APPENDIX A

Buffer and Solutions

A.1 Ammonium Persulfate (10%)

Ammonium persulfate (0.1 g) was added into 1.0 mL of ddH$_2$O. The solution was freshly prepared prior to each DGGE gel preparation.

A.2 Ampicilin (100mg/mL)

Ampicilin (0.1 g) was dissolve in 1mL ddH$_2$O and filter-sterilized with 0.20 µm (pore size) syringe filter. The solution was kept at -20 °C.

A.3 Bromo-chloro-indolyl-galactopyranoside (X-gal, 40mg/mL)

X-gal (100 mg) was added to a final volume of 2.5mL N’N’-dimethyl formamide (DMF). The solution was stored in aliquots at -20 °C for not more than 6 months.

A.4 Ethidium Bromide for gel staining

Ethidium Bromide solution (30 µL) was diluted 10,000X (v/v) with ddH$_2$O (300 mL). The solution was prepared in opaque container and stored in dark at RT.

A.5 Ethylenediaminetetraacetic acid solution (EDTA, 0.5 M)

EDTA.2H$_2$O (186.1 g) was added into 800mL of ddH$_2$O. The pH of this solution was adjusted to pH 8.0 by adding approximately of 20 g NaOH. The solution was made up to 1L and sterilized by autoclaving at 121 °C for 15 minutes. The autoclaved solution was stored at RT.

A.6 Isopropyl-beta-D-thiogalactopyranoside (IPTG, 100mM)

IPTG (250 mg) was added with 10.5mL of ddH2O and mixed well. The solution was filter-sterilized with 0.20 µm (pore size) syringe filter and store in aliquots at -20 °C.
A.7 SYBR Gold nucleic acid gel stain for DGGE gel

SYBR Gold solution (40 µL) was diluted 10,000X (v/v) with 1X TAE (400 mL). The solution was prepared in opaque container and stored in dark at RT.

A.8 Trix-Aacetate-EDTA (TAE Buffer, 50X)

Tris base (242 g), glacial acetate acid (57.1 mL) and 0.5M EDTA (100 mL) were mixed and the solution was top up to 1L with ddH2O. The solution was sterilized by autoclaving at 121°C for 15 minutes. The autoclaved solution was stored at RT.
APPENDIX B

Media for Cloning

B.1 Luria Bertani (LB) agar

Trypone (4 g), yeast extract (2 g), NaCl (2 g), and bacteriological agar (6 g) was added into 400 mL of ddH₂O. The medium was autoclaved at 121 °C for 15 minutes. Subsequently, the medium was cooled to 50 – 55 °C, and poured into plates.

B.2 Luria Bertani (LB) broth

Trypone (4 g), yeast extract (2 g), NaCl (2 g), and bacteriological agar (6 g) was added into 400 mL of ddH₂O. The medium was autoclaved at 121 °C for 15 minutes.
APPENDIX C
Presentations and Publications

C.1 Poster Presentation


C.2 Oral Presentation


Island, Antarctica. SCAR XXXI & Open Science Conference, 30 July – 11 August 2010, Buenos Aires, Argentina


C.3 Journal Publications


C.4 Submitted manuscripts