

## **Curriculum Vitae**

### **A. Personal Information:**

**Name:** Dina, Morshedi

Associated Professor at

National Institute of Genetic Engineering and Biotechnology (NIGEB), Shahrak-e- Pajoohesh, 15<sup>th</sup> Km, Tehran -Karaj Highway, Tehran, Iran.

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### **B. Education:**

Ph.D, Biochemistry, 2004-2008, Institute of Biochemistry and Biophysics, University of Tehran

M.Sc, Biochemistry, 1991-94, Institute of Biochemistry and Biophysics, University of Tehran

B.Sc, Molecular and cellular biology, 1986-1990, University of Tehran

### **C. Working Records:**

1. Faculty member of National Institute of Genetic Engineering and Biotechnology since 2002.
2. Research assistant in an Institute of Biochemistry and Biophysics (IBB). Tehran University since 1996-2002

### **D. Research Interests:**

- Study on different aspects of neurodegenerative diseases, especially Parkinson' including amyloid formation, cytotoxicity and pharmacognosy.
- Application of Nanofibrils and nanocarriers regarding drug delivery.

### **F. Honors:**

1. The 1<sup>st</sup> rank in PhD Entrance Exam. Tehran University.
2. The 2<sup>nd</sup> rank in MSc Entrance Exam. Tehran University.
3. Receiving several grant for participating and selected as an oral presenter in the courses that organized by INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB).
4. Receiving a grant from ICRP.

## **G: Publications:**

1. Aliakbari F, Shabani AA, ....., Christiansen G, Otzen DE, **Morshedi D\*** (2017). Formulation and anti-neurotoxic activity of baicalein-incorporating neutral nanoliposome. *Colloids Surf B Biointerfaces*.161:578-587.
2. Mahdye Sashourpour, Saber Zahri , Tayebeh Radjabian , Viktoria Ruf, Francisco Pan-Montojo, **Dina Morshedi\*** (2017) “A Study on the Modulation of Alpha-synuclein Fibrillation by *Scutellaria pinnatifida* Extracts and Its Neuroprotective Properties. *PlosOne*, [doi.10.1371/journal.pone.0184483](https://doi.org/10.1371/journal.pone.0184483)
3. Amir Tayaranian, and **Dina Morshedi** (2017) "Exophers expel toxic aggregates: The new discovery of a defense mechanism against misfolded or toxic proteins." *Movement Disorders*. 32(6):841.
4. Maleki, Behnam, Fatemeh Tabandeh, Zahra-Soheila Soheili, and **Dina Morshedi\*** (2017) "Application of proteinous nanofibrils to culture retinal pigmented epithelium cells: A versatile biomaterial." *Reactive and Functional Polymers*. 115, 36–42
5. Farhang Aliakbari, Ali. Akbar Shabani, Hassan Bardania, Hadiieh Alsadat Eslampanah Seyedi, Hossein Mohammad-Beigi, Amir Tayaranian Marvian, Mahour Nassoti, Abbas Ali Vafaei, Seyed Abbas Shojaosadati 6, Ali Akbar Saboury 7, Gunna Christiansen 8, **Dina Morshedi\***. (2017) Neurotoxicity of pre-incubated alpha-synuclein with neutral nanoliposomes on PC12 and SHSY5Y cell lines. *ScientiaIranica*. 24.3
6. Nayere Taebnia, **Dina Morshedi\***, Soheila Yaghmaei, Farhang Aliakbari, Fatemeh Rahimi, and Ayyoob Arpanaei. (2017) Curcumin-loaded amine-functionalized mesoporous silica nanoparticles inhibit the  $\alpha$ -synuclein fibrillation and reduce its cytotoxicity-associated effects. *Langmuir*, 32 (50), pp 13394–13402
7. Negar Mirzazadeh Dizaji, Hossein Mohammad-beigi, Farhang Aliakbari, Amir Tayaranian Marvian, Seyed Abbas Shojaosadati, **Dina Morshedi\***. (2016). Inhibition of Lysozyme Fibrillation by Human Serum Albumin Nanoparticles: Possible Mechanism. *International Journal of Biological Macromolecules*, 93, Part A, 1328–1336
8. Hossein Mohammad-Beigi, **Dina Morshedi**, Seyed Abbas Shojaosadati, Jannik Nedergaard Pedersen, Amir Tayaranian Marvian, d Farhang Aliakbari, Gunna

- Christiansen, Jan Skov Pedersen, Daniel E. Otzen. (2016). Gallic acid loaded onto polyethylenimine-coated human serum albumin nanoparticles (PEI-HSA-GANPs) stabilizes  $\alpha$ -synuclein in the unfolded conformation and inhibits aggregation. *RSC Adv.*, 6, 85312–85323.
9. **Dina Morshedi\***, Mahour Nasouti. (2016). Essential oils may drive  $\alpha$ -synuclein to toxic fibrils formation, *Parkinson's Disease*, 16(1):1-10.
  10. Hossein Mohammad-Beigi, Seyed Abbas Shojaosadati, **Dina Morshedi**, Negar Mirzazadeh, Ayyoob Arpanaei (2016) The Effect of Different Desolvating Agents on the Physicochemical Properties of Human Serum Albumin Nanoparticles Prepared by Desolvation Method, *the Iranian Journal of Biotechnology*, 14(1): 50-58
  11. Hossein Mohammad-Beigi, Seyed Abbas Shojaosadati, Amir Tayaranian Marvian, Mingdong Dong, **Dina Morshedi\***, Daniel E. Otzen\* (2015). Strong Interactions with Polyethylenimine-Coated Human Serum Albumin Nanoparticles (PEI-HSA NPs) Alter ASN Conformation and Aggregation Kinetics. *Nanoscale*. 7(46):19627-40
  12. Masoome Khalife, **Dina Morshedi\***, Farhang Aliakbari, Amir Tayaranian Marvian, Hossein Mohammad Beigi, Sadegh Azimzadeh Jamalkandi, Francisco Pan-Montojo. (2015) Alpha-Synuclein fibrils interact with dopamine reducing its cytotoxicity on PC12 cells. *Protein Journal*, 34:291-303
  13. Nayyere Taebnia, **Dina Morshedi\***, Mohsen Doostkam, Soheila Yaghmaei, Farhang Ali-Akbari, Gurvinder Singh, Ayyoob Arpanaei.(2015) The effect of mesoporous silica nanoparticles surface chemistry and concentration on the  $\alpha$ -synuclein fibrillation. *RSC Adv*. 5: 60966-60974
  14. **Dina Morshedi\***, Farhang Aliakbari, Amir Tayaranian Marvian, Afshin Fassihi, Francisco Pan-Montojo, Horacio Pérez-Sánchez (2015). Cuminaldehyde as the major component of Cuminum cyminum, a natural aldehyde with inhibitory effect on alpha-synuclein fibrillation and cytotoxicity. *Journal of Food Science*. 80( 10): 2336-45

15. Hossein Mohammad-Beigi. shojaosadati · **Dina Morshedi** · Ayyoob Arpanaei · Amir Tayaranian (2015) Preparation and in vitro characterization of gallic acid-loaded human serum albumin nanoparticles. Journal of Nanoparticle Research,17:167  
DOI:10.1007/s11051-015-2978-5
16. **Dina Morshedi\***, Tayyebali Salmani Kesejini, Farhang Aliakbari, Rouhollah Karami-Osboo, Mehdi Shakibaei , Amir Tayaranian Marvian, Masoomeh Khalifeh, Mona Soroosh (2014) Identification and characterization of a compound from Cuminum cyminum essential oil with high antifibrillation effect and cytotoxic effect. Research in Pharmaceutical Sciences. 9(6): 431-443
17. Jafar Falahi, **DinaMorshedi\*** (2014). In silico and in vitro analysis about effects of the affinity tags on the rate of amyloid fibrillation of proteins. Genetic Novin,9(3):267-78
18. Zeinab Mohammadi, **Dina Morshedi\***, Masoud Mashhadi Akbar Boojar, Farhang Aliakbari (2014). Designing a simple method with high efficiency to purify hen egg white lysozyme by using the ion-exchange chromatography. IFSTRJ,. 2015.
19. Farhang Aliakbari, Seyedeh Felour Mazhar, Rouhollah Karami-Osboo, Parvin Shariati, **Dina Morshedi**, Davoud Farajzadeh (2014). Decontamination of tomato, red cabbage, carrot, fresh parsley and fresh green onion inoculated with Shigella sonnei and Shigella flexneri by some Essential oils (in vitro conditions). Novelty in Biomedicin, 2:36-77
20. Mazhar, S.F., Aliakbari, F., Karami-Osboo, R. Morshedi, D., Shariati, P. Farajzadeh, D. (2014). Inhibitory Effects of Several Essential Oils towards Salmonella typhimurium, Salmonella paratyphi A and Salmonella paratyphi B, Applied Food Biotechnology, 1(1): 44-54
21. **Dina Morshedi\***, Farhang Aliakbari, Hamid Reza Noori, Majid Lotfinia. Using small molecules as a new challenge to redirect metabolic pathway. 3 BIOTECH. (2013). DOI: 10.1007/s13205-013-0184-7.
22. **Dina Morshedi\***, Zeinab Mohammadi, Masoud Mashhadi Akbar Boojar, Farhang Aliakbari (2013). Using protein nanofibrils to remove azo dyes from aqueous solution by the coagulation process. Colloids and Surfaces B: Biointerfaces . 112: 245–254.

23. **Dina Morshedi\***, Farhang Aliakbari (2012). The inhibitory effects of cuminaldehyde on the amyloid fibrillation and cytotoxicity of alpha-synuclein. *MJMS: Pathobiology*. 15(1): 13-28.
24. Mostafa Hosseini & Ali Asghar Karkhane & Bagher Yakhchali & Mehdi Shamsara & Saeed Aminzadeh & **Dina Morshedi** & Kamahldin Haghbeen & Ibrahim Torktaz & Esmat Karimi & Zahra Safari (2012). In Silico and Experimental Characterization of Chimeric Bacillus termocatenlatus Lipase with the Complete Conserved Pentapeptide of Candida rugosa Lipase. *Appl Biochem Biotechnol*, 169(3):773-85
25. Atefeh Rabiee, Azadeh Ebrahim-Habibi, Latifeh Navidpour, **Dina Morshedi**, Atiyeh Ghasemi, Marjan Sabbaghian, Maryam Nemati-Lay, Mohsen Nemat-Gorgani (2011). Benzofuranone derivatives as effective small molecules related to insulin amyloid fibrillation: a structure-function study”. *Chemical Biology & Drug Design*. 78 495–738
26. **Dina Morshedi**, Ebrahim-Habibi A, Moosavi-Movahedi A.A, Nemat-Gorgani M (2010). Chemical modification of lysine residues in lysozyme may dramatically influence its amyloid fibrillation submission. *Biochemica et Biophysica Acta*. 1804 714-722
27. Ebrahim-Habibi A, **Dina Morshedi**, Rezaei -Ghaleh N, Sabbaghian M, Nemat-Gorgani M (2010). Protein-protein interactions leading to aggregation: some perspectives on mechanism, significance and control. *Journal of the Iranian Chemical Society* 7(3) : 521-544.
28. Rezaei-Ghaleh N, Zweckstetter M, **Dina Morshedi**, Ebrahim-Habibi A, Nemat-Gorgani M(2009). Amyloidogenic potential of alpha-chymotrypsin in different conformational states. *Biopolymers*. 91(1):28-36
29. **Dina Morshedi**, Rezaei-Ghaleh N, Ebrahim-Habibi A, Ahmadian S, Nemat-Gorgani M. Inhibition of amyloid fibrillation of lysozyme by indole derivatives--possible mechanism of action. *FEBS J*. 2007 274(24):6415-25

30. Daliri M, Ghorashi A, **Dina Morshedi**, Taraneh Hajian ,Kian Afshar.( 2007) Detection of bovine viral diarrhoea virus in bovine semen using nested-PCR Iranian Journal of Biotechnology,5,48-51
31. Omumi A, **Dina Morshedi**, Samadi A(2001) Isolation of a novel stable peptide from cultivated raphanus with peroxidase activity. World journal of Microbiology and Biotechnology,17(8),827-828
32. Ghorashi, S.A., Daliri Joupari, M., **Dina Morshedi**, Hajian, T., Lotfi, M. Detection of pestivirus contamination in cell cultures by nested-PCR. Journal of Veterinary Research 63 (1): 17-22
33. Kargar R, Ghorashi S.A, Sadeghi M.R., **Dina Morshedi**, Massoudi, S., and Pournabakhsh S.A. Detection of different Iranian isolates of Bovine Herpesvirus Type-1 (BHV-1) using polymerase chain reaction. Archives of Razi. 2003 55: 11-18
34. Sadeghi,M.R ;Ghorashi,S.A ;Kargar Moakhar,R; **Dina Morshedi** (2006). Polymerase chain reaction for the detection and differentiation of Marek's disease virus strains MDV-1 and HVT ,Iranian Journal of Veterinary Research.University of Shiraz.Vol.7 No.1 17-21
35. Rabbani A, **Dina Morshedi**. The effects of Vitamin A derivatives on protein and RNA synthesis in developing macrophages .J. Science (Az-Zahra University)2000(13):19-27
36. Rabbani A, Faravardeh L, **Dina Morshedi**: The effect of retinoic acid on alveolar macrophages.Iranian Journal of Biology 2001(10) 22-31

## **H. Recently Congresses:**

1. **Dina Morshedi**: Inhibition and induction of fibrillation of amyloidogenic proteins in the presence of cuminaldehyde. 14th congress of Biochemistry, 2016, Iran Aug 19-10
2. Hossein M. Beigi.....,**Dina Morshedi**: Changing the structure and fibrillation of alpha-synuclein through the interaction with the loaded nanoparticles. 14th congress of Biochemistry, 2016, Iran Aug 19-10
3. Amir T. Marvian, **Dina Morshedi**, Farhang Aliakbari, Haniyeh Ghapani, Mahour Nasuti: Characteristics of the interaction between different toxic aggregated species of alpha-synuclein and cell membrane. 20th International Congress of Parkinson's Disease and Movement Disorders 2016 • Berlin, Germany, June 19-23,
4. Farhang Aliakbari, **Dina Morshedi**, Hossein . M Beigi, Amir. T.Marvian, P. Shariati, Abass. Shojaosadati, Ali.A. Saboury: Diverse effects of alpha-synuclein fibrils on various neuron cell lines, using different buffers. 20th International Congress of Parkinson's Disease and Movement Disorders 2016 • Berlin, Germany, June 19-23,
5. Mansooreh Heravi, **Dina Morshedi**, Leyla Bargahi: Cytotoxic assessment of alpha-synuclein aggregates on primary hippocampal neurons compared to PC12 cell line, Basic and clinical neuroscience congress, 2015, Dec.23-25
6. Farhang Aliakbari, **Dina Morshedi**, Ali. Akbar Shabani, Hossein Mohammad Beigi, Alternative response of PC12 and SHSY5Y cell lines on the toxic aggregated- Alpha-synuclein. Basic and clinical neuroscience congress, 2015, 23h-25th December 2015, ID: 26647, PP 122-123. Tehran, Iran.
7. Farhang Aliakbari, Hassan Bardania, **Dina Morshedi**, Ali. Akbar Shabani, Hossein Mohammad Beigi, Amir Tayaranian Marvian, Ali Akbar Saboury, Seyed Abbas Shojaosadati. Neurotoxicity of neutral charge nanoliposome as a candidate in order to drug delivery on the SHSY5Y and PC12 cell line. 14th Iranian Pharmaceutical Congresses and 1st Symposium on Biopharmaceutics and Pharmacokinetics. 21h-24th December 2015. Tehran, Iran.
8. Farhang Aliakbari, **Dina Morshedi**, Ali. Akbar Shabani, Hossein Mohammad Beigi, Amir Tayaranian Marvian, Parvin Shariati, Seyed Abbas Shojaosadati, Ali Akbar Saboury. Diverse effects of alpha-synuclein fibrils on various neuron cell lines, using

- different buffers. Will be held on “20th International Congress of Parkinson’s Disease and Movement Disorders” 19-23 June, 2016, Berlin, Germany.
9. Behnam Maleki, **Dina Morshedi**, Fatemeh Tbandeh, Zahra Soheili: Fabrication and characterization of the HEWL network as a cell culture platform, National Biotechnology congress, IRIR, 2015
  10. **Dina Morshedi**, Fatemeh Omrani, Different conformations of protaceous nanofibrils with different adsorption properties. National Biotechnology congress, IRIR, 2015
  11. Masoome Khalife, Dina Morshedi, Amir Tayaranian Marvi, Prefibrillar alpha-synuclein induce expression of endoplasmic reticulum stress genes in PC12 cells National Biotechnology congress, IRIR, 2015
  12. Farhang Aliakbari, **Dina Morshedi**. The impact of Myrtus communis essential oil to increase the formation of the toxic aggregate species of alpha-synuclein and enhancement of the cell death. Alpha-Synuclein: The Gateway to Parkinsonism. 11th-13<sup>th</sup> February 2015. Session 5, No. 45, Innsbruck, Austria.
  13. Amir Tayaranian Marvian, **Dina Morshedi**, Farhang Aliakbari. The study on the effect of fibrillation inhibitory compounds on the depolymerization of amyloid fibrils of alpha-synuclein using fluorescent-labeled protein. European Human Genetics Conference. Volume 22 Supplement 1. No. J09.60. May 31- June 3, nature publishing group. 2014. Milan, Italy.
  14. Mohsen Doostkam, Ayyoob Arpanaei, **Dina Morshedi**, Farhang Aliakbari, Hossein Mohammad Beigi. Preparation and characterization of baicalein-loaded mesoporous silica nanoparticles. 5th International Congress on Nanoscience and Nanotechnology. PP, 57. October 22-24, 2014. Tehran, Iran.
  15. Negar Mirzazadeh, Abbas Shojaossadati, **Dina Morshedi**, Hossein Mohammad Beigi, Farhang Aliakbari. Effect of Human Serum Albumin Nanoparticles on  $\alpha$ -synuclein fibrillation. 5th International Congress on Nanoscience and Nanotechnology. PP, 117. October 22-24, 2014. Tehran, Iran.
  16. Fatemeh Omrani, **Dina Morshedi**, Farhang Aliakbari. Different sources of protaceous nanofibrils with different potential to bioremediation of dyes. 5th International Congress on Nanoscience and Nanotechnology. PP, 154. October 22-24, 2014. Tehran, Iran.



17. Farhang Aliakbari, **Dina Morshedi**, Amir Tayaranian Marvian, Mohsen Doostkam. Comparison of Cuminaldehyde with Baicalein in fibril formation and fibril decomposition of alpha-synuclein and the assessment of its cytotoxicity on PC12 cells. Conference “RNA Metabolism: Changing Paradigms in Neurodegeneration” PP.42, May 26-29, 2014, Trieste, Italy.
18. Masoome Khalife, **Dina Morshedi**, Farhang Aliakbari, Hossein Mohammad Beigi, The presence of the fibrillar form of alpha-synuclein moderate dopamine cytotoxicity. Conference “RNA Metabolism: Changing Paradigms in Neurodegeneration” PP.38, May 26-29, 2014, Trieste, Italy.
19. **Dina Morshedi**, Farhang Aliakbari, Hossein Abarghooi, Fatemeh Omrani. High potential to decolorize the aqueous solution contain Direct violet 51 by the proteinaceous nanofibrils extract from wastes. *Bioremediation*, 2013, No, 1145.
20. Masoome Khalife, **Dina Morshedi**, Farhang Aliakbari, Hossein Mohammad Beigi, The presence of the fibrillar form of alpha-synuclein moderate dopamine cytotoxicity. Conference “RNA Metabolism: Changing Paradigms in Neurodegeneration” PP.38, May 26-29, 2014, Trieste, Italy.
21. Farhang Aliakbari, **Dina Morshedi**, Amir Tayaranian Marvian, Mohsen Doostkam. Comparison of Cuminaldehyde with Baicalein in fibril formation and fibril decomposition of alpha-synuclein and the assessment of its cytotoxicity on PC12 cells. Conference “RNA Metabolism: Changing Paradigms in Neurodegeneration” PP.42, May 26-29, 2014, Trieste, Italy.
22. **Dina Morshedi**, Farhang Aliakbari, Zeinab Mohammadi, Using protein nano-biomaterial prepared from fish waste to remove azo dyes by the coagulation process. The 8th National Biotechnology Congress of Iran and the 4th Congress on Biosafety and Genetic Engineering. July 6-8, 2013 Tehran, Iran.
23. **Dina Morshedi**, Farhang Aliakbari, Majid Lotfinia, Jafar Fallahi, Using small molecules as new challenge to redirect metabolic pathway in order to decrease acetate toxicity. The 8th National Biotechnology Congress of Iran and the 4th Congress on Biosafety and Genetic Engineering. July 6-8, 2013 Tehran, Iran.
24. Masoome Khalife, **Dina Morshedi**, Farhang Aliakbari, Amir Tayaranian, Hossein Mohammad Beigi The effect of dopamine in induction of Alpha synuclein

- cytotoxicity (involved protein in Parkinsons') by assessment of ROS and cell death. The 8<sup>th</sup> National Biotechnology Congress of Iran and the 4<sup>th</sup> Congress on Biosafety and Genetic Engineering. July 6-8, 2013 Tehran, Iran.
25. Hossein Mohammad Beigi, Seyed Abbas Shojaosadati, **Dina Morshedi**, Farhang Aliakbari, The inhibitory effects of Galic acid on the Alpha-Synuclein amyloid fibrils. The 8<sup>th</sup> National Biotechnology Congress of Iran and the 4<sup>th</sup> Congress on Biosafety and Genetic Engineering. July 6-8, 2013 Tehran, Iran.
26. Amir Tayaranian, **Dina Morshedi**, Mehryar Amininasab, Masoome Khalife, Hossein Mohammad Beigi. The effects of a-synuclein pre-fibrils to induce permeability of cell membrane. The 8th National Biotechnology Congress of Iran and the 4<sup>th</sup> Congress on Biosafety and Genetic Engineering. July 6-8, 2013 Tehran, Iran.
27. Masoome Khalife, **Dina Morshedi**, Farhang Aliakbari, Amir Tayaranian Controversial role of amyloid form of alpha-synuclein on PC12 cells treated with dopamine. The 2<sup>nd</sup> Congress on Basic and Clinical Neuroscience, December 18-20, 2013 Tehran, Iran.
28. Mona Soroush, **Dina Morshedi**, Sattar Tahmasebi Enferadi, Farhang Aliakbari Study on the anti-amyloidogenic effect of herbal extraction which protected dopaminergic cells from damages of toxic forms of alphasynuclein amyloid fibrils. The 2<sup>nd</sup> Congress on Basic and Clinical Neuroscience, December 18-20, 2013 Tehran, Iran.
29. Amir Tayaranian Marvian, **Dina Morshedi**, Mehryar Amininasab, Masoome Khalife, Farhang Aliakbari, Nonspecific exogenous cellular transmission of fluorescent labeled proteins through induction of alpha-synuclein cytotoxic species in different cell lines The 2<sup>nd</sup> Congress on Basic and Clinical Neuroscience, December 18-20, 2013 Tehran, Iran.
30. **Dina Morshedi**, Farhang Aliakbari, Hossein Abarghoee, Fatemeh Omrani, High potential to decolorize aqueous solution contain Direct Violet 51 by the proteinaceous nanofibrils extracted from waste. The first National Iranian Conference on Bioremediation, December 2-3, 2013 Tehran. Iran.
31. Masoome Khalife, Farhang Aliakbari, **Dina Morshedi**. Cautiously view point on the effect of essential oils as therapeutic materials for neurodegenerative diseases. 3<sup>rd</sup> International Student Biotechnology Congress. PP.16. 2013.

32. Jafar Fallahi, **Dina Morshedi**, Farhang Aliakbari, The suitable purification method for investigation on Alpha-Synuclein involved in Parkinson disease. 3<sup>rd</sup> International Student Biotechnology Congress. PP.86. 2013.
33. Amir Tayaranian, **Dina Morshedi**, Mehryar Amininasab, Farhang Aliakbari, alpha-synuclein protein specific probing by Monobromobimane as a fluorescent probe with inefficient amino acid substitution method. 3<sup>rd</sup> International Student Biotechnology Congress. PP.262. 2013.
34. **Dina Morshedi**, Farhang Aliakbari, Prevention of Alpha-synuclein Fibrillation by *Cuminum cyminum* and its Constituent and the Cytotoxicity Assessment of the Extracts on PC12 Cells. The 11th International Conference on Alzheimer's and Parkinson's Diseases, AD/PD™. Florence, Italy. 2013.
35. Farhang Aliakbari, **Dina Morshedi**. The Effect of *Lavandula officinalis* on the Amyloid Fibril Formation of Alpha-synuclein and Evaluation of the Cytotoxicity on SK-N-MC Cells. The 11th International Conference on Alzheimer's and Parkinson's Diseases, AD/PD™. Florence, Italy. 2013. A-459-0002-01432.
36. **Dina Morshedi**, Farhang Aliakbari. Study on the differences in the mechanism of Alpha-synuclein amyloid form mediated cytotoxicity on a dopaminergic and non-dopaminergic neural cell. Basic and Clinical Neuroscience Congress 2012, No: 287.
37. **Dina Morshedi**, Jafar Fallahi, Farhang Aliakbari. Comparison of the effect of His-tag on Alpha-synuclein aggregation according to results of in vitro and prediction in silico. 4<sup>th</sup> Iranian Bioinformatic Congress. Tehran, Iran. 2012. ID: O-111. PP:25.
38. **Dina Morshedi**, Farhang Aliakbari. Lithium chloride as an effective compound to decline acetate accumulation and enhance recombinant human Alpha-synuclein production. 3rd World Congress on Biotechnology. 2012. J Biotechnolo Biomater. Volume 2, Issue 6-199.
39. **Dina Morshedi**, Jafar Fallahi, Farhang Aliakbari. Study on the effect of His-tag on the purification and fibrillation of recombinant alpha synuclein. The 17th national & 5th International Conference of Biology of Iran. Kerman, Iran. 2012. IBC17thP4173T002-2.

40. **Dina Morshedi**, Jafar Fallahi, Farhang Aliakbari. High-performance of chelating process for recombinant protein purification. The 17th national & 5th International Conference of Biology of Iran. Kerman, Iran. 2012. IBC17thP4181T002-1.
41. **Dina Morshedi**, Zeinab Mohammadi, Masoud Mashhadi Akbar Boojar Farhang Aliakbari, Comparison of protein nanofibril with activated carbon for decolorization of acid red 144 aqueous solution. The 17th national & 5th International Conference of Biology of Iran. Kerman, Iran. 2012. IBC17thP5761T004-3.
42. Farhang Aliakbari, Seyedeh Felour Mazhar, Rouhollah Karami-Osbood, Davoud Farajzadehe, **Dina Morshedi**. Decontamination of vegetables inoculated with *Shigella flexneri* by essential oils. 15th International Biotechnology Symposium and Exhibition. Daegu, Korea. . 2012, P-S1-0134.
43. Tayyebali Salmani Kesejini, **Dina Morshedi**, Farhang Aliakbari. Inhibitory effect of essential oil belonging to cumin oil on lysozyme amyloid process. 2nd Research Congress of Medical Sciences students of Tehran's Network Partner. 2012. P:5.
44. **Dina Morshedi**, Farhang Aliakbari, Tayyebali Salmani Kesejini, Congo red coagulation (Azo Dye) by nanofibrils of different proteins. The 7<sup>th</sup> National Biotechnology Congress. Tehran, Iran. 2011.
45. Farhang Aliakbari, Seyedeh Flour Mazhar, Rouhollah Karami-osboo, Parvin Shariati, Davood Faradjzadeh, **Dina Morshedi**. Essential oils usage as a natural pesticide. 14th International Biotechnology Symposium and Exhibition. Rimini, Italy. 2010. P-P&F028.
46. 1st National student Conference of Biotechnology. Elimination of Azo dye from aqua solution by protein nanofibrils. Zeinab Mohammadi, **Dina Morshedi**, Masoud Mashhadi Akbar Boojar, Farhang Aliakbari, Gholestan, Iran. 2012. p:57
47. The 5th Annual Research Conference of Iran's Universities of Medical Sciences. Inhibition of Alpha synuclein amyloid fibrillation by cuminaldehyde and its cytotoxicity assessment on SK-N-MC cells, **Dina Morshedi**, Farhang Aliakbari, 2012, Journal of Semnan University of Medical Sciences, V.13, N.3 p165
48. The 1st national Congress of Medicinal Plants. Different anti amyloidogenic affects of two essential oils' compounds, cuminaldehyde and alpha-terpinole ,on fibril formation of two amyloidogenic proteins. **Dina Morshedi**, Farhang Aliakbari, 2012, Iranian journal of pharmaceutical research V.11 N.22 p135

49. The 1st International and 5th Annual Congress of Iranian Neurogenetic Society. Study on cytotoxicity effects of different structures of Alpha synuclein fibrils on SK-N-MC cells. Tayyebali Salmani Kesejini, Farhang Aliakbari, **Dina Morshedi**. 2011. No: 444. P:28.
50. The 1st International and 5th Annual Congress of Iranian Neurogenetic Society. Inhibition of Alpha synuclein fibrillation in the presence of plant extractions. Tayyebali Salmani Kesejini, **Dina Morshedi**, Farhang Aliakbari 2011. No: 445. P:66.
51. 7th National Congress of Biotechnology (2011) . Coagulation of Congo red (Azo Dye) by Nanofibril of different proteins . Dina Morshedi, Farhang Aliakbari, Tayyebali Salmani Kesejini
52. 2nd National and the 1st International Congress on Cellular and Molecular Advanced in Non-Contagious Diseases. Study of dNTPs effect on alpha-synuclein fibril formation (Amyloidosis). Cell Journal, Babol, Iran. **Dina Morshedi**, Farhang Aliakbari, Hamid Reza Noori. Vol 13, 2011. No:16. P:47
53. 10th Iran Biophysical chemistry conference. Shiraz, Iran. 2011. Induction coagulation form by binding of Azo dyes to the amyloid structure of protein. **Dina Morshedi**, Farhang Aliakbari, Tayyebali Salmani Kesejini, Fatemeh Tabandeh. No:16. P:A8.
54. 4th Iranian Neurogenetic Society Annual Congress 2010. High Production of recombinant alpha-synuclein and in vivo study on cytotoxicity effects of amyloid forms of synuclein (Parkinson's disease related protein). No: P08. P:122. **Dina Morshedi**, Farhang Aliakbari, Tayyebali Salmani Kesejini, Neda Vaseli Hagh, Abdololkhalegh Dizagee.
55. 4th Iranian Neurogenetic Society Annual Congress 2010. Cumin oil as an inhibitor to inhibit protein fibrillation. **Dina Morshedi**, Tayyebali Salmani Kesejini, Farhang Aliakbari. No: P07. P:121.
56. 14th International Biotechnology Symposium and Exhibition. 2010. Essential oils usage as a natural pestiside.. P-P&F028. Farhang Aliakbari, Seyedeh Flour Mazhar, Rouhollah Karami-osboo, Parvin Shariati, Davood Faradjzadeh, **Dina Morshedi**.
57. 14th International Biotechnology Symposium and Exhibition. 2010. P-I.58. **Dina Morshedi**, Farhang Aliakbari, Hassan Habib Ghomi, Mohsen Nemat Ghorghani.

- Adding glucoseamine sulfate induces high production of alpha synuclein in E coli BL21.
58. 11th Iran Genetic Congress. Farhang Aliakbari, Meisam Moradi, Majid Lotfinia, Parvin Shariati, **Dina Morshedi**, Sadegh Azimzadeh Jamalkandi. 2010. Similarity of the lipopeptide antibiotic iturin A protein in Bacillus species. P4 - 010, 2010.
  59. The 35th FEBS congress 2010 ;Fibrillation of human insulin is accelerated upon interaction with PVP-coated nanoparticles under in vitro conditions. Ali Meratan, H Ostadi, **Dina Morshedi**, M. Nemat-Gorgani
  60. 10th international congress Biochemistry and Molecular Biology. 2010 Amorphous aggregation and fibrillation are both accelerated by neutralization of lysine residues in HEWL. **Dina Morshedi**, Mohsen Nemat-Gorgani , Atiyeh Ghasemi

#### **F. Patents:**

1. **Dina Morshedi**, Farhang Aliakbari, Producing of recombinant Alpha synuclein (related protein with Parkinson' Diseases) using a native and economical carbon source. No. 1390/05/11-70923. Tehran. Iran.
2. **Dina Morshedi**, Farhang Aliakbari, Jafar Fallahi, Purification of Alpha synuclein with no tag using properties of salt chelating. No. 1393/02/02-82700. Tehran. Iran.
3. **Dina Morshedi**, Fatemeh Omrani, Arash Yazdani. Formulation of one step production of nanofibrils with high potential to adsorb azo dyes. 1394/12/1-

#### **I: TEACHING RECORDS:**

1. Protein science. National Institute of genetic Engineering and Biotechnology, since 2014 (Master student).
2. Protein formulation. National Institute of genetic Engineering and Biotechnology, since 2015 (Master student).
3. Biochemistry of chromatin, Islamic Azad University, Science and Research Branch, Tehran, since 2015 (Master and PhD students).
4. DNA structure and DNA replication. National Institute of genetic Engineering and Biotechnology, 2012 and 2013 (Master students).
5. Macromolecular structures. National Institute of genetic Engineering and Biotechnology. 2013 (Master students).

6. Human and Plant genetics. Semnan University of Medical sciences. 2013 (PhD student).
7. Protein Engineering. Semnan University of Medical sciences. 2013 (PhD student).
8. Macromolecular structures. Semnan University. 2012. 2013 (Master student).
9. General Biochemistry, Islamic Azad University, Science and Research Branch, Tehran, 2010. (Bachelor Student).

## **WORKSHOPS ORGANIZED/ PARTICIPATED**

- 1. Executive manager and lecturer in workshop entitled: "A 3-day Hands-on Workshop on Recombinant protein expression, SDS-PAGE and Western blotting" Organized by the National Institute of Genetic Engineering and Biotechnology (NIGEB) on 16-18 May 2015, Tehran, Iran.
- 2. Executive manager and lecturer in workshop entitled: "A 2-day Hands-on Workshop on Cell Culture and Assessment of Cell death and Cytotoxicity" Organized by the National Institute of Genetic Engineering and Biotechnology (NIGEB) on 5-6 May 2015, Tehran, Iran.
- 3. Executive manager and lecturer in workshop entitled: "A 2-day Hands-on Workshop on Cell Culture and Assessment of Cell death and Cytotoxicity" Organized by the National Institute of Genetic Engineering and Biotechnology (NIGEB) on 5-6 December 2014, Tehran, Iran.
- 4. Executive manager and lecturer in workshop entitled: "A 2-day Hands-on Workshop on Cell Culture and Assessment of Cell death and Cytotoxicity" Organized by the National Institute of Genetic Engineering and Biotechnology (NIGEB) on 5-6 May 2014, Tehran, Iran.
- 5. Advanced in protein biotechnology course. National Institute of Genetic Engineering and Biotechnology (NIGEB). Second semester. 2014-2015. (For the Master of Science students).
- 6. Protein engineering course. Medical science university of semnan. Second semester. 2014-2015. (For the Ph.D student)
- 7. Cell culture. Azad Islamic University, Pishva Branch. Second semester. 2014-2015. (For the Master of Science student).
- 8. Downstream processing course. National Institute of Genetic Engineering and Biotechnology (NIGEB). Second semester. 2014-2015. (For the Master of Science students).
- 9. Teaching assistant in a work shop entitled: "Genetic engineering" .Arak University April 2004
- 10. Teaching assistant in a work shop entitled: "Genetic engineering" .Islamic Azad University May 2005
- 11. Teaching assistant in an international workshop entitled:" large scale protein purification and application in the production of therapeutic products". Nov.1996, National Institute of Genetic Engineering and Biotechnology

