

CURRICULUM VITAE

Mohammad Amin Moosavi, (BSc., MSc., Ph.D)



I. BIOGRAPHICAL DATA:

Name: Mohammad Amin Moosavi

Present rank: *Assistant Professor*

Academic address:

-Department of Molecular Medicine, National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran.

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URL: <http://scholar.google.com/citations?user=cJTfmAUAAAAJ&hl=en>
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<https://ir.linkedin.com/in/aminmoosavi>

II. EDUCATION:

- **2000-2006** **Ph.D in Biochemistry**, *Institute of Biochemistry and Biophysics (IBB), The University of Tehran, Tehran, Iran.*
Thesis entitled "Study of apoptotic and differentiating effects of 3-hydrogenkwadaphnin, a novel inosine 5'-monophosphate dehydrogenase inhibitor isolated from *Dendrostelle Lessertii*, in human leukemia cells". (*Grade 19.90/20*),
Supervised by Prof. Yazdanparast R.
- **1998-2000** **M.Sc. in Molecular and cell Biochemistry**. *The University of Tarbiat Modarres, Tehran, Iran.*
Thesis entitled "Cloning, expression and purification of N-terminal peptide from Glu-plasminogen and analysis of its interaction with mAb A1D12". (*Grade: 19.57/20*),
Supervised by Prof. Sadeghizadeh M and Dr. Mirshahi M.
- **1994-1998** **B.Sc. in Biology**. *The University of Tabriz, Tabriz, Iran.*
(*Grade: 16.08/20*).

III. ACADEMIC APPOINTMENTS

- **Oct 2016-now** **Visiting academics (nil-salaried appointment)** at Department of Human anatomy and Cell Science, Rady Faculty of Health Science, College of Medicine, Manitoba University, Winnipeg, Canada.
- **2013-Now** **Assistant Professor** at National Institute of Genetic Engineering and Biotechnology, Tehran, Iran.
- **2012-2013** **Post-doctoral Researcher** at Apoptosis Research Centre, National University of Ireland, Galway, Ireland. (*Prof. Afshin Samali's Group*).
- **2011-2012** **Principle Investigator (nil-salaried, part time)** at Hematology Oncology Research Center, Tabriz University of Medical Science, Iran.
- **2007-2012** **Assistant Professor** at Department of Animal Biology, Faculty of Natural Science, Tabriz University.

IV. AWARDS AND HONORS

- **2014** -**Distinguished Award** for “International Collaboration for Applied Research Development (ICARD)”, Ministry of Science, Research and Technology of Iran.
- **2011** -**Distinguished teaching award** as the best faculty member of Tabriz University.
- **2011** -**Top advisor award** for Student's Scientific Association, The University of Tabriz, Iran.
- **2010-11** -**Gold (Team) and Silver (Single) medals at first and Second Iranian Chess Olympiad of University Staffs** at North West of Iran.
- **2007** -**KSBMB travel/fellowship award** from 19th Federation of Asian-Pacific Biochemistry and Molecular Biology Conference, Seoul, Korea.
- **2007** -**Outstanding Doctoral Graduate Award** as the **first rank** among all Ph.D. dissertations of Iran in the field of basic science between 2005-2007, awarded by Jahad Daneshgahi.
- **2006** -**Awarded for the best authors of “Biological Book of Year”** in Student 9th Book Festival of Iran. **Book Title** “Molecular Cell Biology and Genetics Engineering”.
- **2006** -**IUBMB young scientist award** from International Union of Biochemistry and Molecular Biology (IUBMB), Kyoto, Japan.
- **2005** -**Razi young researcher award** by Iranian Society of Biochemistry at 8th Internal and 1st International Congress of Biochemistry, Tehran, Iran.

V. TEACHING ACTIVITIES

- **2013-now** -**National Institute of Genetics Engineering and Biotechnology.**
Courses Taught as Co-instructor: M.Sc. **students:** *Oncology, Advanced Molecular Biology.*

Ph.D. students: *Advanced Molecular Genetics (cell death mechanisms).*

- **2013-now** -Azad University of Tehran, Pharmaceutical Sciences Branch.

Courses taught as primary instructor for M.Sc. students:

Molecular Mechanism of Cancer, and Advanced Molecular Biology.

- **2007-2012** -Tabriz University, Iran.

Courses taught as primary instructor for B.Sc. and M.Sc. students:

Hematology, General Biochemistry, Cell signaling in Cancer, and Molecular Cell biology (Experimental and theoretical).

VI. SUPERVISING/ADVISING ACTIVITIES

Supervisor:

Ph.D. students: 2

MS.c students: 9

Advisor:

Ph.D. students: 2

VII. PROFESSIONAL ACTIVITIES

i. **Journal reviews:**

- **2014-17** *Scientific reports, Journal of Cellular and Molecular Medicine, International Journal of Cell Biology, Cell Death & Disease, Iranian Biotechnology Journal, Austin therapeutics.*
- **2013** **Assistant** in reviewing papers for *Nature reviews, Toxicology and Applied Pharmacology, Cancer Research and PLoS One.*

ii. **Journal editorial boards:**

- **2014-now** *Austin Therapeutics*

iii. **Workshops:**

- **2014-2015** **Organizer** of 1st and 2nd workshop on “**Molecular Techniques of RNA and Real Time PCR**” at National Institute of Genetic Engineering and Biotechnology, Iran.
- **2009 -2010** **Organizer** of 1st and 2nd workshops on “**Stem Cell Isolation, RT-PCR and western blotting techniques in molecular biology**” at Tabriz University, Iran.

iv. Membership in professional and learned societies and committees:

- **2011-now** Member of scientific board of Iran's Biological Diversity.
- **2007, 2014** Member of European Cell Death organization (ECDO).
- **2008-2010** Member of Iranian Biochemical society.
- **2004-2006** Member of European Hematology Association (EHA).

VIII. ADMINISTRATIVE RESPONSIBILITIES

- **2008-2010** Director of Gifted & Talented students department. Tabriz University.

IX. RESEARCH SUPPORTS AND FUNDING (As Principle Investigator):

- **2015-2017** **Funding Agency:** National Institute for Medical Research Development.
- **2015-2017** **Funding Agency:** National Institute of Genetics Engineering and Biotechnology **2013-2016** **Funding Agency:** International Cooperation for Applied Research Development, Ministry of Science.
- **2013-2015** **Funding Agency:** President Office Grants for Supporting Innovative Researchers of Iran.
- **2010-2012** **Funding Agency:** Hematology-Oncology Research Center, Tabriz University of Medical Science.
- **2010-2012** **Funding Agency:** Hematology-Oncology Research Center, Tabriz University of Medical Science.

X. PUBLICATIONS/PRESENTATIONS

i. International peer reviewed papers:

-Review papers:

1. Mokarram MP, Albooski A, Zarghooni M, **Moosavi MA**, Sepehr, Z, Chen QM, Hudecki A, Sargazi A, Alizadeh J, Rezaie Moghaddam A, Hashemi M, Movassagh H, Owji A, Klonisch T, Los MJ, Ghavami S. *New Frontiers in Treatment of Colorectal Cancer therapy: Autophagy and Unfolded protein Response as Promising Targets. Autophagy, Accepted, November 2016 (IF 11.57, Q1).*

-Research papers (* Corresponding author):

20. Mahdavi M Lavi MM, Yekta R, **Moosavi MA**, Nobarani M, Balalei S, Rashidi. Evaluation of the cytotoxic, apoptosis inducing activity and molecular docking of spiroquinazolinone benzamide derivatives in MCF-7 breast cancer cells.MR. **Chem Biol Interact. 2016, S0009-2797(16)30426-4 (IF 2.57, Q2).**

19. **Moosavi MA***, Sharifi M, Moasses-Ghafari S, Mohammad-Alipour M, Khataee, A, Rahmati M, Los MJ, Klonisch T, Ghavami S*. Photodynamic N-TiO₂ nanoparticle treatment induces ROS-mediated autophagy and terminal differentiation of K562 cells. **Scientific Reports. (2016), Oct 4;6:34413. (IF 5.2, Q1).**

18. Akbarzadeh MM, Jasemi NK, Ktuli FH, Yazdani F, Asadollahi K, Sartipnia N, Saboury AA, **Moosavi MA**, Riazi GH, Falahati M. A Bio-Mimetic Zinc/Tau Protein as an Artificial Catalase. *Int J Biol Macromol*. 2016 Feb 18. pii: S0141-8130(16)30145-3. (IF 2.8, Q2).
17. Nazmi F, **Moosavi MA***, Rahmati M, Hoessinpour-Feizi MA. Modeling and structural analysis of human Guanine nucleotide-binding protein-like 3, nucleostemin. *Bioinformation*. 31 (2015), 353-8. (IF 0.5).
16. **Moosavi MA*** and Rahmati MA (*Editorial*). Titanium Dioxide (TiO₂) Nanostructures as an Ideal Tumor-Targeted Drug Delivery System. *Austin Therapeutics* 2 (1), 2016.
15. Rahmati M, **Moosavi MA***, Zarghami N. Nucleostemin Knocking-down causes cell cycle arrest and apoptosis in human T-cell acute lymphoblastic leukemia MOLT-4 cells via p53 and p21 Waf1/Cip1 up-regulation. *Hematology*, (2014) Dec;19(8):455-62.. (IF 1.54, Q3).
14. Seyed-Gogani N, Rahmati M, Zarghami N, Asvadi-Kermani I, Hoseinpour-Feyzi MA, **Moosavi MA***. Nucleostemin depletion induces post-g1 arrest apoptosis in chronic myelogenous leukemia k562 cells. *Adv Pharm Bull*. 4, (2014), 55-60. (IF 1.59, Q1).
13. **Moosavi MA**, Moasses ghafary S, Rahmati M, Asadi M. Growth inhibitory and apoptotic effects of carbenoxolone in human leukemia K562 cell Line. *Daru-J Pharm Res* 19, (2011), 455-61. (IF 1.65, Q2).
12. **Moosavi MA**, and Yazdanparast R. Distinct MAPK signaling pathways, p21 up-regulation and caspase-mediated p21 cleavage establishes the fate of U937 cells exposed to 3-hydrogenkwadaphnin: differentiation versus apoptosis. *Toxicol Appl Pharmacol* 230, (2008):86-96. (IF 4.438, Q1).
11. **Moosavi MA**, and Yazdanparast R. ERK1/2 inactivation and p38 MAPK-mediated caspase activation during GTP-mediated terminal erythroid differentiation of K562 cells. *Int J Biochem Cell Biol*, 39, (2007), 1685-97. (IF 4.956).
10. **Moosavi MA**, and Rahmati M. Retrodifferentiation: a potential strategy in stem cell therapy of leukemia. *Med Hypotheses* 67, (2007) 1472-3. (IF 1.389, Q2).
9. **Moosavi MA**, and Yazdanparast R. GTP induces S-phase arrest and inhibits DNA synthesis in K562 cells but not in human normal PBL cells. *J Biochem Mol Biol (BMB reports)*, 39(2006) 492-501. (IF 2.167, Q2).
8. **Moosavi MA**, Yazdanparast R, and Lotfi A. 3-hydrogenkwadaphnin induces monocytic differentiation and enhances all-trans retinoic acid mediated granulocytic differentiation of NB4 cells. *J Biochem Mol Biol (BMB reports)*, 39 (2006) 722-729. (IF 2.167, Q2).
7. **Moosavi MA**, and Yazdanparast R. Differentiation therapy as an effective strategy for the treatment of chronic myelogenous leukemia. *Med Hypotheses*, 67, (2006) 1470-1. (IF 1.389, Q2).
6. Yazdanparast R, **Moosavi MA**, and Mahdavi M. GTP induces differentiation and apoptosis in human leukemia KG1 and U937 cells. *Acta. Pharm. Sin*, 27 (2006) 1175-84. (IF 3.16, Q1).
5. Yazdanparast R, Mahdavi M, and **Moosavi MA**. Induction of Differentiation and Apoptosis in three Human Leukemia Cell Lines by a new compound from *Dendrostellera lessertii*. *Acta Biochim Biophys Sin (Shanghai)*, 38 (2006) 477-83. (IF 2.12, Q2).

4. **Moosavi MA**, and Yazdanparast R. Daphnane-type diterpene esters as powerful weapons for the treatment of leukemia. **Med Hypotheses**, 67, (2006) 1472-3. (IF 1.389, Q2).
3. **Moosavi MA**, Yazdanparast R, Sanati H, Sarraf Nejad A. 3-hydrogenkwadaphnin targets inosine monophosphate dehydrogenase and triggers post-G1 arrest apoptosis in human leukemia cell lines. **Int J Biochem Cell Biol**, 37 (2005), 2366-79. (IF 4.956, Q1).
2. Yazdanparast R, **Moosavi MA**, and Sanati H. 3-hydrogenkwadaphnin induces differentiation and apoptosis in HL-60 cell line. **Planta Medica**, 71 (2005), 112-7. (IF 2.369, Q1).
1. **Moosavi MA**, Yazdanparast R and Sanati H. Anti-proliferative and cytotoxic effects of 3-hydrogenkwadaphnin was reduced by guanosine in K562 and Jurkat cell line. **J Biochem Mol Biol (BMB reports)** 38 (2005) 391-8. (IF 2.167, Q2).

ii. National peer reviewed papers as corresponding author:

10. Sharifi M, **Moosavi MA**, Naji T. Anti-oxidative and anti-leukemic effects of *Lithospermum Officinal* in human acute promyelocytic leukemia. **The Quarterly Journal of Animal Physiology and Development**, (2016), accepted.
9. Yavari P, **Moosavi MA**, Naji T. Effects of N-doped Titanium Dioxide (TiO₂) in human skin cancer cell line. **Journal of Zanjan University of Medical Science**, (2015) accepted.
8. Rahmati M, **Moosavi MA**, Nourashrafeddin A, Hojabri Z, Hasani A, Zarghami N. Comparative effects of Nucleostemin silencing in human Molt-4 and Jurkat leukemia T-ALL cells. **Journal of Paramedical Sciences**, (2015), 6: 67-73.
7. **Moosavi MA**, Khataei A, Moasses S. Photocatalytic effects of N-doped Titanium Dioxide (TiO₂) on proliferation of human leukemia K562 cells. **Scientific Journal of Kurdistan University of Medical Sciences**, (2013), 67: 47-58.
6. Ghanbarvand F, **Moosavi MA**, Dehnad AR. Apoptotic and differentiating effects of acetonitrile extract of *Streptomyces calvus* in NB4 and K562 human leukemia cell lines. **Cell Journal**, (2011) 12: 45-7.
5. Abasalti S, **Moosavi MA**, Mahdavi M, Riaz G. Induction of differentiation and apoptosis in leukemia cells upon exposure to a derivative from 4-aryl-4H chromenes family. **Yazd University of Medical Sciences Journal**, 17, (2011): 36-53.
4. **Moosavi MA**, Seyed Gogani NM, Asadi A. Survivin-2a, a new survivin splice variant significantly expressed in accelerated/blastic phase of chronic myeloid leukemia patients of Iran. **Scientific Journal of Kurdistan University of Medical Sciences**, (2011) 16: 27-37.
3. **Moosavi MA**, Ahmadi A and Yazdanparast R. Effects of adenosine 5-triphosphate in cell cycle of KG1 cells. **Scientific Journal of Qom University**, (2011) 5: 45-54.
2. Ahmadi A, **Moosavi MA**, Hosseinpour Feizi MA. The inductive effect of boric acid on growth inhibition and differentiating changes of human chronic myeloid leukemia K562 cell line. **Arak University of Medical Sciences Journal**, (2010) 13:1-11.
1. **Moosavi MA**, Moasses ghafari F, Asadi M, Asvadi-Kermani I. Inhibition of survivin and its anti-apoptotic splice variant sur-ΔEx3 genes expression by carbenoxolone in K562 Cells. **Arak University of Medical Sciences Journal**, (2010) 13: 22-33.

iii. Books Chapters:

Moosavi MA, Rahmati MA, Ashtari N, Alizadeh J, Batahi Z, Ghavami S. Development of cerebellum from molecular aspect to disease. Apoptosis, Autophagy, Unfolded Protein Response in cerebellum development. Chapter 9 **Springer International Publishing AG (Under Publication, 2017)**.

iv. Books (Compilation in Persian):

1. Mahdavi M, **Moosavi MA**, Amin Ardestani, Sadeghizadeh M. *Molecular Cell Biology and Genetic Engineering*, **Published by Iran's Biology House (Forth edition, 2006-2014)**. The book has been represented as one of the reference books for entrance exam of BSc and MSc students in Iran.
2. Mahdavi M, **Moosavi MA**, Sadeghizadeh M. *Molecular Cell Biology and Genetic Engineering (Reference book)* **Published by Iran's Biology House (First edition, 2015)**.

v. Abstracts (Selected):

21. Visible light activated Nitrogen-doped titanium dioxide nanoparticles induce differentiation and apoptosis in K562 cells. First International and 9th National Biotechnology Congress. **Tehran, Iran. , May 24-26, 2015.**
20. Targeting nucleostemin induces autophagy, cell-cycle arrest, and differentiation in KG1a leukemia stem cells. The 22nd Euroconference on cell death and rejuvenation. **Crete, Greece, Oct 1-4, 2014.**
19. Titanium dioxide induces apoptosis through ROS-dependent pathway. The first National Congress on Application of Biomaterials in Regenerative Medicine. **Tehran, Iran. Apr, 17-20, 2013.**
18. Induction of differentiation and apoptosis in K562 leukemia cells upon exposure to a derivative from 4-aryl-4H chromenes family The 11th Iranian Congress of Biochemistry and the 4th International congress of biochemistry and cell Biology, **Mashad, Iran. Aug, 17-20, 2011.**
17. Knocking-down nucleostemin gene expression inhibits proliferation and induces apoptosis in human leukemia K562 cells The 11th Iranian Congress of Biochemistry and the 4th International congress of biochemistry and cell Biology, **Mashad, Iran. Aug, 17-20, 2011.**
16. Survivin-2a, a new survivin splice variant significantly expressed in accelerated/blastic phase of chronic myeloid leukemia patients in northwest of Iran The 11th Iranian Congress of Biochemistry and the 4th International congress of biochemistry and cell Biology, **Mashad, Iran. Aug, 17-20, 2011.**
15. Ether extract of *Streptomyces calvus* inhibited growth and induced apoptosis in K562, human leukemia cell. The 10th Iranian Congress of Biochemistry and the 3th International congress of biochemistry and cell Biology, **Tehran, Iran. Sept 15-18, 2010.**
14. Nucleostemin gene silencing by siRNA induces differentiation and growth inhibition of NB4 cell line. The 9th Iranian Congress of Biochemistry, **Tabriz, Iran. Aug 20-23, 2009.**
13. Pivotal role of caspases during 3-Hydrogenkwadaphnin- induced apoptosis of U937 cells. 16th Euroconference on apoptosis, **Bern, Switzerland. Sept 19-21, 2008.**
12. Evaluating the expression of P2X7 splice variants as a novel biomarker in breast tumors. The First International Congress of Gynecology Cancers, **Mashad, Iran. Oct 10-12, 2008.**
11. ERK1/2 inactivation and p38 MAPK activation during GTP-mediated terminal erythroid differentiation of K562 cells. 12th FAOBMB congresses, **Seoul, Korea. Aug 12-15, 2007.**
10. Caspase-mediated p21 cleavage during 3-HK-induced apoptosis of U937 cells. 32nd FEBS congress **Athens, Greece. Sept 23-6, 2007.**
9. A differentiating and anti-apoptotic role for caspase-3 in leukemia cells. 32nd FEBS congress **Athens, Greece. Sept 23-6, 2007.**
8. 3-HK induces cell cycle arrest and differentiation-dependent apoptosis in human NB4 leukemia cell lines. 11th congress of the European Hematology Association. **Amsterdam, Netherlands. Sept 18-21, 2006.**

7. 3-hydrogenkwadaphnin induces differentiation-dependent apoptosis in human AML cell lines. 20th IUBMB and 11th FAOBMB congress. **Kyoto, Japanese. Jun 16-21 2006.**
6. Macrophage differentiation of promyeloblastic leukemia cells (KG1) by a new compound from *Dendrostellera lessertii*. 31st FEBS congress Molecules in Health & Disease, **Istanbul, Turkey. June, 24-29, 2006.**
5. GTP induces differentiation-dependent apoptosis in human leukemia U937 and KG1 cells. 31st FEBS congress Molecules in Health & Disease **Istanbul, Turkey. June, 24-29, 2006.**
4. Cytotoxic and cytostatic effects of 3-hydrogenkwadaphnin, in human normal and leukemia cell lines. 30th FEBS Congress and 9th IUBMB, **Budapest, Hungary. July 2-7, 2005.**
3. Induction of Apoptosis by Purin nucleotide triphosphate (GTP and ATP) in Leukemia cells. 17th FAOBMB symposium **Bangkok, Thailand. Nov. 22-26, 2004.**
2. Analysis of VZV ORF63: the significance of C-terminal and N-terminal in regulation of ORF62 gene. The 2nd National Congress of Biotechnology, **Tehran, Iran. Jul 8-11 2002.**
1. Cloning and expression of N- terminal peptide (PAP) from human glu-plasminogene. The 1st Congress Biochemistry and Biophysics, **Tehran, Iran. Aug. 7-8 2000.**