

CURRICULUM VITAE

IDENTIFICATION:

Given name: Abolfazl

Family name: Shirazi

Date and place of birth: December 6, 1964 - Tehran

Marital status: Married

ADDRESS:

1. Reproductive Biotechnology Research Center, Avicenna Research Institute, P. O. Box: 19615/1177, Tehran, Iran.

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CURRENT EMPLOYMENT:

Reproductive Biotechnology Research Center, Avicenna Research Institute, P. O. Box: 19615/1177, Tehran, Iran.

EDUCATION:

- | | | |
|-------------|-------------|--|
| 2000 | Ph.D | Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.
Thesis: “ Study on follicular and corpus luteum dynamics in Caspian miniature horse ”. |
| 1989 | DVM | Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran.
Dissertation: “ Study on Repeat-Breeding syndrome in dairy cattle ”. |

ACADEMIC AWARDS AND ACHIEVEMENTS:

- 2009** **Visitor scientist**
Veterinary Biomedical Sciences, Western College of Veterinary
Medicine, University of Saskatchewan, 52 Campus Drive, Saskatoon SK
S7N 5B4, Canada, Tel: 001 306 9664317; Fax: 001 306 9667376
- 2005-2008** **Eminent researcher** at the annual celebration of high degree Researchers
for 4 consecutive years, Shahrekord University
- 2001** **\$500 award on behalf of the SSR Awards Committee**
34th Annual meeting of the Society for the Study of Reproduction, July
28-August 1, 2001, Ottawa, Canada.
- 1999** **First place at Veterinary Gynecology Board Exam**
- 1997** **First place at Veterinary Gynecology Residency Exam**
- 1989** **Honor graduated student in DVM**

COURSES AND WORKSHOPS:

- 2008** **Execution of "The Specialty Workshop on Sheep Cloning"**
Research Institute of Animal Embryo Technology, Shahrekord
University, Shahrekord, Iran.
- 2007** **Participating in "Transgenic Animals" workshop,**
National Research Institute of Genetic engineering and Biotechnology
Tehran, Iran.
- 2006** **Participating in "Laser hatching" workshop,**
Dept. of Anatomical Sciences, Faculty of Medicine, University of Tarbiat
Modarres, Iran.
- 2004** **Participating in "Microinjection in laboratory animals" workshop,**
Dept. of Anatomical Sciences, Faculty of Medicine, University of Tarbiat

Modarres, Iran.

- 2003** **Participating in basic techniques in DNA extraction workshop,**
Dept. of Biotechnology, Faculty of Natural Resources, Esfahan Industrial
University, Iran.
- 2000** **Participating in ongoing project (as a part of my PhD),**
Dept. of Farm Animal Health, Faculty of Veterinary Medicine, Utrecht
University, Utrecht, The Netherlands.
- 1999** **Participating in the British Andrology Society workshop, entitled**
“Sperm interaction with epithelia and their products”.
Medical Society of London, 11 Chandos st., London W1M 0EB.
- 1997** **Enrollment in Veterinary Gynecology Residency Course**

PUBLICATIONS:

Published or under process articles in international journals:

- **Shirazi A., Gharagozloo F., Niasari-Naslaji A., Bolorchi M. (2002):** Ovarian follicular dynamics in Caspian mares. J. Equine Vet. Sci., 22: 208-211
- **Shirazi A., Gharagozloo F., Ghasemzadeh-Nava H. (2004):** Ultrasonic characteristics of preovulatory follicle and ovulation in Caspian mares. Anim. Reprod. Sci., 80:261-266.
- **Ghasemzadeh-nava H., Ghasemi F., Tajik P. and Shirazi A. (2004).** A review of mare endometritis in Iran . J. of Equine Vet. Sci., 188-192.
- **Shams-Esfandabadi N., Shirazi A., Ghasemzadeh-Nava H. (2004):** Pregnancy rate following post-insemination intrauterine treatment of endometritis in dairy cattle. J. Vet. Med., 51:155-156.
- **Shirazi A., Shams-Esfandabadi N., Hosseini S.M. (2005):** A comparison of two recovery methods of ovine oocytes for in vitro maturation. Small Rumin. Res., 58:283-286.

- **Shirazi A., Shams-Esfandabadi N., Shishegar H.R (2006):** Occurrence of *Staphylococcus aureus* intramammary infections and its relationship to the visual appearance of mammary secretions in prepartum dairy heifers. Indian Vet. J. 83: 596-598.
- **Shirazi A., Shams-Esfandabadi N., Pirestani A., Hosseini S.M (2006):** The effect of raffinose as a cryoprotectant on the bull sperm. Indian Vet. J. 83: 281-283.
- **Shams-Esfandabadi N., Shirazi A. (2006):** Effects of supplementation of Repeat- Breeder dairy cows with CIDR from 5-19 post insemination on pregnancy rate. Pakistan J Biol Sci. 9: 2173-2176.
- **Shams-Esfandabadi N., Shirazi A., Boyadian M. (2006):** Evaluation of the effect of GnRH administration within 3h after onset of estrus on conception rate in dairy cows. Pakistan J Biol Sci. 9: 2503-2507.
- **Shirazi A., Shams-Esfandabadi N., Hosseini S.M. (2007):** The effect of the presence of cumulus cells on nuclear maturation of sheep oocytes during in vitro maturation. Small Rumin. Res. 68: 291–295.
- **Shirazi A., Sadeghi N., Hosseini S.M. (2007):** The effect of ovine oocyte diameter in relation to nuclear maturational competence. Small Rumin. Res. 69: 103–107.
- **Hassanpour H., Mirshokrai P., Shirazi A., Aminian A. (2007):** Effect of Nitric oxide on ram sperm motility in vitro. Pak J Biol Sci. 15;10(14):2374-8.
- **Shirazi A., Moalemian Z. (2007):** Ovine cumulus cells estradiol-17beta production in the presence or absence of oocyte. Anim. Reprod Sci. 101: 125-133.
- **Kojouri G. A., Shirazi A. (2007):** Serum concentrations of Cu, Zn, Fe, Mo and Co in newborn lambs following systemic administration of vitamin E and selenium to the pregnant ewes. Small Rumin. Res. 70: 136-139.
- **Shirazi A., Shams-Esfandabadi N., Ahmadi E., Heidari B. (2010):** Effects of growth hormone on nuclear maturation of ovine oocytes and subsequent embryo development. Reprod Domest Anim 45:530-536 (doi: 10.1111/j.1439-0531.2008.01290.x ISSN 0936-6768).
- **Shirazi A., Shams-Esfandabadi N., Ahmadi E., Jadidi M., Heidari B. (2008):** Recipient pregnancy rate following transfer of in vitro produced sheep embryos in morula and blastocyst stages. Pakistan J Biol Sci 11 (6) 938-941.
- **Shirazi A., Shams-Esfandabadi N., Ahmadi E., Jadidi M., Heidari B. (2009):** Acephallus lamb resulted from in vitro produced lamb embryo. Can. Vet. J. 50: 501-505.

- **Shirazi A, Nazari H, Ahmadi E, Heidari B, Shams-Esfandabadi N (2009).** Effect of culture system on survival rate of vitrified bovine embryos produced in vitro. *Cryobiology* 59: 285–290.
- **Shirazi A, Ostad-Hosseini S, Ahmadi E, Heidari B, Shams-Esfandabadi N. (2009).** Developmental competence of sheep ICSI derived activated embryos. *Theriogenology* 71: 342–348.
- **Reiisi S, Esmaeili F, Shirazi A, (2010).** Isolation, culture and identification of epidermal stem cells from newborn mouse. *In Vitro Cell. Dev. Biol. Anim.* 46:54–59
- **Shirazi A, Soleimani M, Karimi M, Nazari H, Ahmadi E, Heidari B, (2010).** Vitrification of in vitro produced ovine embryos at various developmental stages using two methods. *Cryobiology* 60: 204–210.
- **Farzaneh-Dehkordi F, Ahadi AM, Shirazi A, Sadeghizade M. (2009):** Effect of lysis strategy in accuracy and repeatability of sex determination by single cell polymerase chain reaction method. *J Biol Sci* 9: 78-82.
- **Shirazi A, Ahmadi E, Bahirae A, Heidari B, (2009):** Effect of duration of IVM on parthenogenetic development of ovine oocytes. *AJMB* 1:113-118.
- **Heidari B, Shirazi A, Tajic P, Ahmadi E, Nazari H, Shams-Esfandabadi N, Ghasemzadeh-Nava H (2010).** Effect of fibroblast donor cell age on development of ovine nuclear transfer embryos in vitro. *Zygote* 18:331-338 (doi:10.1017/S0967199409990360)
- **Shirazi A, Derakhshan M, Nazari H, Ahmadi E, Heidari B, (2010).** Effect of pretreatment of sperm on male pronuclear formation and subsequent embryo development following intracytoplasmic sperm injection. *Reprod Domest Anim* (doi: 10.1111/j.1439-0531.2010.01593.x)
- **Shirazi A, Borjian S, Nazari H, Ahmadi E, Heidari B, Shams-Esfandabadi N, Bahirae A, (2010).** Effects of timing on cell biopsy from pre-compacted morula stage bovine embryos on subsequent embryonic development. *J Reprod Infertil* 11:25-32.
- **Shirazi A, Borjian S, Nazari H, Ahmadi E, Heidari B, (2010).** The effect of biopsy during precompacted morula stage on post vitrification development of blastocyst derived bovine embryos. *AJMB.* 2:181-192.
- **Heidari B, Shirazi A, Borjian S, (2010).** Cloning and interfering factors. *J Reprod Infertil* (under process)

Published in domestic journal:

- **Shirazi A. (2001):** Penicillin-streptomycin in the culture medium during in vitro maturation of bovine oocytes affects nuclear maturation and subsequent embryo development. *Yakhteh Med. J.*, 3: 169-176.
- **Shirazi A., Gharagozloo F., Niasari-Naslaji A., Bolorchi M (2003):** Plasma estradiol-17beta and progesterone concentration during estrous cycle in Caspian mares. *Arch. Razi Inst.* 56:81-92.
- **Darabi M., Karimi H., Sadeghi H., Nasr-Esfahani MH., Imani H., Mardani M., Baharvand H., Shirazi A. (2004):** The effect of type of serum on bovine oocytes in vitro maturation and different amount of heparin and type of semen on fertilization rate. *Kosar Med. J.*, 8:119-125.
- **Nourani H, Shirazi A, (2009).** Morphological findings in bovine amorphous fetus. *Iranian Vet. J.* 4: 105-108.

Presented in international and local congress:

- **Shirazi A., Colenbrander B., Bevers M.M. (2000):** The effect of penicillin-streptomycin on nuclear maturation of cultured bovine oocytes. In: 14th International Congress on Animal Reproduction. Stockholm, Sweden; (abst.) 18:48.
- **Shirazi A., Gharagozloo F., Ghasemzadeh-Nava H., Shams-Esfandabadi N. (2001):** Characteristics of estrus and diestrus in Caspian mare. In: 34th Annual meeting of Society for the Study of Reproduction. Ottawa, Canada.
- **Shirazi A., Colenbrander B., Bevers M.M. (2002):** Resumption of nuclear meiosis of bovine oocytes in two different types of bright and dark cumulus-oocytes complexes. In: 12th Iranian Veterinary Congress. Tehran, Iran.
Shirazi A., Nirouei M. (2002): An abattoir survey of macroscopic abnormalities of genital organs in dairy cattle. In: 22nd World Buiatrics Congress, Hannover, Germany.
- **Shirazi A., Gharagozloo F., Ghasemzadeh-Nava H. (2003):** Some ultrasonic characteristics of preovulatory follicle in Caspian mares. 13th International Veterinary Radiology Association Congress. Midrand, South Africa.(oral presentation).

- **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.
- **Shams-Esfandabadi N., Shirazi A., Kazemi-Aghdam D. (2004):** The effect of postpartum prostaglandin treatment on reproductive performance in dairy cattle. In: 11th International Conference of the Association of Institutions for Tropical Veterinary Medicine. Kuala Lumpur, Malaysia.
- **Ghasemi F., Ghasemzadeh H., Shirazi A. (2001):** The relation of age, barren years, and kind of pathogens to mare endometritis. In: 34th Annual meeting of Society for the study of Reproduction. Ottawa, Canada.
- **Shams-Esfandabadi N., Tajick P., Ghasemzadeh-Nava H., Shirazi A. (2001):** Comparison of three different concentrations of E.S.S in vitro maturation of follicular oocytes in Iranian native sheep and goat. In: 34th Annual meeting of Society for the study of Reproduction. Ottawa, Canada.
- **Shams-Esfandabadi N., Shirazi A., Ghasemzadeh-Nava H. (2002)** Evaluation of the effect of CIDR in treatment of postpartum anestrus dairy cows. In: 12th Iranian Veterinary Congress. Tehran, Iran.
- **Shams-Esfandabadi N., Shirazi A., Ghasemzadeh-Nava H. (2002)** Evaluation of the effect of post insemination intrauterine treatment with oxytetracycline on conception rate in dairy cattle affected by endometritis. In: 3rd International Iran and Russia Conference, Moscow, Russia.
- **Shams-Esfandabadi N., Ghasemzadeh-Nava H., Shirazi A. (2002):** The efficacy of post insemination intra-uterine antibiotics treatment on conception rate in dairy cattle affected by endometritis. In: 22nd World Buiatrics Congress, Hannover, Germany.
- **Shams-Esfandabadi N., Shirazi A., Ghasemzadeh-Nava H. (2002):** Evaluation of the effect of heat detection criteria on conception rate in dairy cattle. In: 3rd Convention of Iranian Veterinary Clinicians, Oct 29-31. Ferdousi University, Mashhad.

- **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.
- **Shirazi, A., Shams-Esfandabadi, N., Nazari, H., Ahmadi, E., Heidari, B. (2008).** Effect of culture system on cryotolerance of vitrified in vitro produced bovine embryos. 16th International Congress on Animal Reproduction 13-17 July, Budapest, Hungary.
- **Shirazi, A; Shams-Esfandabadi, N; Nazari, H; Ahmadi, E; Heidari, B. (2008).** Developmental stage of in vitro produced bovine embryo influence the cryotolerance of vitrified embryo. The 15th Congress of the Federation of Asian Veterinary Association 27-29 October, 2008 Bangkok, Thailand.
- **Shirazi, A; Shams-Esfandabadi, N; Jadidi M; Ahmadi, E; Heidari, B. (2008).** The Effect of growth hormone on nuclear maturation of sheep oocyte during in vitro maturation. The 15th Congress of the Federation of Asian Veterinary Association 27-29 October, 2008 Bangkok, Thailand
- **Nourani H, Shirazi A, (2008).** The first report of bovine amorphous fetus in a triple pregnancy. The 25th Jubilee World Buiatrics Congress. 6-11 July, Budapest, Hungary
- **Ahadi AM, Farzaneh-Dehkordi F, Shirazi A, Nazari H, Ahmadi E, Ayat H, Sadeghizadeh M. (2009).** Gender determination in single bovine blastomeres by multiplex nested single cell polymerase chain reaction (MNSC-PCR). J. Iran. Chem. Soc., Vol. 6, Suppl., November, pp. S103-S114
- **Shirazi A, Soleimani M, Abnosi M.H., Karimi M, Nazari H, Ahmadi E, Heidari B, (2010).** Vitrification of in vitro produced ovine embryos at various developmental stages using two different carriers. The 1st Congress on Fertility Preservation. Jan. 13-14, Tehran, Iran.
- **Borjjan S, Heidari B, Sarvari A, Naderi M M, Behzadi B, Akhondi M M, Shirazi A. (2010).** Ethical considerations of tissue engineering. Genetics, Law, Ethics, and Psychology Congress. Faculty of Law, Shahid Behashti Univ. 10-11 Nov, 2010

- **Naderi M M, Heidari B, Sarvari A, Borjian S, Behzadi B, Shirazi A. Akhondi M M, (2010).** Transgenesis and ethical issues. Genetics, Law, Ethics, and Psychology Congress. Faculty of Law, Shahid Behashti Univ. 10-11 Nov, 2010
- **Sarvari A, Naderi M M, Heidari B, Borjian S, Behzadi B, Akhondi M M, Shirazi A. (2010).** Ethical Issues in Human Enhancement technologies. Genetics, Law, Ethics, and Psychology Congress. Faculty of Law, Shahid Behashti Univ. 10-11 Nov, 2010
- **Heidari B, Naderi M M, Borjian S, Sarvari A, Behzadi B, Akhondi M M, Shirazi A. (2010).** Human cloning and its consequences. Genetics, Law, Ethics, and Psychology Congress. Faculty of Law, Shahid Behashti Univ. 10-11 Nov, 2010

THESIS SUPERVISION:

- A comparison of three recovery methods of ovine oocytes (aspiration by syringe, puncturing and aspiration by vacuum) on oocyte quality and quantity for in vitro maturation
- Study on *Staphylococcus aureus* intramammary infections and its relationship to the visual appearance of mammary secretions in prepartum dairy heifers
- Abattoir survey of macroscopic abnormalities of genital organs in dairy cattle
- The effect of duration of sheep oocyte in vitro maturation on induction of parthenogenesis using ionomycin, 6DMAP, and ethanol
- The effect of growth hormone on nuclear maturation of oocytes during in vitro maturation of ovine COCs
- Vitrification of in vitro produced ovine embryos at various developmental stages using two different carriers
- The potential of survival rate of bovine embryos produced in vitro following biopsy at morula stage
- Using embryonic and adult fibroblast cells as a donor cell on production of sheep cloned embryos

- Study on developmental competence of sheep ICSI derived embryos following artificial activation
- Improvement of male pronuclear formation in ICSI procedure in ovine activated oocytes
- Evaluation of revival of vitrified-thawed GV and MII sheep oocytes in vitro condition
- The effect of raffinose as a cryoprotectant on bull sperm parameters
- The effect of the presence of cumulus cells on nuclear maturation of sheep oocytes during in vitro maturation
- The effect of ovine oocyte diameter on nuclear maturational competence
- Study on ovine cumulus cells estradiol-17beta production in the presence or absence of oocyte
- Pregnancy establishment following transfer of in vitro produced sheep embryos
- The effect duration of in vitro maturation of bovine oocytes and embryo culture condition on the sex ratio
- The effects of culture media (SOF vs TCM) and source of protein (FCS vs BSA) during ovine oocyte in vitro maturation on subsequent embryo development

RESEARCH PROJECTS:

- Using embryonic and adult fibroblast cells as a donor cell on sheep cloning (Terminated project)
- Effect of GH on in vitro production of sheep embryo (Terminated project)
- Isolation of mouse epidermal stem cells (Terminated project)

- Production of cloned transgenic sheep expressing human α -Antithrombin III using transfected somatic cell (cumulus, fibroblast) as a donor cells in procedure of SCNT (Ongoing project)
- Bovine oocyte freezing (Ongoing project)
- Ovine and bovine embryo sex determination using single cell PCR method (Terminated project)
- Production of knockout mouse with targeted deletion of *Rag1* and *Rag2* genes(Ongoing project)

WORK EXPERIENCES

- 2008-2009** **Research staff:** Farm animal IVF lab set up, production of transgenic sheep (capable of expressing human antithrombin-III in milk) Reproductive Biotechnology Research Center, Avicenna Research Institute, P. O. Box: 19615/1177, Tehran, Iran.
- 1997-2008** **Lecturer (Associate Professor),** Obstetrics, Reproductive diseases, Artificial insemination, Advanced techniques in animal reproduction, Reproductive endocrinology. Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahrekord University, Shahrekord, Iran.
- 2005-2008** Production of sheep cloned embryos using SCNT (Somatic Cell Nuclear Transfer), ovine and bovine embryo freezing using vitrification method, in vitro production of sheep and cattle embryos using IVF and ICSI techniques, in vitro production of parthenogenetic embryos. Full experienced in oocyte and sperm preparation for IVF, IVC, cell

culture, animal cloning procedure, cell tissue culture

Research Institute of Animal Embryo Technology, Shahrekord
University, P.O. Box: 115, Shahrekord, Iran.

2001 – 2005

In vitro production of cattle and ovine embryos, assessment of culture conditions during in vitro maturation of cattle and ovine oocytes.

Research Institute of Animal Embryo Technology, Shahrekord
University, P.O. Box: 115, Shahrekord, Iran.

1999-2000

Doing IVM, IVF, IVC, Cell culture, and related techniques (oocyte and sperm manipulation, ICSI) in bovine, Fluorescent dye staining (Nuclear, Cortical granules and Mitochondria).

Dept. of Farm Animal, University of Utrecht, P.O. Box: 151 3508,
Tel: +31 30 2531248, Fax: +31 30 252 1887, Utrecht, The Netherlands.

1998-1999

Lecturer; Faculty of Veterinary Medicine, University of Garmsar,
Garmsar, Iran.

1996-1997

Embryo transfer in Mare

1995

Embryo transfer in Cattle and ewe

1992-1994

Lecturer; Department of Clinical Sciences, Faculty of Veterinary
Medicine, Shahrekord University, Shahrekord, Iran.

1991

Dairy farm practitioner (as a veterinarian)

RESEARCH INTERESTS

- Animal cloning
- Transgenic animal (molecular and cellular aspects)
- Stem cell biotechnology (embryonic stem cell)

- Mammalian epigenetic regulatory mechanisms during preimplantation development
- Gamete and embryo cryopreservation
- Signal transduction pathways in animal cloning procedure