

## Staff Scientist - IBRI Induced Pluripotent Stem Cell (iPSC) Lab

We are the Indiana Biosciences Research Institute (IBRI). We are a leading translational research institute that advances academic and industry science through collaboration to improve patient health outcomes. Building your career at the IBRI in Indianapolis' 16 Tech Innovation District, means being part of a team of renowned scientists, creative thinkers and innovative leaders.

Today's research is being driven by significant advances in our abilities to study complex disease processes and propose new ways to improve patients' lives. To reflect the evolving nature of life sciences research and encourage synergies through collaboration, we're enhancing our integrated capabilities, adding depth to how we approach patient-informed translational science and pursuing four foundational areas of scientific focus. These four areas will provide us the core talent and capability to pursue translational science in this new patient-centric framework:

- **Disease, Systems, Pathways** – We're working to better understand diabetes and identify new ways to combat the disease. We're applying this learning to other diseases that share common systems and pathways.
- **Molecular Innovation** – We're developing new capabilities for molecular design and drug discovery to investigate disease processes and pursue new therapeutic approaches.
- **Integrated Data Sciences** – We're pursuing advanced data sciences to create novel end-user inspired solutions that address complex analysis, simulation and prediction across the translational sciences.
- **Enabling Technologies** – We're building a rich platform of enabling technologies that give our scientists, partners and collaborators access to the best tools to solve complex scientific problems.

The IBRI's vision is to build a world-class organization of researchers, innovators and business professionals that catalyze activities across the Indiana (and beyond) life sciences community. To achieve that vision, we look for curious and collaborative team members who are energized by innovation, guided by integrity and inspired by diversity.

### The Opportunity:

The Enabling Technologies area has a Staff Scientist position available for a talented individual with training, knowledge and experience in the generation and differentiation of human induced pluripotent stem cells. As a Staff Scientist in the induced Pluripotent Stem Cell (iPSC) Lab, you will serve as a technical Subject Matter Expert (SME) to oversee iPSCs generation and differentiation activities of the lab.

In this role, your responsibilities include cell culture of mammalian cell lines including human primary somatic cells or peripheral blood mononuclear cells and human pluripotent stem cells (hPSC), numerous reprogramming experiments from somatic cells to induced pluripotent stem cells, the characterization of resulting induced pluripotent stem cell lines and of the reprogramming processes, banking and organization of cell lines, the characterization (quality control) of resulting iPSC lines with diverse

biochemical and molecular methods including genomics approaches such as RNA-seq and whole genome sequencing and CRISPR. You also will oversee the differentiation of iPSCs into various cell types for a variety of research application, most important of which is the integration and utilization of iPSC-derived cells in cellular pharmacology screening activities.

The individual in this role will be required to coordinate and work together as a team with other employees of the iPSC Lab. The position will be highly cross-functional and will build and maintain effective collaborations with IBRI researchers/collaborators and will oversee technical staff in the core. The individual in this role will work with the lab personnel on other tasks as needed including ordering, distributing research materials, administration of projects and budgeting. This position will be an integral part of the team as it empowers science and the IBRI strategy through the generation and use of iPSC-derived cells for translational and drug discovery projects.

Success in this role will be measured by the ability to drive scientific excellence in a team setting through participation in applied research projects leading to publications, funding, patents, tools and innovation. This position will assist the IBRI's applied research mission to deliver innovation by integrating with cellular pharmacology screening core using cutting-edge translational technology in relevant human systems.

This position is ideal for you if you want to work in an innovative institute in the middle of a technology district with opportunities to interact with other life sciences organizations in the region.

### **Responsibilities:**

- Direct, operate and maintain the iPSC Lab, including overseeing human induced pluripotent stem cell colonies, maintaining a database of all fibroblast and iPSC strains, as well as supervising lab personnel in the iPSC Lab.
- Direct and conduct experiments with human iPSC-derived cells, including:
  - Reprogramming of skin fibroblasts or blood cells to iPSC,
  - Differentiation of iPSC into various cell types to be defined,
  - Characterize gene and protein expression in iPSC and iPSC-derived cells at different stages of development, and
  - Transfect and analyze transgenic iPSC lines using different techniques including CRISPR/Cas9-based methods.
- Develop quality control standards, storage and stability conditions for iPSCs and differentiated cell types.
- Specifically, manage the milestones of projects involving the generation of mammalian and human pluripotent stem cell (hPSC) systems from human fibroblast or PBMCs and differentiation of iPSCs to various cell types for use in translational studies.
- Independently conduct research projects based on reviews of scientific literature and recent advances in related fields while contributing original/novel ideas of major methodological significance to projects, designing key experiments and developing new techniques.

- Prepare and implement research study budgets based on detailed plans and analysis of data.
- Stay up to date on current and emerging techniques for cell line generation.
- Direct and advise the work of associates, technicians, students and post-doctoral fellows to enable them to successfully participate in laboratory projects.

**Qualifications:**

- PhD in developmental biology, cell or molecular biology or related scientific discipline with at least two years of research experience in generating iPSC lines and differentiating to various cell types.
- Advanced theoretical knowledge of stem cells, biochemistry, cellular and molecular biology, including experience in establishing, maintaining, transfecting and differentiating iPSCs.
- Experience in reprogramming primary patients samples to iPSCs and expertise in sterile cell culture techniques.
- Experience in transfecting transgenic iPSC lines using CRISPR/Cas9-based methods.
- Excellent written, verbal and interpersonal communication skills including tact, diplomacy and flexibility in order to work and interact effectively with staff, researchers and management in various forums.

*Additional preferred qualifications:*

- Demonstrated ability working in a multi-disciplinary team to drive the identification of new molecular entities to drive target enablement and new screening efforts in drug discovery.
- Superior experience in generating SOP and documentation required to provide guidelines to team members.
- Experience in working in multi-center, multi-discipline, milestone-driven projects.

**Compensation:**

Competitive salary and comprehensive benefits offered, commensurate with experience.

**Equal Employment Opportunity:**

The IBRI provides equal employment opportunities to all employees and applicants and does not discriminate on the basis of age, race, color, religion, gender, sexual orientation, gender identity, gender expression, national origin, protected veteran status, disability or any other legally protected status.

**Apply:**

Please visit us at <https://www.indianabiosciences.org/careers/> to learn more and/or apply for this opportunity. Interested individuals are encouraged to provide their CV/resume and a brief cover letter with their application.