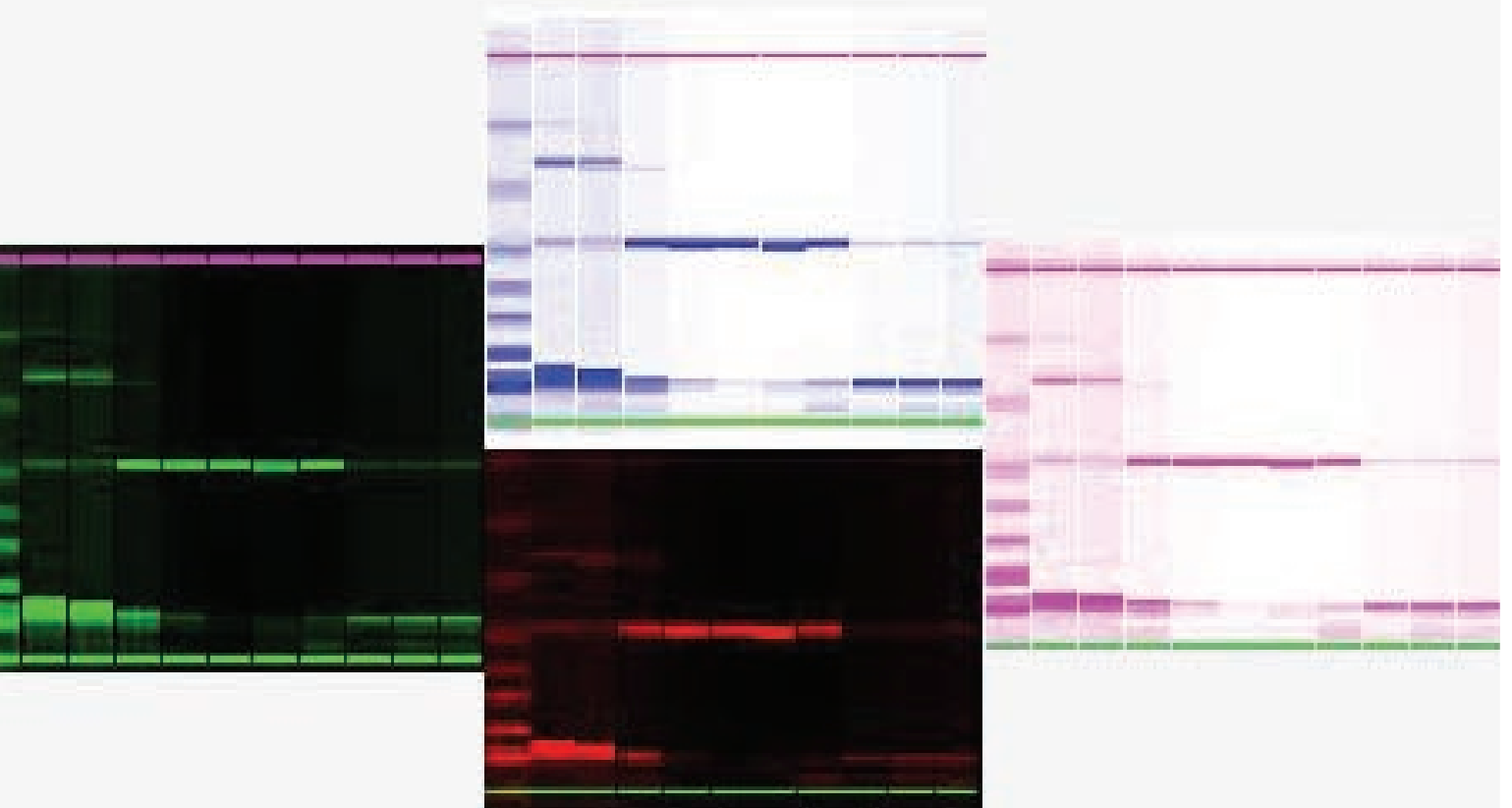




Protein Production Unit



Summary

The Monash University Protein Production Unit specialises in providing services to academic or commercial research facilities to alleviate the time consuming task of protein production.

The Protein Production Unit is integrated with other complimentary, co-located bioplatfroms and expertise relating to proteomics, x-ray crystallography, the Australian Synchrotron and monoclonal antibody production, to allow the seamless conduct of multidisciplinary projects.

Capability and Infrastructure

High-throughput protein production services including:

Protein Expression

Cell based protein expression using a prokaryotic expression system. (Insect and eukaryotic expression facilities expected to be on line early 2008).

Screening

Determination of optimal conditions for protein expression, solubility and yield.

Small Scale Purification

Affinity chromatography can be employed to purify hexaHis-tagged proteins. Assays are performed in 96 well format using a Tecan Freedom EVO liquid-handling robot.

Large Scale Purification

Large scale purification can be conducted to assess protein purity and predict yields. This is performed by the largest ÄKTAexpress™ in the southern hemisphere, a dedicated high throughput chromatography system for multi-dimensional His and GST-tagged proteins. ÄKTAexpress™ can run multiple samples in parallel according to defined purity levels and allows:

- Purification of up to 48 proteins simultaneously;
- Yield of up to 50 mg of pure protein;
- Various protocols can be run on different modules simultaneously;
- On-column TEV cleavage of fusion proteins.



Quality Assurance

Provision of release documentation based upon any of the following tests:

- Electrophoresis (SDS-PAGE, Native, IEF, 2D) and Coomassie® blue or silver staining;
- Protein concentration determinations;
- Western blotting;
- Absorption spectrum;
- Mass spectrometry;
- Activity assay;
- CD Spectroscopy.

Utility

Research

Expression and purification of proteins for research purposes.

Drug Development

Production of proteins for vaccine or new therapeutics development processes.

Biomarker Development

Production of proteins for disease development and progression tests and/or as a basis for ongoing therapeutic monitoring.

Engagement basis

Our personnel are experienced and sensitive to your research or industry requirements.

We offer flexibility to the basis of engagement including:

- Collaborative research;
- Fee for service;
- Consultancy or other flexible arrangements.

Submitted samples must be accompanied by a request form which can be downloaded from our website.

For more information contact us or visit us at

<http://proteinexpress.med.monash.edu.au/index.htm>

Contact details

Tel: + 61 3 9902 0019

Fax: + 61 3 9905 3726

Email: proteinproduction.biochemistry@med.monash.edu.au

Postal address

Protein Production Unit
Department of Biochemistry and Molecular Biology
Monash University VIC 3800
Australia

ARC Centre of Excellence in

