

Postdoctoral Fellowship in Genome Engineering

Department of Hematology



Job Description

The Tsai Laboratory is seeking dynamic and creative candidates for a fully supported postdoctoral fellowship on **gene editing technologies for therapeutic treatment of genetic disorders**.

Programmable RNA-guided CRISPR-Cas nucleases, adapted from bacterial adaptive immune systems, are transforming both basic biological research and genomic medicine.

You will have the opportunity to lead new projects in this exciting space such as:

- Developing improved genomic methods to define and measure gene editing “off-target” effects
- Protein engineering of CRISPR-Cas nucleases to direct DNA-repair pathway choice away from error-prone non-homologous end-joining (NHEJ) and towards precise homology-directed repair (HDR) for gene correction
- Conducting high-throughput CRISPR-Cas screening for novel genetic contributors to fetal hemoglobin switching
- Developing novel strategies for allele-specific editing in hematopoietic stem cells (**HSCs**) of genetic mutations that cause sickle cell disease and other hematological disorders

In this position, you will gain extensive experience and training in gene editing, protein engineering, and high-throughput genome biology.

Eligibility

Successful applicants will have a strong publication record, excellent writing skills, and a Ph.D. or equivalent degree in molecular biology, cell biology, genetics, genomics, or a related area. To succeed in this position, you will have a strong molecular and cell biology background, with an emphasis on molecular cloning and transfection of mammalian cells. If you have additional experience with genome editing, hematopoietic stem cells, next-generation sequencing, protein purification, or automated liquid handling you are strongly encouraged to apply.

Please direct inquiries to:

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About St. Jude

St. Jude Children's Research Hospital, located in Memphis, Tennessee, is one of the world's premier research and treatment centers for pediatric cancer and childhood disease. St. Jude has been recognized by *Fortune* magazine as one of the “100 Best Companies to Work For” every year since 2011 and was one of *The Scientist's* top 10 “Best Places to Work in Academia” for seven consecutive years. St. Jude offers highly competitive stipends and benefits and actively fosters professional development. For more information, visit www.stjude.org.

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