REYHANEH VARSHOCHIAN

PharmD, PhD of Pharmaceutics

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ABOUT ME

I am a highly motivated researcher in the field of **drug delivery and nanomedicine** with experience of working in Research and Development (R&D) of pharmaceutical companies and teaching as a lecturer.

EDUCATION

PhD **2008-2013**

Tehran University of Medical Sciences (TUMS) | *Tehran, Iran*

- **Pharmaceutics**
- **Thesis**: Bevacizumab loaded PLGA nanoparticle intended for CNV treatment
- GPA:18.2/20 (within the top 3 of the class)

PharmD **2002-2008**

Shahid Beheshti University of Medical Sciences (SBMU) | *Tehran, Iran*

- **Pharmacy**
- GPA: 17.6/20 (within the top 3 of the class)

EXPERIENCE

Assistant Professor **2020-Current**

Department of Pharmaceutics, SBMU | ***Tehran, Iran***

- Teaching and working on novel drug deliveries and biomaterials

R&D Project Manager **2019-2021**

Tofigh Daru Research and Engineering Company (TodaCo) | *Tehran, Iran*

- Development of injectable sustained release formulation

Secretary of Nanotechnology Research Network
Research Assistant **2016-2018**

Nanotechnology Research Center, TUMS | *Tehran, Iran*

- Working on novel drug delivery systems

Postdoctoral Researcher **2014-2016**

Granted from Iran National Science Foundation (INSF) | *Tehran, Iran*

- Preparation of in situ forming gel containing antibody loaded nanoparticles

Executive Secretary **2015**

4th Iranian Pharmaceutical Science Conference (IPSC 2015)
& 1st Symposium of Biopharmaceutics | *Tehran, Iran*

R&D Project Researcher **2012-2015**

NanoDaru Company | *Tehran, Iran*

- Development of injectable sustained release formulation

RESEARCH INTERESTS

Novel drug deliveries including:

- Nano/micro particles (Polymeric, Lipidic)
- In situ forming gels, Hydrogels, and Block-co polymers
- Controlled release drug deliveries
- Nanofibers and Implants
- Metal nanoparticles

Biomaterials
Cancer drug delivery
Ocular drug deliver
Targeted drug delivery
Biopharmaceutical analysis

Conventional drug delivery dosage forms:

- Tablets and tablet coating
- Capsules
- Creams

ACHIEVEMENTS

Awards

- **Top Student, 1st**

  The National Board exam
  Awarded by Iran Ministry of Health and Medical Education

- **Top Student, 1st**
  The National PhD Entrance exam

Scholarships

- **Iran National Science Foundation (INSF)- Postdoctoral grant**

PATENTS

National Patent

Title **Poly(lactic-co-glycolic) acid nanoparticles containing bevacizumab**

A nanomedicine intended for age-related macular degeneration

PUBLICATIONS

Articles https://scholar.google.com/citations?user=6Ib7OmwAAAAJ&hl=en

Ghareh Sheikhlou, M; Shabani Ravari, N; Behrouzi, M; Goodarzi, N; Saghafian Larijani, R; **Varshochian, R**; Dinarvand, R; Rouini, MR;
Engineered PLGA Microspheres for Extended-release of Naltrexone: In vitro, In vivo, and IVIVR
Pharmaceutical Development and Technology, 1-32; 2023

Sadegha, S; **Varshochian, R**; Dadras, P; Hosseinzadeh, H; Sakhtianchi, R; Mirzaie, Z.H; Shafiee, A; Atyabi, A; Dinarvand, R;
Mesoporous silica coated SPIONs containing curcumin and silymarin intended for breast cancer therapy
DARU Journal of Pharmaceutical Sciences, 1-11; 2022

Rabizadeh, T; **Varshochian, R**; Athar, M; Rezaei, M; Pazouki, N; Zardkanlou, M; Irani, S; Dinarvand, R;
Teriflunomide Loaded SPION Nanoparticles Induced Apoptosis in MDA-MB-231 Breast Cancer Cells
Journal of Cluster Science, 33, (4); 2022

Babavalian, A; Tekie, FSM; Ayazi, H; Ranjbar, S; **Varshochian, R**; Rad-Malelkshahie, M; Akhavan, O; Dinarvand, R;
Reduced polydopamine coated graphene for delivery of Hset1 antisense as A photothermal and gene therapy of breast cancer
Journal of Drug Delivery Science and Technology, 73, 103462; 2022

Shirazi, A.S; **Varshochian, R**; Rezaei, M; Ardakani, Y.H; Dinarvand, R;
SN38 loaded nanostructured lipid carriers (NLCs); preparation and in vitro evaluations against glioblastoma
Journal of Materials Science: Materials in Medicine, 32, (7), 1-12; 2021

Katebi, A; **Varshochian, R**; Riazi-rad, F; Ganjalikhani-Hakemi, M; Ajdary, S;
Combinatorial delivery of antigen and TLR agonists via PLGA nanoparticles modulates Leishmania major-infected-macrophages activation
Biomedicine & Pharmacotherapy,137, 111276; 2021

Shafiee, A; Kehtari, M; Zarei, Z; Soleimani, M; **Varshochian, R**; Ahmadi, A; Atyabi, F; Dinarvand, R;
An in situ hydrogel-forming scaffold loaded by PLGA microspheres containing carbon nanotube as a suitable niche for neural differentiation
Materials Science and Engineering: C, 120, 111739; 2021

Baghaei, M; Tekie, F.S.M; Khoshayand, M.R; **Varshochian, R**; Hajiramezanali, M; Kachousangi, M.J; Dinarvand, R; Atyabi, F;
Optimization of chitosan-based polyelectrolyte nanoparticles for gene delivery, using design of experiment: in vitro and in vivo study
Materials Science and Engineering: C, 118, 111036; 2021

Chaharband, F; Daftarian, N; Kanavi, M.R; **Varshochian, R**; Hajiramezanali, M; Norouzi, P; Arefian, E; Atyabi, F; Dinarvand, Rl;
Trimethyl chitosan-hyaluronic acid nano-polyplexes for intravitreal VEGFR-2 siRNA delivery: Formulation and in vivo efficacy evaluation
Nanomedicine: Nanotechnology, Biology and Medicine, 26, 102181; 2020

Ayazi, H; Akhavan, O; Raoufi, M; **Varshochian, R**; Motlagh, N.S.H; Atyabi, F;
Graphene aerogel nanoparticles for in-situ loading/pH sensitive releasing anticancer drugs
Colloids and Surfaces B: Biointerfaces, 186, 110712, 2020

Rezaei, M; Abbasi, A; **Varshochian, R**; Dinarvand, R; Jeddi-Tehrani, M;
NanoMIL-100 (Fe) containing docetaxel for breast cancer therapy

Artificial cells, nanomedicine, and biotechnology, 46, (7), 1390-1401; 2018 (IF: 6.4)

Badiee, P; **Varshochian, R**; Rafiee-Tehrani, M; Abedin Dorkoosh, F; Khoshayand, M.R; Dinarvand, R;
Ocular implant containing bevacizumab-loaded chitosan nanoparticles intended for choroidal neovascularization treatment
Journal of Biomedical Materials Research Part A, 106, (8), 2261-2271; 2018
[Co-Correspond]

Agha-Hosseini, F; Moosavi, M.S; **Varshochian, R**, Akbari, Kh;
A New Approach for Treatment and Prevention of Recurrent Oral Lichen Planus: A Technical Report
Journal of Iranian Dental Association, 30, (3), 126-131, 2018

Pakravan, M; Beni, A.N; Ghahari, E; **Varshochian, R**; Yazdani, S; Esfandiari, H; Ahmadieh, H;
The ocular hypotensive efficacy of topical fasudil, a rho-associated protein kinase inhibitor, in patients with end-stage glaucoma
American Journal of Therapeutics, 24, (6), e676-e680; 2017

Nejat, H; Rabiee, M; **Varshochian, R**; Tahriri, M; Jazayeri, HE; Rajadas, J; Ye, H; Cui, Z; Tayebi, L;
Preparation and characterization of cardamom extract-loaded gelatin nanoparticles as effective targeted drug delivery system to treat glioblastoma
Reactive and Functional Polymers, 120, 46-56; 2017

Gandomi, N; **Varshochian, R**; Atyabi, F; Ghahremani, M.H; Sharifzadeh, M; Amini, M; Dinarvand, R;
Solid lipid nanoparticles surface modified with anti-Contactin-2 or anti-Neurofascin for brain-targeted delivery of medicines
Pharmaceutical Development and Technology, 22, (3), 426-435; 2017

Mehdizadeh, M; Rouhani, H; Sepehri, N; **Varshochian, R**; Ghahremani, M.H; Amini, M; Gharghabi, M; Ostad, S.N; Atyabi, F; Baharian, A;
Biotin decorated PLGA nanoparticles containing SN-38 designed for cancer therapy
Artificial cells, nanomedicine, and biotechnology, 45, (3), 495-504; 2017

Mirzaie, Z.H; Irani, S; Mirfakhraie, R; Atyabi, S.M; Dinarvand, M; Dinarvand, R; **Varshochian, R**; Atyabi, F;
Docetaxel–chitosan nanoparticles for breast cancer treatment: cell viability and gene expression study
Chemical biology & drug design, 88, (6), 850-858; 2016

Varshochian, R; Riazi-Esfahani, M; Jeddi-Tehrani, M; Mahmoudi, A.R; Aghazadeh, S; Mahbod, M; Movassat, M; Atyabi, F; Sabzevari, A; Dinarvand, Rassoul;
Albuminated PLGA nanoparticles containing bevacizumab intended for ocular neovascularization treatment
Journal of biomedical materials research part A, 103, (10), 3148-3156; 2015

Varshochian, R; Hosseinzadeh, H; Gandomi, N; Tavassolian, F; Atyabi, F; Dinarvand, R;
Utilizing liposomes and lipid nanoparticles to overcome challenges in breast cancer treatment
Clinical Lipidology, 9, (5), 571-585; 2014

Dinarvand, R; **Varshochian, R**; Kamalinia, G; Goodarzi, N; Atyabi, F;
Recent approaches to overcoming multiple drug resistance in breast cancer using modified liposomes
Clinical Lipidology, 8, (4), 391-394; 2013

Varshochian, R; Jeddi-Tehrani, M; Mahmoudi, A.R; Khoshayand, M.R; Atyabi, F; Sabzevari, A; Esfahani, M.R; Dinarvand, R;
The protective effect of albumin on bevacizumab activity and stability in PLGA

nanoparticles intended for retinal and choroidal neovascularization treatments
European Journal of Pharmaceutical Sciences, 50, (4-Mar), 341-352; 2013

Goodarzi, N; **Varshochian, R**; Kamalinia, G; Atyabi, F; Dinarvand, R;
A review of polysaccharide cytotoxic drug conjugates for cancer therapy
Carbohydrate polymers, 92, (2), 1280-1293; 2013

Varshochian, R; Jeddi-Tehrani, M; Mahmoudi, A; Dinarvand, R;
Evaluation of bevacizumab activity during encapsulation into polymeric nanospheres by double emulsion method
Research in Pharmaceutical Sciences, 7, (5), 208; 2012

Moghimi, HR; **Varshochian, R**; Kobarfard, F; Erfan, M;
Reduction of percutaneous absorption of toxic chemicals by dendrimers
Cutaneous and Ocular Toxicology 29 (1), 34-40; 2010

BOOK CHAPTER

Kamalinia, G; **Varshochian, R**; Goodarzi, N; Atyabi, F; Dinarvand, R;
Bioconjugation of Cytotoxic Drugs to Peptides, Proteins and Aptamers as Novel Nanostructures for Enhanced Anticancer Drug Delivery
Nanotechnology (Vol. 7: Diagnostics and Therapeutics), Studium Press LLC, 266-290; 2013

PERESENTAIONS & WORKSHOPS

3rd International Conference on Nanotechnology and Chemistry, **2023**
Keynote Speaker, 2023
Thermosensitive in situ forming gel containing Bevacizumab loaded nanoparticles for CNV
Paris, France

2nd Professional Board of R&D Managers and Experts, Nopajuhan Academy, **2022**
Management and innovation during disorders
Tehran, Iran

Nopajuhan Academy, Training, **2022**
Establishment of research and development system
Tehran, Iran

Ofogh Pharmed Educational Institute, Training, **2021**
Quality risk managements, Inspection, Quality audit, and Self Inspection
Tehran, Iran

TUMS, Nanotechnology Research Center, Workshop, **2020**
Tissue engineering principles and bio-printing
Tehran, Iran

TUMS, Nanotechnology Research Center, **Lecturer of the Workshop**, **2019**
Theoretical and practical instructions for synthesis of polymeric and protein nanoparticles
Tehran, Iran

BL22-CLAESS beam line/ALBA Synchrotron, Experiment, **2017**
Encapsulation of cisplatin in MIL-100(Fe)
Barcelona, Spain

23th International Student Congress of (bio)Medical Sciences, **2016**
Characterization of albumin loaded chitosan nanoparticle by UV spectroscopy
Netherland, Groningen

Regional Conference of Young Scientists-Nanoscience & Nanomaterials, TWAS, **2015**
Preparation of thermosensitive in situ forming gel containing diclofenac loaded nanoparticles intended for ocular inflammation treatment
Bangalore, India

4th Iranian Research Association of Vision and Ophthalmology, IRAVO, **2014**
Albuminated PLGA nanoparticles containing bevacizumab intended for treatment of retinal and choroidal neovascularization
Tehran, Iran

6th CLINAM &ETPN Summit, **2013**
Albuminated PLGA nanoparticles for the ophthalmic delivery of bevacizumab intended for retinal and choroidal neovascularization treatment
Basel, Switzerland

6th CLINAM &ETPN Summit, **2013**
Transmission of topical SiO2 nanoparticles through the corneal stroma; a new horizon for management of corneal and choroidal neovascularization
Basel, Switzerland

13h Iranian Pharmaceutical Sciences Conference, **2012**
Evaluation of Bevacizumab activity during encapsulation into nanospheres by double emulsion technique
Isfahan, Iran

5th Iranian Controlled Release Conference, ICRC, **2011**
Novel usage of dendrimers in reduction of percutaneous absorption of toxic chemicals
Zanjan, Iran

12th Iranian Pharmaceutical Sciences Conference, IPSC, **2010**
Antibody activity evaluation during loading into PLGA nanoparticles by double emulsion technique
Mashhad, Iran

11th Iranian Pharmaceutical Sciences Conference, IPSC, **2008**
The effect of various penetration enhancers on in vitro release of diclofenac diethylamine from gel-based formulation
Kerman, Iran