

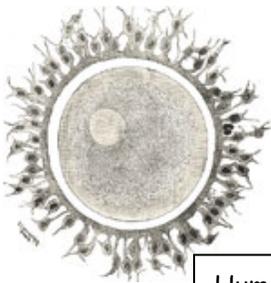


Unit 1: Appendix D

In Vitro Fertilization

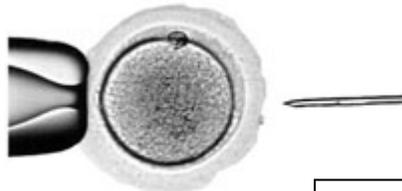
Name _____

In Vitro Fertilization is: a technique used in animal and human science, whereby an egg is fertilized with a sperm outside the body, before implantation in the uterus.



IVF STEP
1. ovulation
induction

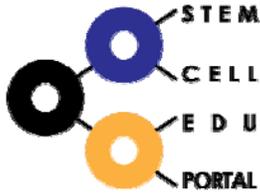
Human egg cell with granulosal cells which produce steroids and growth factors



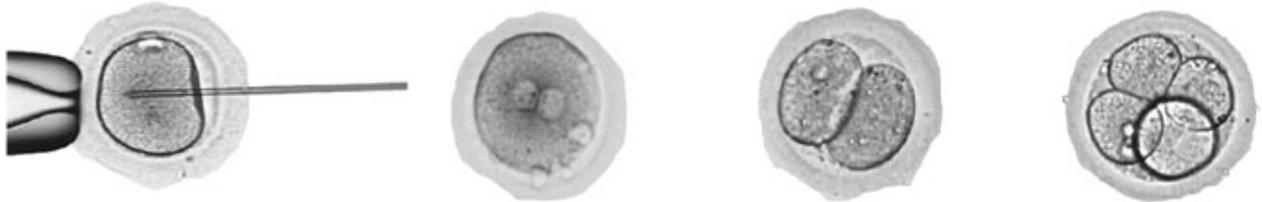
IVF STEP
3. Collecting and
preparing the sperm

Sperm in needle

2. egg retrieval



Name _____



IVF STEP 4.
Insemination of the egg with the sperm

Zygote: fertilized egg (about 20 hours after insemination)

2 cell embryo (about 36 hours after insemination)

4 cell embryo (about 48 hours after insemination)



8 cell embryo (about 72 hours after insemination)

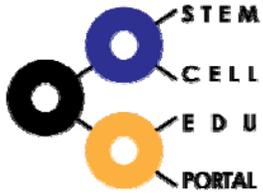


Morula: 16-32 cell totipotent stem cell embryo (about 96 hours after insemination)



Blastocyst (about 115 hours after insemination) with inner cell mass (pluripotent stem cells)

IVF Step 5. Transfer embryos to the uterus



Name _____

Assessment:

Compare natural fertilization and in vitro fertilization.

Describe and draw the locations of totipotent and pluripotent stem cells.



Name _____

Draw diagrams here: