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LIST OF ADDENDUMS

- Addendum 1:** Pedigrees used in the study
- Addendum 2:** Dilution plate design
- Addendum 3:** Inbreeding Co-efficients
- Addendum 4:** Frequency tables and Chi-Square results
- Addendum 5:** CYRILLIC family trees

ABBREVIATIONS

| | |
|-------------------|--|
| <i>AFAF</i> | Homozygous for the African horn gene |
| <i>AFaf</i> | Heterozygous for the African horn gene |
| ARC | Agricultural Research Council |
| bp | base pair |
| BTA1 | Bovine Chromosome One |
| BTA2 | Bovine Chromosome Two |
| cM | centimorgan. The distance measure on a genetic map. |
| df | degree freedom |
| DMSO | Dimethyl Sulfoxide |
| DNA | Deoxyribonucleic Acid |
| EDTA | Ethylenediaminetetraacetic acid, disodium salt |
| H_A | The alternative hypothesis |
| H_0 | The hypothesis statement |
| HQ | High Quality Water |
| H ₂ O | Water |
| INRA | Institute National de' la Recherche Agronomique' |
| LOD | Logarithm of the Odds |
| MAS | Marker Assisted Selection |
| MgCl ₂ | Magnesium Chloride |
| ng | nanogram |
| nm | nanometer |
| PCR | Polymerase Chain Reaction |
| pMOL | pico molar |
| <i>PP</i> | Homozygous polled genotype |
| <i>Pp</i> | Heterozygous polled genotype |
| <i>pp</i> | horned genotype |
| p-value | The significance measure of the Chi-square test |
| Poll | Name used to specify the polled gene in the linkage analysis |
| RNA | Ribonucleic Acid |
| <i>ScSc</i> | Homozygous scurred genotype |
| <i>Scsc</i> | Heterozygous scurred genotype |
| SC1 | Name of the first set of markers in multiplex |
| SC2 | Name of the second set of markers in multiplex |
| TDT | Transmission Disequilibrium Test |
| θ | Recombination Fraction or <i>Theta</i> . |
| Tm | Melting Temperature |
| μ l | microlitre |
| Z _{max} | Point at which the LOD score is maximized |