WHAT IS CLAIMED IS:

1. Use of adherent stromal cells derived from a placenta tissue in the preparation of a medicament for treating or preventing preeclampsia or eclampsia in a subject, said adherent stromal cells having been obtained from a three-dimensional (3D) culture.

2. The use of claim 1, wherein the subject has early-onset preeclampsia.

3. The use of claim 2, wherein the subject is at a period of gestation of from about 20 weeks to about 34 weeks.

4. The use of claim 1, wherein the subject has late-onset preeclampsia.

5. The use of claim 4, wherein the subject is at a period of gestation of from about 34 weeks to about 38 weeks or more.

6. The use of any one of claims 1 to 5, wherein the subject has an increased inflammatory response to pregnancy.

7. The use of any one of claims 1 to 6, wherein the preeclampsia or eclampsia is prevented by administration of the adherent stromal cells at a period of gestation of from about 16 weeks to about 20 weeks.

8. The use of any one of claims 1 to 7, wherein the adherent stromal cells are to

be administered systemically.

9. The use of any one of claims 1 to 7, wherein the adherent stromal cells are to be administered locally, optionally intramuscularly or subcutaneously.

10. The use of any one of claims 1 to 9, wherein the adherent stromal cells are obtained from placenta.

11. The use of any one of claims 1 to 10, wherein the adherent stromal cells express a marker selected from the group consisting of CD73, CD90, CD29 and CD 105; and/or the adherent stromal cells do not express a marker selected from the group consisting of CD3, CD4, CD45, CD80, HLA-DR, CD1 Ib, CD14, CD19, CD34 and CD.

12. The use of any one of claims 1 to 11, wherein the three dimensional (3D) culture comprises a 3D bioreactor.

13. The use of any one of claims 1 to 12, wherein culturing of the adherent stromal cells in the 3D culture is performed

a) under perfusion and/or

b) for at least 3 days and/or

c) until at least 10 % of the adherent stromal cells are proliferating.

14. The use of any one of claims 1 to 13, wherein the adherent stromal cells are allogeneic to said subject and said subject's fetus.