Short CV Bio

1. Studies and degrees

B.S. in Physics, University of Peshawar, Pakistan (2000)

Ph.D. in Biophysics, Ohio University (2006)

Postdoc, The Pennsylvania State University (2006-2010)

Postdoc, Los Alamos National Lab (2010-2013)

Early Career Visitor, The Ohio State University (2012-2013)

1. General description of research line and current projects

Multiscale modeling of biological systems from molecular to the tissue level to understand neurological disorders, including Alzheimer’s disease, Epilepsy, Migraine, and Stroke.

1. Calcium signaling in health and disease.
2. The function of mechanosensitive channels from single channel to the tissue level
3. Glutamatergic crosstalk at tripartite synapses
4. Aggregation of amyloid beta during metabolic stress
5. Gene expression and pathways analysis in Alzheimer’s and other diseases
6. Five recent relevant publications and journals where they were published
7. Adeoye T, Shah S I, and Ullah G. Systematic Analysis of Biological Processes Reveals Gene Co-expression Modules Driving Pathway Dysregulation in Alzheimer's Disease, [Aging and Disease 2024.](https://www.aginganddisease.org/EN/10.14336/AD.2024.0429)
8. Passlick S, Ullah G, and Henneberger C. Bidirectional dysregulation of synaptic glutamate signaling after transient metabolic failure, [eLife 2024.](https://elifesciences.org/reviewed-preprints/98834" \l "mainMenu" \t "_blank)
9. Everaerts K\*, Thapaliya P\*, Pape N, Durry S, Eitelmann S, Roussa E, Ullah G, and Rose C R. Inward Operation of NBCe1 Promotes Astrocytic Na+ loading and Loss of ATP in Mouse Neocortex during Brief Chemical Ischemia, [Cells 2023, 12(23) 2675](https://www.mdpi.com/2073-4409/12/23/2675)
10. Kolen B, Kortzak D, Borghans B, Hannack C, Guzman R, Ullah G, and Fahlke C. Vesicular glutamate transporters are H+-anion exchangers that operate at variable stoichiometry, [Nature Communications 2023, 14:2723.](https://www.nature.com/articles/s41467-023-38340-9)
11. Adeoye T, Shah S I, Demuro A, Rabson D A, and Ullah G. Upregulated Ca2+ release from the endoplasmic reticulum leads to impaired presynaptic function in Alzheimer’s disease, [Cells (2022) 11(14), 2167.](https://www.mdpi.com/2073-4409/11/14/2167)
12. Number of graduated students, and number of current students both undergrad and graduate

Graduated: 3 postdocs, 11 graduate students, 35 undergraduate students

Current: 8 graduate students, 2 undergraduates

5) Previous research positions

Postdoc, The Pennsylvania State University (2006-2010)

Postdoc, Los Alamos National Lab (2010-2013)

Early Career Visitor, The Ohio State University (2012-2013)

6) Webpage:

<http://faculty.cas.usf.edu/gullah/index.html>