

Job Description – Senior Scientist

Irazu Oncology is a preclinical biotechnology company based in Baltimore, Maryland developing its cancer immunotherapy platform. Irazu offers a dynamic and entrepreneurial environment where employees can grow and develop both personally and professionally. The company is seeking a skilled, passionate and motivated scientist to assist with research and development. The company is located in the 4MLK building at the UMB Biopark in Baltimore.

Role:

Reporting to the Director of Research, the Senior Scientist will design, execute, analyze, and interpret experiments to advance Irazu Oncology's proprietary OMV-based cancer immunotherapy platform. This role will contribute to our lead drug program and support future pipeline candidates and beyond. We are looking for a collaborative team player with hands-on experience in molecular biology (primer design, PCR, and qPCR), protein-fusion and linker design, antibody-based assays, bacterial culture (ideally Gram-negative bacteria), and in vivo mouse work. The ideal candidate is proactive, enjoys a fast-paced startup setting, and can take experiments from design through data interpretation.

Responsibilities & Duties:

- Design, engineer, and optimize attenuated Gram-negative bacterial strains for OMV production, including genetic modifications for antigen display, hypervesiculation, and detoxification.
- Design and optimize linkers between OMV-anchoring sequences and display or conjugation domains, and determine peptide-tag copy number for a given antigen.
- Design primers and cloning strategies; perform PCR, overlap PCR, qPCR, genotyping, and related nucleic-acid workflows.
- Support the production, purification, and characterization of OMVs, including antigen loading/display for our lead drug program and future candidates.
- Plan and perform antibody-based assays (Western blot, ELISA, and related methods) to confirm construct identity, antigen display, and lot quality.
- Support in vivo mouse studies under approved protocols, including dosing, sample collection, tissue harvest and processing, and coordination with in vivo vendors as assigned.
- Perform mammalian cell culture operations, including maintenance of cell lines and integration with OMV testing (e.g., reactogenicity assays and mechanism-of-action studies).
- Analyze and interpret experimental data; synthesize findings to support project decisions and pipeline advancement.
- Maintain accurate electronic or paper laboratory notebooks in accordance with good documentation practices; contribute data summaries and figures for internal reviews and reports.
- Prepare and present scientific results and updates at team meetings.
- Support laboratory management tasks, such as equipment maintenance, reagent inventory, and maintaining a safe and organized lab environment.
- Mentor associate scientists and interns in molecular biology, antibody assays, cell culture, and in vivo support techniques.

Required Qualifications:

- Ph.D. in Molecular Biology, Microbiology, Immunology, or a related field with 2-3+ years of relevant experience; or M.S. with 4–7+ years; or B.S. with 7+ years.
- Hands-on primer design, PCR, and qPCR.
- Experience designing protein fusions, including linker sequences and peptide-tag copy number.
- Hands-on antibody-based assays, including Western blot and ELISA.
- Hands-on in vivo mouse experience, including dosing and/or tissue harvest.
- Hands-on experience with molecular cloning, bacterial culture, or cell culture techniques.
- High level of initiative, motivation, and willingness to work in a fast-paced environment.
- Excellent communication skills, with the ability to present research at intra- and inter-departmental meetings.

Preferred Qualifications:

- Direct experience with conjugation fusions on bacterial or OMV surfaces
- Experience in vaccine development, cancer immunotherapy, or bacterial nanoparticle/OMV platforms.
- Familiarity with Gram-negative bacteria (e.g., attenuated Salmonella strains), OMV production/purification
- Familiarity with syngeneic or xenograft tumor models (e.g., implantation, tumor measurement, efficacy readouts, or tissue collection).
- Proficiency in construct-design tools (e.g., SnapGene) or data analysis tools (e.g., GraphPad Prism).
- Nanoparticle characterization (e.g., NTA, DLS, TRPS, KDO).
- Prior work in industry, a translational academic lab, or a startup environment, with the ability to multitask and work independently.

Compensation & Benefits

- Competitive salary paid every two weeks
- Ten (10) days Paid Time Off (PTO) per year
- Federal holidays observed
- Immediately participate in Irazu Oncology's benefits program which include: health, dental, and vision care, and participation in Irazu Oncology's 401(k) retirement savings plan

Irazu Oncology is committed to creating a diverse environment and is proud to be an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status.

Contact us by emailing your resume and cover letter to kchen@irazuoncology.com