Humza N. Zubair

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Objective: To enroll in a Medical Scientist Training Program (MSTP), where I will enhance knowledge of biomedical sciences and medicine

Education

Bachelor of Science: ARIZONA STATE UNIVERSITY, Aug 2015 – May 2020

- Dual Majors: Medicinal Biochemistry and Biomedical Sciences; GPA: 4.0

Awards and Scores

- Goldwater Scholar
- MCAT: 97th percentile
- Amgen Scholar – University of California San Francisco
- Presidential Scholar (Tuition Waiver), Arizona State University
- Goldwater Honorable Mention
- Recognized in the College of Liberal Arts and Sciences as a CLAS Student Leader
- Dean's Honors List: 6 semesters

Research Experience

Research Assistant: *Beloozerova Lab, Department of Neurobiology, Barrow Neurological Institute,* Feb 2015-Current

- Analyzed data using Matlab and SPSS programming
- Developed a Monte Carlo analysis method to evaluate sequences of gaze behaviors in the walking cat
- Trained cats to perform various tasks for experimental study
- Assisted in brain surgeries including cortical injections and implantation of electrodes in feline brain
- Drafted, edited, and finalized various research posters and manuscripts
- Reviewed and provided input to research proposals by lab to NIH and NSF
- Mentored six undergraduate and high school students in the laboratory

Amgen Scholar: *Feinberg Lab, Department of Anatomy, University of California San Francisco Medical School*, Summer 2017

- Used Matlab and Arduino to establish an experimental paradigm requiring mice to execute fictive orienting movements in direction of a visual stimulus; trained mice and conducted experiments using two-photon microscope
- Analyzed data and presented key findings in the form of a conference poster

Research Assistant Volunteer – Gap Year: *Department of Neurobiology, Barrow Neurological Institute,* May 2014 – Feb 2015

- Conducted neurophysiology experiments, trained cats, analyzed medical images, interpreted and published results in high impact journals

Publications

- **Zubair HN**, Stout EE, Dounskaia N, Beloozerova IN. (2018) The role of inter-segmental dynamics in coordination of the forelimb joints during unperturbed and perturbed skilled locomotion. J Neurophysiology 120:1547-1557.
- **Zubair HN**, Beloozerova IN, Sun H, Marlinski V. (2016) Head movement during walking in the cat. Neuroscience 332:101-120.
- Finalizing and formatting for publication submission:
    - **Zubair HN**, Chu KMI, Johnson JL, Rivers TJ, Beloozerova IN. Coordination of gaze behaviors with stepping in the cat.

Conference Presentations

- **Zubair HN**, Stout EE, Beloozerova IN, Dounskaia N (2018) Control of forelimb joints during accurate stepping. Program No 401.07. Society for Neuroscience Annual Meeting, San Diego, CA.
- **Zubair HN**, Stout EE, Beloozerova IN, Dounskaia N (2018) Control of intersegmental dynamics during known and unexpected perturbations of complex locomotion. Society for the Neural Control of Movement, Santa Fe, New Mexico.
- **Zubair HN**, Kim AY, Feinberg E (2017) Developing A Head-Fixed Orienting Task in Mice. ABRCMS, Phoenix, AZ.
- Chu KM, **Zubair HN**, Johnson JL, Rivers TJ, Beloozerova IN (2016) Gaze coordination with strides during walking in the cat. Program No 705.19. Society for Neuroscience Annual Meeting. San Diego, CA.
- **Zubair HN**, Izady MY, Sun H, Marlinski V, Beloozerova IN (2015) Feline head movement during walking. Program No 335.14. Society for Neuroscience Annual Meeting, Chicago, IL.

Clinical Activities - Volunteering

- Shadowed ER physician at St. Luke's hospital (Spring 2018 – Current)
- Shadowed radiologist at St. Luke's hospital (Spring 2017)
    - Assisted in reviewing CT and MRI of patients, and generating reports
- Shadowed neurosurgeon at Barrow Neurosurgical Institute (Spring 2015)
    - Shadowed during patient visits pre- and post-surgery

Volunteer Activities

- Dementia Friendly Tempe (2017-Current)
- Reelection campaigner for councilwoman (2014, 2018)

Skills

- Operant Conditioning, Medical Image Analysis, Statistical analyses, including time series analysis, motion analysis, bootstrapping, generalized linear models
- Matlab, SPSS, Arduino, Minitab, Experimental Design, Professional Writing
- Trilingual (Spanish, Arabic, English) - Fluent

Professional Memberships

- Society for Neuroscience (2015 – Present)
- American Society for Biochemistry and Molecular Biology (2015 – Present)
- American Physiological Society (2016 – Present)