

# Curriculum vitae



## Personal data

First name: Amir  
Last name: Amiri-Yekta  
Nationality: Iranian  
Birth: 05-Sep-1979

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## Work Address

Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute, Tehran-Iran.  
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## Education

### 2012-2017: Ph.D. in Medical Genetics

- Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute, Tehran-Iran.
- Centre Hospitalier Universitaire de Grenoble, France
- Institut pour l'Avancée des Biosciences (IAB), INSERM 1209, CNRS UMR 5309, Grenoble, France

### 2002-2005: M.Sc. in Microbiology

### 1998-2002: B.Sc. in Cellular and Molecular Biology

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## Work Experience

Director of Royan Medical Genetics Center	Royan Institute, 2023-Present
Faculty member, Associate professor	Royan Institute, 2012-Present
Postdoctoral research fellowship	Centre Hospitalier Universitaire de Grenoble, France, CHU 2022-2023
Postdoctoral research fellowship	INSERM, IAB-UGA, France 2020-2022
Director of Genetics Laboratories	Royan Institute, 2018-2021
Guest researcher (PhD student)	Centre Hospitalier Universitaire de Grenoble, France, CHU 2015-2018

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## Research Fields

- High throughput sequencing-based investigation of disease driver genes
  - Gene therapy and disease modeling
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## Publications

- 1- Maryam Afkari, Samaneh Saboori-Darabi, Seyed Abolhassan Shahzadeh-Fazeli, Amir Amiri-Yekta. *Male infertility and its ties to next generation sequencing as a new forward path to definite diagnoses*. Gene. Volume 965, 15 September 2025, 14965.
- 2- Maryam Afkari, Najmeh Salehi, Hesamoddin Sajadi, Marjan Sabbaghian, Seyed Abolhassan Shahzadeh-Fazeli, Amir Amiri-Yekta. *A compound heterozygous missense variant in the DNAH5 gene could be a significant factor in unexplained male infertility*. Int J Fertil Steril. 07-June-2025, 10.22074/ijfs.2025.2051131.1811
- 3- Amir Amiri-Yekta, Sharanya Sen, Florence Hazane-Puch, et al. *Whole genome sequencing identifies a homozygous splicing variant in TDRKH segregating with non-obstructive azoospermia in an Iranian family*. Clinical Genetics. 2024. 106 (5), 625-631.
- 4- F Hasheminejad, S.H. Jazayeri, Z Halfinezhad, A Dalman, A Daneshpour, B Abd Emami, M Gharanfoli, A Amiri-Yekta. *Ubiquitous chromatin opening element enhance Darbepoetin alfa expression in CHO DG44 cell line*. Biochemical Engineering Journal. 2024. Vol211, <https://doi.org/10.1016/j.bej.2024.109468>.
- 5- Hasheminejad F., Amiri-Yekta A., *Recombinant Protein Expression Optimizing: A Review of S/MAR, STAR, and UCOE, as a Chromatin-Modifying Element*. West Kazakhstan Medical Journal. 2024, 137–145.
- 6- Muroňová J, Kherraf ZE, Giordani E, Lambert E, Eckert S, Cazin C, Amiri-Yekta A, et al., *Lack of CCDC146, a ubiquitous centriole and microtubule-associated protein, leads to non-syndromic male infertility in human and mouse*. Elife. 2024 Mar 5;12:RP86845. doi: 10.7554/eLife.86845. PMID: 38441556
- 7- Fadwa Jreijiri, Emma Cavarocchi, Amir Amiri-Yekta, et al., *CCDC65, encoding a component of the axonemal Nexin-Dynein regulatory complex, is required for sperm flagellum structure in humans*. Clin Genet. 2024 Mar;105(3):317-322. doi: 10.1111/cge.14459. PMID: 37975235
- 8- R Lohrasbi, SH Jazayeri, A Daneshpour, Z Halfinezhad, R Mohammadi, P Javidzade, A Amiri-Yekta., *Utilizing the Transposon Vector to Enhance the Expression of Recombinant Erythropoietin in Chinese Hamster Ovary Cells*. Journal of Animal Biology. Jan. 2024
- 9- Denis Dacheux, et al., *Novel axonemal protein ZMYND12 interacts with TTC29 and DNAH1, and is required for male fertility and flagellum function*. Elife. 2023 Nov 7;12:RP87698. doi: 10.7554/eLife.87698. PMID: 37934199
- 10- R Lohrasbi, A Amiri-Yekta., *Genome Editing Technologies and Application in Medicine: Discoveries, Challenges, and Prospects*. Cell and Tissue Journal. 14 (3), 241-263. Sptember 2023
- 11- Couderc A, Cazin C, Amiri-Yekta A, et al., *Genetic causes of macrozoospermia and proposal for an optimized genetic diagnosis strategy based on sperm parameters*. J Genet Genomics. 2023 Jul;50(7):536-540. doi: 10.1016/j.jgg.2023.04.007. Epub 2023 Apr 26. PMID: 37116580.
- 12- Saboori-Darabi S, Carrera P, Akbari A, Amiri-Yekta A, et al., *A heterozygous missense variant in DLX3 leads to uterine leiomyomas and pregnancy losses in a consanguineous Iranian family*. Gene. 2023 May 20;865:147292. doi: 10.1016/j.gene.2023.147292. Epub 2023 Feb 26. PMID: 36854347.
- 13- Martinez G, Barbotin AL, Cazin C, Wehbe Z, Boursier A, Amiri-Yekta A, et al., *New Mutations in DNHD1 Cause Multiple Morphological Abnormalities of the Sperm Flagella*. Int J Mol Sci. 2023 Jan 29;24(3):2559. doi: 10.3390/ijms24032559. PMID: 36768883.
- 14- Zohreh Hashemian, Amir Amiri-Yekta, et al., *CYP19A1 Promoters Activity in Human Granulosa Cells: A Comparison between PCOS and Normal Subjects*. Cell J, Vol 24, No 4, April 2022.
- 15- Maryam Rezaei-Gazik, Alexandra Vargas, Amir Amiri-Yekta, et al., *Direct visualization of pre-protamine 2 detects protamine assembly failures and predicts ICSI success*. Molecular Human Reproduction, Volume 28, Issue 2, February 2022, gaac004,
- 16- Shaaban Z, Khoradmehr A, Amiri-Yekta A, et al., *Pathophysiologic Mechanisms of Insulin Secretion and Signaling-Related Genes in Etiology of Polycystic Ovary Syndrome*. Genet Res (Camb). 2021 Dec 6;2021:7781823. doi: 10.1155/2021/7781823. eCollection 2021. PMID: 34949963.
- 17- Salehi N, Karimi-Jafari MH, Totonchi M, Amiri-Yekta A. *Integration and gene co-expression network analysis of scRNA-seq transcriptomes reveal heterogeneity and key functional genes in human spermatogenesis*. Sci Rep. 2021 Sep 27;11(1):19089. doi: 10.1038/s41598-021-98267-3. PMID: 34580317

- 18- Shen Q, Martinez G, Liu H, Beurois J, Wu H, Amiri-Yekta A, et al., *Bi-allelic truncating variants in CFAP206 cause male infertility in human and mouse*. Hum Genet. 2021 Sep;140(9):1367-1377. doi: 10.1007/s00439-021-02313-z. Epub 2021 Jul 13. PMID: 34255152
- 19- Cong J, Wang X, Amiri-Yekta A, et al., *Homozygous mutations in CCDC34 cause male infertility with oligoasthenoteratozoospermia in humans and mice*. J Med Genet. 2021 Aug 4;jmedgenet-2021-107919. doi: 10.1136/jmedgenet-2021-107919. Online ahead of print. PMID: 34348960
- 20- Patrick Lorès, Zine-Eddine Kherraf, Amir Amiri-Yekta, et al., *A missense mutation in IFT74, encoding for an essential component for intraflagellar transport of Tubulin, causes asthenozoospermia and male infertility without clinical signs of Bardet–Biedl syndrome*. Human Genetics. March 2021, <https://doi.org/10.1007/s00439-021-02270-7>.
- 21- Fatemi NS, et al., *KH domain containing 3 like (KHDC3L) frame-shift mutation causes both recurrent pregnancy loss and hydatidiform mole*. European Journal of Obstetrics & Gynecology and Reproductive Biology. DOI:<https://doi.org/10.1016/j.ejogrb.2021.02.006>.
- 22- Salehi N, Amiri-Yekta A, Totonchi M. *Profiling of initial available SARS-CoV-2 sequences from Iranian related COVID-19 patients*. Cell J. 2020;22 Suppl 1: 148-150. doi: 10.22074/cellj.2020.7524.
- 23- Bahrami S, Amiri-Yekta A, et al. *Designing a Transgenic Chicken: Applying New Approaches toward a Promising Bioreactor*. Cell J. 2020 Jul;22(2):133-139.
- 24- Goudarzi A., Amiri-Yekta A., *Regulated Acyl-CoA Synthetase Short-Chain Family Member 2 Accumulation during Spermatogenesis*. Cell J. 2020 Apr; 22(1):66-70.
- 25- Shaaban Z, Khoradmehr A, Amiri-Yekta A, Jafarzadeh Shirazi MR, Tamadon A. *Pathophysiologic Mechanisms of Obesity-And Chronic Inflammation-Related Genes in Etiology of Polycystic Ovary Syndrome*. Iran J Basic Med Sci. 2019 Dec;22(12):1378-1386.
- 26- Patrick Lorès, Denis Dacheux, Zine-Eddine Kherraf, Jean-Fabrice Nsota Mbango, Charles Coutton, Laurence Stouvenel, Come Ialy-Radio, Amir Amiri-Yekta, et al., *Mutations in TTC29, Encoding an Evolutionarily Conserved Axonemal Protein, Result in Asthenozoospermia and Male Infertility*. Am J Hum Genet. 2019 Dec 5;105(6):1148-1167.
- 27- Beurois J., Martinez G., Cazin C., Kherraf ZE., Amiri-Yekta A., et al, *CFAP70 mutations lead to male infertility due to severe astheno-teratozoospermia. A case report*. Hum Reprod. 2019 Oct 2;34(10):2071-2079.
- 28- Li W., Wu H., Li F., Tian S., et al, *Biallelic mutations in CFAP65 cause male infertility with multiple morphological abnormalities of the sperm flagella in humans and mice*. J Med Genet. 2019 Sep 9. pii: jmedgenet-2019-106344. doi: 10.1136/jmedgenet-2019-106344.
- 29- Kherraf ZE, Cazin C, Coutton C, Amiri-Yekta A., *Whole exome sequencing of men with multiple morphological abnormalities of the sperm flagella reveals novel homozygous QRICH2 mutations*. Clin Genet. 2019 Nov;96(5):394-401.
- 30- Liu C, Lv M, He X, Zhu Y, Amiri-Yekta A, et al, *Homozygous mutations in SPEF2 induce multiple morphological abnormalities of the sperm flagella and male infertility*. J Med Genet. 2019 May 2. doi: 10.1136/jmedgenet-2019-106011.
- 31- Coutton C, Martinez G, Kherraf ZE, Amiri-Yekta A, et al, *Bi-allelic Mutations in ARMC2 Lead to Severe Astheno-Teratozoospermia Due to Sperm Flagellum Malformations in Humans and Mice*. Am J Hum Genet. 2019 Feb 7;104(2):331-340.
- 32- Martinez G, et al, *Whole-exome sequencing identifies mutations in FSIP2 as a recurrent cause of multiple morphological abnormalities of the sperm flagella*. Hum Reprod. 2018 Oct 1;33(10):1973-1984.
- 33- Kherraf ZE, Amiri-Yekta A, et al. *A Homozygous Ancestral SVA-Insertion-Mediated Deletion in WDR66 Induces Multiple Morphological Abnormalities of the Sperm Flagellum and Male Infertility*. Am J Hum Genet. 2018 Sep 6;103(3):400-412.
- 34- Marie Christou-Kent, Zine-Eddine Kherraf, Amir Amiri-Yekta, Emilie Le Blévec, et al. *PATL2 is a key actor of oocyte maturation whose invalidation causes infertility in women and mice*. EMBO Mol Med (2018) e 851.
- 35- Zine-Eddine Kherraf, Beatrice Conne, Amir Amiri-Yekta, Marie Christou Kent, Charles Coutton, Jessica Escoffier, Serge Nef, Christophe Arnoult, Pierre F. Ray. *Creation of knock out and knock in mice by CRISPR/Cas9 to validate candidate genes for human male infertility, interest, difficulties and feasibility*. Molecular and Cellular Endocrinology, DOI 10.1016/j.mce.2018.03.002.
- 36- Frederick N Dong, Amir Amiri-Yekta, Guillaume Martinez, Antoine Saut, Julie Tek, Laurence Stouvenel, et al. *Absence of CFAP69 Causes Male Infertility due to Multiple Morphological Abnormalities of the Flagella in Human and Mouse*. The American Journal of Human Genetics 102, 636–648, April 5, 2018.
- 37- Coutton C, Vargas AS, Amiri-Yekta A, Kherraf ZE, et al. *Mutations in CFAP43 and CFAP44 cause male infertility and flagellum defects in Trypanosoma and human*. Nature Commun. 2018 Feb 15;9(1):686. doi: 10.1038/s41467-017-02792-7.s

- 38- Jazayeri SH, Amiri-Yekta A, Bahrami S, Gourabi H, Sanati MH, Khorramizadeh MR. *Vector and Cell Line Engineering Technologies Toward Recombinant Protein Expression in Mammalian Cell Lines*. Appl Biochem Biotechnol. 2018 Feb 3. doi: 10.1007/s12010-017-2689-8.
- 39- Jazayeri SH., et al. *Comparative Assessment on the Expression Level of Recombinant Human Follicle-Stimulating Hormone (FSH) in Serum-Containing Versus Protein-Free Culture Media*. Mol Biotechnol 2017, DOI 10.1007/s12033-017-0037-4.
- 40- Amiri-Yekta A., et al. *Measure of sperm DNA fragmentation (SDF): how, why and when?* Transl Androl Urol 2017;6(Suppl 4):S588-S589.
- 41- Kherraf ZE., et al. *SPINK2 deficiency causes infertility by inducing sperm defects in heterozygotes and azoospermia in homozygotes*. EMBO Mol Med. 2017 Aug;9(8):1132-1149.
- 42- Amiri-Yekta A., et al. *Whole-exome sequencing of familial cases of multiple morphological abnormalities of the sperm flagella (MMAF) reveals new DNAH1 mutations*. Hum. Reprod. (2016) 31 (12): 2872-2880.
- 43- Elyasi Gorji Z., et al. *Cloning and Expression of Iranian Turkmen-thoroughbred Horse Follicle Stimulating Hormone in Pichia pastoris*. Iran J Biotech. 2015 June;13(2): e1004.
- 44- Shahverdi A., et al. *Fertility and Flow Cytometric Evaluations of Frozen-thawed Rooster Semen in Cryopreservation Medium containing Low Density Lipoprotein*. Theriogenology. 2015 Jan 1;83(1):78-85.
- 45- Amiri Yekta A., et al. *Optimization of the electroporation conditions for transfection of human factor IX into the goat fetal fibroblasts*. Cell J. 2013; 14(4): 270-275.
- 46- Amiri-Yekta A., et al. *Production of Transgenic Goats Expressing Human Coagulation Factor IX in the Mammary Glands after nuclear transfer using transfected fetal fibroblast cells*. Transgenic Res (2013) 22:131–142.
- 47- Hajian M., et al. *“Conservation cloning” of vulnerable Esfahan mouflon (Ovis orientalis isphahanica): in vitro and in vivo studies*. European Journal of Wildlife Research. 2011. 57(4): 959-69.
- 48- Amiri-Yekta A., et al. *Bacterial expression and purification of C1C2 domains of human factor VIII*. Iran J Biotech. 2006. 4(2):104-11.

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## Books

- 1- **Molecular Biotechnology**, 2017.  
ISBN: 978-600-8486-015
- 2- **Application of bioinformatics in medical genetics**, 2016.  
ISBN: 978-600-322-043-0
- 3- **Application of transgenesis in reproductive biomedicine science**, 2016.  
ISBN: 978-964-6772-47-2
- 4- **Good Laboratory Practice and Biosafety**, 2015.  
ISBN: 978-600-94587-4-5
- 5- **Encyclopedia of Biotechnology and Genetics**, 2009.  
ISBN: 978-964-5515-032  
ISBN: 978-964-5515-063  
ISBN: 978-964-5515-070
- 6- **Textbook of biology**, Farhang publication, Tehran-Iran. 2006.  
ISBN: 964-8789-71-1

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## Patents and Gene submission

- Production of *pichia pastoris* cell line secreting Equus caballus follicle stimulating hormone, using new nucleotide variant of the beta chain, 2013.
- Gene submission at NCBI, EMBL. Equus caballus follicle stimulating hormone beta subunit (Beta-FSH) mRNA, complete cds. **ACCESSION: JX861871**. Dec 8, 2012.
- Production of DNA extraction training kit from different types of cells with gel electrophoresis package (without any toxic reagents), 2008.

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## Honors and Awards

- Ranked-Group B of Iran Science Elites federation in 2020.
- Ranked-Group A of Iran Science Elites federation in 2019.
- Winner of 8<sup>th</sup> Yazd International Congress & Student Award in reproductive Medicine, April-2019, Yazd-Iran
- Winner of 19<sup>th</sup> Royan International Research Award (RIRA) in the field of Reproductive Genetics, Aug-2018. Tehran-Iran.
- Outstanding researcher at Royan Institute, 2018.
- Outstanding researcher at Royan Institute, 2017.

- Production of first transgenic farm animals in Iran, 2009.
  - Outstanding researcher at Royan Institute, 2008.
  - Ranked 1<sup>st</sup> among B.Sc. graduates of cellular-molecular science-Microbiology, 2001.
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### **Teaching experiences** *(for Master and PhD student)*

- Human Molecular Genetics course. Royan Institute for Reproductive Biomedicine Research Center, Tehran-Iran, Since 2020.
  - Gene Therapy course. Royan Institute for reproductive biomedicine research center, Tehran-Iran, since 2019.
  - Genetic engineering course. Royan Institute for reproductive biomedicine research center, Tehran-Iran, since 2014.
  - Biotechnology course. University of Science and Culture, Tehran-Iran, since 2013.
  - The 4<sup>nd</sup> Royan international Summer School, August 10-15, 2013. Tehran-Iran.
  - Genetic engineering course. University of Science and Culture, Tehran-Iran, since 2012.
  - Training course on gene cloning and DNA analysis. Royan Institute, Tehran-Iran, since 2010.
  - Training course on introductory techniques in molecular biology. Royan Institute, Tehran-Iran, since 2010.
  - Training course on application of molecular biology techniques. Iranian bioresource center (IBRC). 2011-2012.
  - Training course on cloning and expression of recombinant proteins in bacterial systems. Iranian bioresource center (IBRC). 2011-2012.
  - Training course on application of molecular biology techniques. Iranian Acecr Branch of Olom Pezeshki. 2007-2011.
  - Training course on cloning and expression of recombinant proteins in bacterial systems. Iranian Acecr Branch of Olom Pezeshki. 2007-2011.
  - Workshop on cloning and expression of recombinant proteins in bacterial systems. Medical university of Kurdistan, MUK-Iran.2005.
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### **Supervisor/Advisor of the thesis**

	M.Sc. student	Ph.D. student	Post Doc. fellow
Supervisor	45	10	4
Advisor	25	5	-