

Name: Majid

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Academic Rank: Professor

Educational Records:

Post.doc. Cloning and expression of the human inducible nitric oxide synthase gene (iNOS), Institut national de la santé et de la recherche médicale (INSERM) U75 CHU Necker Enfants Malades, Paris, France, 1995-1997

PhD. Molecular Biology of Eukaryotes, Option Molecular Virology, with Dr. Peter Sheldrick, Université de Paris VII, France, in collaboration with Dr. John Hay's Laboratory, The State University of New York at Buffalo, NY, USA, 1988-1993

MSc. Molecular Biology of Eukaryotes, Université de Paris VII, France, 1986-1988

BSc. Molecular Biology of Eukaryotes, Universite de Paris VII, France, 1985-1986

BSc. Nutritional Engineering, Tabriz University, Iran, 1975-1980

Short-Term Fellowships:

Yeast Molecular Genetics, International Center for Genetics Engineering and Biotechnology (ICGEB), Trieste, Italy, 2008-2009

Background:

Dr. Majid Sadeghizadeh is a Professor of Molecular Genetics, at the Department of Genetics, Tarbiat Modares University, Tehran.

After completing a B.Sc. and an MSc in Molecular Biology, he further continued his Ph.D. at the Université de Paris VII, France, with Dr. Peter Sheldrick. His PhD project was conducted in collaboration with Dr. John Hay at the State University of New York at Buffalo. Majid Sadeghizadeh's research there mainly focused on the transcription and replication of human herpes simplex viruses (HSV-1) as well as varicella zoster virus (VZV).

He then returned to Iran in 1994 and joined the Department of Genetics at Tarbiat Modares University (TMU) in Tehran where he was of the founders of the first graduate (PhD) program in Molecular Genetics in Iran. Since then, Professor Majid Sadeghizadeh has been a group leader and a lecturer at the Department of Genetics and trained many young researchers. Also he is a principle investigator at the new-born Department of Nanobiotechnology. His main fields of research include:

- Molecular diagnosis of human infectious viruses e.g. HSV, HBV and Adenoviruses.
- Production of recombinant proteins such as human IL-2 and thermostable DNA polymerases.
- Application of nano(bio)particles for gene and drug delivery purposes such as Dendrosomes.

And finally, more recently, Dr. Majid Sadeghizadeh and his team have been working on production of suicide constructs for targeting Cancer Stem Cells.

Professional Experiences:

- Professor of Molecular Genetics, Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, 2009-Present
- Associate Professor, Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, 2004-2009
- Assistant Professor, Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, 1994-2004

- Head of the Biology Group, Faculty of Biological Sciences, Tarbiat Modares University, 2003-2008
- Head of the Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, 1998-2005
- Assistant Professor, INSERM U75 (Post.doc) Necker Medical School, Paris, France, 1994-1996
- Research Associate, Dept of Microbiology, SUNY at Buffalo, USA, 1992-1993
- Research Associate, Uniformed Services University of the Health Sciences(USUHS), Bethesda, USA, 1990-1992
- Biotechnology Committee Member of the Ministry of Science, Research and Technology at Tarbiat Modares University, 2005-Present
- Research Committee member of the Biotechnology Center, School of Medical Sciences, Tarbiat Modares University, 2000-Present

Courses Taught:

- Advanced Molecular Genetics I&II, to PhD Students
- Advanced Genetic Engineering I&II, to PhD Students
- Biotechnology, to MSc and PhD Students
- Advanced Molecular Biology, to MSc and PhD Students
- Viral Genetics, to MSc Students
- Bacterial Genetics, to MSc Students
- Molecular Genetics, to MSc Students
- Genetic Engineering I&II, to MSc Students

- International Publications:

- 1- P. LING, P.R. KINCHINGTON, M. SADEGHI-ZADEH, W.T.RUYECHAN and J.HAY 1992, 'Transcription from Varicella-Zoster Virus gene 67 /Glycoprotein IV', *J. Virol*, Vol. 66, pp. 3690-3698
- 2- L. P. PERERA, J. D. MOSCA, M. SADEGHI-ZADEH, W.T.RUYECHAN and J.HAY 1992, 'The Varicella-Zoster Virus immediate early protein, IE62, can positively regulate its cognate promoter', *J. Virol*, Vol. 191, pp. 346-354
- 3- C. SABELLA, P.W.LOWRY, G.M.ABBRUZZI, C.M.KOROPCHANK, P.R.KINCHINGTON, M. SADEGHI-ZADEH, W.T.RUYECHAN, J.HAY and A.M.ARVIN 1993, 'Immunization with the immediate-early tegument protein (Open Reading Frame 62) of Varicella-Zoster Virus

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- 4- M.SADEGHI-ZADEH, J.P.KOLB, D. GEROMIN, R.D'ANNA, B.DUGAS, C.MARSAC, and P.D' alessio 2000, 'Regulation of ICAM expression on human endothelial cells by hydrogen peroxide involves inducible NO synthase ', *Journal of leukocyte Biology*, Vol. 67, pp. 327-334
 - 5- F. MEHRAN, H.AKRAMI, M.NOORI-DALOII, and M.SADEGHI-ZADEH 1999, 'Cloning and expression of a human interferon $\alpha 2$ gene in E.coli', *J. of sciences, islamic republic of Iran*, Vol. 10, No. 2, pp. 85-92
 - 6- M. M. Yaghoobi, M. Sadeghizadeh, H. Naderi-Manesh, M. R. Noori-Daloii 2004, 'Varicella Zoster Virus(VZV) origin-dependent plasmid replication in the presence of the four overlapping cosmids comprising the complete genome of VZV', *Journal of Science, IR of Iran* , Vol. 15, No. 1, pp. 21-26
 - 7- M.N.Sarbolouki, M.Sadeghizadeh, M.M.Yaghoobi, A.Karami, T.Lohrasbi 2001, 'DENDROSOMES: A novel family of vehicles for transfection and therapy.', *J. of Chemical Technology and Biotechnology.*, pp. 919-922
 - 8- H.Saderi, M.H.Roustai, F.Sabahi, M.Sadeghizadeh, P.Owlia, J.C.De Jong 2003, 'Incidence of enteric adenovirus gastroenteritis in Iranian children', *J.Clon.Virol*, Vol. 24, pp. 1-5
 - 9- M.Ann Arvin, M.Sharp, M.Moir, P.R.Kinchington, M.Sadeghizadeh, W.T.Ruyechan and J.Hay, 2003, 'Memory cytotoxic T cell response to viral tegument and regulatory proteins encoded by open reading frames 4, 10, 29 and 62 of Varicella-Zoster virus', *Viral Immunology*, Vol. 15, No. 3, pp. 507-516
 - 10- M.Ebrahimi, M.Sadeghizadeh, M.R.Noori-Dalooii 2003, 'Expression of inducible nitric oxide synthase gene (iNOS) stimulated by hydrogen prooxide in human endothelial cells', *Journal of Science, IR of Iran* , Vol. 13, pp.
 - 11- R.H.Sajedi, H.Aminzadeh, H.Naderimanesh, M.Sadeghizadeh, H.Abdolhay, M.Naderimanesh 2003, 'Genetic variation within and among Rainbow Trout, *Onchorhynchus mykiss*, Hatchery population from Iran assessed by PCR-RFLP analysis of mitochondrial DNA segment', *J. of Food science*, Vol. 68, pp.
 - 12- M.R. Noori-Daloii, Z.Hajebrahimi, L.Najafi, S.M. Ganji and M.Sadeghizadeh, 2004, 'Molecular identification of the most prevalent mutation of glucose-6-phosphate dehydrogenase (G6PD) gene in deficient patients in Gilan Province', *Journal of Science, IR of Iran* , pp. 327-331
 - 13- M.M.Yaghoobi, M.Sadeghizadeh, H.Naderi-Manesh, M.R.Noori-Daloii 2005, 'Varicella Zoster Virus(VZV) origin-dependent plasmid replication in the presence of the four overlapping cosmids comprising the complete genome of VZV', *Journal of Science, IR of Iran* , Vol. 1, No. 15, pp. 21-26
 - 14- F.Rhbarizadeh, M.J.Rasaee, M.Forouzandeh, A.A.Allameh, S.A.Nararg and M.Sadeghizadeh 2005, 'Induction of immune response in camelus bactrianus and camelus dromedaries against MUC-1 peptide produced heavy-chain antibodies with efficient combining properties', *Journal of Camel Practice and Research*, Vol. 1, No. 11, pp. 1-9
 - 15- N.K.Tafreshi, M.Sadeghizadeh, S.A. Bovil-Oliaee, M.Ahadi, I.Jahanzad 2006, 'Development of Multiplex Nested PCR-Method for Detection and Identification of Major Human Herpes Viruses in CNS Infection', *J Clin. Virol*, Vol. 4, No. 32, pp. 318-324
 - 16- F.Behzadian, F.Sabahi, M.Karimi, M.Sadeghizadeh, N.Maghsoudi, R.Sarami, L.Shahinsaz, 2006, 'Molecular phylogenetic analysis of Iranian HDV, complete genome, ', *Virus Genes*, Vol. 3, No. 30, pp. 383-393
 - 17- F.Rahbarizadeh, M.J.Rasaee, M.Forouzandeh, A.A.Allameh, R.sarami, h.naziri and M. Sadeghizadeh 2006, 'The production and characterization of novel heavy-chain antibodies against the tandem repeat region of MUC1 mucin', *Immunological Investigation*, No. 34, pp. 431-452
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- 18- T.Bamdad, M.H.Rostaee, M.Sadeghizadeh, F.Mahbodi, A.Kazemnejad, H.Soleimanjahi 2006, 'Immunogenecity and protective effect of a DNA construct encoding certain neutralizing epitops of herpes simplex virus type-1 glycoprotein B', *Folia Biologica (Praha)*, No. 51, pp. 109-113

- 19- R.Masoudi, M.Sadeghizadeh, M.H.Roostaee 2006, 'A preliminary study on the molecular identification of herpes simplex virus type 1 in Iranian population', *Journal of Science, I.R.I* , No. 16, pp. 125-129

- 20- F.Moradian, K.Khajeh, H.Naderi-Manesh, R.Ahmadvand, R.H.Sajedi and M.Sadeghizadeh 2007, 'Thiol-dependent serin alkaline protease from *Bacillus* sp. HR-08 and KR-8102: isolation, production and characterization', *Applied Biochemistry and Biotechnology*, No. 134, pp. 77-87

- 21- N.Abolhassani, M.Sadeghizadeh, M. Sadeghizadeh, H.Rafati 2007, 'Comparative molecular PCR-RFLP study of native herpes simplex virus type1 (HSV-1) with KOS strain', *Iranian Biomedical Journal*, Vol. 10, No. 3, pp. 157-161

- 22- M.Nikkhah, H.Naderi-Manesh, M.Taghdir, M.Talebzede, M.Sadeghizadeh, J.Schaller, M.N.Sarbolouki 2007, 'cDNA cloning, sequence analysis and molecular modeling of a new peptide from the Scorpion *Buthotus saulcyi* venom, ', *Journal of Biochemistry and Molecular Biology*, Vol. 39, No. 3, pp. 284-291

- 23- A.R.Emamzadeh, S.Hosseinkhani, M. Sadeghizadeh, M.Nikkhah, M.J.Chaichi, M.Mortazavi 2007, 'cDNA cloning, expression and homology modeling of a luciferase from the firefly *Lampyriodea maculate*', *Journal of Biochemistry and Molecular Biology*, Vol. 39, No. 5, pp. 578-585

- 24- M.A.Ahadi, M.Sadeghizadeh, K.Gharagozli, M.Houshmand 2006, 'Confirmation of R82Q mutation in g2 sub-unit of gamma amino butyric acid receptor in an Iranian family', *Pakistan Journal of biological science*, Vol. 9, No. 14, pp. 2704-2707

- 25- K.M. Khalaj, M.Sadeghizadeh, Kh.Khajeh, H.Naderi-Manesh, A.M.Ahadi, A.Emamzadeh, Cloning 2007, 'sequence analysis and three-dimensional structure prediction of DNA pol I from thermophilic *Geobacaciilus* sp',) *Applied Biochemistry and Biotechnology*, No. 142, pp. 200-208

- 26- G. Bahramali, M. Sadeghizadeh, S. Amini-Bavil-Olyae, S-M Alavian, A. Behzad-Behbahani, A. Adeli, M-R Aghasadeghi, S. Amini, F. Mahboudi 2008, 'Clinical, virological and phylogenetic features of hepatitis B infection in Iranian patients', *World J Gastroenterol* , Vol. 5, No. 3, pp. 519-521

- 27- P. Gill, A-H Alvandi, H. Abdul-Tehrani, M. Sadeghizadeh 2008, 'Colorimetric detection of *Helicobacter pylori* DNA using isothermal helicase-dependent amplification and gold nanoparticle probes', *Diag Microbiol Infect Dis* , Vol. 62, No. 2, pp. 119-124

- 28- M. Shavandi, M. Sadeghizadeh, Kh. Khajeh 2009, 'Biosulfurization of dibenzothiophene by recombinant *Gordonia alkanivorans* RIPI90A', *Bioresource Technology*, Vol. Bioresource technology, No. 100, pp. 475-479

- 29- M R. Abbaszadegan, N. Jafarzadeh, M. Sankian, A. Varasteh , M. Mahmoudi, M. Sadeghizadeh, Khatami F., Mehramiz N 2008, 'Truncated MTA-1: A Pitfall in ELISA-Based Immunoassay of HTLV-1 Infection', *J. of Biomedicine and Biotechnology* , Vol. Article ID 846371, pp.

- 30- M. Sadeghizadeh, B. Ranjbar, M. Damaghi, L. Khaki, M N. Sarbolouki 2008, 'Dendrosome as novel gene porter III ', *J. of Chemical Technology and Biotechnology*, Vol. 83, No. 6, pp. 912-920

- 31- N.K. Tafreshi, M. Sadeghizadeh, S. Hosseinkhani, M., Ranjbar, B., Naderimanesh, H 2009, 'Site-directed mutagenesis of firefly luciferase: Implication of conserved residue(s) in bioluminescence emission spectra among firefly luciferases', *Biochemical Journal*, Vol. 15, No. 412, pp. 27-33

- 32- J T. Afshari, Z. Rezaieyazdi, F. Shoja-Taheri, and M. Sadeghizadeh 2007, 'The role of HLA-DQ1 alleles in susceptibility to rheumatoid arthritis', *APLAR J. of Rheumatology*, Vol. 10, No. 3, pp. 209-213

- 33- F. Behzadian, F. Sabahi, M. Sadeghizadeh, N. Maghsoudi 2007, 'In vitro Replication of Hepatitis D Virus Using a New Construct Containing a cDNA Dimer of HDV Genome', *Intervirology*, Vol. 50, pp. 393-387

- 34- A. Nikraves, R. Dryselius, L. Faridani, G. Shan, M. Sadeghizadeh 2007, 'Antisense PNA accumulates in E.coli and mediates a long post-antibiotic effect ', *Molecular Therapy*, Vol. 15, No. 8, pp. 1537-1542

- 35- Pooria Gill, Mostafa Ghalami, Amir Ghaemi.Nader Mosavari, Hossein Abdul-Tehrani, Majid Sadeghizadeh 2009, 'nanodiagnostic method for colorimetric detection of Mycobacterium tuberculosis 16S rRNA', *Nanobiotechnol*, Vol. published online, pp.

- 36- M.Ebrahimi, M.Sadeghizadeh and M.R Noori-Daloii 2002, ' Expression of inducible nitric oxide synthase gene (iNOS) stimulated by hydrogen peroxide in human endothelial cells ', *Journal of Science IR.I*, Vol. 1, No. 13, pp. 15-18

- 37- Sara Gharavi, Majid Sadeghizadeh, Saman Hosseinkhani and Farzaneh Sabahi 2007, 'A Study of Varicella Zoster virus Glycoprotein C Regulatory Region Response to Viral Activators in vitro', *Pakistan Journal of Biological science* , Vol. 13, No. 10, pp. 2140-2145

- 38- Keivan Zandi, Mohammad Hassan Roostaei, Majid Sadeghizadeh, Mohammad Javad Rasaee, Reza Hassan Sajedi & Hoorieh soleimanjahi 2007, 'Production of recombinant gG-1 protein of herpes simplex virus type1 in a prokaryotic system in order to develop a type-specific enzyme-linked immunosorbent assay kit', *FEMS Immuno Med Microbiol*, No. 50, pp. 319-323

- 39- A. Aleyasin, A.M Mobarez, M.sadeghizadeh, R.Hosseini Doust, N.Khoramabadi 2007, 'Resistance to vancomycin in enterococcus faecium and faecalis clinical isolates', *Pak J Med Sci*, Vol. 23, No. 3, pp. 390-393

- 40- Roohollah Nakhaei Sistani, Majid Sadeghizadeh, Hourieh Sadari, Narges Kharazani Tafreshi, Mehrdad Behmanesh, Hadi Shirzad 2007, 'Detection of types 40 and 41 adenoviruses in stool samples of diarrheal children by solid phase PCR', *Iranian Journal of Biotechnology*, Vol. 5, No. 1, pp. 42-46

- 41- Sabri SH, Ghaffari H, Sadeghizadeh M, Alimoghaddam K, Ghavamzadeh A 2005, 'Quantitative Analysis of Epstein-Barr Virus DNA Load in Bone Marrow Transplant Recipients By Using Real-Time PCR', *IJHOBMT*, Vol. 2, No. 6, pp. 27-29

- 42- A.Nikraves, M.Sadeghizadeh, M.Behmanesh, L.Good 2009, 'Cellular morphology and immunologic properties of Escherichia coli treated with antimicrobial antisense peptide nucleic acid', *Iranian Journal of pathology*, Vol. 4, No. 1, pp. 13-18

- 43- Ali mohammad Ahad, Majid Sadeghizadeh, Masoud Houshmand, Kurosh Gharagozli, Mohammad Mehdi Banoei, Mehdi Shafa Shariat Panahi 2008, 'An A8296G mutation in the MT-TK gene of a patient with epilepsy -a disease-causing mutation or rare polymorphism?', *Neurologia i Neurochirurgia Polska*, Vol. 42, No. 3, pp. 1-4

- 44- Ehsan Farashahi Yazd, Majid Sadeghizadeh, Saman Hosseinkhani, Mohammad Khalaj-Kondori, Rahman Emamzadeh , 'Molecular Cloning, Expression and sequence analysis of DNA Polymerase 1 from an Iranian thermophilic bacterium, Bacillus sp. G (2006)', *Journal of Iranian Chemical Society*, pp. Under Publication

- 45- Majid Sadeghizadeh , Rasool Asghari-Zakaria, Alireza Panahi 2008, 'Comparative study of chromosome morphology in Silybum marianum ', *Cytologia*, Vol. 73, No. 3, pp. 327-332

- 46- Ali moradi, Saman Hosseinkhani, Hossein Naderimanesh, Majid Sadeghizadeh, Bagher Said Alipour 2009, 'Effect of charge distribution in a flexible loop on the bioluminescence color of firefly luciferase', *Biochemistry*, Vol. 48, No. 3, pp. 575-582

- 47- R. J. Heinrich, A.A. Sabour, Majid Sadeghizadeh, A.A. Moosavi-Movahedi 2008, 'Sequence refinement of the human tyrosinase clone (Oculocutaneous Albinism OCA1A)', *JOURNAL OF THE IRANIAN CHEMICAL SOCIETY*, Vol. 5, No. 3, pp. 519-521
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- 48- Leila Hassani, Bijan Ranjbar, Mahmoud Tavallaee, Majid Sadeghizaeh , 'Identification of a Molten Globule like state in Hc-N fragment of Botulinum Neurotoxin A:', *Protein & Peptide Letters*, pp. Under Publication
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- 49- S.Irani, M. Monajjemi, Majid Sadeghizadeh, M. Heshmat, T. Nejadi-Sattari 2008, 'Investigation of solvent effect on CUA codon mutation: NMR shielding study', *Journal of Physical and theoretical chemistry*, Vol. 5, No. 1, pp. 29-35
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- 50- Khatami M, Houshmand M, Sadeghizadeh M, Eftekharzadeh M, Heidari MM, Saber S, Banihashemi K, Scheiber-Mojdehkar B , 'Accumulation of mitochondrial genome variations in Persian LQTS patients: a possible risk factor?', *Cardiovasc Pathol*, pp. Under Publication
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- 51- NOORMOHAMMADI Zahra ; HOSSEINI-MAZINANI Mehdi ; TRUJILLO Isabel ; RALLO Luis; BELAJ Angelina ; SADEGHIZADEH Majid 2007, 'Identification and classification of main Iranian olive cultivars using microsatellite markers', *HORTScience*, Vol. 42, No. 7, pp. 1-6
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- 52- Narges Kh. Tafreshi, Saman Hosseinkhani, Majid Sadeghizadeh, Mehdi Sadeghi, Bijan Ranjbar and Hossein Naderi-Manesh 2006, 'The Influence of Insertion of a Critical Residue (Arg356) in Structure and Bioluminescence Spectra of Firefly Luciferase', *The Journal of Biological Chemistry (JBC)*, Vol. 282, No. 12, pp. 8641-8647
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