

Curriculum Vitae

PERSONAL PROFILE

Family name: Khorshid

First name: Shiva

Date of Birth:

Highest academic degree: PharmD (equal to MSc)

Email:

Mobile phone:

Address:

Research Interest:

- ❖ 3D Bioprinting
- ❖ Tissue engineering
- ❖ Novel drug delivery systems
- ❖ Novel pharmaceutical formulations
- ❖ Nanomedicines

Education:

- ❖ **Zanjan University of Medical Science, Zanjan, Iran, September 2013 – September 2019,**
GPA: 3.34 (16.35/20)
Relevant Coursework: Biotechnology: 18/20, Bio-pharmacy: 15.9/20, Pharmaceutics II: 19.75/20, Pharmaceutics III: 16/20, Pharmaceutics IV: 18.25/20, Medicinal chemistry III: 18.75/20
- ❖ **NODET High School (National Organization Development of Exceptional Talents), Karaj, Iran, September 2009- June 2013: GPA: 18.25/20**

Honors:

- ❖ **Member of the National Organization for Development of Exceptional Talents (NODET) (2009-2013):** NODET student exam is held annually nationwide for students starting middle and high school. The organization is responsible for several schools across the country and training the top students on a more advanced level in every field of study.
- ❖ **Being in 5% of the nationwide university entrance exam**
- ❖ **Being in 5% of my graduating class 2019**

Publications:

- ❖ **A Hydrogen-Bonded Extracellular Matrix-Mimicking Bactericidal Hydrogel with Radical Scavenging and Hemostatic Function for pH-Responsive Wound Healing Acceleration** (Advanced Healthcare Materials)
- ❖ **Biomedical applications of sprayable hydrogels** (ready for submission)
- ❖ **Chemically crosslinked gelating-hyaluronic acid hydrogel for wound healing** (under preparation)
- ❖ **A photothermally active antibacterial Bismuth Sulfide loaded biomimicking hydrogel for wound healing** (under preparation)
- ❖ **Preparation and *in vitro* evaluation of self-double emulsifying drug delivery system (SDEDDS) containing Acyclovir: a biopharmaceutical class III drug** (under preparation)
- ❖ **Immunotherapy mediated tissue regeneration: from concept to current clinical trials** (under preparation)

Lab experience and skills:

- ❖ **Physicochemical characterization of nanoparticles and self-double emulsifying drug delivery systems (SDEDDS)**
- ❖ **UV-Visible spectroscopy**
- ❖ **Evaluation of nanoparticle's stability:** Monitoring time-dependent changes in appearance, viscosity, mean droplet size and the visual appearance grade by visual grading method
- ❖ **Morphological characterization of SDEDDS:** Evaluation by optical microscopy to achieve a well prepared double emulsion

- ❖ **Evaluation of antibacterial effects of the hydrogels:** Measurement of the inhibition zone around the hydrogel in agar diffusion test and the antibacterial effect using dispersion method
- ❖ **Dynamic light scattering technique:** Measuring size, zeta potential, and polydispersity index of the nanoparticles
- ❖ **High-performance liquid chromatography**
- ❖ **RBC hemolysis assay:** RBC separation and evaluating the RBC hemolysis by measuring the absorbance via microplate reader.
- ❖ **Antioxidant assay:** 2,2-diphenyl-1-picrylhydrazyl (DPPH) assay
- ❖ **Viscosity test**
- ❖ **Rheometer test**
- ❖ **Calibration technique:** Making serial dilution, using linear regression analysis and calculating LOD, LOQ, accuracy, and precision.
- ❖ **Preparation of chemically cross-linked hydrogels for wound healing**
- ❖ ***In vitro* characterization of hydrogels:** Swelling, water retention, water content, gelation time, yield, degradation
- ❖ ***In vivo* wound healing assay**
- ❖ ***In vivo* biodegradation assay**
- ❖ ***In vivo* blood clotting assay**
- ❖ **Animal intraperitoneal (IP) injection**
- ❖ **Drug release study:** Preparing Simulated Gastric Fluid (SGF), Simulated Intestinal Fluid (SIF), and Investigating drug release by dialysis membrane (DM) and Continuous Flow (USP I (basket), USP II (paddle)) method.

Work experience

- ❖ **Working as a pharmacist in pharmacy as a part-time job,** Karaj, Iran, June 2020-present, Mahdasht hospital.

Workshops and conferences:

- ❖ **Drug Discovery:** online course authorized by the University of California San Diego, offered through Coursera, July 2020
- ❖ **International Congress on biomedicine:** held by International Congress on BioMedicine (ICB), Tehran, Iran, December 2017

- ❖ **Drug Design Workshop:** ICB training course, Tehran, Iran, July 2017

Subtopic: - Fundamentals of Drug Discovery and Design

- Virtual Screening
- Molecular Docking by Autodock-Vina
- Molecular Designing of Ligands
- Quantitative Structure-Activity Relationships (QSAR) Analysis

- ❖ **Hospital Pharmacy Conference:** Held by Food and Drug Administration of Iran, Tehran, Iran, December 2016

Extracurricular and Volunteer Experience

- ❖ **2nd Hepatitis Awareness Campaign,** under the supervision of Prof. Seyed Moayed Alavian, Professor of Gastroenterology and Hepatology, director of Iran Hepatitis Network, Zanjan, Iran.
- ❖ **National plan for awareness of blood pressure,** Zanjan, Iran, December 2016
- ❖ **Cancer charity of Mehraneh,** Zanjan, Iran, March 2017

Computer Skills:

- ❖ **Applied software:** Origin, Adobe Illustrator, Mendeley, Microsoft Word, Microsoft PowerPoint, Microsoft Excel

Language Skills:

- ❖ **Persian:** Native
- ❖ **English:** Fluent, TOEFL iBT: 89/120 (Reading 19, Listening 22, Speaking 25, Writing 23)
- ❖ **French:** A1