

## SHAHRAM SAVAD

- MD. Ph.D. in Medical Genetics
- Certified Genetic Counselor
- CEO of Pars-Genome Genetics Lab
- CEO of Pars-Genome Genetic Counseling Center
- CEO of Gene Dorfam Pars Knowledge-Based Company
- Owner and Technical Manager of Nilou-Genome Genetics Lab
- Owner, Founder and Technical Manager of Pars-Genome Genetics Lab
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### PERSONAL INFORMATION

- Nationality: Iranian
- Date and Place of Birth: August 23, 1975 / Tehran, Iran
- Languages: English and Persian.

### MEMBERSHIPS

- Member of ASHG (American Society of Human Genetics)
- Member of ESHG (European Society of Human Genetics)
- Member of the Specialized Genetics Commission of Tehran Province General Office of Forensic Medicine
- Member of the specialized genetics commission of the Tehran province Welfare Organization

### SUCCESSSES

- Ranked 8th worldwide in the report of genomic variants registered on the website NCBI- NIH (ClinVar) of the United States ( [https://www.ncbi.nlm.nih.gov/clinvar/docs/submitter\\_list/](https://www.ncbi.nlm.nih.gov/clinvar/docs/submitter_list/) )
- Conducted the first-ever whole genome sequence of the coronavirus using the NGS method in Iran
- Pioneered the first NGS personalized cancer panel in Iran
- Reported the highest number of SMA (Spinal Muscular Atrophy) patients in the Middle East

- Launched the first NIPT (Non-Invasive Prenatal Testing) test in Iran
- Reported the largest number of amniocentesis cases in Iran
- Executed the largest number of NIPT and pregnancy screenings in Iran
- Served as the technical responsible for the only laboratory providing Next Generation Sequencing (NGS) services to the Pasteur Institute of Iran for corona vaccine research and development
- Introduced the genetic screening test for consanguineous marriage (ECS) based on the prevalence of hereditary diseases in the Iranian population for the first time in Iran
- Designed and developed the saliva collection tube for corona testing and DNA testing, the first of its kind in the Middle East
- Initiated genetic tests for hereditary cancers in Iran

### ABILITIES

- Possess more than 12 years of extensive experience in practicing and researching in the field of genetics
- Expertise in cytogenetics, molecular genetics, and modern diagnostic methods such as NGS, molecular and cytogenetic PND (Prenatal Diagnosis), and PGD (Preimplantation Genetic Diagnosis)
- Proficient in handling inquiries and effectively communicating with clinical colleagues and other healthcare professionals
- Vast medical knowledge of diseases and the ability to diagnose genetic causes of problems related to pregnancy, infertility, abortion, and cancers
- Proficient in using diagnostic methods and tests to diagnose genetic diseases and interpreting results conducted by genetic technologists
- Skilled in developing and devising new investigation strategies
- Strong knowledge of cellular and molecular biology
- Demonstrates superior problem-solving and decision-making skills
- Capable of effectively training subordinates

### EDUCATION & QUALIFICATIONS

- Ph.D. in Medical Genetics, Tehran University of Medical Sciences and Health Services, Iran (2007-2011)
- Certified Genetic Counselor from the Islamic Republic of Iran's Ministry of Health
- Certified Genetic Counselor from the Islamic Republic of Iran's Welfare Organization
- MD, Doctor of Medicine, Qazvin University of Medical Sciences & Health Services, Iran (1994-2001)
- Homeopathy course certification from the University of Tehran's Free Education Office (400 hours)
- Successfully passed the United States Medical Licensing Examination (USMLE) - Step 1

### ACHIEVEMENTS IN THE FIELD OF INTERESTS

- First-place winner in the 11th region Quran reading competition in Tehran in 1987.
- Swimming championship winner of Tehran province and recipient of a gold medal in a competition in 1991.
- Member of the swimming team of Qazvin University of Medical Sciences from 1994 to 2001.
- Silver medalist in the swimming competition of the Medical Council in September 2018.

### MANAGERIAL & ADMINISTRATIVE EXPERIENCE

- Co-owner, CEO, Director, and Technical Officer of Nilou-Genome Genetics Lab (from 2013 to now)  
<https://www.ncbi.nlm.nih.gov/gtr/labs/507598/>
- Owner, CEO, Founder, and Technical Officer of Pars-Genome Genetics Lab (from 2013 to now)  
<https://www.ncbi.nlm.nih.gov/gtr/labs/507685/>
- CEO of Gene Dorfam Pars Knowledge-Based Company
- CEO of Pars Genome Genetic Counseling Center
- Providing genetic counseling services at Omid Infertility Center (Tehran) (2014 to 2016)
- Providing genetic counseling services in Imam Khomeini Hospital (2013 to 2017)
- Providing genetic counseling services in Kamali Hospital (2012 to 2015)
- Providing genetic counseling services in Bahonar Hospital (2012 to 2016)
- Head of the genetics department of Mohebbe Yas hospital laboratory (2016 to 2017)

### COURSES & WORKSHOPS

- Genetic Counseling Training Course, Ministry of Health of the Islamic Republic of Iran, Department of Genetics (2019 - 2020)
- Introduction to the principles of quality management system in the medical diagnostic laboratory, Health Reference Laboratory, Quality Assurance Management Office, May 17, 2018.
- Fluorescence In Situ Hybridization (FISH) Workshop Department of Medical Genetics, University of Tehran, May 29-30, 2010.
- Practical Training Course on “Real-Time PCR” Pasteur Institute of Iran, November 8-9, 2009.
- 8th Bioinformatics Workshop Iranian Molecular Medicine Network, Pasteur Institute of Iran, January 11-13, 2009.
- Karyotype Internship Cancer Institute’s Genetics Department of Imam Khomeini Hospital Complex, June 2008 - January 2009.

- Genetic Counseling Training Course Welfare Organization of the Islamic Republic of Iran October 2008 – January 2009 (210 Hours)
- Scientific Writing (Basic and advanced) Workshop, Tehran University of Medical Sciences and Health Services, May 8-15, 2008.

### PRESENTATIONS

- The 2<sup>nd</sup> International Congress of Laboratory Diagnosis (As Speaker & Chairman of Medical Genetics Session), February 15-18, 2023
- The 10<sup>th</sup> Iran Congress of the Scientific Association of Women's Cancers, Tehran, February 22-24, 2023
- Cytogenetics (karyotype) and its applications, Baqiyatullah University of Medical Sciences, December 24, 2022
- The 17<sup>th</sup> Congress of Women and Midwifery, Tehran University of Medical Sciences, December 6- 9, 2023
- Genetic counseling and methods of preventing disabilities, July 19, 2022
- The 1<sup>st</sup> International Congress of Laboratory Diagnosis (As Speaker & Chairman of Medical Genetics Session), February 15-18, 2022
- Speech at Scientific Conference on Neurometabolic, December 19, 2019
- Shahid Beheshti University of Medical Sciences, Pediatric Nerve Research Center; December 19, 2019
- Speech in Congress of Genetic counseling and its role in the prevention of disabilities
- Cellular and Molecular Research Center of Iran University of Medical Sciences, December 5, 2019
- Speech in Iranian Congress of Obstetrics and Gynecology Iranian Scientific Association of Obstetricians and Gynecologists, October 8 – 11, 2019
- Speech in Congress of Women and Family Health Iranian Scientific Association of Midwifery; August 1 – 3, 2019
- Speech at Scientific Conference on HRT Challenges in Healthy Women and Cancer Patients; Iranian Scientific Association of Women's Cancers; July 25, 2019
- Speech at 31<sup>st</sup> Conference on Pediatrics Scientific center of Pediatric Medical Center of Tehran University of Medical Sciences; October 31 – November 3, 2019
- Speech in Congress of Minimally Invasive Methods of Obstetrics and Gynecology in Iran; Iranian Scientific Society of Minimally Invasive Surgery; December 18 – 21, 2018
- Speech in Periodical Scientific Conference on Perinatology Scientific center of Pediatric Medical Center of Tehran University of Medical Sciences; December 3, 2018
- Speech in Periodic Scientific Conference on Neurometabolic Diseases Shahid Beheshti University of Medical Sciences; October 18, 2018

- Speech in Periodic Scientific Conference on Neurometabolic Diseases Shahid Beheshti University of Medical Sciences; June 21, 2018
- Speech at One-day scientific conference on the latest first and second quarter screening protocols Organization of the Medical Council of the Islamic Republic of Iran, May 10, 2018
- Speech in Periodic Scientific Conference on Neurometabolic Diseases; Shahid Beheshti University of Medical Sciences; February 15, 2018
- Speech at International Congress of Biomedicine 2017 ICB Pasteur Institute of Iran; December 18, 2017
- Speech in Congress of Genetic counseling and its role in the prevention of disabilities; Cellular and Molecular Research Center of Iran University of Medical Sciences; November 1–2, 2017
- Speech in Iranian Congress of Obstetrics and Gynecology Iranian Scientific Association of Obstetricians and Gynecologists, October 10–13 , 2017
- Speech in Scientific Conference on Precancerous Stages of Ovaries, Tubes and Interstitial Tumors; Iranian Scientific Association of Women's Cancers; May 25, 2017
- Speech in Scientific Conference on Fetal Health Assessment; Alborz University of Medical Sciences, January 31, 2017
- Speech in Congress of Minimally Invasive Methods of Obstetrics and Gynecology in Iran; Iranian Scientific Society of Minimally Invasive Surgery, January 19 – 22, 2017
- Speech at Scientific Conference on Screening in the First and Second Trimesters of Pregnancy; Arak University of Medical Sciences, December 22, 2016
- Speech at Scientific Conference on Complete Screening During Pregnancy Alborz University of Medical Sciences; October 4, 2016
- Speech in Genetic counseling and its role in the prevention of disabilities Cellular and Molecular Research Center of Iran University of Medical Sciences; August 10 – 11, 2016
- Speech at Scientific Conference on Gynecological Diseases and Screening During Pregnancy; Organization of the Medical Council of the Islamic Republic of Iran, July 13, 2016

## PUBLICATIONS

- A comprehensive overview of SMN and NAIP copy numbers in Iranian SMA patients  
Shahram Savad, Mahmoud Reza Ashrafi, Niusha Samadaian, Morteza Heidari, Mohammad-Hossein Modarressi, Gholamreza Zamani, Saloomeh Amidi, Sarang Younesi, Mohammad Mahdi Taheri Amin, Pourandokht Saadati, Alireza Ronagh, Hossein Shojaaldini Ardakani, Solat Eslami & Soudeh Ghafouri-Fard  
Springer Nature, Scientific Reports, February 2023

- Extreme  $\beta$ HCG levels in first trimester screening are risk factors for adverse maternal and fetal outcomes  
Sarang Younesi, Laleh Eslamian, Nikta Khalafi, Mohammad Mahdi Taheri Amin, Pourandokht Saadati, Soudabeh Jamali, Payam Balvayeh, Mohammad-Hossein Modarresi, Shahram Savad, Saloomeh Amidi, Saeed Delshad, Fariba Navidpour, Bahareh Yazdani, Fatemeh Aasdi, Samira Chagheri, Yalda Mohammadi, Vajiheh Marsoosi, Ashraf Jamal & Soudeh Ghafouri-Fard  
Springer Nature, Scientific Reports, January 2023
- Clinical and Molecular Findings of Autosomal Recessive Spastic Ataxia of Charlevoix Saguenay: an Iranian Case Series Expanding the Genetic and Neuroimaging Spectra  
Mahmoud Reza Ashrafi, Pouria Mohammadi, Ali Reza Tavasoli, Morteza Heidari, Sareh Hosseinpour, Maryam Rasulinejad, Mohammad Rohani, Masoud Ghahvechi Akbari, Reza Azizi Malamiri, Reza Shervin Badv, Davood Fathi, Ali Zare Dehnavi, Shahram Savad, Ali Rabbani, Matthis Synofzik, Nejat Mahdieh, Zahra Rezaei  
Springer Nature, Scientific Reports, June 2022
- Incorporation of second-tier tests and secondary biomarkers to improve positive predictive value (PPV) rate in newborn metabolic screening program  
Sarang Younesi, Bahareh Yazdani, Mohammad Mahdi Taheri Amin, Pourandokht Saadati, Soudabeh Jamali, Mohammad-Hossein Modarresi, Shahram Savad, Saloomeh Amidi  
Journal of Clinical Laboratory Analysis, May 2022
- The Role of Thyroid Function Tests in the Diagnosis of Allan-Herndon-Dudley Syndrome Revisited: A Novel Mutation from Iran  
Shahab Noorian, Sepideh Hamzehlou, Ali Rabbani, Arya Sotoudeh, Kioumars Pour Rostami, Shahram Savad  
Basic and Clinical Neuroscience, July 2021
- Karyotype analysis of amniotic fluid cells and report of chromosomal abnormalities in 15,401 cases of Iranian women  
Sarang Younesi, Mohammad Mahdi Taheri Amin, Sedigheh Hantoushzadeh, Mohammad-Hossein Modarresi, Shahram Savad  
Springer Nature, Scientific Reports, September 2021

- A Family with a Novel X-linked Recessive Homozygous Mutation in ANOS 1 Gene (c.628\_629 del, p.1210fs) in Kallmann Syndrome Associated Unilateral Ptosis; A Case Report and Review of the Literature.  
Shahab Noorian, Shahram Savad, Armin Khavandegar, Mahnaz Jamee  
Science Direct; January 2021 AACE Clinical Case Reports
- Whole Exome Sequencing in Idiopathic Short Stature: Rare Mutations Affecting Growth  
Benyamin Hakak-Zargar, Shahab Noorian, Nami Mohammadian Khonsari, Shahram Savad  
Thieme; September 2020 Journal of Pediatric Genetics
- A novel pathogenic variant of BRAT1 gene causes rigidity and multifocal seizure syndrome, lethal neonatal  
Azam Pourahmadiyan, Morteza Heidari, Hossein Shojaaldini Ardakani, Shahab Noorian, Shahram Savad  
International Journal of Neuroscience; April 2020 International Journal of Neuroscience
- Fine-tuning of routine combined first- trimester screening: The ratio of serum free- beta-human chorionic gonadotropin (f  $\beta$  - hCG) to pregnancy associated plasma protein-A (PAPP-A) could improve the performance of Down syndrome screening program, a retrospective cohort study in Iran  
Sarang Younesi, Mohammad Mahdi Taheri Amin, Pourandokht Saadati, Mohammad-Hossein Modarresi, Shahram Savad  
Human Antibodies, March 2020
- Non-invasive prenatal test to screen common trisomies in twin pregnancies  
Mahtab Motevasselian, Soraya Saleh Gargari, Sarang Younesi, Shahram Savad  
Springer Nature; Molecular Cytogenetics 13(1), February 2020
- Whole Exome Sequencing in Idiopathic Short Stature: rare mutations affecting growth  
Shahab Noorian, Farzaneh Rohani, Shahram Savad, Kourosh Kabir, Nami Mohammadian Khonsari, Nima Ghanipour, Mehri Gholami, Hooshang Zaimkohan  
Research Square; November 2019
- A novel missense mutation of the HGD gene causes Alkaptonuria  
Shahab Noorian, Shahram Savad, Arya Sotoudeh  
Science Direct; September 2018 Meta Gene 18

- First Trimester Contingent Screening for Trisomy 21 by Fetal Nuchal Translucency and Maternal Serum Biomarkers and Maternal Blood Cell-Free DNA Testing  
Sarang Younesi, Shahram Savad, Soudeh Ghafouri-Fard, Mohammad Mehdi Taheri Amin  
Journal of Fetal Medicine, June 2018
- Association between the HLA-G0105N polymorphism and recurrent abortion in women  
Z. Hajifathaliya, Reza Najafipour, MH. Modarressi, Shahram Savad  
Journal of Qazvin University of Medical Sciences; February 2018
- Dizygotic Twins Concordant for Down Syndrome: Implication for Establishing a National Birth Defect Registry in Iran  
Shahram Savad, Sepideh Hamzehlou, Jila Ghaffourian Abadi  
Iranian Journal of Public Health; December 2016
- A novel nonsense mutation in the WFS1 gene causes the Wolfram syndrome  
Shahab Noorian, Shahram Savad, Davood Shah Mohammadi  
Journal of Pediatric Endocrinology and Metabolism; March 2016
- Personalized Evolutionary Hypothesis in Genomics and Auxiliary Lymph Node through Diverse Subtelomeric Signal Profile  
Parvin Mehdipor, Firoozeh Javan, Shahram Savad  
Wiley Online Library/ Cell Biology International January 2015
- Evaluation of in vitro Spermatogenesis System Effectiveness to Study Genes Behavior: Monitoring the Expression of the Testis Specific 10 (Tsga10) Gene as a Model  
Mohammad Miryounesi, Karim Nayernia, Maryam Beigom Mobasheri, Shahram Savad  
Archives of Iranian Medicine October 2014
- Balanced reciprocal translocation 5, 18: a case report  
Shahram Savad, Niusha Samadaian, Roza Azam, Vahid Nikoui, Mohammad Hossein Modarressi  
Tehran University Medical Journal; May 2014  
MiR-520d expression analysis in breast cancer  
Shahram Savad, Parvin Mehdipor, Hoda Shirdast, Ladan Nekooohesh, Leili Nekooohesh, Reza Shirkoohi, Vahid Nikoui, Mohammad Miryounesi, Mohammad Hossein Modarressi  
Tehran University Medical Journal, Volume: 71 Issue: 2, 2013, Pages: 90 – 95

- Expression of miR-520d in breast cancer  
Shahram Savad, Parvin Mehdipour, Hoda Shirdast, Ladan Nekooohesh  
Basic and Clinical Cancer Research Journal, July 2013
- MiR-520d expression analysis in breast cancer  
Shahram Savad, Parvin Mehdipour, Leili Nekooohesh, Reza Shirkoohi  
Tehran University Medical Journal, May 2013
- Expression of testis specific genes TSGA10, TEX101 and ODF3 in breast cancer  
Mehdi Dianatpour, Parvin Mehdipour, Karim Nayernia, Shahram Savad  
National Center for Biotechnology Information; November 2012 Iranian Red Crescent Medical Journal  
14(11)
- Expression analysis of MiR-21, MiR-205, and MiR-342 in breast cancer in Iran  
Shahram Savad, Parvin Mehdipour, Mohammad Miryounesi, Reza Shirkoohi, Mohammad Hossein  
Modarresi  
Korea Science March 2012 Asian Pacific journal of cancer prevention: APJCP 13(3)
- Protective effects of Fumaria vaillantii extract on carbon tetrachloride induced hepatotoxicity in rats  
S.R. Mortazavi, Marjan Nassiri-Asl, Z. Farahani-Nick, Shahram Savad  
Pharmacologyonline January 2007/3

## REFERENCES

- MH Modarresi, Professor of Human Genetics Tehran University of Medical Sciences & Health Services  
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- Parvin Mehdipour, Professor of Medical Genetics Tehran University of Medical Sciences & Health  
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