

The Gandel Charitable Trust Sequencing Centre

The Gandel Charitable Trust Sequencing Centre at the Monash Health Translation Precinct (MHTP) provides a NATA accredited DNA sequencing service. The Centre services research Institutes throughout Australia and maintains an excellent reputation for the provision of high quality, long read sequence data and comprehensive client support.

The centre was established in 1999 and operates as not-for-profit. The following platforms are utilised: Applied Biosystems 3130xl Genetic Analyzers, 7900HT Fast RT-PCR Systems and Biorad Experion.

Services include:

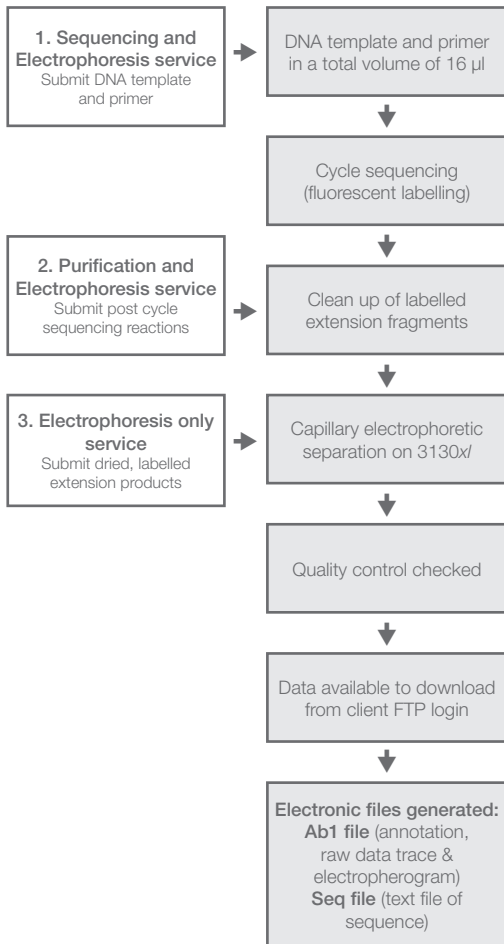
- DNA Sequencing
- Fragment Analysis
- Gene Expression
- RNA, DNA and Protein Analysis

DNA Sequencing Service

The DNA Sequencing service utilises the latest technology, Applied Biosystems 16-capillary 3130xl Genetic Analyzers that generates sequence read lengths of approximately 1000 bases.

Services include:

- 1. Sequencing and electrophoresis:**
Template and primer are submitted together in a total volume of 16ul and we perform cycle sequencing (fluorescent labelling) and electrophoretic separation.
- 2. Purification and electrophoresis:**
Post cycle sequencing reactions are submitted and we perform purification prior to electrophoretic separation.
- 3. Electrophoretic separation:**
Samples are submitted as dried, labelled extension products for electrophoretic separation.



Sample submission

Samples can be dropped off in person to the laboratory, sent by courier or mailed. Samples received by 11am will be processed within 24 hours.

All samples need to be accompanied by a completed DNA sequencing request form (available on website) and labelled with sample name (<10 characters) and client name.

DNA template and either the 3' or 5' primer are submitted together in a total volume of 16 µl.

Template (6ul max volume of neat template)	Quantity
Primer	3 to 5 pmol
Plasmid	400 ng
PCR product:	
100-200 bp	10 ng
200-500 bp	25 ng
500-1000 bp	50 ng
1000-2000 bp	100 ng

Dilutions (5 µM) of the following primers are available from the Centre free of charge:

M13/pUC (-21) Forward	5' TGT AAA ACG ACG GCC AGT 3'
M13/pUC Reverse	5' TCA CAC AGG AAA CAG CTA TGA C 3'
T3 Promotor	5' ATT AAC CCT CAC TAA AGG GA 3'
T7 Promotor	5' TAA TAC GAC TCA CTA TAG GG 3'
SP6 Promotor	5' TAT TTA GGT GAC ACT ATA G 3'
T7 Terminator	5' GCT AGT TAT TGC TCA GCG G 3'

Note: If using 100 µM primer stocks, dilute 1:20 to 5 µM and add 1 µl to the sequencing reaction. 1 µl of a 5µM stock equals 5 pmol of primer.

Data retrieval

Sequence data is available within 24 - 48 hours of sample receipt and easily downloaded via the FTP site link on the Centre website. Each sample generates .ab1 and .seq (text) files.

The ab1 file contains the raw data and analysed electropherogram and can be opened using shareware programs (links on website).

Comprehensive trouble-shooting and technical advice is available to all researchers. Clients are encouraged to call or email with any questions.