

CURRICULUM VITAE

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Current position:

- Vice-research, Stem Cell Research Center, Tabriz University of Medical Sciences,
- Assistant professor, Stem Cell Research Center,
- Member of research committee of Stem Cell Research Center
Tabriz University of Medical Sciences, Tabriz, Iran, 5166614756
- Affiliated to Reproduction Biology department, Faculty of Advance Medical Sciences, Tabriz University of Medical Sciences,

Professional profile:

- Professional and trained academic writer and reviewer
- Motivated Biologist/researcher, specialist in reproductive Biotechnology/molecular cell biology
- Excellent aptitudes in design, management and performance of experiments involved in molecular, cell culture and reproductive biology

Research lines/interests:

- Cell and Stem Cells related studies:
 - Exosome isolation and characterization
 - Isolation, culture and characterization of cells/stem cells
 - Primary culture and expansion
 - Decellularization of tissues and organs
- Reproductive biology related line:
 - Oogenesis and spermatogenesis
 - Ovarian rejuvenation
 - Mitochondrion and aging
 - Early detection of prenatal anomalies/disorders
 - Stem Cell therapy and infertility
 - Small non-coding RNAs and developmental competence of oocyte
- Animal models for reproductive related studies
 - Menopause (Premature ovarian failure)
 - Azoospermia/Oligospermia
 - Polycystic ovary syndrome
 - Preeclampsia
 - *In vitro* fertilization in rodent and large animal models
 - Pre-implantation embryo culture in rodent and large animal models

Main skills/abilities:

- Reproduction related techniques: oocyte recovery, *in vitro* maturation, *In vitro* fertilization, embryo culture, micro injection and sperm preparation
- Molecular biology techniques: qRT-PCR, cloning, sequencing, immunoblotting, immunohistochemistry, immunoprecipitation, micro RNA quantification and inhibition, bioinformatics, etc.
- Cell culture techniques
- Confocal microscopy
- Animal (laboratory animals) handling and modeling skills
- Excellent communication and interpersonal skills

Academic Background:

2010-2016 PhD Researcher in the field of Biotechnology (Reproduction Biology)
Under the research school of Cancer Stem cells & Developmental Biology of Reproduction Cells Group
Faculty of Veterinary Medicine (Utrecht University, the Netherlands)

Main research area: Maintaining genomic integrity and developmental competence in the mammalian oocyte during meiosis and pre-implantation embryos, function of small non-coding RNAs in the oocytes and early embryos

2010-2016 PhD Training Programme, “Cancer, Stem Cells, and Developmental Biology”
Training Programme of the Graduate School of Life Sciences,
(Utrecht University and Utrecht Medical School, the Netherlands)

2011-2013 Guest Researcher

Hubrecht Institute, Research institute of the Royal Netherlands Academy of Arts and Sciences (KNAW) (Developmental Biology & Stem Cell Research) Professor Dr. René Ketting lab, Non-coding RNA Group

2006-2008 Master of Science: Animal Genetics and Breeding
Dairy Cattle Breeding Division, (National Dairy Research Institute, India) (August 2006 – August 2008, 2 years)

Thesis title: Genetic screening of Karan Fries bulls for Bovine Leukocyte Adhesion Deficiency Syndrome (BLAD) and Complex Vertebral Malformation (CVM)

2007-2008 Guest Researcher

DNA Sequencing Lab, National Bureau of Animal Genetic Resources, Karnal, India

Teaching experience:

- IVF techniques in laboratory animals: *Tabriz University of Medical sciences* (PhD course for Reproductive biology students)
- Biotechnology: *Tabriz University of Medical sciences* (PhD course for Reproductive biology students)
- Andrology: *Tabriz University of Medical sciences* (PhD course for Reproductive biology students)
- Cellular and molecular biology: *Tabriz University of Medical sciences* (PhD course for Reproductive biology students)
- Writing in English for publications: *Tabriz University of Medical sciences* (PhD course for Reproductive biology students)
- Oocyte recovery techniques in laboratory animals, *Tabriz University of Medical sciences* (workshop for PhD and Master students)
- Cell culture techniques, *Tabriz University of Medical sciences* (workshop for PhD and Master students as well as international students)
- An introduction to Solution preparation using Stoichiometry method, *Tabriz University of Medical sciences* (workshop for PhD and Master students)
- Introduction to organize references for academic writing using Mendeley program, *Tabriz University of Medical sciences* (workshop for PhD and Master students)
- Confocal Microscopy, PhD and Master students
- Primer design, qRT-PCR and results interpretation, *Tabriz University of Medical sciences* (workshop for PhD and Master students)

Language skills:

Farsi/Persian (Native)
Azari (Native)
English (writing and speaking: fluent)
Dutch (Basic)

Students (Past and Present):

- Halimeh Mobarak, DVM, PhD Student, Project: The Effects of Amniotic Fluid-Derived Exosomes On Experimental Model of Azoospermia in Rat
- Nahideh Mobarak, MSc, PhD student, Project: Studying The Regenerative Effects of Menstrual Blood Stem Cells On Experimental Model of Premature Ovarian Failure in Rat
- Afsaneh Bagherzadeh, BSc, MSc student, Project: Studying The Therapeutic Effect of Bacterial Lipase On Bacterial Lipopolysaccharide Toxicity Level in The Chick Embryo Model
- Fatemeh Sokouti, BSc, MSc student, BSc, Project: The Role of Estradiol On Differentiation of Testicular Spermatogonial Stem Cells Toward Sertoli Cells
- Shahin Ahmadian, BSc, MSc student, Project: Studying the effect of intra-ovarian injection with platelet rich plasma (PRP) in ovarian rejuvenation of menopause rats and restoration of ovulation
- Sepideh Sheshpari, BSc, MSc student, Project: The effect of intra-ovarian injection of cKit⁺ bone marrow cells in ovarian rejuvenation of menopause rats

- Niloufar Ghanbarzadeh, BSc, MSc Student, Project: Clinical Relationship of Dietary Inflammatory Index with Insulin Resistance and Free Androgen Index in People with Polycystic Ovary Syndrome
- Roghayeh Azami, BSc, MSc student, Project: The Effect of Soft Capsule Nigella Sativa Oil On Early Menopausal Symptom and Serum Levels of Some Oxidative Markers in Postmenopausal Women: A Randomized, Triple-Controlled Clinical Trial
- Fatemeh Hejazi, BSc, MSc student, Project: Relationship between serum levels of folic acid and superoxide dismutase enzyme (SOD-1) with the results of first trimester Down syndrome screening methods and fetal karyotype in high risk pregnant women referring to the Alzahra educational hospital of Tabriz
- Soheil Vazifehdoust, DVM student, Project: Comparison of The Efficacy of Two Culture Media Handmade (Hams F10 with Umbilical Serum) And Commercial (G1/G2) On In-Vitro Development of Mouse Embryos
- Amir Shoari, DVM student, Project: Comparison of The Efficacy of Two Culture Media Handmade (Hams F10 with Horse Serum) And Commercial (G1/G2) On In-Vitro Development of Mouse Embryos
- Farhad Amjadi, DVM student, Project: Project: Bovine Ovarian Tissue Decellularization Followed by Its Re-Cellularization Using Cultured Granulosa Cells
- Marjaneh Pournaghi, DVM student, Project: Effect of Melatonin Treatment on Exosomal Secretion Capacity of Bovine Cumulus Cells.
- Rasa Khodavirdilou, DVM student, Project: Studying The Effect of Platelet Rich Growth Factor on Growth and Development of Ovine Pre-Implantation Embryos
- Sima Mojtahedin, BSc, MSc student, Project: Differentiation of Mice Derived Embryonic Stem Cells to Pacemaker Cells
- Fariba Yahyavi, MSc, PhD student, sabbatical leave, Project: Animal Modeling of Endometriosis and treatment followed by Non-Surgical Embryo Transfer (NEST) in mice.
- Behrad Mohammadzadeh, Bsc, MSc student, Project: Evaluating the effect of Ishikawa cells treatment with melatonin on the biogenesis of exosome
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Ongoing Projects:

- The effect of intra-ovarian injection of human amniotic fluid-derived exosomes in ovarian rejuvenation of menopause rats
- Ovarian rejuvenation using of classical music therapy in rats with premature ovarian failure
- Ovarian rejuvenation using of uterine derived stem cells in rats with premature ovarian failure
- The comparative effect of PRP, PRGF, PRF and SVF on reproduction reverse with preservation of zygote replacement in uterus
- Design and preparation of mitochondrial isolation kit for cultured cells and tissues
- Potency of low-level laser irradiation on mitochondrial activity

Congress: international oral and poster participations

- **Mahdi Mahdipour**, "Adverse effects of bacterial LPS on expression levels of inflammatory genes during chicken fetal development", *4th international and 16th Iranian Genetics Congress*. Tehran. Iran, April 15-17, 2020.

- **Mahdi Mahdipour** “Studying the impact of estradiol on CD90 positive spermatogonial stem cells viability”, *The 4th International Congress on Biomedicine, Tehran, Iran*, November 10-21, 2020.
- **Mahdi Mahdipour**, “The Effect of Intra-Ovarian Injection of c-Kit Positive Cells Derived from Bone Marrow Cells in Ovarian Rejuvenation of Menopause Rats; A Pre-Clinical Study”, *International Congress on Stem Cell & Regenerative Medicine*, Tehran, Iran, July 13-15, 2017.
- **Mahdi Mahdipour**, “Platelet-Rich Plasma and its Restorative Effect on Fertility for Rat Model of Menopause; A Pre-Clinical Study”, *International Congress on Stem Cell & Regenerative Medicine*, Tehran, Iran, July 13-15, 2017.
- **Mahdi Mahdipour**, “One Step to Defeat the Acute Myeloid Leukemia (AML) by Ultrasensitive Detection of Single Cancer Stem Cell”, *International Congress on Stem Cell & Regenerative Medicine*, Tehran, Iran, July 13-15, 2017.
- Soheil Vazifehdust, Mohammad Ali Ebrahimi Saadatlou, **Mahdi Mahdipour**, Mohammadreza Esmaealzadeh, “Comparison of the Efficacy of two culture media handmade (Hams F10 with umbilical serum) and commercial (G1/G2) on in-vitro development of mouse embryos”, *4th International Congress on Reproduction (ISERB)*, Tehran, Iran, April 25-27, 2018.
- **Mahdi Mahdipour**, “MicroRNAs as a Marker for Assessment of Developmental Competence in the Maturing Oocytes”, *International Congress on Stem Cell & Regenerative Medicine*, Tehran, Iran, July 13-15, 2017.
- B. A. J. Roelen, E. F. Roovers, D. Rosenkranz, **M. Mahdipour**, C.-T. Han, N. He, S. M. Chuva de Sousa Lopes, van der Westerlaken, L. A.J., H. Zischler, F. Butter and R. F. Ketting, “PIWIL3 and piRNAs in mammalian oocytes”, *Annual meeting of the International Society for Stem Cell Research (ISSCR)*, Stockholm, Sweden, 24-27 June, 2015.
- **Mahdi Mahdipour**, Ana-Rita Leitoguinho, Ricardo Zacarias, Maartje Luteijn, Helena Van Tol, Rene Ketting, Bernard Roelen, “TACC3 is a crucial protein for bovine oocyte meiosis”, *17th International Congress of Developmental Biology*, Cancun, Mexico. 16-20 June, 2013.
- **Mahdi Mahdipour**, Leitoguinho, A. R, Silva, R., Van Tol, H., Stout, T., Rodrigues, G. and Roelen, B. “The role of transforming acidic coiled-coil protein-3 in oocyte meiosis”, *18th national and 6th international congress of biology of Iran, kharazmi University*, Karaj, Iran, 26-29 August 2014. (Invited speaker)
- **Mahdi Mahdipour**, Helena TA van Tol, Tom AE Stout, Bernard AJ Roelen, “Validation of reference microRNAs for normalizing expression data generated by quantitative PCR”, *41st Annual Conference of the International Embryo Transfer Society, Versailles, France*, January 10-13, 2015.
- **Mahdi Mahdipour**, Ashwani Sharma, M.S. Tandia, Avtar Singh, Bina Mishra, and B.K. Joshi. 2008. “Incidence of Bovine Leukocyte Adhesion Deficiency Syndrome (BLAD) in carrier Karan Fries Bulls”. *Proc. IX Conference of Indian Society of Animal Genetics and Breeding. Symposium on Livestock Genomics in Productivity Enhancement for Food Security*, New Delhi, India, 120-121.
- **Mahdi Mahdipour**, Ashwani Sharma, M.S. Tandia, Avtar Singh, Bina Mishra, and B.K. Joshi. 2008. “Incidence of Complex Vertebral Malformation carriers in Karan Fries Bulls”. *Proc. IX Conference of Indian Society of Animal Genetics and Breeding. Symposium on Livestock Genomics in Productivity Enhancement for Food Security*, New Delhi, India, 115-116.

Featured publications:

- Shahin Ahmadian, Sepideh Sheshpari, Mohammad Pazhang, Alberto Miranda Bedate, Rahim Beheshti, Mehran Mesgari Abbasi, Mohammad Nouri, Reza Rahbarghazi, **Mahdi Mahdipour**, “Intra-ovarian injection of platelet-rich plasma into ovarian tissue promoted rejuvenation in the rat model of premature ovarian insufficiency and restored ovulation rate via angiogenesis modulation”, *Reproductive Biology and Endocrinology*, 18 (1): 1-13, 2020.

- Soudabe Yousefi, Maryam Akbarzadeh, Jafar Soleimanirad, Kobra Hamdi, Laya Farzadi, Aalie Ghasemzadeh, **Mahdi Mahdipour**, Reza Rahbarghazi, Mohammad Nouri, "Combination of Estradiol with Leukemia Inhibitory Factor Stimulates Granulosa Cells Differentiation into Oocyte-Like Cells" Advanced Pharmaceutical Bulletin, doi:10.34172/apb.2021.080.
- Shahin Ahmadian, **Mahdi Mahdipour**, Mohammad Pazhang, S Sheshpari, Halimeh Mobarak, AM Bedate, R Rahbarghazi, M Nouri, "Effectiveness of Stem Cell Therapy in Treatment of Ovarian Disorders and Female Infertility: A Systematic Review" Current stem cell research & therapy, 15: 2, 2020.
- Sepideh Sheshpari, Mahnaz Shahnazi, Halimeh Mobarak, Shahin Ahmadian, Alberto Miranda Bedate, Ziba Nariman-Saleh-Fam, Mohammad Nouri, Reza Rahbarghazi, **Mahdi Mahdipour**, "Ovarian function and reproductive outcome after ovarian tissue transplantation: a systematic review" Journal of Translational Medicine, 17: 396, 2019.
- Halimeh Mobarak, Mohammad Heidarpour, Pei-Shiue Jason Tsai, Aysa Rezaabakhsh, Reza Rahbarghazi, Mohammad Nouri, **Mahdi Mahdipour**, "Autologous mitochondrial microinjection; a strategy to improve the oocyte quality and subsequent reproductive outcome during aging" BMC Cell & Biosciences, 2019, DOI :10.1186/s13578-019-0360-5.
- Shahin Ahmadian, **Mahdi Mahdipour**, Mohammad Pazhang, Sepideh Sheshpari, Halimeh Mobarak, Alberto Miranda Bedate, Reza Rahbarghazi, Mohammad Nouri, "Effectiveness of Stem Cell Therapy in Treatment of Ovarian Disorders and Female Infertility: A Systematic Review, Current Stem Cell Research and Therapy, 2019, doi: 10.2174/1574888X14666191119122159.
- Halimeh Mobarak, Reza Rahbarghazi, Francesca Lolicato, Mohammad Heidarpour, Fariba Pashazadeh, Mohammad Nouri and Mahdi Mahdipour, "Evaluation of the association between exosomal levels and female reproductive system and fertility outcome during aging: a systematic review protocol", Systematic Reviews, 8: 293, 2019.
- Shahin Ahmadian, Sepideh Sheshpari, **Mahdi Mahdipour**, Mohammad Pazhang, Pei-Shiue Jason Tsai, Mohammad Nouri, Reza Rahbarghazi and Mahnaz Shahnazi , "Toxic effects of VCD on kidneys and liver tissues : a histopathological and biochemical study" BMC Research Notes, 12:446, 2019.
- Halimeh Mobarak, Mohammad Heidarpour, Francesca Lolicato, Mohammad Nouri, Reza Rahbarghazi, **Mahdi Mahdipour**, "Physiological impact of extracellular vesicles on female reproductive system; highlights to possible restorative effects on female age-related fertility" Biofactors, 45 (3):293–303, 2019.
- Milad Bastami, Jalal Choupani, Zahra Saadatian, Sepideh Zununi Vahed, Elaheh Ouladsahebmadarek, Yasser Mansoori, Abdolreza Daraei, Hossein Samadi Kafil, Bahman Yousefi, **Mahdi Mahdipour**, Andrea Masotti and Ziba Nariman-Saleh-Fam, "Evidences from a Systematic Review and Meta-Analysis Unveil the Role of MiRNA Polymorphisms in the Predisposition to Female Neoplasms", International Journal of Molecular Sciences, 2019, 20, 5088.
- Samira Asghari, Amir Valizadeh Dizajeykan, Majid Ahmadi, Abolfazl Barzegari, Reza Rikhtegar, Sanam Dolati, Shahla Danaii, Sedigheh Abdollahi-Fard, Mohammad Nouri, **Mahdi Mahdipour**, Mehdi Yousefi, "Evaluation of ovarian cancer risk in granulosa cells treated with steroid depleted endometriosis serum: Role of NF - κ B / RelA and AKT" Journal of Cellular Physiology, 2018; 1–8.

- Ramyar Azizia, Mohammad Sadegh Soltani-Zangbar, Golshan sheikhansari, Zahra Pourmoghadam, Amir Mehdizadeh, **Mahdi Mahdipour**, Siamak Sandoghchian, Shahla Danaii, Ladan Koushaein, Hossein Samadi Kafil, Mehdi Yousefi, "Metabolic syndrome mediates inflammatory and oxidative stress responses in patients with recurrent pregnancy loss" Journal of Reproductive Immunology. 2019; 133, 18–26.
- Reza Rikhtegar, Masoud Pezeshkian, Sanam Dolati, Naser Safaieb, Abbas Afrasiabi Rad, **Mahdi Mahdipour**, Mohammad Nouri, Ahmad Reza Jodatib, Mehdi Yousef, "Stem cells as therapy for heart disease: iPSCs, ESCs, CSCs, and skeletal myoblasts" Biomedicine & Pharmacotherapy, 2019; 109, 304–313.
- Sanam Dolati, Mehdi Yousefi, **Mahdi Mahdipour**, Abbas Afrasiabi Rad, Alireza Pishgahi, Mohammad Nouri, Ahmad Reza Jodati, "Mesenchymal stem cell and bone marrow mononuclear cell therapy for cardiomyopathy: From bench to bedside" Journal of Cellular Biochemistry, 2018; 1-11.
- Sara Jafarzadeh, Majid Ahmadi, Sanam Dolati, Leili Aghebati-Maleki, Shadi Eghbal-Fard, Amin Kamrani, Behboud Behrad, Leila Roshangar, Farhad Jadidi-Niaragh, Bahman Yousefi, **Mahdi Mahdipour**, Laya Farzadi, Mehdi Yousefi, "Intravenous immunoglobulin G treatment increases live birth rate in women with recurrent miscarriage and modulates regulatory and exhausted regulatory T cells frequency and function" Journal of Cellular Biochemistry, 2018; 1-11.
- Soudabe Yousef, Jafar Soleimanirad, Kobra Hamdi, Laya Farzadi, Aalie Ghasemzadeh, Masoumeh Kazemi, **Mahdi Mahdipour**, Reza Rahbarghazi and Mohammad Nouri, "Distinct effect of fetal bovine serum versus follicular fluid on multipotentiality of human granulosa cells in *in vitro* condition", Biologicals, 2018.01.002.
- E. F. Roovers, D. Rosenkranz, **M. Mahdipour**, C.-T. Han, N. He, S. M. Chuva de Sousa Lopes, van der Westerlaken, L. A.J., H. Zischler, F. Butter, B. A. J. Roelen, and R. F. Ketting, "Piwi Proteins and piRNAs in Mammalian Oocytes and Early Embryos," Cell Reports, 2015 (10) 2069–2082.
- **M. Mahdipour**, A. R. C. Leitoguinho, R. A. Zacarias Silva, H. T. A. van Tol, T. A. E. Stout, G. Rodrigues, and B. A. J. Roelen, "TACC3 Is Important for Correct Progression of Meiosis in Bovine Oocytes," PLoS One, 2015; 10 (7), e0132591.
- **M. Mahdipour**, H. T. A. van Tol, T. A. E. Stout, and B. A. J. Roelen, "Validating reference microRNAs for normalizing qRT-PCR data in bovine oocytes and preimplantation embryos," BMC Developmental Biology, 2015; 15:25.
- **M. Mahdipour**, H. T. A. Van Tol, T. A. E. Stout, and B. A. J. Roelen, "Validation of Reference microRNAs for Normalizing Expression Data Generated by Quantitative PCR," Reproduction Fertility and Development, 2015; 27 (1), 202.
- **M. Mahdipour**, A. Sharma, P. P. Dubey, A. Singh, M. S. Tantia, B. Mishra, V. Kumar, and B. K. Joshi, "PCR based identification of bovine leukocyte adhesion deficiency syndrome (BLAD) carriers in Karan Fries bulls," Indian Journal of Animal Science, 2010; 80 (5), 433–435.
- **M. Mahdipour**, A. Sharma, P. P. Dubey, V. Kumar, B. Mishra, and A. Singh, "Identification of complex vertebral malformation using polymerase chain reaction- primer introduced restriction analysis in karan fries bulls," Current Trends in Biotechnology and Pharmacy, 2010; 4 (4), 850–854.

- A. Sharma, V. Kumar, **M. Mahdipour**, P. P. Dubey, A. Singh, J. Joshi, P. Banerjee, and B. K. Joshi, "Complex vertebral malformation: A recessive disorder in Holstein Friesian cattle – A review" Journal of Livestock Biodiversity, 2009; 1 (2), 70–73.
- **M. Mahdipour**, "Indian National Project on Cattle and Buffalo breeding," Journal of Damdar, 2009, 209: 40- 44.
- P. P. Dubey, **M. Mahdipour**, Ashwani Sharma, and J. P. Sehgal, "Genetic improvement using reproductive technologies combination with biotechnological approaches for commercial benefit in cattle Farming" Agrovet Buzz, 2009, 2 (2), 34-45.
- Ashwani Sharma, Vijay Kumar, **Mahdi Mahdipour**, P.P. Dubey, Avtar Singh, M.S. Tantia, Dinesh Kumar and B.K. Joshi, "Complex Vertebral Malformation (CVM): A Genetic Disorder" Dairy Planner, 2009, 5 (6), 38-39.
- Genbank accession numbers:
 Bos taurus PIWIL3 mRNA (KR911819.1)
 Bos indicus isolate A CD18 (CD18) gene (EU826000.1)
 Bos indicus isolate B CD18 (CD18) gene (EU826001.1)
 Bos indicus isolate A solute carrier family 35 member 3 (slc35a3) gene (EU822945.1)
 Bos indicus isolate B solute carrier family 35 member 3 (slc35a3) gene (EU822946.1)

Reference Researchers:

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