

**Statistical Genetics and Functional Genomics
Postdoctoral Research Scientist Position**

The Statistical Functional Genomics Lab in the Gertude H. Sergievsky Center, Columbia University and the Dey Lab in Computational & Systems Biology program at Memorial Sloan Kettering Cancer Center (MSKCC) is seeking a postdoctoral fellow to lead inter-disciplinary collaborative projects jointly supervised by Dr. Kushal K. Dey (MSKCC) and Dr. Gao Wang (Columbia). Successful candidate will lead projects to

- Develop new methods in statistical genetics and machine learning/generative AI for integrating multimodal omics data (RNA-seq, ChiP-seq, ATAC-seq, Perturb-seq) with GWAS to inform fine-mapping and polygenic risk score (PRS) predictions integrating resources from FunGen-xQTL Project.
- Develop new strategies for improving the transferability of the PRS across diverse ancestries using a combination of genetic data from diverse ancestries (AllofUS, MVP, UKBB).
- Develop and apply integrative statistical/ML models to identify disease sub-phenotypes and perform patient risk stratification using multimodal data from Alzheimer's disease patients as part of the ADSP project and different cancer types as part of the MSKCC sequencing cohort.
- Develop new methods for Mendelian randomization and mediation analysis for multi-omics data with applications to neurodegenerative disorders.

We welcome applications from candidates with an exceedingly strong quantitative background in statistics, biostatistics, computer science, or other related domains. The applicant would be required to have prior experience working with large-scale genetic and omics data, resulting in a high quality first/co-first author publication. The candidate must be proficient in computing, with expertise in R and/or Python. Prior background in machine learning or generative AI models will be a plus, but not required.

The candidate's primary affiliation will be through Sloan Kettering located on the Upper East Side of New York City. It is part of the vibrant Tri-Institutional Research campus adjacent to Rockefeller University and Weill Cornell Medical College. Sloan Kettering offers competitive postdoc salaries and convenient subsidized housing. The candidate will have office space in both the Computational and Systems Biology Program, MSKCC and the Gertude H. Sergievsky Center, Columbia University. The candidate will have weekly meetings with both Dr. Dey and Dr. Wang and will be working closely with collaborators from various consortia like ADSP, FunGen-xQTL, ENCODE, and IGVF.

To apply, please send a CV, a brief cover letter outlining your interest, and names/contact information for three references to both the following email addresses: wang.gao@columbia.edu and deyk@mskcc.org.