

EDUCATION

PhD Biochemistry & M.Sc. Virology (May 2018); M.Sc. Chemical Eng. (May 2011), Louisiana State University, USA
B.Sc. Chemical Engineering (May 2008), Sharif University of Technology; Tehran, Iran

EXPIRIENCE

Academic

- Research Assistant: Biochemistry (Jan 2013- May 2018), Virology (Jan 2010- Jan 2013)
- Teaching: Biological Sciences 1005 lab (spring 2015), Chemical Eng. Unit operation (2009)
- Assistant project manager: Oil and gas trade show, Tehran, Iran (Jul 2008- Dec 2009)
- Collaboration: Worked with 13 scientists from biochemistry, evolutionary biology, computer science, and virology on 6 different projects. Outcomes: 12 manuscripts in high-impact journals and 3 software packages. (2012- present)

Leadership

- Undergraduate research mentor: Initiated an anti-viral computational drug discovery project. Guided two undergraduate students in performing the research. Assisted the students in applying for awards and presenting at national conferences. Outcomes: 1 oral and 3 poster presentations, 3 awards, and one publication. (Aug 2016- May 2018)
- Student vice-president Phi Kappa Phi Honor Society, LSU chapter: Planned and executed the inauguration of more than 300 new members. Invited professor Mary H. Manhein to raise funds for the adult literacy program in Louisiana. Led chapter in building 4 neighborhood libraries to encourage reading and sharing books. (2013-2014)
- Representative scientist, International Super Computing SC-13, Denver: Exhibited high performance computing capabilities at LSU. Showcased drug discovery projects conducted by scientists at LSU. (Nov 2013)
- Completed "Managing Sciences in Biotechnology" MBA course, Keck graduate institute, Ca. A teamwork assignment to mimic real life biotech consulting to write a business plan for a 3D printed spinal fusion implant. Constructed and printed a 3D model. Presented the prototype along with the business strategy and market analysis to a panel of judges. (2017)
- President of the board, Lake Plaza Condominiums homeowner association: Decision making and budgeting for routine operations and improvements. Conflict resolution. Lead the board and the manager to run a 161-unit complex. (2017-18)

Community Service

- Guest reviewer for The Journal of Infection in Developing Countries and Current Drug Targets (2016-Present)
- American Society of Cell Biology ambassador: promote science communication, collaboration & leadership (2017- present)
- Volunteer staff, Biophysical Society 61st Annual Meeting, New Orleans (2017)
- Peace ambassador, Interfaith Federation of Greater Baton Rouge (May- September 2013)
- Founder of "Meditation at LSU", yoga and meditation teacher at LSU International Cultural Center (2011- present)

SKILLS

Computational: Proficient in High Performance Computing, data mining and data analysis with Python, R, Perl and bash.

Wet-lab: Design and execute *in vivo* and *in vitro* experimental protocols. Cell culture, PCR, Flow Cytometry & cell imaging.

Languages: Fluent in English and Farsi. intermediate in Arabic. Basic in French.

SELECTED PUBLICATIONS & SUCCESSFUL GRANT PROPOSALS

Grants: Received total of 4.5 million computing service units from HPC at LSU (2014- present)

1. **Naderi et al. 2017** "eRepo-ORP: Exploring the opportunity space to combat orphan diseases with existing drugs." *JMB* ▶ Assisted with constructing computational protein models associated with rare diseases as well as protein-drug complexes curated in DrugBank. ▶ Predicted and compared binding pockets of rare disease and DrugBank protein models. ▶ Explored the possibility of repositioning FDA-approved drugs to treat orphan diseases.

2. **Naderi et al. 2016** "A graph-based approach to construct target-focused libraries for virtual screening." *J Cheminform* ▶ Devised algorithms for two cheminformatics software tools for *in silico* drug design, which were coded professionally in C++ and Python by collaborators. ▶ Benchmarked and implemented the software in large scale studies. ▶ Assisted in building and launching the web server as well as the stand-alone software packages: "eSynth" and "eMolFrag".

3. **Naderi et al. 2017** "Phylogenetics and structural modeling of herpes simplex virus glycoprotein K (gK) identify functionally important domains and residues critical for alphaherpesvirus pathogenesis" ▶ Built the 1st protein model of gK, a multi-functional protein in Herpes Virus. ▶ Suggested mutations to guide lab tests, which lead to new discoveries in gK research. ▶ Implemented and visualized on the protein surface a novel model pioneered by our collaborators in a phylogeny lab.

HONORS & AWARDS

- C.R. Komma Memorial Outstanding Graduate Student Award, Biological Sciences, Louisiana State University, 2017
- McDaniel travel award, Biological Sciences, Louisiana State University, 2017
- Tony B. Academic Travel Award, SLAS conference, Washington, D.C., 2017
- Oral presentation award, Annual Biograd Symposium, Louisiana State University, 2017
- Poster award, Barry Dellinger Symposium, Louisiana State University, 2017

MEMBERSHIPS & INTERESTS

American Society of Virology, Biophysical Society, American Society of Cell Biology, Engineers without borders, PKP, AIChE

Interests: Roles: Managing science/projects in biotech industry, Consulting, IP & tech transfer, R&D

Fields: Drug discovery/repurposing, Precision medicine, Science communication

Personal Growth: Running, Character building, Meditation/Yoga, Entrepreneurship, Rock climbing, Audiobooks