Claims

1. An oxytocin receptor antagonist for use in increasing ongoing implantation rate, increasing ongoing pregnancy rate, increasing clinical pregnancy rate, and/or increasing live birth rate, in a female subject undergoing embryo transfer as part of an assisted reproductive technology, wherein the antagonist is to be provided to the female such that the effect of the antagonist overlaps with the receptive endometrium stage in said female.

2. The oxytocin receptor antagonist for use according to claim 1, wherein the receptive endometrium stage corresponds to:
a) between LH+6 to LH+9, preferably between LH+6 to LH+8, of a natural ovulation cycle;
b) between hCG+6 to hCG+9, preferably between hCG+6 to hCG+8, of an induced ovulation cycle;
c) between day 4 to day 7, preferably between day 4 to day 6, of luteal phase support following oocyte retrieval, preferably wherein the female has undergone ovarian stimulation;
d) between day 4 to day 9, preferably between day 5 to day 7, of luteal phase support, preferably wherein luteal support begins after the endometrium is primed for at least 6 days with exogenous estrogen.

3. The oxytocin receptor antagonist for use according to claim 2, wherein the luteal phase support comprises supplementation with progesterone, estradiol and progesterone, human chorionic gonadotropin, progestins and/or gonadatropin releasing hormone (GnRH) agonists.

4. An oxytocin receptor antagonist for use in increasing ongoing implantation rate, increasing ongoing pregnancy rate, increasing clinical pregnancy rate, and/or increasing live birth rate, in a female subject undergoing embryo transfer, wherein the antagonist is to be provided to the female such that the effect of the antagonist is present when the embryo has reached the blastocyst-stage.

5. The oxytocin receptor antagonist for use according to any one of the preceding claims, wherein the female is undergoing transfer of a blastocyst-stage embryo and the antagonist is to be provided to the female such that the antagonist is released on the day of embryo transfer, preferably wherein the antagonist is to be administered to the female on the day of embryo transfer.

6. The oxytocin receptor antagonist for use according to claim 5, wherein the antagonist is to be administered between 2 hours prior to and 2 hours post embryo transfer, preferably wherein the antagonist

is to be administered twice, preferably wherein the first administration occurs around 45 minutes prior to embryo transfer and the second administration occurs around 60 minutes after the first administration.

7. The oxytocin receptor antagonist for use according to claim 5 or 6, wherein the blastocyst-stage embryo has an expansion and hatching status of 3, 4, 5, or 6, preferably wherein the blastocyst-stage embryo is a day 5 post-fertilization embryo.

8. The oxytocin receptor antagonist for use according to any one of claims 1-4, wherein the female is to be undergoing transfer of a cleavage-stage embryo and the antagonist is to be provided to the female such that the antagonist is to be released two or three days after embryo transfer, preferably wherein the antagonist is to be administered to the female two or three days after embryo transfer.

9. The oxytocin receptor antagonist for use according to claim 8, wherein the cleavage-stage embryo has at least 6 blastomeres and fragmentation of 20% or less, preferably wherein the cleavage-stage embryo is a day 2 or day 3 post-fertilization embryo.

10. The oxytocin receptor antagonist for use according to any one of the preceding claims, wherein the antagonist is a selective oxytocin receptor antagonist or an vasopressin/oxytocin receptor antagonist.

11. The oxytocin receptor antagonist for use according to claim 10, wherein the antagonist is barusiban.

12. The oxytocin receptor antagonist for use according to claim 11, wherein barusiban is to be provided subcutaneously.

13. The oxytocin receptor antagonist for use according to claim 11 or 12, wherein between 30-80 mg, preferably 50 mg, of barusiban is to be administered.

14. The oxytocin receptor antagonist for use according to any one of claims 11-13, wherein the female is to be undergoing transfer of a blastocyst-stage embryo and barusiban is to be administered to the female on the same day as embryo transfer.

15. The oxytocin receptor antagonist for use according to claim 14, wherein 40 mg barusiban is to be administered subcutaneously 45 minutes prior to embryo transfer and 10 mg barusiban is to be administered subcutaneously 60 minutes after the first administration.