:** design and develop a high quality optimised oligonucleotide microarray to study gene expression of the *Campylobacter jejuni* genome

**Design:** design and select several probes to each gene in-silico and print each probe on the array in triplicate

**Hybridisation:** perform hybridisation in triplicate with genomic DNA to create a data set for empirical optimisation

**Optimisation:** perform hybridisation in triplicate to determine the optimal probe for each gene

**Outcome:** an empirically validated microarray consisting of 1563 optimised DNA probes to study gene expression of the *Campylobacter jejuni* genome



View poster presented at 13th International Workshop on Campylobacter, Helicobacter and Related Organisms, Gold Coast, Queensland, Australia, 4 – 8 September 2005

Go to [http://www.ogt.co.uk/ogt\\_services/documents/JWCHRO2005.pdf](http://www.ogt.co.uk/ogt_services/documents/JWCHRO2005.pdf)

## Prokaryote probe optimisation pricing structure

Number of genes	Price (£)
1-3000	4250
3001 to 6000	6350
6001 to 9000	8450

Pricing structure includes:

- informatics design
- hybridisation
- data generation
- data processing
- limited research user licence

For details on the eukaryote probe optimisation pricing structure please enquire

## Design and fabrication of custom microarrays

### Oxford Gene Technology (OGT)

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