

## APPENDIX

### Appendix A

#### List of chemical and materials were used in the study

| Chemicals and materials                                          | Source                         |
|------------------------------------------------------------------|--------------------------------|
| Absolute ethanol                                                 | BDH, England                   |
| Acrylamide                                                       | Sigma-Aldrich chemical Co.,USA |
| Agarose                                                          | PRONA, E.U.                    |
| Ammonium persulfate                                              | BDH, England                   |
| Ava I restriction enzyme                                         | GIBCOBRL,USA                   |
| Boric acid                                                       | E. Merk, Germany               |
| Deoxynucleoside triphosphate(dNTPs)                              | Promega, Medison WI, USA       |
| Ethylenediaminetetra-acetic acid                                 | BDH, England                   |
| Ethidium bromide                                                 | AMERESCO,USA                   |
| Nucleic Acid Sample Loading Buffer                               | BIO-RAD, England               |
| N,N'-methylenebisacrylamide                                      | Sigma-Aldrich chemical Co.,USA |
| TEMED(N,N,N',N'-tetramethyleneethylenediamine)                   | Fluka, Switzerland             |
| PROTEINASE K                                                     | USB, OHIO, USA                 |
| 100 bp DNA ladder                                                | GIBCOBRL,USA                   |
| 50 bp DNA ladder                                                 | GIBCOBRL,USA                   |
| 25 mM Magnesium chloride<br>(supplied with Taq DNA polymerase)   | Promega, Medison WI, USA       |
| 10X Buffer, Magnesium free<br>(supplied with Taq DNA polymerase) | Promega, Medison WI, USA       |
| Sodium chloride                                                  | BDH, England                   |
| Sodium dodecyl sulfate                                           | Sigma-Aldrich chemical Co.,USA |
| Taq DNA polymerase                                               | Promega, Medison WI, USA       |
| TRIS-base                                                        | USB, OHIO, USA                 |

## Appendix B

### List of instruments were used in the study

| Instrument / Model                         | Source                        |
|--------------------------------------------|-------------------------------|
| High speed microcentrifuge BIO 101         | Sigma 202 MC                  |
| Imperial III water bath                    | LAB-LINE Instrument inc., USA |
| Mastercycle gradient                       | Eppendorf, Germany            |
| Φ34 pH meter                               | Beckman, USA                  |
| UV detector-Gel Doc 100                    | Bio-Rad Lab., USA             |
| UV-Vis spectrophotometer-UV1200            | Shimadzu Co., Japan           |
| Model Mighty Small II SE250/SE260 (Hoefer) | Amersham Biosciences, USA     |

### Appendix C

#### List of solutions and buffers were used in the study

##### Red cell lysis buffer

|                       |     |    |
|-----------------------|-----|----|
| 1.0 M Tris (pH 7.6)   | 5   | ml |
| 1.0 M $\text{MgCl}_2$ | 2.5 | ml |
| 5.0 M NaCl            | 1   | ml |
| Distilled water to be | 500 | ml |

Sterized by autoclaving and store at 4 °C

##### Nuclei lysis buffer

|                       |      |    |
|-----------------------|------|----|
| 1.0 M Tris (pH 8.0)   | 12.5 | ml |
| 0.5 M EDTA (pH 8.0)   | 0.5  | ml |
| 5.0 M NaCl            | 5    | ml |
| Distilled water to be | 500  | ml |

Sterized by autoclaving and store at room temperature

##### Tris-EDTA (TE) buffer

|                       |     |               |
|-----------------------|-----|---------------|
| 1.0 M Tris (pH 8.0)   | 5   | ml            |
| 0.5 M EDTA (pH 8.0)   | 100 | $\mu\text{l}$ |
| Distilled water to be | 500 | ml            |

Sterized by autoclaving and store at room temperature

##### 5X Tris-Borate-EDTA (TBE) buffer

|                       |      |    |
|-----------------------|------|----|
| Tris base             | 5    | g  |
| Boric acid            | 27.5 | g  |
| 0.5 M EDTA (pH 8.0)   | 20   | ml |
| Distilled water to be | 1000 | ml |

Sterized by autoclaving and store at room temperature

**Protenase K solution**

|                                |     |    |
|--------------------------------|-----|----|
| Protenase K                    | 1   | g  |
| 0.5 M EDTA (pH 8.0)            | 0.4 | ml |
| 10% SDS                        | 1   | ml |
| Sterized distilled water to be | 100 | ml |

Dispense into aliquots and store at -20°C

**10% Sodium dodecyl sulphate (pH 7.2)**

|                         |      |    |
|-------------------------|------|----|
| Sodium dodecyl sulphate | 100  | g  |
| Distilled water         | 1000 | ml |

Sterized by autoclaving and store at room temperature

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## CURRICULUM VITAE

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