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### Education

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**Ph.D in Biochemistry**, Tarbiat Modares University, Tehran..... 2009-2013

**M.Sc in Biochemistry**, Tarbiat Modares University, Tehran ..... 2006-2009

**B.Sc in Biology**, Alzahra University, Tehran ..... 2000-2004

### Research Interests

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- Cell signaling pathways: death inhibitors, drug resistance and molecular cancer therapy
- Biosensor development to investigate protein interactions and drug screening
- Proteasome function in cancer cells treatment
- Molecular cloning and specific stable cell line generation
- Protein engineering and production

### Publications

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- 1- **Development of a bioluminescence assay for BIR2-caspase3 interaction through split luciferase complementary assay.** Mahdiyeh Mostafavi, **Farangis Ataei**, Amir Ali Hamidieh, Saman, Hosseinkhani, *Biochemical Engineering Journal.* (2022) 186: 108584.
- 2- **XIAP as a multifaceted molecule in Cellular Signaling.** Mina Hanifeh, **Farangis Ataei**, *Apoptosis.* (2022) 27:441-453.
- 3- **Inhibition of noncaspase proteases, calpain and proteasome, via ALLN and Bortezomib contributes to cell death through low degradation of pro-/anti-apoptotic proteins and apoptosis induction.** Roghaye Hamidi, **Farangis Ataei**, Saman Hosseinkhani, *Medical Oncology.* (2022) 39:125.

- 4- **Determination of Dioxins and Polychlorinated Biphenyls Levels in Milk Samples from Capital and North of Iran.** Seyede Pegah Azarchehry, Farangis Ataei, Saman Hosseinkhani, *Pollution*. (2022) 8:37-43.
- 5- **Upregulation of apoptotic protease activating factor-1 expression correlates with anti-tumor effect of taxane drug.** Maysam Bakhshoudeh, Kayhan Mehdizadeh, Saman Hosseinkhani, Farangis Ataei, *Medical Oncology*. (2021) 38:1.
- 6- **Treating MCF7 breast cancer cell with proteasome inhibitor Bortezomib restores apoptotic factors and sensitizes cell to Docetaxel.** Kayhan Mehdizadeh, Farangis Ataei, Saman Hosseinkhani, *Medical Oncology*. (2021) 38:64.
- 7- **Efficient Stable Cell Line Generation of Survivin as an In Vitro Model for Specific Functional Analysis in Apoptosis and Drug Screening.** Rashid Houshdarpour, Farangis Ataei, Saman Hosseinkhani, *Molecular Biotechnology*. (2021) 63:515–524.
- 8- **Effects of doxorubicin and docetaxel on susceptibility to apoptosis in high expression level of survivin in HEK and HEK-S cell lines as in vitro models.** Kayhan Mehdizadeh, Farangis Ataei, Saman Hosseinkhani, *Biochemical and Biophysical Research Communications*. 532 (2020) 139-144.
- 9- **Cloning of human survivin in pET-28a and its protein expression study in E.coli BL21(DE3).** Mahsa Tirmomenin, Farangis Ataei, Saman Hosseinkhani. *Modares Journal of Biotechnology*. 2020;11(3):273-278.
- 10- **The effects of ovarian cancer cell-derived exosomes on vascular endothelial growth factor expression in endothelial cells.** Mohammad Ghorbanian, Sadegh Babashah, Farangis Ataei, *EXCLI Journal*. (2019) 18, 899-907.
- 11- **A Luminescent Amine-Functionalized Metal–Organic Framework Conjugated with Folic Acid as a Targeted Biocompatible pH-Responsive Nanocarrier for Apoptosis Induction in Breast Cancer Cells.** Reza Abazari, Farangis Ataei, Ali Morsali, L.Cameon Carpenter-Warren, Alexandra Slawin, *ACS Appl. Mater. Interfaces*. (201) 11, 49, 45442-45454.
- 12- **Effect of mutation at positively charged residues (K329 and R330) in a flexible region of firefly luciferase on structure and kinetic properties.** Hossein Salehi-Sedeh, Farangis Ataei, Samaneh Jarchi, Roghaye Hamidi, Saman Hosseinkhani, *Enzyme Microbial Technol*. (2019), 131, 109424.
- 13- **Fabrication of encapsulated biocompatible IPMC actuators using sputtering and electroless plating methods.** Matin Sadat Saneei Mousavi, Alaei Arman, Hasani Mahdi, Mohammadreza Kolahdouz, Faranak Manteghi, Farangis Ataei, *Mater. Res. Express*. (2019), 6, 035312.
- 14- **Experimental and theoretical study of IBC domain from human IP3R2; molecular cloning, bacterial expression and protein purification.** Marzieh Nakhaei Amroudie, Farangis Ataei, *International Journal of Biological Macromolecules*. (2019) 124, 1321-1327.

- 15- **Impact of mutation at position 330 of luciferase on the function and proteolytic stability.** Samaneh Jarchi, Farangis Ataei, Saman Hosseinkhani. *Modares Journal of Biotechnology*, (2019) 10(2): 187-192.
- 16- **Tris-chelated complexes of nickel(II) with bipyridine derivatives: DNA binding and cleavage, BSA binding, molecular docking, and cytotoxicity.** Marzieh Anjomshoa, Masoud Torzkadeh-Mahani, Jan Janczak, Corrado Rizzoli, Mehdi Sahihi, Farangis Ataei, Monireh Dehkhodaei. *Journal of Biomolecular Structure and Dynamics*. (2018) 11: 1-51.
- 17- **Chitosan Immobilization on Bio-MOF Nanostructures: A Biocompatible pH-Responsive Nanocarrier for Doxorubicin Release on MCF- 7 Cell Lines of Human Breast Cancer.** Reza Abazari, Ali Reza Mahjoub, Farangis Ataei, Ali Morsali L.Cameon Carpenter-Warren, Kayhan Mehdizadeh, Alexandra Slawin. *Inorganic Chemistry*. (2018) 57, 21, 13364-13379.
- 18- **Design of a remote-control drug delivery implantable chip for cancer local on demand therapy using ionic polymer metal composite actuator.** Matin Sadat Saneei Mousavi, Amir HosseinKarami, Mehrshad Ghasemnejad, Mohammadreza Kolahdouz, Faranak Manteghi, Farangis Ataei, *Journal of the Mechanical Behavior of Biomedical Materials*. 2018 (86) 250-256.
- 19- **Mutation of conserved residues K329 and R330 on the surface of firefly luciferase: effect on proteolytic degradation.** Samaneh Jarchi, Farangis Ataei, Saman Hosseinkhani, *International Journal of Biological Macromolecules*. 2018 (115) 324-330.
- 20- **Insufficient Apaf-1 expression in early stages of neural differentiation of human embryonic stem cells might protect them from apoptosis.** Somayeh Karimzadeh, Saman Hosseinkhani, Ali Fathi, Farangis Ataei, Hossein Baharvand. *European Journal of Cell Biology*. 2018 (97) 126–135.
- 21- **Expression, purification and characterization of IP3-binding domain from human type 2.** Marzieh Nakhaei, Farangis Ataei, *Modares Journal of Biotechnology*, (2018) 9: 165-169.
- 22- **Increase of Bacillus badius Phenylalanine dehydrogenase specificity towards phenylalanine substrate by site-directed mutagenesis.** Farzad Yousefi, Farangis Ataei, Seyed Shahriar Arab, Saman Hosseinkhani, *Archives of Biochemistry and Biophysics*. 2017 (635) 44-51.
- 23- **MicroRNA-100 shuttled by mesenchymal stem cell-derived exosomes suppresses in vitro angiogenesis through modulating the mTOR/HIF-1 $\alpha$ /VEGF signaling axis in breast cancer cells.** Pakravan K, Babashah S, Sadeghizadeh M, Mowla SJ, Mossahebi-Mohammadi M, Ataei Farangis, Dana N, Javan M, *Cellular Oncology*. 2017, 40 (5):457-470.
- 24- **Bifunctional role of leucine 300 of firefly luciferase in structural rigidity.** Farzad Yousefi, Farangis Ataei, Mojtaba Mortazavi, Saman Hosseinkhani. *International Journal of Biological Macromolecules*. 2017 (101) 67-74.

- 25- Luciferin-Regenerating Enzyme Crystal Structure Is Solved but its Function Is Still Unclear.** Saman Hosseinkhani, Elahe Emamgholi Zadeh, Fatemeh Sahebazzamani, Farangis Ataei, Roohullah Hemmati, *Photochem Photobiol.* 2017, 93(2): 429-435.
- 26- Synthesis, crystal structure and Hirshfeld surface analysis of copper(II) complexes: DNA- and BSA-binding, molecular modeling, cell imaging and cytotoxicity.** Marzieh Anjomshoa, Masoud Torkzadeh-Mahani, Jan Janczak, Corrado Rizzoli, Mehdi Sahihi, Farangis Ataei, Monireh Dehkhoodaei, *Polyhedron.* 2016 (119):23-38.
- 27- Evaluation of the Active Site of Phenylalanine Dehydrogenase Isolated from *Bacillus badius* using Homology Based Modeling.** Farzad Yousefi, Farangis Ataei, Hamid Reza Samadikhah, Parisa Bahmani, Saman Hosseinkhani, *Focus Sci.* 2015, 1, 1,:1-3.
- 28- Luciferin Regenerating Enzyme mediates firefly luciferase activation through direct effects of D-cysteine on luciferase structure and activity.** Roohullah Hemmati, Saman Hosseinkhani, Reza H. Sajedi, Taha Azad, Amin Tashakor, Nuredin Bakhtiari, Farangis Ataei, *Photochemistry and Photobiology.* 2015. 91(4):828-36.
- 29- Impact of trifluoroethanol-induced structural changes on luciferase cleavage sites.** Farangis Ataei, Saman Hosseinkhani. *Journal of Photochemistry and Photobiology B: Biology.* 144 (2015) 1–7.
- 30- Apoptotic protease-activating factor 1 (Apaf-1) as a liable gene for spontaneous mutations *in vitro*,** Taha Azad, Amin Tashakor, Mina Ghahremani, Roohullah Hemmati, Farangis Ataei, Saman Hosseinkhani, *Progress in Biological Sciences.* 2014, 4: 261-273.
- 31- Design and development of a whole-cell luminescent biosensor for detection of early-stage of apoptosis.** Masoud Torkzadeh-Mahani, Farangis Ataei, Maryam Nikkhah, Saman Hosseinkhani. *Biosensor and Bioelectronics.* 2012, 38: 362-368.
- 32- A novel luminescent biosensor for rapid monitoring of IP3 by split-luciferase complementary assay.** Farangis Ataei, Masoud Torkzadeh-Mahani, Saman Hosseinkhani. *Biosensor and Bioelectronics.* 2013, 41: 642-648.
- 33- The ENPP1 K121Q polymorphism is not associated with type 2 diabetes and related metabolic traits in an Iranian population,** Hamzeh Saberi, Mohammadtaghvaei, N., Gulkho, N., Bakhtiyari, S., Mohammadim M., Hanachi, P., Gerayesh-nejad, S., Zargari, M., Farangis Ataei, Parvaneh, L., Larijani, B, Meshkani, R. *Molecular and Cellular Biochemistry.* 2010, 350(1-2): 13-118.
- 34- Luciferase Protection Against Proteolytic Degradation: A key for Improving Signal in Nano-system Biology.** Farangis Ataei, Saman Hosseinkhani, Khosro khajeh. *Journal of Biotechnology.* 2009, 144: 83–88.
- 35- Limited Proteolysis of Luciferase as a Reporter in Nanosystem Biology: A Comparative Study.** Farangis Ataei, Saman Hosseinkhani, Khosro khajeh, *Photochemistry and Photobiology.* 2009, 85: 1162–1167.

## Books

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- **Principles of Biochemistry.** (In Persian),  
Malihe Mohammadi, **Farangis Ataei.**
- **Gene Cloning and Manipulation.** (Translated in Persian),  
Malihe Mohammadi, **Farangis Ataei.**

## Patents

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- **IP3 Biosensor**  
**Farangis Ataei**, Masoud Torkzadeh-Mahani, Saman Hosseinkhani. "**Design and Construction of IP3 Biosensor**". Iranian Patent Office.
- **Apoptosis Detection Kit**  
Masoud Torkzadeh-Mahani, **Farangis Ataei**, Maryam Nikkhab, Saman Hosseinkhani. "**Design and Construction of an Apoptosis Detection Biosensor**". Iranian Patent Office.