DANAH ALQURAISH CHANDRASEKAR

MBBS, MAS, PhD Candidate

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PROFESSIONAL SUMMARY

Dr. Alquraish is a PhD candidate in Neuroscience at Florida State University College of Medicine, specializing in auditory sensory processing disorders. She holds an MBBS and a Master of Advanced Studies in Clinical Research from the University of California, San Diego. Her research uses immunohistochemistry, confocal microscopy, and quantitative image analysis to examine how disruptions in auditory brainstem circuits contribute to the sensory challenges seen in Fragile X Syndrome and other neurodevelopmental conditions.

CORE COMPETENCIES

- Confocal Microscopy
- Immunohistochemistry
- Histology
- Quantitative Image Analysis
- Statistical Analysis (SAS, SPSS, GraphPad Prism, Python)
- REDCap Electronic Data Capture
- IRB Protocol Development & Regulatory Compliance
- Grant Writing & Administration
- Scientific Writing & Peer-Reviewed Publication
- Mentorship & Interdisciplinary Collaboration

EDUCATION

PhD, Neuroscience — *Expected June 2026*
Florida State University College of Medicine, Tallahassee, FL

Dissertation: Mechanisms of auditory neurodevelopment in Fragile X syndrome models

Master of Advanced Studies (MAS), Clinical Research — *2014*
University of California, San Diego, La Jolla, CA

MBBS (MD-equivalent) — *2009*
King Abdulaziz University, Jeddah, Saudi Arabia

RESEARCH EXPERIENCE

Graduate Researcher — *Aug 2021 – Present*
Florida State University College of Medicine, Tallahassee, FL

- Leading research on pediatric auditory sensory processing disorders including Fragile X Syndrome and Autism Spectrum Disorders
- Directly supervising a team of 8 (undergraduate researchers, medical trainees, and junior staff) — hiring, evaluating, assigning work, and training on experimental design, imaging, and data analysis
- Owning protocol design, regulatory documentation, and neuroscience grant applications
- Serving as Outreach Coordinator for the Biomedical Sciences Graduate Student Association (2022–2023), leading department-wide outreach and engagement across FSU College of Medicine
- Designing and executing experimental protocols including confocal microscopy, immunohistochemistry, histology, and quantitative image analysis
- Performing statistical modeling and data interpretation using SAS, GraphPad Prism, SPSS, and Python
- Leading interdisciplinary research collaborations across neuroscience, audiology, and pediatric health
- Authoring peer-reviewed manuscripts and presenting at national conferences including SfN and ARO

Volunteer Researcher — *Apr 2020 – Apr 2021*
Larkin Community Hospital, Division of Clinical and Translational Research, Miami, FL

- Collaborated with principal investigators to design clinical and translational research projects and proposals
- Contributed to protocol development, consent forms, and regulatory documentation

- Assisted in designing protocols for Investigational New Drug (IND) applications across multiple therapeutic areas, including vaccines, therapeutic drugs, and immunomodulating therapies for COVID-19
- Refined and adapted research approaches based on evolving project needs

Research Assistant *Dec 2016 – Mar 2017*

Frontiers in Bioscience, Irvine, CA

- Studied Caenorhabditis elegans as a model of human genetics to identify factors influencing aging, supervised by Dr. Siamak Tabibzadeh

Scientific Researcher *May 2006 – Jul 2006*

King Abdulaziz University, Department of Community and Family Medicine, Jeddah, Saudi Arabia

- Investigated the prevalence of diabetes in Saudi Arabia under Dr. Nahla Khamice Rajab

CLINICAL RESEARCH EXPERIENCE

Research Fellow *Jan 2013 – Sep 2014*

UC San Diego / Rady Children's Hospital, San Diego, CA

- Conducted pediatric neurology clinical research on neurodevelopmental outcomes in children with prenatal stroke and autism spectrum disorders
- Led participant recruitment across diverse pediatric populations and managed clinical data collection and electronic data workflows using REDCap
- Administered the WASI (Wechsler Abbreviated Scale of Intelligence) and other standardized cognitive assessments to evaluate developmental outcomes
- Performed statistical analyses using SPSS to support peer-reviewed research
- Collaborated with multidisciplinary teams of neurologists, psychologists, and research coordinators

CLINICAL EXPERIENCE

Family Practice Observership *2018*

ProHealth Care Medical Group, United States

Four-week observership in family practice with U.S. licensed attending physicians.

Pediatric Neurology Observership *2013 – 2014*

Rady Children's Hospital, San Diego, CA

18-month observership in inpatient and outpatient pediatric neurology, with experience across multidisciplinary care delivery models.

Supervised Clinical Rotation, Pediatrics *Aug – Sep 2012*

Inglewood Management Clinic, Chicago, IL

Four-week pediatric rotation supervised by licensed U.S. attending physicians in both inpatient and outpatient settings.

Supervised Clinical Rotation, Pediatrics *Jul 2012*

St. Patrick's Family Health Center, Chicago, IL

Four-week pediatric rotation supervised by licensed U.S. attending physicians in both inpatient and outpatient settings.

Internship Rotation, Pediatric Genetics *Feb – Mar 2010*

King Abdulaziz University Hospital, Jeddah, Saudi Arabia

Two-month rotation in pediatric genetics as part of a 12-month full-time internship in core medical specialties.

Internship Rotation, Pediatric Neurology *Nov – Dec 2009*

King Fahd Medical City, Neuroscience Center, Riyadh, Saudi Arabia

Two-month rotation in pediatric neurology as part of a 12-month full-time internship in core medical specialties.

GRANT & FUNDING EXPERIENCE

- Lead author and contributor on competitive neuroscience grant applications
- Authored and maintained IRB protocols, regulatory compliance documentation, and research administration materials across multiple neuroscience studies.
- Owned protocol design and regulatory submissions for preclinical and translational projects; coordinated with institutional review and compliance teams end-to-end.

LEADERSHIP & MENTORSHIP

- Directly supervise a team of 8 lab members (undergraduate researchers, medical trainees, and junior staff): hire, evaluate, assign work, and train on experimental design, imaging workflows, data analysis, and scientific communication.
- Outreach Coordinator, Biomedical Sciences Graduate Student Association, FSU College of Medicine (2022–2023): led department-wide outreach and engagement programming across the biomedical sciences graduate student body.
- Protocol ownership: design and maintain experimental protocols, regulatory documentation, and lab SOPs for ongoing grant-funded research.
- Manage day-to-day laboratory operations, project timelines, and resource planning across concurrent studies.
- Lead interdisciplinary research collaborations across neuroscience, audiology, and pediatric health.
- Mentor trainees on manuscript preparation, conference abstract development, and scientific presentation.

PUBLICATIONS

Wang H, Alquraish D, Yu X, Wang Y, Lu Y (2025). Conditional mGluR5 Knockout in Glutamatergic Pathways Disrupts the Development of Excitatory Synaptic Transmission onto Mouse MNTB Neurons. *Journal of Neurophysiology*. https://doi.org/10.1152/jn.00308.2025

Jaiswal V, Alquraish D, Sarfraz Z, Sarfraz A, Nagpal S, Shrestha PS, Mukherjee D, Guntipalli P, Sanchez Velazco DF, Bhatnagar A, Savani S, Halilaj E, Ruxmohan S, Cueva W (2021). The Influence of Coronavirus Disease-2019 (COVID-19) On Parkinson's Disease: An Updated Systematic Review. *Journal of Primary Care & Community Health*. https://doi.org/10.1177/21501327211039709

SELECTED PRESENTATIONS & POSTERS

- FMRP regulation of molecular signatures of neuron subtypes in the mouse spiral ganglion — Society for Neuroscience (SfN), 2025.
- Role of the RNA-binding protein FMRP in spiral ganglion maturation — Association for Research in Otolaryngology (ARO), 2024.
- Fragile X syndrome and auditory challenges: exploring the role of FMRP loss — Three Minute Thesis Competition, 2024.
- How does FMRP loss from the cochlea contribute to auditory dysfunction in Fragile X syndrome? Mechanisms of circuit assembly — Research Seminar, 2023.
- Functional and behavioral characterization of cKO/CR-Cre mice — FSU Annual Research Fair, 2023.
- A peripheral contribution to auditory dysfunction in Fragile X syndrome pathogenesis: mouse and chicken models — Neuroscience Symposium, 2022.
- Gender differences in autism spectrum disorders — UC San Diego Graduation Project, 2014.
- Daisy drawing as a test of hemineglect in children with perinatal stroke — Cognitive Development Society Biennial Meeting, Poster, 2013.

CERTIFICATIONS

- HIPAA Certification (2026)
- CITI Program Certification: Human Subjects Protection, HIPAA & Health Information Privacy and Security (HIPS) (2020)
- Pediatric Advanced Life Support (PALS), American Heart Association and American Academy of Pediatrics (2016)
- Basic Life Support (BLS), American Heart Association (2016)
- Research Aspects of HIPAA Certification, University of California, San Diego (2013)
- Basic HIPAA Online Training Certificate, Advanced Colleges of America (2012)
- U.S. Pre-Clinical Healthcare Acculturation Certificate, Advanced Colleges of America (2012)
- House Officers Orientation Course (Major Medical and Surgical Skills), King Abdulaziz University (2009)

PROFESSIONAL MEMBERSHIPS

- Society for Neuroscience (2022)
- Association for Research in Otolaryngology (2022)
- American Academy of Pediatrics (2019)
- AmeriClerkships Medical Society (2012)
- Saudi Cancer Foundation (2009)

TECHNICAL SKILLS

Statistical & Data Analysis: SAS, SPSS, GraphPad Prism, Python

Data Management: REDCap electronic data capture, clinical data workflows

Laboratory: Confocal microscopy, immunohistochemistry, histology, quantitative image analysis, western blot, brain slice, mGluR5

Research Compliance: IRB protocol writing, HIPAA training, CITI certification, regulatory compliance

Languages: English (native), Arabic (native)

COMMUNITY SERVICE

Volunteer *2015*

Second Harvest Food Bank of Orange County

Helped serve Thanksgiving meals to families in need.

After-School Program Volunteer *2015*

Child Creativity Lab

Supported after-school programs for underserved communities, advancing divergent thinking, problem solving, and innovation through creative play.

Volunteer *2012*

19th Annual All Kids & Family Health Fair, Chicago, IL

Health Educator *2009*

Breast Cancer Awareness Campaign, Saudi Arabia

Provided community health education and public awareness of breast cancer.

Airport Emergency Drill Master *2009*

Saudi Arabian Ministry of Health, Saudi Arabia