

**Position goals:** To increase competitiveness and innovation of Northwestern University's capacity in Genomic and Genetic Medicine. The Transgenic and Targeted Mutagenesis Laboratory (TTML) provides services for genetic engineering in mouse models and is seeking a leader for this Core Facility with expertise in gene editing (CRISPR-Cas9 and related methods, embryonic stem cell technology, pronuclear and blastocyst manipulation). The TTML provides the following:

- 1) Full service genetic manipulation and gene targeting to create genetically-engineered mouse models for use in biomedical research, from custom construct design through genetic engineering and genotyping. This includes CRISPR/Cas9 and plasmid or BAC-based transgenesis.
- 2) Embryonic stem cell manipulation and injection services.
- 3) Facilitate use and development of methods and technology by working with investigators.
- 4) Conduct training, consultation, and collaboration to optimize generation and genotyping of mouse models.
- 5) Cryopreservation and cryorecovery.

**Position Description:**

Core Operations:

The Core Director is expected to oversee TTML personnel and lead efforts to provide and expand services. This includes planning and implementation of workflows and related processes and optimizing the scope of services offered to meet the needs of Northwestern researchers.

The Core Director will be skilled at or have the capacity to supervise:

- Design of gene editing genome manipulation in collaboration with investigators' research goals. This includes guide design and related molecular applications, construct generation where needed, embryonic stem or blastocyst-based gene editing, and resultant genotyping.
- Surgical skills required for embryo implantation
- Embryonic stem cell culture, transfection, selection, and related manipulation.
- Project tracking and communication with researchers
- Receive annual feedback from Core users and Faculty Advisory Committee to add or delete services as needed.
- Perform outreach for the TTML Core by providing advice and consultations to faculty and their research group members on novel uses of gene editing or other embryo manipulation.
- Develop, assess, and adapt new technologies and protocols.
- Provide vision and interact collaboratively with faculty advisors for long-range

planning for the continued development TTML Core.

- Assist faculty in the preparation of grants that utilize TTML services. Contribute to the writing of project proposals and manuscripts TTML core services.
- Optimize and supervise the continued enhancement of TTML Core protocols and processes (protocol and service optimization).
- As the technical expert, the director will be expected to keep up to date with the latest trends and technologies in this field.

**Administrative Duties:**

- Provide daily leadership and management of administrative activities and serve as a principal adviser to the Center for Genetic Medicine Director and Faculty advisors on all Core administrative matters.
- Help to formulate, propose and implement business and management goals, policies and procedures to meet research and Institute objectives.

**Education:** PhD (or equivalent) in relevant biological or chemical science field with experience transgenesis and gene editing.

**Experience:**

- Minimum of 5 years experience in molecular biology/genomics with a minimum of 3 years of hands-on technical experience in transgenesis.
- Hands-on experience with transgenesis techniques.
- Experience in preparation for grant applications or in assisting with grant applications is highly desirable.
- Experience with implementation of novel transgenic or gene editing methods is desirable.
- Prior experience working within or directing a similar Core facility is highly desirable

**Special Requirements:** Demonstrated ability to manage projects and lead interdisciplinary teams. Excellent interpersonal as well as verbal and written skills are required.

**To Apply:** Please send (as a single PDF) a cover letter referencing the TTML Core Director, a curriculum vitae, and the name and contact information for four to six references to [CGM@northwestern.edu](mailto:CGM@northwestern.edu). **Application deadline is May 15, 2022.**

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