CLAIMS

1. A method of identifying at least one human primitive foetal erythroblast in a sample, the method consisting of;

   (i) providing at least one nucleated, CD45 negative, cell from the sample; and

   (ii) analysing the morphology of said at least one nucleated, CD45 negative, cell by staining the nucleus and determining the cytoplasm to nuclear ratio, by area, of said at least one nucleus-stained cell in the sample, wherein if the at least one CD45 negative cell has a cytoplasm to nuclear ratio, by area, in the range of 16:1 to 9:1 and at least one feature selected from

   a. having a cell diameter within a range of 10-20μm;
   b. being non adherent with a smooth non-sticky cell surface;
   c. being malleable; and/or
   d. being globular in shape,

the at least one CD45 negative cell is identified as a human primitive foetal erythroblast, wherein the sample is selected from the group consisting of maternal blood, cord blood, amniotic fluid, chorionic villus sample, foetal blood, and foetal tissue, and wherein the identified human primitive foetal erythroblast is capable of being cultured.

2. A method of culturing at least one human primitive foetal erythroblast from a sample, the method comprising:

(i) identifying at least one human primitive foetal erythroblast according to the method of claim 1;

(ii) isolating the at least one human foetal erythroblast identified in (i) using a micromanipulator; and

(iii) culturing the at least one human foetal erythroblast isolated in (ii) in a medium comprising IMDM (Iscove's modified Dulbecco's medium), 30% FBS (foetal bovine serum), 1% BSA (bovine serum albumin), 10^{-4} mol/l β-mercaptoethanol, 100 μg/ml iron-saturated transferrin.

3. The method according to claim 2, wherein the method is carried out under normoxic conditions.

4. The method according to any of claims 2 to 3, wherein the foetal erythroblast is maintained in a microdroplet.

5. The method according to claim 4, wherein the microdroplet is overlaid with at least one mineral oil.

6. The method according to any one of claims 2 to 5, wherein medium is capable of increasing the viability of the foetal erythroblast.

7. The method according to any one of claims 2 to 6, wherein the medium is capable of maintaining the cell viability of the foetal erythroblast for at least 48 hours.

8. The method according to claim 7, wherein the culture medium comprises at least one mitogen and/or at least one epigenetic factor, wherein the mitogen is selected from the group consisting of concanavalin A, phytohaemagglutinin, lipopolysaccharide (LPS), Insulin-like growth factors (IGFs) and pokeweed mitogen and/or the at least one epigenetic factor is at least one histone deacetylase inhibitor and/or at least one DNA methyl transferase inhibitor.

9. A method of diagnosing at least one prenatal disorder in a foetus, the method comprising:
   i. culturing at least one primitive foetal erythroblast according to any one of claims 2 to 8;
   ii. determining at least one genetic marker associated with the prenatal disorder in the foetal erythroblast, wherein the method is *in vitro*.

10. The method according to claim 9, wherein the prenatal disorder is selected from the group consisting of Down Syndrome, Edwards Syndrome, Patau Syndrome, a neural tube defect, spina bifida, cleft palate, Tay Sachs disease, sickle-cell anemia, thalassemia, cystic fibrosis, fragile X syndrome, spinal muscular atrophy, myotonic dystrophy, Huntington's disease, Charcot-Marie-Tooth disease, haemophilia, Duchenne Muscular Dystrophy, mitochondrial disorder, hereditary multiple exostoses and osteogenesis imperfecta disorder.