

CURRICULUM VITAE

NAME:

Given name: Morteza. S

Family name: Hosseini



DATE AND PLACE OF BIRTH: August 6, 1979 – Sabzevar, Iran

MARITAL STATUS: Married

ADDRESS: Department of Clinical and Experimental Embryology, Cell Sciences Research Centre, Royan Institute, ACECR, Tehran, Iran.

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EDUCATIONS:

- 1997-2004** Doctor of Veterinary medicine (DVM), GPA: 17.15
Veterinary School, Shahrekord University, Shahrekord, Iran
Dissertation: Effect of cumulus cells on in vitro maturation of ovine oocytes
- 2010** Reproductive Biotechnology (PhD), Veterinary School, Shahrekord University, Shahrekord, Iran

RESEARCH ACHIEVEMENTS:

- 2006** The first IVM/F/C sheep, goats and cows in Iran
- 2007** The first cloned sheep in Iran (nick-named Royana)
- 2007** The first cloned cow in Iran
- 2007** The first interspecies hybrids of wild (*Ovis orientalis isphahanica*) and domestic (*Ovis aries*) sheep and deriving two fertile generations in Iran
- 2006-2007** The first genome resource bank (GBR) for endangered native species in Iran by somatic cell cryopreservation (SCCC)
- 2006-2007** The first gene bank for gamete preservation of endangered species
- 2008** Senior researcher of Royan Institute, Isfahan, Iran

COURSES AND WORKSHOPS:

- 2008** **Holding International workshop in "Hand Made Somatic Cell Nuclear Transfer"**
Royan Institute, Isfahan Campus, Isfahan, Iran
- 2007** **Participating in "Transgenic Animals" workshop,**
National Research Institute of Genetic engineering and Biotechnology
- 2007** **Holding workshop in "Bovine in vitro embryo production and transfer" (the second Iranian workshop),**
Royan Institute, Isfahan, Iran
- 2007** **Holding workshop in "Mammalian cell culture and transfection",**
Royan Institute, Isfahan, Iran
- 2006** **Holding workshop in "Bovine in vitro embryo production and transfer" (the first Iranian workshop),**
Royan Institute, Isfahan, Iran

- 2006 Participating in PCR, RTPCR workshop,**
Dep. Biotechnology, Faculty of Natural Resources, Isfahan Industrial University, Iran
- 2006 Participating in "Laser hatching" workshop,**
Dep. Anatomical Sciences, Faculty of Medicine, Tarbiat Modarres University, Iran
- 2004 Participating in "Microinjection in laboratory animals" workshop,**
Dep. Anatomical Sciences, Faculty of Medicine, Tarbiat Modarres University, Iran
- 2004 Participating in basic techniques in DNA extraction workshop,**
Dep. Biotechnology, Faculty of Natural Resources, Isfahan Industrial University, Iran

WORK EXPERIENCES:

- **Oocyte:**
Fully experienced in bovine/ovine oocyte collection (aspiration and slicing), washing, maturation, dissection, staining (DAPI, Hoechst, FITC, Orcein), Immunocytochemistry (microtubule and microfilaments, DNA methylation, Histone acetylation/methylation), Oocyte manipulation (enucleation, renucleation, ICSI), Enzymatic zona dissolution, Parthenogenetic activation and oocytes freezing
- **Spermatozoa:**
Fully experienced in morphological examinations, densitometry, staining, semen preparation (swim up, swim down, capacitation), washing, microinjection (ICSI), freezing
- **Cells:**
Fully expert in tissue biopsy preparation, cell culture, cell cycle synchronization, cell passage, cell freezing, immunostaining, permeabilizing, cell membrane dissolution, cell extraction, cell fusion, cell infection (liposomes, electroporation), preparation different cell lineage for different purposes (vero, oviductal, cumulus and BRL for embryo co-culture and mouse fibroblast cells for feeder cells in stem cell culture).
- **IVF and IVC:**
Fully familiar and experienced in preparation of the gametes for fertilization, assessment of the pronucleuses and cleavage, detection of fragmentation

and degeneration during embryo development, embryo sorting and manipulation, blastomere separation for PGD, zona drilling and hatching and dissolution, embryo grading and culture, embryo staining (differential), inner cell mass separation (mechanical or chemicals), embryo freezing

- **Culture media:**

Fully familiar with Investigation within the papers, documents and companies, media preparation, PH and Osmolarity adjustment

- **Farm animal's skills:**

1. **Mouse and rabbit:**

Super ovulation, oocyte retrieval

2. **Sheep:**

Super ovulation, synchronization and estrous detection, surgical oocyte retrieval and embryo transfer, insemination, ultrasonographical exams, C-Section.

3. **Cow:**

Super ovulation, synchronization and estrous detection

- **Computer skills:**

Advanced Internet search, Word, Photoshop, SPSS statistics

- **Technical skills:**

Flowcytometry, PCR, RT-PCR, Gel documentation

PUBLICATIONS: (Only accepted and published international manuscript were included)

<p>Title: Improved In Vitro Development of Cloned Bovine Embryos Using S-adenosylhomocysteine, A Non-Toxic Epigenetic Modifying Reagent</p> <p>Journal: Molecular Reproduction and Development (Accepted)</p> <p>Authors: Jafari Sh, Hosseini S.M, Hajian M, Forouzanfar M, Jafarpour F, Abedi P, Ostadhosseini S, Nasr-Esfahani M.H</p>
<p>Title: Somatic cell induced hypomethylation, but no acethylation, improves the effieincy of</p> <p>Journal: Cellular Reprogramming (Accepted)</p> <p>Authors: Jafarpour F, Hosseini S.M, Hajian M, Forouzanfar M, Abedi P, Ostadhosseini S, Nasr-Esfahani M.H</p>
<p>Title: Epigenetic modification does not determine the time of POU5F1 transcription activation in cloned bovine embryos</p> <p>Journal: Assisted Reproduction and Genetics (Accepted)</p> <p>Authors: Jafari Sh, Hosseini S.M, Hajian M, Forouzanfar M, Jafarpour F, Abedi P, Ostadhosseini S, Nasr-Esfahani M.H</p>
<p>Title: Development of an Optimized Zona-Free Method of Somatic Cell Nuclear Transfer in the Goat</p> <p>Journal: Cellular Reprogramming (Published)</p> <p>Authors: Nasr-Esfahani M.H, Hosseini S.M, Hajian M, Forouzanfar M, Ostadhosseini S, Abedi P,...</p>
<p>Title: Interspecies conservation cloning of threatened Esfahan mouflon via somatic cell nuclear transfer into enucleated oocytes of domestic sheep; in vitro and in vivo studies</p> <p>Journal: European Journal of Wildlife Research (Published)</p> <p>Authors: Hajian M, Hosseini S.M, Forouzanfar M, Abedi P, Ostadhosseini S, ..., Nasr-Esfahani M.H</p>
<p>Title: Time dependent effect of post warming interval on microtubule organization, meiotic status, and parthenogenetic activation of vitrified in vitro matured sheep oocytes</p> <p>Journal: Theriogenology (Published)</p>

<p>Authors: Asgari A, Hosseini S.M, Hajian M, Ostadhosseini S, Nasr-Esfahani M.H</p>
<p>Title: In vitro comparison of egg yolk–based and soybean lecithin–based extenders for cryopreservation of ram semen</p> <p>Journal: Theriogenology (Published)</p> <p>Authors: Forouzanfar M, Sharafi M, Hosseini S.M, Hajian M, Ostadhosseini S,, Nasr-Esfahani M.H</p>
<p>Title: Sperm Status and DNA Dose Play Key Roles in Sperm/ICSI-Mediated Gene Transfer in Caprine</p> <p>Journal , Vol, No: Molecular Reproduction and Development (Published)</p> <p>Authors: Shadanloo F, Najafi M H, Hosseini S.M, Hajian M, Forouzanfar M, Ostadhosseini S, Abedi P,... Nasr-Esfahani M.H,</p>
<p>Title: Developmental Competence and Pluripotency Gene Expression of Cattle Cloned Embryos Derived from Donor Cells Treated with 5-aza-2'-deoxycytidine</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Jafarpour F, Hosseini S.M, Hajian M, Forouzanfar M, Abedi P, Ostadhosseini S,, Nasr-Esfahani M.H</p>
<p>Title: Highly Efficient In Vitro Production of Bovine Blastocyst in Cell-Free Sequential Synthetic Oviductal Fluid vs. TCM199 Vero Cell Co-Culture System</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Hosseini S.M, Moulavi F, Hajian M, Abedi P, Forouzanfar M, ..., Nasr-Esfahani M.H</p>
<p>Title: Effect of Ovarian Cyclic Status on In Vitro Embryo Production in Cattle</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Pirestani A, Hosseini S.M, Hajian M, Forouzanfar M, Abedi P, Ostadhosseini S,, Nasr-Esfahani M.H</p>

<p>Title: Royana: Successful Experience in Cloning the Sheep</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Kazemi Ashtiani S, Nasr-Esfahani M.H, Hosseini S.M, Moulavi F, Hajian M, Forouzanfar M, Ostadhosseini S, Abedi P,...</p>
<p>Title: Effect of culture condition and cell-permeable superoxide dismutase on levels of reactive oxygen species (ROS) production in in vitro produced sheep embryos</p> <p>Journal , Vol, No: Small Ruminant Research (Published)</p> <p>Authors: Ostadhosseini S, Aghaie F, Hosseini S.M, Hajian M, ..., Nasr-Esfahani M.H</p>
<p>Title: Selection of the Most Appropriate Medium for Assessing Motility and DNA Uptake of Bovine Spermatozoa</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Eghbalsaeed Sh, Ghaedi K, Hosseini S.M,, Nasr-Esfahani M.H</p>
<p>Title: Antioxidant supplementation of culture medium during embryo development and/or after vitrification-warming; which is the most important?</p> <p>Journal , Vol, No: Journal of Assisted Reproduction and Genetics (Published)</p> <p>Authors: Hosseini S.M, Forouzanfar M, Asgari V, Hajian M, Ostadhosseini S,, Nasr-Esfahani M.H</p>
<p>Title: Differential Effect of Medium on the Ratio of ICM/TE of Bovine Embryos in a Co-culture System</p> <p>Journal: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Forouzanfar M, Hosseini S.M, Hajian M, , Ostadhosseini S, Abedi P,... Nasr-Esfahani M.H,</p>
<p>Title: Effect of donor cell type and gender on the efficiency of in vitro sheep somatic cell cloning</p> <p>Journal: Small Ruminant Reserach (Published)</p> <p>Authors: Hosseini S.M, Moulavi F, Forouzanfar M, Hajian M, ..., Nasr-Esfahani M.H</p>

<p>Title: Novel Approach of Differential Staining to Detect Necrotic Cells in Preimplantation Embryos</p> <p>Journal , Vol, No: International Journal of Fertility and Sterility (Published)</p> <p>Authors: Hosseini S.M, Hajian M, Asgari V, ..., Nasr-Esfahani M.H</p>
<p>Title: Optimized combined electrical–chemical parthenogenetic activation for in vitro matured bovine oocytes</p> <p>Journal , Vol, No: Animal Reproduction Science(Published)</p> <p>Authors: Hosseini S.M, Hajian M, Moulavi F,, Nasr-Esfahani M.H</p>
<p>Title: Reproductive potential of domestic Ovis aries for preservation of threatened Ovis orientalis isphahanica: in vitro and in vivo studies</p> <p>Journal , Vol, No: European Journal of Wildlife Research (Published)</p> <p>Authors: Hosseini S.M, Moulavi F, Hajian M, Forouzanfar M, Ostadhosseini S,, Nasr-Esfahani M.H</p>
<p>Title: Can Vero cell co-culture improve in-vitro maturation of bovine oocytes?</p> <p>Journal , Vol, No: Reproductive BioMedicine Online (Published)</p> <p>Authors: Moulavi F, Hosseini S.M, ... Nasr-Esfahani M.H,</p>
<p>Title: A comparison of two recovery methods of ovine oocytes for in vitro maturation.</p> <p>Journal , Vol, No: Small Ruminant Research (Published)</p> <p>Authors: Shirazi A,, Hosseini S.M,</p>
<p>Title: The presence of cumulus cells on nuclear maturation of sheep oocytes during in vitro maturation.</p> <p>Journal , Vol, No: Small Ruminant Research (Published)</p> <p>Authors: Shirazi A,, Hosseini S.M.</p>
<p>Title: The effects of raffinose as a cryoprotectant on the bull semen.</p> <p>Journal , Vol, No: Indian Veterinary Journal (Published)</p>

Authors: Shirazi A,, Hosseini S.M.

Presented in international and local congress:

- **Shirazi A., Shams-Esfandabadi N., Hosseini S.M. (2004):** A comparison of two methods of oocyte recovery in ewe lambs for in vitro maturation. In: 11th International Conference of the Association of Institutions for Tropical Veterinary Medicine. Kuala Lumpur, Malaysia.
- **Shirazi A., Shams-Esfandabadi N., Hosseini S.M. (2004):** A comparison of two methods of oocyte recovery in ewes for in vitro maturation. In: 15th International Congress on Animal Reproduction. Porto Seguro, BA-Brazil.
- **Shirazi A., Hosseini S.M., Heidari B. (2005):** The effect of cumulus cells-conditioned media on resumption of meiosis in ovine oocytes. In: 6th International Sheep Veterinary Congress. 17-21 June, Crete, Greece.
- **Heidari B., Shirazi A., Hosseini S.M. (2005):** The effect of post oestrus sheep serum on in vitro nuclear maturation of ovine oocytes. In: 6th International Sheep Veterinary Congress. 17-21 June, Crete, Greece.

- **And over 12 further presentations until 2010**

RESEARCH INTERESTS:

- Oocyte competence
- Reprogramming
- Embryo development/metabolism
- SCNT, Stem cell biotechnology, Transgenic animal