CURRICULUM VITAE

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

I. BIOGRAPHICAL DATA:

Present position: Assistant Professor
Academic address: Department of Molecular Medicine, National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran.
E. mails: a-moosavi@nigeb.ac.ir & labmoosavi@gmail.com
URL: http://scholar.google.com/citations?user=cJTfmAUAAAAJ&hl=en
https://www.researchgate.net/profile/Mohammad_Moosavi
https://ir.linkedin.com/in/aminmoosavi

II. EDUCATION:

2001-2007 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.***

1998-2001 M.Sc. in 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, Iran (Grade: 16.08/20).

III. ACADEMIC APPOINTMENTS

2018 -now, Head of department, National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran.

2016 (Oct)-2017 (March), Visiting academics (nil-salaried appointment)
Department of Human anatomy and Cell Science, College of Medicine, Manitoba University, Winnipeg, Canada.

***2013-Now Principle Investigator (*Assistant Professor),**
National Institute of Genetic Engineering and Biotechnology (NIGEB).

***2012-2013* Post-doctoral Researcher,**
Apoptosis Research Centre, National University of Ireland, Galway, Ireland.

***2007-2012* Lecturer *(*Assistant Professor),**
Faculty of Natural Science, Tabriz University, and Hematology Oncology Research Center, Tabriz University of Medical Science, Iran.

IV. AWARDS AND HONORS

2014 –**The Ministry Award winner** for efforts in promoting "International Collaboration for Applied Research Development (ICARD)", Ministry of Science, Research and Technology of Iran.

2011 -**Top advisor award** for Student's Scientific Association, The University of Tabriz, Iran.

2011 -**Distinguished teaching award** as the best faculty member of Tabriz University by the selection of students*.*

***2010* & 2011** -**Gold (Team) and Silver (Single) Chess medals,** First and Second Iranian Chess Olympiad among University Staffs of North West of Iran.

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 of Iran.

2007 -**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".

2007 -**KSBMB travel/fellowship award** from 19th Federation of Asian-Pacific Biochemistry and Molecular Biology Conference, Seoul, Korea.

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

B.Sc. students: Molecular Cell biology (Experimental and theoretical), General Biochemistry.

M.Sc. students: *Cellular and Molecular Mechanisms of Cancer. Control of metabolisam.*

Ph.D. students: *Advanced topics in Molecular Genetics, Signaling of cell death.*

VI. PRFESSIONAL ACTIVITIES

i. Supervising/Advising Activities:

Supervisor: *Ph.D. students: 3; MSc. students: 14.*
Advisor: *Ph.D. students: 2; MSc. students: 3, BSc. Student: 1.*

ii. Journal editor/reviewer:

Editorial Board*:* Heamatology International Journal
Reviewer*:* Scientific reports, Journal of Cellular and Molecular Medicine, International Journal of Cell Biology, Cell Death & Disease, Iranian Biotechnology Journal, BMC Cancer, International Journal of Nanomedicine, Oncotarget and therapy. **Assistant in reviewing** papers for Nature reviews, Cancer Research and PLoS One, etc.

iii. Workshops*:*

2019 Organizer and lecturer at **Autophagy and its detection methods** at NIGEB (in collaboration with Dr. Djavaheri-Megny from Inserm, France).
2014 Organizer and lecturer at the first workshop on **"Molecular Techniques of RNA and Real Time PCR"** at NIGEB, Iran.
2010 Organizer and lecturer at 2nd workshop on "**Stem Cell Isolation and Western blot techniques"** at Tabriz University, Tabriz, Iran.

VII. RESEARCH SUPPORTS AND FUNDING

(As Principle Investigator):

2017-2019 Developing new inhibitors of LC3/ATG8 and p62/SQSTM1 in cancer, Funding Agency: NIGEB.

2015-2018 Targeting autophagy and ER stress in leukemia, Funding Agency**:** NIMAD

2013-2017 NIGEB Welcome Grants.

2013-2015 Pro-oxidant nanoparticles and regulated cell death, Funding Agency: INSF.

2012-2013 Targeting GTP-binding protein nucleostemin in leukemia, Funding Agency: NIGEB.

(As Co-Principle Investigator):

2019-2021 Evaluating therapeutic potentials of Ire1 arm of the UPR in colorectal cancer, Funding Agency**:** NIMAD.

VIII. *PUBLICATIONS (Selected)*

2019

1. **Moosavi MA** and Djavaheri-Mergny M*. *Autophagy: New Insights into Mechanisms of Action and Resistance of Treatment in Acute Promyelocytic leukemia*. **Int. J. Mol. Sci. 2019, 20: 3559 (IF 4.2, Q1).**

2. Mohammadinejad R, **Moosavi MA**, Tavakol S, Vardar DÖ, Hosseini A, Rahmati M, Dini L, Hussain S, Mandegary A, Klionsky DJ*****. *Necrotic, apoptotic and autophagic cell fates triggered by nanoparticles.* **Autophagy. 2019.15: 4-33 (IF 11.8, Q1).**

3. Shabani S, Mahjoubi F and **Moosavi MA.** *A siRNA-based method for efficient silencing of PYROXD1 gene expression in the colon cancer cell line HCT116.***J Cell Biochem. 2019, 120: 19310-19317 (IF 2.8, Q1).**

4.Ahmadiany M, Alavi-Samani M, Hashemi Z, **Moosavi MA*,** Rahmati M*. *The Increased RNase Activity of IRE1α in PBMCs from Patients with Rheumatoid Arthritis.* **Advanced Pharmaceutical Bulletin (In press, 2019, Q1).**

5. Kashani MH, Madrakian T, Afkhami A, Mahjoubi F, **Moosavi MA.** *Bottom-up and green-synthesis route of amino functionalized graphene quantum dot as a novel biocompatible and label-free fluorescence probe for in vitro cellular imaging of human ACHN cell lines.* **Materials Science and Engineering. 2019, 114452 (IF 3.5, Q1).**

2018

1. Rahmati M*[$], **Moosavi MA[$] and** McDermott M*. *ER stress: a therapeutic option in rheumatoid arthritis?* **Trends in pharm Sci. 2018, 39: 610-23 (IF 12.87, Q1). [$]Equal contribution**

2. Mohammad MA*, Haghi A, Rahmati M, Taniguchi H, Mocan A, Echeverría J, GuptaV.K, Tzvetkov NT, Atanasov AG*****. *Phytochemicals as potent modulators of autophagy for cancer therapy.* **Cancer letter. 2018, 424:46-69 (IF 6.37, Q1).*Co-corresponding author**

3. Ajdary M, **Moosavi MA,** Rahmati M, Falahati M, Mahboubi M, Mandegary A, Jangjoo S, Mohammadinejad R, Varma RS*****. *Health Concerns of Various Nanoparticles: A Review of Their in Vitro and in Vivo Toxicity.* **Nanomaterials (Basel). 2018, 21: 8 (IF 3.5, Q1).**

2017

1. Mokarram MP, Albooski A, Zarghooni M, **Moosavi MA,** Sepehr, Z, Chen QM, Hudecki A, Sargazi A, Alizadeh J, 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. 2017, 13 :781-819 (IF 11.8, Q1).**

2. Fakhimahmadi A, Nazmi F, Rahmati M, Bonab NM, Hashemi M, **Mohammad MA*.** *Nucleostemin silencing induces differentiation and potentiates all-trans-retinoic acid effects in human acute promyelocytic leukemia NB4 cells via autophagy.* **Leukemia Research. 2017, 63: 15-21. (IF 2.4, Q2).**

3. Rahmati, M*****, Amanpour S, Kharman-Biz A, **Moosavi MA*.** *Endoplasmic Reticulum Stress as a Therapeutic Target in Cancer: A mini review*. **Basic & Clinical Cancer research 2017, 9: 38-48.**

2016

1. **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, 6: 34413 (IF 5.2, Q1).**

2. 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.* **Chem Biol Interact. 2016, 260: 232-42 (IF 2.57, Q2).**

2005-2015 (10 selected)

1. Nazmi F, **Moosavi MA*,** Rahmati M, Hoessinpour-Feizi MA. Modeling and structural analysis of human Guanine nucleotide-binding protein-like 3, nucleostemin. **Bioinformation. 2015, 11: 353-8 (IF 0.4, Q3).**

2. 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, 19: 455-62 (IF 1.54, Q3).**

3. 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. 2011, 19: 455-61 (IF 2.6, Q2).**

4. 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. 2008, 230: 86-96 (IF 3.6, Q1).**

5. 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. 2007, 39: 1685-97 (IF 3.1, Q1).**

6. Moosavi MA, and Yazdanparast R. GTP induces S-phase arrest and inhibits DNA synthesis in K562 cells but not in human normal PBL cells. **BMB reports. 2006, 39: 492-501 (IF 2.9, Q1).**

7. Yazdanparast R, **Moosavi MA**, and Mahdavi M. GTP induces differentiation and apoptosis in human leukemia KG1 and U937 cells. **Acta. Pharm. Sin. 2006, 27: 1175-84 (IF 4.1, Q1).**

8. Moosavi MA, Yazdanparast R, Sanati H, Sarraf Nejad A. 3-hydrogenhwadaphnin targets inosine monophosphate dehydrogenase and triggers post-G1 arrest apoptosis in human leukemia cell lines. **Int J Biochem Cell Biol. 2005, 37: 2366-79 (IF 3.1, Q1).**

9. Yazdanparast R, **Moosavi MA,** and Sanati H. 3-hydrogenkwadaphnin induces differentiation and apoptosis in HL-60 cell line. **Planta Medica. 2005, 71: 112-7 (IF 2.4, Q1).**

10. 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. **BMB reports. 2005, 38: 391-8 (IF 2.9, Q1).**

IX. *BOOKS*

-Book chapter:

1. **Moosavi MA,** Rahmati MA, Ashtari N, Alizadeh J, Batahi Z, Ghavami S. "Apoptosis, Autophagy, and Unfolded Protein Response and Cerebellar Development." Development of the Cerebellum from Molecular Aspects to Diseases. ***Springer International Publishing AG***. **2017, 153-178.**

-Books (in Persian):

1. **Moosavi MA** and Rahmati MA. Molecular Mechanisms controlling cell fate: apoptosis, autophagy and unfolded protein response. ***Naroon Publisher*****. First Edition: 2017.**

2. Mahdavi M, **Moosavi MA,** Ardestani A, Sadeghizadeh M. Molecular *Cell Biology and Genetic Engineering*, ***Published by*** **Iran's Biology House (Forth edition, 2006-2014).** (The book has been selected as the best book of year in 2006 in Iran).