M. Saleet Jafri, PhD

Professor, School of Systems Biology

Director, Interdisciplinary Program in Neuroscience

Education

PhD, Biomathematical Sciences, Mount Sinai School of Medicine/City University of New York

Key Interests

Multiscale Systems Biology | Computational Biology | Bioinformatics | Cardiac Physiology | Immunology | Mitochondria | Cellular Signaling | Neuroscience | Algorithms | HPC

CONTACT

Phone: 703-993-8420 | Email: sjafri@gmu.edu

Websites: binf.gmu.edu/jafri/

SELECT PUBLICATIONS

- E. Munger *et al.*, Application of machine learning to determine top predictors of non-calcified coronary burden in psoriasis: an observational cohort study. *J Am Acad Dermatol*, (in press).
- H. Choi *et al.*, Application of machine learning to determine top predictors of non-calcified coronary plaque burden in psoriasis. *J Am Coll Cardiol* 73(9 Supplement 1),1467 (2019).
- M. D. McCoy *et al.*, SNP2SIM: a modular workflow for standardizing molecular simulation and functional analysis of protein variants. *BMC Bioinformatics* 20, 171-178 (2019).
- J. R. King *et al.*, Ionotropic and metabotropic mechanisms of allosteric modulation of a7 nicotinic receptor intracellular calcium. *Mol Pharmacol* 93(6), 601-611 (2018).

Research Focus

I apply computational analysis and modeling to answer fundamental and translational biomedical questions. My focus is understanding the molecular and cellular basis of normal and patho-physiology.

Current Projects

- Computational modeling to address fundamental questions about agonist-induced calcium signaling and downstream targets
- More recent scientific contributions are in the area of cardiac ventricular excitation-contraction coupling and mitochondrial energy metabolism and ionic homeostasis
- Development of novel computational algorithms to address significant biological questions
- Other research involves the development of new methods to understand genomic data and how they result in traits or disease