

# Postdoctoral Fellow – Genomic and Bioinformatic Data Analyses

## Center for Neurogenetics, Lal Research Group

### UTHealth Houston, USA



Are you ready to shape the future of neurogenetics? Join the Center for Neurogenetics at UTHealth Houston, located in the world's largest medical center. Led by Dr. Dennis Lal, a globally recognized expert in neurogenetics and genomics, our team is seeking a highly motivated Postdoctoral Fellow to contribute to our groundbreaking research.

This position offers an unparalleled opportunity to engage in cutting-edge research at the intersection of **genomics, bioinformatics, and clinical science**, focusing on epilepsy and related neurodevelopmental disorders. You'll work within the vibrant **Lal Research Group**, an international and interdisciplinary team of experts in bioinformatics, data science, biology, clinical genetics, and neurology. Our supportive, collaborative environment fosters innovation, mentorship, and growth.

As a key member of our team, you will drive impactful discoveries, leveraging state-of-the-art resources and datasets. This role is perfect for proactive and ambitious researchers eager to:

- Expand their expertise in neurogenetics.
- Develop innovative approaches to genomic and clinical data integration.
- Achieve rapid, performance-based career advancement and research recognition.

We value curiosity, creativity, and the desire to make meaningful contributions to science and medicine. Join us to advance your career and be part of a team that's transforming our understanding of brain disorders.

### Postdoc Focus Areas

The postdoctoral project will focus on data analysis across diverse genomic, molecular, and clinical datasets, welcoming candidates with backgrounds in bioinformatics, biology, or biomedical data science. Applicants must be comfortable coding in R or Python, as strong programming and data analysis skills are essential for success in this role. This position offers opportunities to strengthen analytical and computational expertise while working with large, unique datasets. Potential projects include:

- Analyzing large-scale genomic data to uncover insights into neurological disorders and genotype-phenotype relationships.
- Developing and applying computational methods to integrate and interpret diverse data types, including genetic, clinical, and molecular information.
- Enhancing or creating innovative tools and resources to support the research community.

- Collaborating on bioinformatic pipelines, leading independent projects, contributing to team publications, and presenting findings through conferences and training activities.

## Essential Qualifications

- **Ph.D.** in bioinformatics, computational biology, genomics, or a related field; **MDs** with strong coding skills are also encouraged to apply.
- Proficiency in **Python** or **R**; candidates must be proficient in at least one and willing to learn the other if not already proficient.
- Basic **Unix/Linux** skills.
- Strong **communication skills** to collaborate effectively within interdisciplinary teams, including neurologists, genetic counselors, patients, basic scientists, and software developers.
- At least **one first-author publication** in a peer-reviewed journal.
- Highly motivated scientist with a strong drive to efficiently bring projects to publication while maintaining excellent teamwork and collaboration skills.

## Preferred Qualifications

- Proficiency with genomic file formats (e.g., FASTQ, BAM, VCF) and bioinformatic tools (e.g., GATK, Plink, Annovar, VEP).
- Familiarity with genomic databases (e.g., gnomAD, ClinVar, UniProt, Ensembl).
- Experience in developing or optimizing computational pipelines, querying databases (e.g., SQL), and EMR data research.
- Skills in creating R Shiny dashboards or basic front-end development.
- Multiple peer-reviewed publications in clinical genetics, bioinformatics, or biomedical data science.
- Expertise in analyzing large-scale genomic datasets, integrating diverse data types, and using high-performance computing environments.

Interested candidates are encouraged to review Dr. Lal's previous work in Pubmed and highlight how their own interests align with the Lal Research Group's focus in their cover letter. Please send both your cover letter and CV to Dr. Dennis Lal at [Dennis.lal@uth.tmc.edu](mailto:Dennis.lal@uth.tmc.edu)

