

Farideh Amirrad

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Irvine, California • (949)836-0483

Research Scientist

Analytical and results-driven researcher with diverse technical expertise across numerous research techniques and substantial experience in molecular biology, pharmacology research, and clinical medicine.

Demonstrated expertise in identifying molecular and biochemical mechanisms of disease development, clinical medicine, molecular biology, pathology, pharmacology, and biochemistry. Well-versed in planning, designing, and conducting research experiments and the ability to analyze and interpret scientific data. Instrumental in working independently with minimal supervision and ability to identify, effectively communicate, and troubleshoot issues. Articulate communicator with the ability to collaborate with cross-functional teams and present complex scientific analysis to internal and external stakeholders. Familiarity with global compliance and guidance for GMP manufacturing and raw materials.

Areas of Expertise

- Research & Development
- Report Writing & Presentation
- Data Analysis & Interpretation
- Clinical & Laboratory Procedures
- Pharmacology & Clinical Medicine
- Molecular & Biochemical Mechanisms
- Equipment Maintenance & Performance
- Quality Assurance & Control
- Team Development & Leadership
- Problem Solver & Decision Maker
- Effective Written & Communication
- Health & Safety Standards

Technical Proficiencies

In vivo and in vitro pharmacology | confocal microscopy | bright field and fluorescence microscopy | immunostaining | immunohistology | fresh frozen section | tissue processing (human and rodent tissue) and staining with Masson Trichrome and H&E, Pathology analysis | FURA-2 AM | Fluo-4 calcium assay test | cell culture | isolation of cardiomyocytes and fibroblasts (primary cells) from the mouse heart | RNA isolation | DNA extraction | genotyping | PCR, Western blot | ELISA | spectrophotometry for protein measurement and enzyme kinetics analysis | blood sampling and injection | blood test and blood gas analysis | Tissue collection | MRI, CT scan | Hypoxia chamber | Microsoft office and Graph pad Prism.

Career Experience

Postdoctoral Fellow at Chapman University | Chapman University School of Pharmacy, Irvine, CA **2022 – Present**

Compile, interpret, and analyze the data and create various reports by utilizing Microsoft Office and GraphPad Prism. Support other students and postdocs researchers while performing lab research. Exceptional writing skills to summarize research findings and integrate them into scientific manuscripts.

- Wrote and published various research papers by collaborating with a group of researchers and other labs.
- Identified and resolved issues within time by examining and evaluating data, and selecting corrective steps.

Teaching Assistant | Chapman University School of Pharmacy Irvine, California

2019 – 2021

Developed, coordinated, and delivered didactic and experiential education in the Doctor of Pharmacy Program. Supported professors in various day-to-day duties.

- Skilled in conducting practice-based research and the ability to provide clinical and classroom teaching services to student pharmacists.
- Engaged in practice-based or other scholarly activities in support of institute' research and innovation mission.

Research Assistant | Chapman University School of Pharmacy Irvine, California

2015 – 2022

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Conducted biochemistry and molecular biology techniques as part of a collaborative research lab. Maintained lab equipment by following operating instructions, troubleshooting breakdowns, performing preventive maintenance, and calling for any additional repairs or calibrations.

- Recorded data and provided a basic analysis of results, including reports to PI on conclusions based on theoretical and experimental knowledge.
- Utilized effective communication and interpersonal skills to engage and collaborate with other researchers.

Family medicine and emergency care physician | Medical University of Shiraz (Omidvar Hospital), Iran **1998 – 2011**

Oversaw and efficiently managed patients and carried out various day-to-day duties in the emergency room, including diagnosing problems, ordering tests, treating illnesses and injuries, and creating post-emergency treatment plans.

Additional Experience

Part-Time Faculty – Irvine Valley College (2018-Present)
Histology-Anatomy-Physiology

Education & Credentials

Ph.D. in Pharmaceutical Sciences, 2022

Thesis: *"Heart in Polycystic kidney disease is characterized by cardiac dysfunction and structural deformation"*
Chapman University School of Pharmacy, Irvine, California

Masters in Pharmaceutical Sciences (MSPS), 2017

Thesis: *"Characterization of Cytochrome p450 in Rat brain"*
Chapman University School of Pharmacy Irvine, California

Doctor of Medicine (MD)

Thesis: *"Chronic disease of nasal mucosa"*
Medical University of Belgrade

Licenses & Certifications

Education Commission for Foreign Medical Graduates Certification United States Medical Licensing Examination | Step 1 Basic Science | Step 2 Clinical Knowledge | Step 3 Clinical Skill
Iranian Medical license

Honors & Awards

Research day – Best oral presentation (\$1000) – Chapman University School of Pharmacy, Irvine, California

Graduate Student Academic scholarship (\$2,500) – Chapman University School of Pharmacy

Graduate Student Conference Travel Grant (\$800) – Chapman University School of Pharmacy, Irvine, California

Affiliations

Member – AHA (American Heart Association)

Member – AAPS (American Association of Pharmaceutical Scientists)

Research & Publications

- **Amirrad F**, Fishbein GA, Edwards RA, Nauli SM. Hypertrophic and fibrotic human PKD hearts are associated with macrophage infiltration and abnormal TGF- β_1 signaling. *Cell Tissue Res.* 2022 Nov 15. doi: 10.1007/s00441-022-03704-y. PMID: 36376769.
- Nam YW, Pala R, El-Sayed NS, Larin-Henriquez D, **Amirrad F**, Yang G, Rahman MA, Orfali R, Downey M, Parang K, Nauli SM, Zhang M. Subtype-Selective Positive Modulation of KCa_{2.3} Channels Increases Cilia Length. *ACS Chem Biol.* 2022 Aug 19;17(8):2344-2354. doi: 10.1021/acscchembio.2c00469. PMID: 35947779.
- **Amirrad F**, Pala R, Shamloo K, Muntean BS, Nauli SM. Arrhythmogenic Hearts in PKD2 Mutant Mice Are Characterized by Cardiac Fibrosis, Systolic, and Diastolic Dysfunctions. *Front Cardiovasc Med.* 2021 Nov 26; 8:772961. doi: 10.3389/fcvm.2021.772961. PMID: 34901233
- DuBois BN, **Amirrad F**, Mehvar R. A Comparison of Calcium Aggregation and Ultracentrifugation Methods for the Preparation of Rat Brain Microsomes for Drug Metabolism Studies. *Pharmacology.* 2021;106(11-12):687-692. doi: 10.1159/000519667. Epub 2021 Oct 18. PMID: 34662883.
- **Amirrad F**, Pytak PA, Sadeghiani-Pelar N, Nguyen JPT, Cauble EL, Jones AC, Bisoffi M. Prostate field cancerization and exosomes: Association between CD9, early growth response 1 and fatty acid synthase. *Int J Oncol.* 2020 Apr; 56(4):957-968. PMID: 32319557
- Bousoik E, Nabiee R, **Amirrad F**, Nichols A, Witt R, Mahdipoor P, Montazeri Aliabadi H. Heterogeneity and Plasticity of Human Breast Cancer Cells in Response to Molecularly-Targeted Drugs. *Front Oncol.* 2019 Oct 15; 9:1070. PMID: 31681603
- DuBois BN, **Amirrad F**, Mehvar R. Kinetics of dextromethorphan-O-demethylase activity and distribution of CYP2D in four commonly-used subcellular fractions of rat brain. *Xenobiotica.* 2019 Oct; 49 (10) :1133-1142. PMID: 30392427
- Mozaffari S, Bousoik E, **Amirrad F**, Lamboy R, Coyle M, Hall R, Alasmari A, Mahdipoor P, Parang K, Montazeri Aliabadi H. Amphiphilic Peptides for Efficient siRNA Delivery. *Polymers (Basel).* 2019 Apr 17; 11(4). pii: E703. PMID: 30999603
- **Amirrad F**, Bousoik E, Shamloo K, Al-Shiyab H, Nguyen VV, Montazeri Aliabadi H. Alzheimer's Disease: Dawn of a New Era? *J Pharm Pharm Sci.* 2017 Jul 9;20(0):184-225. PMID: 28719360

Poster Presentations

- Effects of normobaric hypoxia on cardiac remodeling in the PGRMC2 mouse model" Annual Research Day, Chapman University School of Pharmacy, Irvine, CA, 2022
- Characterization of Cytochrome p450 in Rat brain" Annual Research Day, Chapman University School of Pharmacy, 2017
- Comparison of Ultracentrifugation and Calcium Aggregation Methods or Preparation of Rat Brain Microsomes for Drug Metabolism studies." AAPS, Denver, CO,2016
- Faculty Expo" at Chapman University School of Pharmacy, Irvine, CA,2016
- "Effect of Prolonged Cholestasis on Hepatic Cytochrome P450 in the rat" AAPS, Denver, CO, 2016