

Ali Dehshahri



Personal Information:

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Date and place of birth: 19.05.1977, Shiraz, Iran

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Education:

- 1998-2004: Doctor of Pharmacy (Pharm.D.), Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran.
- 2004-2009: Ph.D. in Pharmaceutical Biotechnology, Mashhad University of Medical Sciences, Mashhad, Iran.
- March-September 2007: Visiting Researcher, Department of Pharmacy, Munich Center of Nanoscience (CeNS), Ludwig-Maximilians University of Munich, Germany.
- August-September 2019: Visiting Scholar, Division of Pharmaceutical Technology, University of Basel, Switzerland.
- June-July 2025: Visiting Professor, Division of Chemical Sciences and Technologies, Department of Agricultural, Food, Environmental and Animal Sciences (Di4A), University of Udine, Udine, Italy.

Academic position:

- 2009-2015: Assistant professor, Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran.
- 2015-2020: Associate professor, Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran.
- 2020-now: Professor, Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran.

Research interests:

- Biotechnology
- Nanotechnology-based Delivery of Gene and Drug
- Cancer Immunotherapy
- Bioinformatics and Vaccine Design

Selected Publications:

Original research papers:

- **Dehshahri A**, Oskuee RK, Shier WT, Hatefi A, Ramezani M. Gene transfer efficiency of high primary amine content, hydrophobic, alkyl-oligoamine derivatives of polyethylenimine. *Biomaterials*. 2009 Sep 1;30(25):4187-94.
- Nouri F, Sadeghpour H, Heidari R, **Dehshahri A***. Preparation, characterization, and transfection efficiency of low molecular weight polyethylenimine-based nanoparticles for delivery of the plasmid encoding CD200 gene. *International Journal of Nanomedicine*. 2017; 12:5557-5569.
- Sheikhsaran F, Sadeghpour H, Khalvati B, Entezar-Almahdi E, **Dehshahri A***. Tetraiodothyroacetic acid-conjugated polyethylenimine for integrin receptor mediated delivery of the plasmid encoding IL-12 gene. *Colloids and Surfaces B: Biointerfaces*. 2017 Feb 1; 150:426-36.
- Taheri Z, Kazemi M, Khalvati B, Safari F, Alhashemi SH, Ahmadi F, **Dehshahri A***. Dihydroxyphenylalanine-conjugated high molecular weight polyethylenimine for targeted delivery of Plasmid. *Scientific Reports*. 2024 Sep 4;14(1):20564.

Review papers:

- Mohammadinejad R, **Ali Dehshahri***, Madamsetty V.S, Zahmatkeshan M, Tavakol Sh, Makvandi P, Khorsandi D, Pardakhty A, Ashrafizadeh M, Ghasemipour Afshar E, Zarrabil A*, *In vivo* gene delivery mediated by non-viral vectors for cancer therapy. *Journal of Controlled Release*. 2020 Sep; 325: 249-275.
- **Dehshahri A**, Ashrafizadeh M, Ghasemipour Afshar E, Pardakhty A, Mandegary A, Mohammadinejad R, Sethi G. Topoisomerase inhibitors: Pharmacology and emerging nanoscale delivery systems. *Pharmacological Research*. 2020 Jan; 151:104551.
- Casper J, Schenk SH, Parhizkar E, Detampel P, **Dehshahri A***, Huwyler J*. Polyethylenimine (PEI) in gene therapy: Current status and clinical applications. *Journal of Controlled Release*. 2023 Oct 1; 362:667-91.
- Mansouri M, Mansouri K, Taheri Z, Hossaini Alhashemi S, **Dehshahri A***. The Fomivirsen, Patisiran, and Givosiran Odyssey: How the Success Stories May Pave the Way for Future Clinical Translation of Nucleic Acid Drugs. *BioDrugs*. 2025 Apr 5:1-3.

(*Corresponding Author)

- **Full list of Publications:**

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1. Mansouri M, Mansouri K, Taheri Z, Hossaini Alhashemi S, **Dehshahri A***. The Fomivirsen, Patisiran, and Givosiran Odyssey: How the Success Stories May Pave the Way for Future Clinical Translation of Nucleic Acid Drugs. *BioDrugs*. 2025 Apr 5:1-3. **(IF: 6.9)**
2. **Dehshahri A**, Hossaini Alhashemi S, Taheri Z, Firouzabadi N. A pharmaceutical perspective on the potential of monkeypox outbreak to tackle future pandemics. *Trends in Pharmaceutical Sciences and Technologies*. 2025 Jun 1.(In-Press)
3. Ghorbani M, Namazi S, Dehghani M, Razi F, Khalvati B, **Dehshahri A***. Identifying the potential mediators of pathological complete response to neoadjuvant chemotherapy among TACR1 gene polymorphisms: a study on breast cancer patients. *Breast Cancer Research and Treatment*. 2025 Mar 13:1-10. **(IF:3.0)**
4. Kiaghobadi F, **Dehshahri A**, Ghasemi Y, Morowvat MH. Emerging Methods in the Identification of Bacterial Respiratory Tract Pathogens. *Recent Patents on Biotechnology*. 2025 Sep;19(3):198-209.
5. Zare F, Kazemi M, Khalvati B, Sakhteman A, Ahmadi F, **Dehshahri A***, Sadeghpour H. Small Library of Prednisolone and Budesonide Conjugated Low and High Molecular Weight Polyethylenimine for Delivery of Plasmid DNA. *BioNanoScience*. 2025 Mar;15(1):1-5. **(IF:3.2)**
6. Sadeghi MM, Alipour S, Morowvat MH, Salehi MS, Das SS, **Dehshahri A***. Green Biosynthesized Selenium Nanoparticles Using Whole Cell and Cell Lysate of *Spirulina platensis*: Characterizations and In Vitro Wound Healing Studies. *BioNanoScience*. 2025 Mar;15(1):1-8. **(IF:3.2)**
7. Bakhoda Z, Dadfarnia S, Haji Shabani AM, **Dehshahri A***, Baneshi M, Moghadam D. Design and comparison of the drug delivery systems of pegylated doxorubicin loaded Zn-CP and Zn-CP-SO₃H. *Journal of the Iranian Chemical Society*. 2024 Dec 10:1-3.**(IF:2.3)**
8. Ashooriha M, Khoshneviszadeh M, Kabiri M, **Dehshahri A**, Hassani B, Ansari M, Emami S. Multi-functional tyrosinase inhibitors derived from kojic acid and hydroquinone-like diphenols for treatment of hyperpigmentation: Synthesis and in vitro biological evaluation. *Archiv der Pharmazie*. 2024 Dec: e2400380. **(IF:3.6)**
9. Haghighi E, Abolmaali SS, **Dehshahri A**, Mousavi Shaegh SA, Azarpira N, Tamaddon AM. Navigating the intricate in-vivo journey of lipid nanoparticles tailored for the targeted delivery of RNA therapeutics: a quality-by-design approach. *Journal of Nanobiotechnology*. 2024 Nov 14;22(1):710. **(IF:12.6)**
10. Taheri Z, Mozafari N, Moradian G, Lovison D, **Dehshahri A***, De Marco R. Integrin-Specific Stimuli-Responsive Nanomaterials for Cancer Theranostics. *Pharmaceutics*. 2024 Nov 11;16(11):1441. **(IF: 5.5)**

11. Taheri Z, Kazemi M, Khalvati B, Safari F, Alhashemi SH, Ahmadi F, **Dehshahri A***. Dihydroxyphenylalanine-conjugated high molecular weight polyethylenimine for targeted delivery of Plasmid. *Scientific Reports*. 2024 Sep 4;14(1):20564.(**IF:3.9**)
12. Safari F, Bardania H, **Dehshahri A**, Hallaj-Nezhadi S, Asfaram A, Mohammadi V, Baneshi M, Bahramianpour S, Akrami N, Khalvati B, Mirzaei A. Targeted delivery of interleukin-12 plasmid into HepG2 cells through folic acid conjugated graphene oxide nanocarrier. *Biotechnology Progress*. 2024 Sep;40(5):e3473. (**IF: 2.5**)
13. Ghorbani M, Namazi S, Dehghani M, Razi F, Khalvati B, **Dehshahri A***. Gene polymorphisms of TACR1 serve as the potential pharmacogenetic predictors of response to the neurokinin-1 receptor antagonist-based antiemetic regimens: a candidate-gene association study in breast cancer patients. *Cancer Chemotherapy and Pharmacology*. 2024 Apr 27:1-4. (**IF:3.00**)
14. Zarei M, Abedini B, **Dehshahri A**, Negahdaripour M. Peptide Engineering Approach to Introduce an Improved Calcitonin Mutant. *Molecular Biology*. 2024 Mar 17:1-3.(**IF: 1.2**)
15. Keshavarz V, Kazemi M, Khalvati B, Zare F, **Dehshahri A***, Sadeghpour H. Surface decoration of low molecular weight polyethylenimine (LMW PEI) by phthalated dextrin for improved delivery of interleukin-12 plasmid. *Biotechnology Progress*. 2024 Mar 10:e3443. (**IF: 2.5**)
16. Keshavarz V, Kazemi M, Khalvati B, **Dehshahri A***, Sadeghpour H. Self-Assembled Nanoparticle-Forming Derivatives of Dextrin-Conjugated Polyethylenimine Containing Urethane Bonds for Enhanced Delivery of Interleukin-12 Plasmid. *Current Nanoscience*. 2025 Jan;21(1):99-110. (**IF: 1.5**)
17. Ahmadi F, Ahmadi-Fakhr M, **Dehshahri A**, Parhizkar E. Synthesis and in vitro Evaluation of Levothyroxine-Targeted Paclitaxel-Dextran Conjugate for Drug Delivery to Cancer Cells. *Trends in Pharmaceutical Sciences*. 2023 Sep 1;9(3):213-20.
18. Casper J, Schenk SH, Parhizkar E, Detampel P, **Dehshahri A***, Huwyler J. Polyethylenimine (PEI) in gene therapy: Current status and clinical applications. *Journal of Controlled Release*. 2023 Oct 1; 362:667-91. (**IF: 11.5**)
19. Ranjbar S, Emamjomeh A, Sharifi F, Zarepour A, Aghaabbasi K, **Dehshahri A**, Sepahvand AM, Zarrabi A, Beyzaei H, Zahedi MM, Mohammadinejad R. Lipid-Based Delivery Systems for Flavonoids and Flavonolignans: Liposomes, Nanoemulsions, and Solid Lipid Nanoparticles. *Pharmaceutics*. 2023 Jul 14;15(7):1944.(**IF: 5.5**)
20. Mozafari N, Mozafari N, **Dehshahri A***, Azadi A*. Knowledge Gaps in Generating Cell-Based Drug Delivery Systems and a Possible Meeting with Artificial Intelligence. *Molecular Pharmaceutics*. 2023 Jul 10. (**IF:4.5**)

21. Moradi A, Shahabinezhad F, **Dehshahri A***. An in-silico study to find potential effective circRNAs in the progression of Huntington's disease. *Iranian Journal of Basic Medical Sciences*. 2023;26(8):934. **(IF:2.7)**
22. Madamsetty VS, Vazifehdoost M, Alhashemi SH, Davoudi H, Zarrabi A, **Dehshahri A**, Fekri HS, Mohammadinejad R, Thakur VK. Next-generation hydrogels as biomaterials for biomedical applications: exploring the role of curcumin. *ACS Omega*. 2023 Feb 28 (In-press) **(IF: 4.3) (presented on the cover page)**
23. Alhashemi SH, Ahmadi F, **Dehshahri A***. Lessons learned from COVID-19 pandemic: Vaccine platform is a key player. *Process Biochemistry*. 2023 Jan 1;124:269-79. **(IF: 4.0)**
24. Kazemi M, Parhizkar E, Samani SM, Firuzi O, Sadeghpour H, Ahmadi F, **Dehshahri A***. Targeted co-delivery of paclitaxel and anti P-gp shRNA by low molecular weight PEI decorated with L-3, 4-dihydroxyphenylalanine. *Biotechnology Progress*. 2022 Oct 28:e3310. **(IF: 2.5)**
25. Taghizadeh SM, Ghoshoon MB, Ghasemi Y, **Dehshahri A**, Berenjian A, Ebrahiminezhad A. Efficiency of magnetic immobilization for recombinant *Pichia pastoris* cells harvesting over consecutive production cycles. *Separation Science and Technology*. 2022 Sep 16:1-5. **(IF: 2.3)**
26. Zare F, Solhjoo A, Sadeghpour H, Sakhteman A, **Dehshahri A**. Structure-based virtual screening, molecular docking, molecular dynamics simulation and MM/PBSA calculations towards identification of steroidal and non-steroidal selective glucocorticoid receptor modulators. *Journal of Biomolecular Structure and Dynamics*. 2022 Sep 10:1-1. **(IF: 5.235)**
27. Pouya S, Kazemi M, Pouya S, **Dehshahri A***, Sobhani Z. Evaluation of CTAB coated gold nanoparticles as a potential carrier for gene delivery. *Trends in Pharmaceutical Sciences*. 2022 Sep 1;8(3):147-54.
28. De Marco R, **Dehshahri A**, Baiula M, Doderio V. Editorial: Integrin Ligands and Their Bioconjugate Systems: Synthesis, Conformation, and Biological Activity. *Frontiers in Chemistry*. 16 June 2022. 10: 954618. **(IF: 4.2)**
29. Mozafari N, **Dehshahri A**, Ashrafi H, Mohammadi-Samani S, Shahbazi MA, Heidari R, Azarpira N, Azadi A. Vesicles of yeast cell wall-sitagliptin to alleviate neuroinflammation in Alzheimer's disease. *Nanomedicine: Nanotechnology, Biology and Medicine*. 2022 Jun 14. 44, 102575. **(IF:4.6)**
30. **Dehshahri A**, Khalvati B, Taheri Z, Safari F, Mohammadinejad R, Heydari A. Interleukin-12 Plasmid DNA Delivery by N-[(2-Hydroxy-3-trimethylammonium)propyl]chitosan-Based Nanoparticles. *Polymers*. 2022, 14, 2176. **(IF:4.967)**

31. Rahiminezhad Z, Tamaddon AM, **Dehshahri A**, Borandeh S, Abolmaali SS, Najafi H, Azarpiran. PLGA-graphene quantum dot nanocomposites targeted against $\alpha_v\beta_3$ integrin receptor for sorafenib delivery in angiogenesis. *Biomaterials Advances*. 2022 11 May, 137, 212851. **(IF:6.0)**
32. Firouzabadi N, Javdani K, **Dehshahri A**. Interleukin-33 and Soluble ST2 as Potential Biomarkers of Cancer in Opium Users: A Nested Case-Control Study. *Iranian Journal of Medical Sciences*. 2022 Apr 27, 47 (6), 541-548. **(IF:2.7)**
33. Madamsetty VS, Mohammadinejad R, Uzielienė I, Nabavi N, **Dehshahri A**, García-Couce J, Tavakol S, Moghassemi S, Dadashzadeh A, Makvandi P, Pardakhty A. Dexamethasone: Insights into Pharmacological Aspects, Therapeutic Mechanisms, and Delivery Systems. *ACS Biomaterials Science & Engineering*. 2022 Apr 19. 8(5) 1763–1790 **(IF: 5.5)**
34. Alipour S, Shirazi HC, Kazemi M, **Dehshahri A***, Ahmadi F. Synthesis and cytotoxicity evaluation of doxorubicin-polyethyleneimine conjugate as a potential carrier for dual delivery of drug and gene. *Journal of Drug Delivery Science and Technology*. 2022 Feb 1; 68:102994. **(IF: 4.9)**
35. Ghorbani M, Dehghani M, Fahimfar N, Namazi S, **Dehshahri A***. FLOT (a chemotherapy regimen for gastric/esophagogastric junction cancer): to be treated as a highly emetogenic regimen or a moderately emetogenic one? Comparison of the emetogenic potential of FLOT versus FOLFOX and TAC regimens. *Supportive Care in Cancer*. 2022 Jan 17:1-9. **(IF: 3.0)**
36. Madamsetty VS, Tavakol S, Moghassemi S, Dadashzadeh A, Schneible JD, Fatemi I, Shirvani A, Zarrabi A, Azedi F, **Dehshahri A**, Afshar AA. Chitosan: A versatile bio-platform for breast cancer theranostics. *Journal of Controlled Release*. 2021 Dec 11. 341:733-752. **(IF: 12.5)**
37. Varzandeh M, Mohammadinejad R, Esmaeilzadeh-Salestani K, **Dehshahri A**, Zarrabi A, Aghaei-Afshar A. Photodynamic therapy for leishmaniasis: recent advances and future trends. *Photodiagnosis and Photodynamic Therapy*. 2021 Oct 31:102609. **(IF: 2.6)**
38. Tagizadeh SM, Ebrahimezhad A, Ghoshoon MB, **Dehshahri A**, Berenjian A, Ghasemi Y. Impacts of Magnetic Immobilization on the Growth and Metabolic Status of Recombinant *Pichia pastoris*. *Molecular biotechnology*. 2021 Oct 64, 320-329. **(IF: 2.5)**
39. Mohammadinejad R, Madamsetty VS, Kumar A, Varzandeh M, **Dehshahri A**, Zarrabi A, Sharififar F, Mohammadi M, Fahimipour A, Ramakrishna S. Electrospun nanocarriers for delivering natural products for cancer therapy. *Trends in Food Science & Technology*. 2021 Dec 1; 118:887-904. **(IF: 15.4)**
40. Mansouri K, Ahmadi F, **Dehshahri A***. Synthesis of L-DOPA conjugated doxorubicin-polyethylenimine nanocarrier and evaluation of its cytotoxicity on A375 and HepG2 cell lines. *Nanomedicine Journal*. 2021 Oct 1;8(4) 264-269. **(IF:1.7)**

41. Ghasemiyeh P, Mohammadi-Samani S, Firouzabadi N, **Dehshahri A**, Vazin A. A focused review on technologies, mechanisms, safety, and efficacy of available COVID-19 vaccines. *International immunopharmacology*. 2021 Sep 17;108162. (IF: 4.7)
42. Zarrinhighi A, Moradi A, **Dehshahri A***. Bioinformatics investigation of CRISPR/Cas systems in *Bifidobacterium longum*. *Trends in Pharmaceutical Sciences*. 2021 Sep 1;7(3):169-78.
43. Alipour S, Kalari S, Morowvat MH, Sabahi Z, **Dehshahri A***. Green Synthesis of Selenium Nanoparticles by *Cyanobacterium Spirulina platensis* (abdf2224): Cultivation Condition Quality Controls. *BioMed Research International*. 2021 May 30;2021. (IF: 3.246)
44. Parhizkar E, Rafieipour P, Sepasian A, Alemzadeh E, **Dehshahri A***, Ahmadi F. Synthesis and cytotoxicity evaluation of gemcitabine-tobacco mosaic virus conjugates. *Journal of Drug Delivery Science and Technology*. 2021 Apr 1;62:102388. (IF: 4.5)
45. Karamikhah R, Azarpira N, Zareifar S, **Dehshahri A**, Namazi S, Anbardar MH, Karimzadeh I. The Effects of Three ABCG2 Polymorphisms on Outcome of Central Nervous System Relapses in Iranian Children With Acute Lymphoblastic Leukemia Receiving High Dose Methotrexate. *Acta Medica Iranica*. 2021 Mar 1;59(3) 133-141.
46. **Dehshahri A**, Kumar A, Madamsetty VS, Uzielienė I, Tavakol S, Azedi F, Fekri HS, Zarrabi A, Mohammadinejad R, Thakur VK. New horizons in hydrogels for methotrexate delivery. *Gels*. 2021 Mar;7(1):2. (IF: 5.3)
47. **Dehshahri A**, Biagioni A, Bayat H, Lee E, Hashemabadi M, Fekri HS, Zarrabi A, Mohammadinejad R, Kumar AP. Editing SOX genes by CRISPR-Cas: current insights and future perspectives. *International Journal of Molecular Sciences*. 2021 Jan;22(21):11321. (IF: 4.9)
48. Dorosti H, Nezafat N, Heidari R, Ghoshoon MB, Gholami A, **Dehshahri A**, Erfani N, Rahbar MR, Ghasemi Y. Production and immunological evaluation of epitope-based preventative pneumococcal candidate vaccine comprising immunodominant epitopes from PspA, CbpA, PhtD and PiuA antigens. *Current Pharmaceutical Biotechnology*. 2021;22(14):1900-9. (IF: 2.6)
49. Taghizadeh SM, Ghoshoon MB, Berenjian A, Ghasemi Y, **Dehshahri A**, Ebrahiminezhad A. Impacts of Magnetic Immobilization on the Recombinant Proteins Structure Produced in *Pichia Pastoris* System. *Molecular Biotechnology*. 2021 Jan;63(1):80-9. (IF: 2.6)
50. Mohammadinejad R, **Dehshahri A***, Madamsetty V.S, Zahmatkeshan M, Tavakol Sh, Makvandi P, Khorsandi D, Pardakhty A, Ashrafizadeh M, Ghasemipour Afshar E, Zarrabi A. In vivo gene delivery mediated by non-viral vectors for cancer therapy. *Journal of Controlled Release*. 2020; 325, 249-275. (IF: 12.5) **(presented on the cover page)**

51. Mohammadinejad R, **Dehshahri A**, Sassan H, Behnam B, Ashrafizadeh M, Samareh Gholami A, Pardakhty A, Mandegary A. Preparation of carbon dot as a potential CRISPR/Cas9 plasmid delivery system for lung cancer cells. *Minerva Biotechnologica*.2020; 32(3), 106-13. (IF: 2.024)
52. Firouzabadi N, Dashti M, **Dehshahri A**, Bahramali E. Biomarkers of IL-33 and sST2 and Lack of Association with Carvedilol Therapy in Heart Failure. *Clinical Pharmacology: Advances and Applications*. 2020; 12, 53-58. (IF:2.5)
53. Firouzabadi N, Haghnegahdar M, Khalvati B, **Dehshahri A**, Bahramali E. Overexpression of adiponectin receptors in opium users with and without cancer. *Clinical Pharmacology: Advances and Applications*. 2020; 12, 59-65. (IF:2.5)
54. Ghasemipour Afshar E, Zarrabi A, **Dehshahri A**, Ashrafizadeh M, Dehghannoudeh G, Behnam B, Mandegary A, Pardakhty A, Mohammadinejad R, Tavakol Sh. Graphene as a promising multifunctional nanoplatform for glioblastoma theranostic applications. *FlatChem*. 2020, 100173. (IF: 6.2)
55. Mohkam M, Taleban Y, Golkar N, Berenjian A, **Dehshahri A**, Mobasher MA, Ghasemi Y. Isolation and identification of novel l-Methioninase producing bacteria and optimization of its production by experimental design method. *Biocatalysis and Agricultural Biotechnology*. 2020, 101566. (IF:3.8)
56. **Dehshahri A**, Sadeghpour H, Mohazzabieh E, Saatchi Avval S, Mohammadinejad R. Targeted double domain nanoplex based on galactosylated polyethylenimine enhanced the delivery of IL-12 plasmid. *Biotechnology Progress*. 2020, e3002. (IF: 2.5)
57. Negahdaripour M, Nezafat N, Heidari R, Erfani N, Hajighahramani N, Ghoshoon MB, Shoolian E, Rahbar MR, Najafipour S, **Dehshahri A**, Morowvat MH, Ghasemi Y. Production and Preliminary in vivo Evaluations of a Novel in silico-Designed L2-based Potential HPV Vaccine. *Current Pharmaceutical Biotechnology*. 2020; 21 (4), 316-324. (IF: 2.829)
58. Araste F, Abnous K, Hashemi M, **Dehshahri A**, Detampel P, Alibolandi M, Ramezani M. Na⁺/K⁺ ATPase-targeted delivery to metastatic breast cancer models. *European Journal of Pharmaceutical Sciences*. 2020; 143, 105207. (IF: 4.7)
59. Mohammadinejad R, Sassan H, Pardakhty A, Hashemabadi M, Ashrafizadeh M, **Dehshahri A**, Mandegary A. ZEB1 and ZEB2 gene editing mediated by CRISPR/Cas9 in A549 cell line. *Bratislavske Lekarske Listy*.2020; 121 (1),31-36. (IF: 1.564)
60. Taghizadeh SM, Ebrahiminezhad A, Ghoshoon, **Dehshahri A**, Ghoshoon MB, Berenjian A, Ghasemi Y. Magnetic Immobilization of Pichia pastoris Cells for the Production of Recombinant Human Serum Albumin. *Nanomaterials*.2020; 10 (1), 111. (IF: 5.719)
61. Zarrinhighi A, Dehshahri A. An in Silico Approach to Find the Molecular Targets and Potential Candidates for SARS-CoV-2. *Trends in Pharmaceutical Sciences*. 2020; 6 (1), 11-20.

62. **Dehshahri A**, Ashrafizadeh M, Afshar EG, Pardakhty A, Mandegary A, Mohammadinejad R, Sethi G. Topoisomerase inhibitors: pharmacology and emerging nanoscale delivery systems. *Pharmacological Research*. 2019 Nov 17;104551. (IF: 10.5)
63. Dorosti H, Eslami M, Negahdaripour M, Ghoshoon MB, Gholami A, Heidari R, **Dehshahri A**, Erfani N, Nezafat N, Ghasemi Y. Vaccinomics approach for developing multi-epitope peptide pneumococcal vaccine. *Journal of Biomolecular Structure and Dynamics*. 2019 Sep 2; 37(13):3524-35. (IF:5.235)
64. Khalvati B, **Dehshahri A***. ShRNA-mediated knock-down of CD200 using the self-assembled nanoparticle-forming derivative of polyethylenimine. *Nanomedicine Journal*. 2019 Jul 1;6(3):195-206. (IF:1.7)
65. Hajighahramani N, Eslami M, Negahdaripour M, Ghoshoon MB, **Dehshahri A**, Erfani N, Heidari R, Gholami A, Nezafat N, Ghasemi Y. Computational design of a chimeric epitope-based vaccine to protect against *Staphylococcus aureus* infections. *Molecular and cellular probes*. 2019 Jun 21. 101414. (IF:3.285)
66. Alemzadeh E, **Dehshahri A**, Dehghanian AR, Afsharifar A, Behjatnia AA, Izadpanah K, Ahmadi F. Enhanced anti-tumor efficacy and reduced cardiotoxicity of doxorubicin delivered in a novel plant virus nanoparticle. *Colloids and Surfaces B: Biointerfaces*. 2019 Feb 1; 174:80-6. (IF:5.6)
67. Mohammadinejad R, Dadashzadeh A, Moghassemi S, Ashrafizadeh M, **Dehshahri A**, Pardakhty A, Sassan HA, Sohrevardi SM, Mandegary A. Shedding light on gene therapy: carbon dots for the minimally invasive image-guided delivery of plasmids and noncoding RNAs. *Journal of Advanced Research*. 2019 Jan 18; 18:81-93. (IF: 13.0)
68. Kholghipour H, **Dehshahri A**, Mahmoudian H, Nabeiei P. Shiraz Pharmaceutical Students' Knowledge about Pharmacy Professional Ethics. *Journal of Medical Education*. 2019 Jan 8; 17(3):168-174.
69. Mottaghi S, Azarpira N, **Dehshahri A**, Khalvati B, Namazi S. Evaluation of Angiotensinogen M235T and T174M Polymorphisms, Demographic and Clinical Factors in New-Onset Diabetes after Liver Transplantation in Iranian Patients. *International journal of organ transplantation medicine*. 2019;10(3):137-147.
70. Kholghipour H, **Dehshahri A**, Mahmoudian H. Professionalism ethics in pharmacy education: Do students have acceptable knowledge or it is a white paper in pharmacy education curriculum? *Journal of Advances in Medical Education & Professionalism*. 2018 Oct 2;6(4):190-1.
71. Alemzadeh E, **Dehshahri A**, Izadpanah K, Ahmadi F. Plant virus nanoparticles: novel and robust nanocarriers for drug delivery and imaging. *Colloids and Surfaces B: Biointerfaces*. 2018 Jul 1; 167:20-27. (IF:5.5)
72. Sadeghpour H, Khalvati B, Entezar-Almahdi E, Savadi N, Alhashemi SH, Raoufi M, **Dehshahri A***. Double domain polyethylenimine-based nanoparticles for integrin

- receptor mediated delivery of plasmid DNA. *Scientific reports*. 2018 May 1;8(1):6842. **(IF:3.9)**
73. Sadeghpour H, Roshan Nasrabad K, Alipour Haghighi M, **Dehshahri A***. Preparation and characterization of celecoxib-conjugated polyethylenimine as a potential nanocarrier for gene delivery. *Trends in Pharmaceutical Sciences*. 2018 Mar 1;4(1).
 74. Negahdaripour M, Nezafat N, Eslami M, Ghoshoon MB, Shoolian E, Najafipour S, Morowvat MH, **Dehshahri A**, Erfani N, Ghasemi Y. Structural vaccinology considerations for in silico designing of a multi-epitope vaccine. *Infection, Genetics and Evolution*. 2018 Mar 1; 58:96-109. **(IF:2.6)**
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- **Ph.D. Thesis:**

Ali Dehshahri (2009), Preparation and evaluation of transfection efficiency of modified polyethyleneimine (PEI)-based nanoparticles as non viral vectors used in gene therapy: effect of spermidine and diethylenetriamine shielded by galactose, Supported by the Research Council of Mashhad University of Medical Sciences, Mashhad, Iran.

- **Pharm.D. Thesis:**

Ali Dehshahri (2004), Biotransformation of hydrocortisone by *Nostoc sp.* Supported by the Research Council of Shiraz University of Medical Sciences, Shiraz, Iran.

- **Selected Abstracts and Congress Presentations:**

1. **9th International Conference on Nanostructured Materials, June 2008, Rio de Janeiro, Brazil.**

Presentation Topic/Title: Nanocarriers based on hydrophobic PEI-oligoamines for plasmid DNA transfer.

2. **12th Iranian Pharmaceutical Sciences Congress (IPSC 2010), August 2010, Iran**

Presentation Topic/Title: Oligomerized polyethylenimine: novel nanoparticle (The best paper award)

3. **Nanotech Italy 2010, October 2010, Italy**

Presentation Topic/Title: Less toxic, more efficient nanostructured complexes based on high molecular weight PEI for cancer gene therapy

4. **3rd European Science Foundation Summer School in Nanomedicine, June 2011, Germany**

Presentation Topic/Title: Modification of PAMAM dendrimer leads to efficient nanocarriers for plasmid DNA delivery

5. **MipTec-The leading European Event for Drug Discovery, September 2012, Switzerland**

Presentation Topic/Title: Modified nanodendrimers based on polyamidoamine for tumor cell gene delivery

6. **BIT's 1st Annual International Conference of Emerging Industry- November 2013, China**

Presentation Topic/Title: Polymeric nanoparticles for plasmid DNA and siRNA delivery into cancer cells

7. **6th Iranian Controlled Release society Conference (ICRC2014) & 1st Middle East Controlled release Conference (MECR 2014), February 2014, Iran**

Presentation Topic/Title: Interleukin-12 plasmid DNA delivery into hepatocytes using L-thyroxine conjugated polyethylenimine nanocarrier

8. **Bologna peptide 2016, February 2016, Italy**

Presentation Topic/Title: Integrin receptor-mediated delivery of interleukin-12 plasmid by modified polyethylenimine-based nanoparticles

9. **2nd Iranian Nanomedicine Congress (INMC 2016), 2016, Iran**

Presentation Topic/Title: Tetraiodothyroacetic acid-conjugated polyethylenimine for integrin receptor mediated delivery of the plasmid IL-12 gene (The best paper award)

10. **30 Years of Drug Delivery & Controlled release Society's Nordic Chapter Meeting, June 2017, Finland**

Presentation Topic/Title: Polyethylenimine-based nanoparticles decorated with various integrin ligands mimicking RGD peptides for targeted delivery of plasmid DNA

11. 2nd Edition of Global Conference on Pharmaceutics and Drug Delivery Systems, June 2018, Italy

Presentation Topic/Title: polyethylenimine-based nanoparticles decorated with small molecules mimicking RGD peptide for targeted plasmid DNA delivery

12. World Congress on Pharmaceutical Research and Toxicology, May 2024, Geneva, Switzerland

Presentation Topic/Title: Small Library of Prednisolone and Budesonide Conjugated Low and High Molecular Weight Polyethylenimine Nanoparticles for Delivery of Plasmid DNA

- **Journal Editorial Board**

Guest editor, *Molecules* (Special Issue on new nanomaterials for diagnostic and drug delivery"), October 2022-now

Co-guest editor, *Frontiers in Chemistry*, August 2020-now

Associate Editorial Board Member, *Current Nanoscience*, 2018-now.

- **Teaching Experiences**

- 1- Principles of Protein and Peptide Formulation, Pharmaceutical Biotechnology Ph.D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 2- Quality Control of Biological Products, Pharmaceutical Biotechnology Ph.D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 3- Nanobiotechnology, Medical Biotechnology Ph.D. Program, Shiraz School of Advanced Medical Sciences and Technologies, Shiraz, Iran.
- 4- Chemistry of Proteins, Pharmaceutical Biotechnology Ph.D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 5- Animal Cell Culture, Pharmaceutical Biotechnology Ph.D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 6- Molecular Biology and Genetics, Pharm. D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 7- Pharmaceutical Biotechnology, Pharm. D. Program, Shiraz School of Pharmacy, Shiraz, Iran.
- 8- Supervision of 25 Ph.D and 48 Pharm.D. students from 2010-now.

- **Technical Expertise**

1. Dynamic light scattering (DLS-zeta potential), Co-supervisor, Nanotechnology and Cellular Characterization Lab.
2. Small animal bioluminescent imaging, Co-supervisor, Central Lab of Shiraz University of Medical Sciences.
3. Cell culture and cell-based bioassays, Supervisor, Pharmaceutical biotechnology lab.
4. Basic molecular biology techniques including PCR, real-time PCR, SDS-PAGE, Confocal microscopy, flow cytometry, etc.

- **Academic Memberships**

1. 2108-2023: National panel of experts in Pharmaceutical Biotechnology, Iranian Ministry of Health and Medical Education.
2. 2015-2020: Research council of Shiraz University of Medical Sciences.

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