



**Asma Sepahdar**

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#### **EDUCATION:**

**PhD: Pharmaceutical Biomaterials, Tehran University of Medical Sciences,** Prof. Hamid Akbari Javar, Prof. Mohammad Mehdi Dehghan, Dr. Shahin Bonakdar, Prof. Mohammad Ali Shokrgozar

**Thesis title:** Preparation and investigation of the effect of nanoparticles loaded with kartogenin in order to regenerate cartilage tissue

**GPA:** 16.89/20

**M.Sc.:** Inorganic Chemistry, Ilam University, Ilam, Iran

**Thesis title:** Preparation and characterization of silver nanoparticles using  $[\text{FeII}(\text{EDTA})]^{2-}$  complex as the reducing agent., Supervisor: Prof. Saeed Farhadi, Prof. Ali Naghipoor

**GPA:** 17.86/20

**B.Sc.:** Applied Chemistry, Chemistry Department, Lorestan University, Khorramabad, Iran

#### **RELEVANT COURSES:**

Physical Pharmacy, Advanced Cell and Molecular Biology, Medical Physiology, Pharmaceutical Biomaterial, New Methods in Analytical Chemistry, Biopharmacy and Industrial Medicines, Interaction of Biological Materials with Living Environment, Histology and Tissue Engineering, Synthesis and Processing of Biomaterials, Novel drug delivery system, Biological Products.

## **WORKSHOP:**

Introduction to Entrepreneurship, Teamwork skills and successful leadership, Chiral Separation of Drugs by HPLC, Safety in laboratories, Tissue Engineering, Construction of tissue engineered heart and its evaluation, Working with laboratory animals, Laboratory Animal Science in Regenerative Medicine and Stem Cells Researches, Workshop of Characterization of protein corona composition on the surface of nanoparticles

## **CAREER RELATED EXPERIENCE:**

**Research Assistant**, Tehran University of Medical science, Pharmaceutical Biomaterials Department, Tehran, Iran, 2018- 2021

**Research Assistant**, Pasteur Institute of Iran, Department of Cell Bank, Tehran, Iran, 2018-2020.

**Research Assistant**, Lorestan University, Faculty of Science, Department of Chemistry, Lorestan, Iran- 2011-2012

### **Laboratory Technician**

Conducted chemical experiments, tests and analysis using techniques such as Atomic Absorption Spectrophotometer, UV-vis spectroscopy, HPLC and FT-IR photometer, NMR, Particle Size and Zeta Potential analyzer with Dynamic Light Dispersion (DLS), Fluorescence spectroscopy

## **ACADEMIC PROJECT:**

**Determination of topical effects of silymarin and metformin on diabetic ulcers**, Pharmaceutical Biomaterials Department, Tehran University of Medical science, Tehran, Iran

**Preparation and evaluation of injectable hydrogel PLGA - PEG - PLGA / KFE loaded with kartogenin for repair and regeneration of cartilage tissue**, Pharmaceutical Biomaterials Department, Tehran University of Medical science, Tehran, Iran

**Wound dressing based on sodium carboxymethyl cellulose/carboxymethyl chitosan/agarose containing silk fibroin for antibiotic delivery**, National Cell Bank Department, Pasteur Institute of Iran, Tehran, Iran

**Ultrasound-Assisted Preparation of SPION@Chitosan Functionalized Ionic Liquid as a Novel and Reusable Superparamagnetic Catalyst for Green One-Pot Synthesis**

**of pyrido[2,3-d]pyrimidone Derivatives under Ultrasonic Irradiation in Water,**  
Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical  
Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran

#### **PUBLICATIONS:**

1. **Sol-gel derived LaFeO<sub>3</sub>/SiO<sub>2</sub> nanocomposite: synthesis, characterization and its application as a new, green and recoverable heterogeneous catalyst for the efficient acetylation of amines, alcohols and phenols,** J IRAN CHEM SOC, DOI 10.1007/s13738-013-0377-3, 2013.
2. **Spinel-Type Cobalt Oxide (Co<sub>3</sub>O<sub>4</sub>) Nanoparticles from the mer Co(NH<sub>3</sub>)<sub>3</sub>(NO<sub>2</sub>)<sub>3</sub> Complex: Preparation, Characterization, and, Study of Optical and Magnetic Properties,** JNS, Vol. 3, Pages 199- 207. 2013.
3. **Functionalized Carbon/Alumina/Silica Nano-fibrous Membrane: Preparation, Characterization and Heavy Metal Filtration Performance,** J Desalination and Water Treatment, Vol. 233, Page 81–97. 2021.
4. **Cartilage Tissue Regeneration Using Kartogenin Loaded Hybrid Scaffold for the Chondrogenic of Adipose Mesenchymal Stem Cells,** Journal of Drug Delivery Science and Technology, Vol. 73, Page 2411-2421. 2022.
5. **Comparison of engineered cartilage based on BMSCs and chondrocytes seeded on PVA- PPU scaffold in a sheep model,** J Biomed Mater Res, Vol. 11, 2022.
6. **Ionic Liquid Modified SPION@Chitosan as a Novel and Reusable Superparamagnetic Catalyst for Green One-Pot Synthesis of Pyrido[2,3-d]pyrimidine-dione Derivatives in Water,** Journal of Catalysts, 2023.

#### **ATTENDED SEMINARS & CONFERENCES:**

1. 4th International Congress on Nanoscience and Nanotechnology, Kashan University
2. 1th National Conference and Workshops on Nanoscience and Nanotechnology, Tarbiat Modarres University
3. 13th Conference on Nanotechnology graduates, Tehran University of Medical Sciences.
4. 16th Iranian Pharmaceutical Sciences Congress, Kermanshah University of Medical Sciences, School of Pharmacy

## **COMPUTER SKILLS:**

- SPSS
- Microsoft office (Excel, Word, Access, PowerPoint, Outlook)
- F-Text
- GENERUNER
- Experimental design software

## **LAB SKILLS:**

- Cell Culture, Evaluation of cytotoxicity, Immunocytochemistry, qPCR, Isolation and Culture of Mesenchymal Stem Cells, Biocompatible and biodegradable polymers and copolymer synthesis, Design and surface engineering, Production of Nanocomposites, Making Nanoparticles (Iron Oxide Magnetic, Polymer micelles, Bioceramics, Metal nanoparticles, Lipid Nanoparticles), Synthesis of nanofiber and hydrogel scaffolds, ELISA test

## **TEACHING EXPERIENCES**

- Inorganic Chemistry Laboratory (Lorestan University)
- General Chemistry Laboratory (Lorestan University)

## **LANGUAGES:**

- English (Fluent)
- Persian